

THE ENERGY COMMUNITY

LEGAL FRAMEWORK

4.3 Edition

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PREFACE

When the Treaty establishing the Energy Community entered into force in 2006, it explicitly referred to 11 legal acts that the Contracting Parties were to transpose and implement. Just as EU law is continuously evolving, so is the Energy Community legal framework subject to ongoing revision. Today, the Energy Community body of law amounts to 112 Decisions and 48 Procedural Acts adopted by the Ministerial Council and the Permanent High Level Group, facilitating the transposition and implementation of 15 Directives, 35 Regulations and 12 Recommendations. To illustrate the scale of the revisions; the Birds Directive is the only remaining act in force in its original format, free of adaptation or revision.

To put the Contracting Parties on a path towards achieving 2030 and mid-century decarbonisation targets, the Energy Community Ministerial Council adopted five key legislative acts stemming from the EU's Clean energy for all Europeans package in November 2021. The package covers legislation in the area of energy efficiency, renewables, governance, electricity market design and security of supply rules, to enter into force in the next years. This first set of Clean Energy Package rules and commitments is presented for the first time in Part II of this 4.3. Legal Framework edition.

The adoption of the package paves the way to a modern, clean and secure energy system in the Energy Community. It establishes a stable regulatory and market framework to stimulate the necessary public and private investments and modernised rules to unlock new business opportunities. Furthermore, the package puts forward measures to protect vulnerable consumers, tackle energy poverty and empower consumers to actively participate in the energy transition.

Renewables, energy efficiency and greenhouse gas reduction targets for 2030 will be adopted at the next Ministerial Council in 2022, following the finalization of a study by the European Commission. Following their adoption, the Secretariat will incorporate and consolidate the new set of acts and subsequently release a new edition of the Legal Framework.

The 2021 Ministerial Council also adopted Gas Security of Supply Regulation 2017/1938. As a result, the rules of procedure of the security of supply group underwent revision. Part III, which displays the latest versions of the rules of procedure governing the Energy Community institutional bodies, remains otherwise unchanged.

In putting the applicable Energy Community legal framework under one cover, this 4.3 edition provides a working tool for all stakeholders involved in the process of consolidating and developing the Energy Community. In editorial terms, it is important to note that the legislation compiled in this edition consists of consolidations done by the editors for the sake of convenience only. In any circumstance, the versions adopted by the legislature in the European Union and the Energy Community and published in the Official Journal or the Energy Community website respectively, shall prevail.

Vienna, June 2022



PART I

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TREATY ESTABLISHING THE ENERGY COMMUNITY

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TREATY ESTABLISHING THE ENERGY COMMUNITY

The Parties, being:

The European Community on the one hand,

And

The following Contracting Parties on the other hand:

- The Republic of Albania, the Republic of Bulgaria, Bosnia and Herzegovina, the Republic of Croatia, the former Yugoslav Republic of Macedonia, the Republic of Montenegro, Romania, the Republic of Serbia (hereafter referred to as the Adhering Parties),

and

- The United Nations Interim Administration Mission in Kosovo pursuant to the United Nations Security Council Resolution 1244,

Consolidating on the Athens Process and the 2002 and 2003 Athens Memoranda of Understanding,

Noting that the Republic of Bulgaria, Romania and the Republic of Croatia are Candidate Countries for accession to the European Union, and that the former Yugoslav Republic of Macedonia has also applied for membership,

Noting that the European Council in Copenhagen in December 2002 confirmed the European perspective of the Republic of Albania, Bosnia and Herzegovina, and Serbia and Montenegro, as potential candidates for accession of the European Union, and underlined the determination to support their efforts to move closer to the European Union,

Recalling that the European Council in Thessaloniki in June 2003 endorsed “The Thessaloniki Agenda for the Western Balkans: moving towards European integration”, which aims to further strengthen the privileged relations between the European Union and the Western Balkans and in which the European Union encouraged the countries of the region to adopt a legally binding South-East Europe energy market agreement,

Recalling the Euro-Mediterranean Partnership Process and the European Neighbourhood Policy,

Recalling the contribution of the Stability Pact for South East Europe that has as its core the need to strengthen co-operation amongst the states and nations of South East Europe and to foster the conditions for peace, stability and economic growth,

Resolved to establish among the Parties an integrated market in natural gas and electricity, based on common interest and solidarity,

Considering that this integrated market may involve at a later stage other energy products and carriers, such as liquefied natural gas, petrol, hydrogen, or other essential network infrastructures,

Determined to create a stable regulatory and market framework capable of attracting investment in gas networks, power generation and transmission networks, so that all Parties have access to the stable and continuous gas and electricity supply that is essential for economic development and social stability,

Determined to create a single regulatory space for trade in gas and electricity that is necessary to match the geographic extent of the concerned product markets,

Recognising that the territories of the Republic of Austria, of the Hellenic Republic, of the Republic of Hungary, of the Italian Republic, and of the Republic of Slovenia are naturally integrated or directly affected by the functioning of the gas and electricity markets of the Contracting Parties,

Determined to promote high levels of gas and electricity provision to all citizens based on public service obligations, and to achieve economic and social progress and a high level of employment as well as a balanced and sustainable development through the creation of an area without internal frontiers for gas and electricity,

Desiring to enhance the security of supply of the single regulatory space by providing the stable regulatory framework necessary for the region in which connections to Caspian, North African and Middle East gas reserves can be developed and indigenous reserves of natural gas, coal and hydropower can be exploited,

Committed to improving the environmental situation in relation to gas and electricity, related energy efficiency and renewable energy sources,

Determined to develop gas and electricity market competition on a broader scale and exploit economies of scale,

Considering that, to achieve these aims, a broad ranging and integrated market regulatory structure needs to be put in place supported by strong institutions and effective supervision, and with the adequate involvement of the private sector,

Considering that in order to reduce stress on the state level gas and electricity systems and contribute to resolving local gas and electricity shortages, specific rules should be put in place to facilitate gas and electricity trade; and that such rules are needed to create a single regulatory space for the geographic extent of the concerned product markets,

Have decided to create an Energy Community.

TITLE I – PRINCIPLES

Article 1

1. By this Treaty, the Parties establish among themselves an Energy Community.
2. Member States of the European Community may become Participants in the Energy Community pursuant to Article 95 of this Treaty.

Article 2

1. The task of the Energy Community shall be to organise the relations between the Parties and create a legal and economic framework in relation to Network Energy, as defined in paragraph 2, in order to:

(a) create a stable regulatory and market framework capable of attracting investment in gas networks, power generation, and transmission and distribution networks, so that all Parties have access to the stable and continuous energy supply that is essential for economic development and social stability,

(b) create a single regulatory space for trade in Network Energy that is necessary to match the geographic extent of the concerned product markets,

(c) enhance the security of supply of the single regulatory space by providing a stable investment climate in which connections to Caspian, North African and Middle East gas reserves can be developed, and indigenous sources of energy such as natural gas, coal and hydropower can be exploited,

improve the environmental situation in relation to Network Energy and related energy efficiency, foster the use of renewable energy, and set out the conditions for energy trade in the single regulatory space,

(d) develop Network Energy market competition on a broader geographic scale and exploit economies of scale.

2. "Network Energy" shall include the electricity and gas sectors falling within the scope of the European Community Directives 2003/54/EC and 2003/55/EC.¹

Article 3

For the purposes of Article 2, the activities of the Energy Community shall include:

the implementation by the Contracting Parties of the *acquis communautaire* on energy, environment, competition and renewables, as described in Title II below, adapted to both the institutional framework of the Energy Community and the specific situation of each of the Contracting Parties (hereinafter referred to as "the extension of the *acquis communautaire*"), as further described in Title II;

¹ According to Article 1 of Decision 2008/03/MC-EnC of 1 December 2008 concerning the implementation to the oil sector of certain provisions of the Treaty and the creation of an Energy Community Oil Forum, "1. The Treaty is extended to oil under the conditions set by this Article. 2. 'Network Energy' as mentioned in Article 2 paragraph 2 of the Treaty shall be understood as to include the oil sector, i.e. supply, trade, processing and transmission of crude oil and petroleum products falling within the scope of the Directive 2006/67/EC and the related pipelines, storage, refineries and import/export facilities <...> 4. Paragraphs 1 and 2 of this Article do not apply to Articles 21 to 23 and to Articles 43 to 46 of the Treaty."

the setting up of a specific regulatory framework permitting the efficient operation of Network Energy markets across the territories of the Contracting Parties and part of the territory of the European Community, and including the creation of a single mechanism for the cross-border transmission and/or transportation of Network Energy, and the supervision of unilateral safeguard measures (hereinafter referred to as “the mechanism for operation of Network Energy markets”), as further described in Title III;

the creation for the Parties of a market in Network Energy without internal frontiers, including the coordination of mutual assistance in case of serious disturbance to the energy networks or external disruptions, and which may include the achievement of a common external energy trade policy (hereinafter referred to as “the creation of a single energy market”), as further described in Title IV.

Article 4

The Commission of the European Communities (hereinafter referred to as “the European Commission”) shall act as co-ordinator of the three activities described in Article 3.

Article 5

The Energy Community shall follow the *acquis communautaire* described in Title II, adapted to both the institutional framework of this Treaty and the specific situation of each of the Contracting Parties, with a view to ensuring high levels of investment security and optimal investments.

Article 6

The Parties shall take all appropriate measures, whether general or particular, to ensure fulfilment of the obligations arising out of this Treaty. The Parties shall facilitate the achievement of the Energy Community’s tasks. The Parties shall abstain from any measure which could jeopardise the attainment of the objectives of this Treaty.

Article 7

Any discrimination within the scope of this Treaty shall be prohibited.

Article 8

Nothing in this Treaty shall affect the rights of a Party to determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply.

TITLE II – THE EXTENSION OF THE ACQUIS COMMUNAUTAIRE

CHAPTER I GEOGRAPHIC SCOPE

Article 9

The provisions of and the Measures taken under this Title shall apply to the territories of the Adhering Parties, and to the territory under the jurisdiction of the United Nations Interim Administration Mission in Kosovo.

CHAPTER II THE ACQUIS ON ENERGY

Article 10

Each Contracting Party shall implement the *acquis communautaire* on energy in compliance with the timetable for the implementation of those measures set out in Annex I.

Article 11

The “*acquis communautaire* on energy”, for the purpose of this Treaty, shall mean the acts listed in Annex I of this Treaty.²

CHAPTER III THE ACQUIS ON ENVIRONMENT

Article 12

Each Contracting Party shall implement the *acquis communautaire* on environment in compliance with the timetable for the implementation of those measures set out in Annex II.

Article 13

The Parties recognise the importance of the Kyoto Protocol. Each Contracting Party shall endeavour to accede to it.

² Amended by Ministerial Council Decisions 2021/13/MC-EnC, 2021/14/MC-EnC and 2021/15/MC-EnC of 30 November 2021, including Article 1 of Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011

Article 14

The Parties recognise the importance of the rules set out in Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control. Each Contracting Party shall endeavour to implement that Directive.

Article 15

After the entry into force of this Treaty, the construction and operation of new generating plants shall comply with the *acquis communautaire* on environment.

Article 16

The “*acquis communautaire* on environment”, for the purpose of this Treaty, shall mean

- (i) Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment as amended by Directive 2014/52/EU,³
- (ii) Directive (EU) 2016/802 of the European Parliament and of the Council of 11 May 2016 relating to a reduction in the sulphur content of certain liquid fuels and Commission Implementing Decision (EU) 2015/253 of 16 February 2015 laying down the rules concerning the sampling and reporting under Council Directive 1999/32/EC as regards the sulphur content of marine fuels,⁴
- (iii) Directive 2001/80/EC of the European Parliament and of the Council of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants,⁵
- (iv) Article 4(2) of Directive 79/409/EEC of the Council of 2 April 1979 on the conservation of wild birds,
- (v) Chapter III, Annex V, and Article 72(3)-(4) of Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control),⁶
- (vi) Directive 2004/35/EC of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage, as amended by Directive 2006/21/EC, Directive 2009/31/EC and Directive 2013/30/EU⁷, and,
- (vii) Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment.⁸

³ Amended by the Ministerial Council Decision 2016/12/MC-EnC of 14 October 2016 on amending the Treaty establishing the Energy Community and adapting and implementing Directive (EU) 2016/802 of the European Parliament and of the Council and Commission Implementing Decision (EU) 2015/253.

⁴ Amended by the Ministerial Council Decision 2016/15/MC-EnC of 14 October 2016 on amending the Treaty establishing the Energy Community and adapting and implementing Directive (EU) 2016/802 of the European Parliament and of the Council and Commission Implementing Decision (EU) 2015/253.

⁵ Amended by the Ministerial Council Decision 2013/05/MC-EnC of 24 October 2013 on the implementation of Directive 2001/80/EC of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants and Decision 2015/07/MC-EnC on amending 2013/05/MC on implementation of Directive 2001/80/EC on limitation of certain emissions.

⁶ Amended by the Ministerial Council Decision 2013/06/MC-EnC of 24 October 2013 on the implementation of Chapter III Annex V, and Article 72(3)-(4) of Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) and amending Article 16 and Annex II of the Energy Community Treaty.

⁷ Amended by the Ministerial Council Decision 2016/14/MC-EnC of 14 October 2016 on amending the Treaty establishing the Energy Community and adapting and implementing Directive 2004/35/EC of the European Parliament and of the Council.

⁸ Amended by the Ministerial Council Decision 2016/13/MC-EnC of 14 October 2016 on amending the Treaty establishing the Energy Community and adapting and implementing Directive 2001/42/EC of the European Parliament and of the Council.

Article 17

The provisions of and the Measures taken under this Chapter shall only apply to Network Energy.

CHAPTER IV THE ACQUIS ON COMPETITION

Article 18

1. The following shall be incompatible with the proper functioning of the Treaty, insofar as they may affect trade of Network Energy between the Contracting Parties:

- (a) all agreements between undertakings, decisions by associations of undertakings and concerted practices which have as their object or effect the prevention, restriction or distortion of competition,
- (b) abuse by one or more undertakings of a dominant position in the market between the Contracting Parties as a whole or in a substantial part thereof,
- (c) any public aid which distorts or threatens to distort competition by favouring certain undertakings or certain energy resources.

2. Any practices contrary to this Article shall be assessed on the basis of criteria arising from the application of the rules of Articles 81, 82 and 87 of the Treaty establishing the European Community (attached in Annex III).

Article 19

With regard to public undertakings and undertakings to which special or exclusive rights have been granted, each Contracting Party shall ensure that as from 6 months following the date of entry force of this Treaty, the principles of the Treaty establishing the European Community, in particular Article 86 (1) and (2) thereof (attached in Annex III), are upheld.

CHAPTER V THE ACQUIS FOR RENEWABLES

Article 20⁹

Each Contracting Party shall implement Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources.

⁹ Amended by Ministerial Council Decision 2021/13/MC-EnC of 30 November 2021 amending Article 20 and Annex I to the Treaty establishing the Energy Community and incorporating Directive (EU) 2018/2001, Directive (EU) 2018/2002, Regulation (EU) 2018/1999, Delegated Regulation (EU) 2020/1044, and Implementing Regulation (EU) 2020/1208 in the Energy Community acquis communautaire.

CHAPTER VI COMPLIANCE WITH GENERALLY APPLICABLE STANDARDS OF THE EUROPEAN COMMUNITY

Article 21

Within one year of the date of entry into force of this Treaty, the Secretariat shall draw up a list of the Generally Applicable Standards of the European Community, to be submitted to the Ministerial Council for adoption.

Article 22

The Contracting Parties shall, within one year of the adoption of the list, adopt development plans to bring their Network Energy sectors into line with these Generally Applicable Standards of the European Community.

Article 23

“Generally Applicable Standards of the European Community” shall refer to any technical system standard that is applied within the European Community, and is necessary for operating network systems safely and efficiently, including aspects of transmission, cross-border connections, modulation and general technical system security standards issued where applicable via the European Committee for Standardization (CEN), the European Committee for Electrotechnical Standardization (CENELEC) and similar normation bodies or as issued by the Union for the Co-ordination of Transmission of Electricity (UCTE) and the European Association for the Streamlining of Energy Exchanges (Easeegas) for common rule setting and business practices.

CHAPTER VII THE ADAPTATION AND EVOLUTION OF THE ACQUIS

Article 24

For the implementation of this Title, the Energy Community shall adopt Measures adapting the *acquis communautaire* described in this Title, taking into account both the institutional framework of this Treaty and the specific situation of each of the Contracting Parties.

Article 25

The Energy Community may take Measures to implement amendments to the *acquis communautaire* described in this Title, in line with the evolution of European Community law.

TITLE III – MECHANISM FOR OPERATION OF NETWORK ENERGY MARKETS

CHAPTER I GEOGRAPHIC SCOPE

Article 26

The provisions of and the Measures taken under this Title shall apply to the territories of the Adhering Parties, to the territory under the jurisdiction of the United Nations Interim Administration Mission in Kosovo, and to the territories of the European Community referred to in Article 27.

Article 27

As regard the European Community, the provisions of and the Measures taken under this Title shall apply to the territories of the Hellenic Republic, of Hungary, of the Republic of Bulgaria, of the Republic of Croatia, of the Republic of Italy, of the Republic of Poland, of the Republic of Romania and of the Republic of Slovakia.¹⁰ Upon accession to the European Union of an Adhering Party, the provisions of and the Measures taken under this Title shall, without any further formalities, also apply to the territory of that new Member State.

CHAPTER II MECHANISM FOR LONG-DISTANCE TRANSPORTATION OF NETWORK ENERGY

Article 28

The Energy Community shall take additional Measures establishing a single mechanism for the cross-border transmission and/or transportation of Network Energy.

CHAPTER III SECURITY OF SUPPLY

Article 29

The Parties shall, within one year of the date of entry into force of this Treaty, adopt security of supply statements describing in particular diversity of supply, technological security, and geographic origin of imported fuels. The statements shall be communicated to the Secretariat, and shall be available to any Party

¹⁰ Amended by Ministerial Council Decision 2015/09/MC-EnC on the implementation of Regulation (EU) 347/2013 of the European Parliament and the Council on guidelines for trans-European energy infrastructure.

to this Treaty. They shall be updated every two years. The Secretariat shall give guidance and assistance with respect to such statements.

Article 30

Article 29 does not imply a necessity to change energy policies or purchasing practices.

CHAPTER IV PROVISION OF ENERGY TO CITIZENS

Article 31

The Energy Community shall promote high levels of provision of Network Energy to all its citizens within the limits of the public service obligations contained in the relevant *acquis communautaire* on energy.

Article 32

For this purpose, the Energy Community may take Measures to:

- (a) allow for the universal provision of electricity;
- (b) foster effective demand management policies;
- (c) ensure fair competition.

Article 33

The Energy Community may also make Recommendations to support effective reform of the Network Energy sectors of the Parties, including *inter alia* to increase the level of payment for energy by all customers, and to foster the affordability of Network Energy prices to consumers.

CHAPTER V HARMONISATION

Article 34

The Energy Community may take Measures concerning compatibility of market designs for the operation of Network Energy markets, as well as mutual recognition of licenses and Measures fostering free establishment of Network Energy companies.

CHAPTER VI RENEWABLE ENERGY SOURCES AND ENERGY EFFICIENCY

Article 35

The Energy Community may adopt Measures to foster development in the areas of renewable energy sources and energy efficiency, taking account of their advantages for security of supply, environment protection, social cohesion and regional development.

CHAPTER VII SAFEGUARD MEASURES

Article 36

In the event of a sudden crisis on the Network Energy market in the territory of an Adhering Party, the territory under the jurisdiction of the United Nations Interim Administration Mission in Kosovo, or a territory of the European Community referred to in Article 27, where the physical safety or security of persons, or Network Energy apparatus or installations or system integrity is threatened in this territory, the concerned Party may temporarily take necessary safeguard measures.

Article 37

Such safeguard measures shall cause the least possible disturbance in the functioning of the Network Energy market of the Parties, and not be wider in scope than is strictly necessary to remedy the sudden difficulties which have arisen. They shall not distort competition or adversely affect trade in a manner which is at variance with the common interest.

Article 38

The Party concerned shall without delay notify these safeguard measures to the Secretariat, which shall immediately inform the other Parties.

Article 39

The Energy Community may decide that the safeguard measures taken by the Party concerned do not comply with the provisions of this Chapter, and request that Party to put an end to, or modify, those safeguard measures.

TITLE IV – THE CREATION OF A SINGLE ENERGY MARKET

CHAPTER I GEOGRAPHIC SCOPE

Article 40

The provisions of and the Measures taken under this Title shall apply to the territories to which the Treaty establishing the European Community applies under the conditions laid down in that Treaty, to the territories of the Adhering Parties and to the territory under the jurisdiction of the United Nations Interim Mission in Kosovo.

CHAPTER II INTERNAL ENERGY MARKET

Article 41

1. Customs duties and quantitative restrictions on the import and export of Network Energy and all measures having equivalent effect, shall be prohibited between the Parties. This prohibition shall also apply to customs duties of a fiscal nature.
2. Paragraph 1 shall not preclude quantitative restrictions or measures having equivalent effect, justified on grounds of public policy or public security; the protection of health and life of humans, animals or plants, or the protection of industrial and commercial property. Such restrictions or measures shall not, however, constitute a means of arbitrary discrimination or a disguised restriction on trade between the Parties.

Article 42

1. The Energy Community may take Measures with the aim of creating a single market without internal frontiers for Network Energy.
2. Paragraph 1 shall not apply to fiscal measures, to those relating to the free movement of persons nor to those relating to the rights and interests of employed persons.

CHAPTER III EXTERNAL ENERGY TRADE POLICY

Article 43

The Energy Community may take Measures necessary for the regulation of imports and exports of Network Energy to and from third countries with a view to ensuring equivalent access to and from third country markets in respect of basic environmental standards or to ensure the safe operation of the internal energy market.

CHAPTER IV MUTUAL ASSISTANCE IN THE EVENT OF DISRUPTION

Article 44

In the event of disruption of Network Energy supply affecting a Party and involving another Party or a third country, the Parties shall seek an expeditious resolution in accordance with the provisions of this Chapter.

Article 45

Upon request of the Party directly affected by the disruption, the Ministerial Council shall meet. The Ministerial Council may take the necessary Measures in response to the disruption.

Article 46

Within one year of the date of entry into force of this Treaty, the Ministerial Council shall adopt a Procedural Act for the operation of the mutual assistance obligation under this Chapter, which may include the conferral of powers to take interim Measures to the Permanent High Level Group.

TITLE V – INSTITUTIONS OF THE ENERGY COMMUNITY

CHAPTER I THE MINISTERIAL COUNCIL

Article 47

The Ministerial Council shall ensure that the objectives set out in this Treaty are attained. It shall:

- (a) provide general policy guidelines;
- (b) take Measures;
- (c) adopt Procedural Acts, which may include the conferral, under precise conditions, of specific tasks, powers and obligations to carry out the policy of the Energy Community on the Permanent High Level Group, the Regulatory Board or the Secretariat.

Article 48

The Ministerial Council shall consist of one representative of each Contracting Party and two representatives of the European Community. One non-voting representative of each Participant may participate in its meetings.

Article 49

The Ministerial Council shall adopt its internal rules of procedure by Procedural Act.

Article 50¹¹

The Presidency shall be held in turn by each Contracting Party for a term of one year in the order decided by a Procedural Act of the Ministerial Council. The Presidency shall convene the Ministerial Council in a place decided upon by the Presidency. The Ministerial Council shall meet at least once every year. The meetings shall be prepared by the Secretariat.

Article 51

The Presidency shall chair the Ministerial Council and be assisted by one representative of the European Community and one representative of the incoming Presidency as Vice-Presidents. The Presidency and the Vice-Presidents shall prepare the draft Agenda.

Article 52

The Ministerial Council shall submit an annual report on the activities of the Energy Community to the European Parliament and to the Parliaments of the Adhering Parties and of the Participants.

¹¹ Amended by Ministerial Council Decision 2009/02/MC-EnC of 18 December 2009 amending the Treaty establishing the Energy Community with regard to the frequency of Ministerial Council meetings.

CHAPTER II THE PERMANENT HIGH LEVEL GROUP

Article 53

The Permanent High Level Group shall:

- (a) prepare the work of the Ministerial Council;
- (b) give assent to technical assistance requests made by international donor organisations, international financial institutions and bilateral donors;
- (c) report to the Ministerial Council on progress made toward achievement of the objectives of this Treaty;
- (d) take Measures, if so empowered by the Ministerial Council;
- (e) adopt Procedural Acts, not involving the conferral of tasks, powers or obligations on other institutions of the Energy Community;
- (f) discuss the development of the *acquis communautaire* described in Title II on the basis of a report that the European Commission shall submit on a regular basis.

Article 54

The Permanent High Level Group shall consist of one representative of each Contracting Party and two representatives of the European Community. One non-voting representative of each Participant may participate in its meetings.

Article 55

The Permanent High Level Group shall adopt its internal rules of procedure as a Procedural Act.

Article 56

The Presidency shall convene the Permanent High Level Group at a place to be determined by the Presidency. The meetings shall be prepared by the Secretariat.

Article 57

The Presidency shall chair the Permanent High Level Group and be assisted by one representative of the European Community and one representative of the incoming Presidency as Vice-Presidents. The Presidency and the Vice-Presidents shall prepare the draft Agenda.

CHAPTER III THE REGULATORY BOARD

Article 58

The Regulatory Board shall:

- (a) advise the Ministerial Council or the Permanent High Level Group on the details of statutory, technical and regulatory rules;
- (b) issue Recommendations on cross-border disputes involving two or more Regulators, upon request of any of them;
- (c) take Measures, if so empowered by the Ministerial Council;
- (d) adopt Procedural Acts.

Article 59¹²

The Regulatory Board shall be composed of one representative of the energy regulator of each Contracting Party, pursuant to the relevant parts of the *acquis communautaire* on energy. The European Union shall be represented by the European Commission, assisted by one regulator of each Participant, and one representative of the Agency for the Cooperation of Energy Regulators.

Article 60

The Regulatory Board shall adopt its internal rules of procedure by Procedural Act.

Article 61

The Regulatory Board shall elect a President for a term determined by the Regulatory Board. The European Commission shall act as Vice-President. The President and the Vice-President shall prepare the draft Agenda.

Article 62

The Regulatory Board shall meet in Athens.

¹² Amended by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011 on the implementation of Directive 2009/72/EC, Directive 2009/73/EC, Regulation (EC) 714/2009 and Regulation (EC) 715/2009 and amending Articles 11 and 59 of the Energy Community Treaty.

CHAPTER IV THE FORA

Article 63

Two Fora, composed of representatives of all interested stakeholders, including industry, regulators, industry representative groups and consumers, shall advise the Energy Community.¹³

Article 64

The Fora shall be chaired by a representative of the European Community.

Article 65

The conclusions of the Fora shall be adopted by consensus. They shall be forwarded to the Permanent High Level Group.

Article 66

The Electricity Forum shall meet in Athens. The Gas Forum shall meet at a place to be determined by a Procedural Act of the Ministerial Council.¹⁴

CHAPTER V THE SECRETARIAT

Article 67

The Secretariat shall:

provide administrative support to the Ministerial Council, the Permanent High Level Group, the Regulatory Board and the Fora;

review the proper implementation by the Parties of their obligations under this Treaty, and submit yearly progress reports to the Ministerial Council;

review and assist in the coordination by the European Commission of the donors' activity in the territories of the Adhering Parties and the territory under the jurisdiction of the United Nations Interim Administration Mission in Kosovo, and provide administrative support to the donors;

¹³ Pursuant to Decision 2008/03/MC-EnC of 18 December 2008 concerning the implementation to the oil sector of certain provisions of the Treaty and the creation of an Energy Community Oil Forum, the Ministerial Council established the Oil Forum.

¹⁴ According to Article 1 of Procedural Act 2007/03/2/PHLG-EnC of 17 October 2007 on the seat of the Gas Forum, the Gas Forum is to be set up in cooperation with the competent Slovenian authorities. According to Article 2 of the Decision 2008/03/MC-EnC of 18 December 2008 Oil Forum shall meet in Belgrade, Serbia.

carry out other tasks conferred on it under this Treaty or by a Procedural Act of the Ministerial Council, excluding the power to take Measures; and
adopt Procedural Acts.

Article 68

The Secretariat shall comprise a Director and such staff as the Energy Community may require.

Article 69

The Director of the Secretariat shall be appointed by a Procedural Act of the Ministerial Council. The Ministerial Council shall lay down, by Procedural Act, rules for the recruitment, working conditions and geographic equilibrium of the Secretariat's staff. The Director shall select and appoint the staff.

Article 70

In the performance of their duties the Director and the staff shall not seek or receive instructions from any Party to this Treaty. They shall act impartially and promote the interests of the Energy Community.

Article 71

The Director of the Secretariat or a nominated alternate shall assist at the Ministerial Council, the Permanent High Level Group, the Regulatory Board and the Fora.

Article 72

The seat of the Secretariat shall be in Vienna.

CHAPTER VI BUDGET

Article 73

Each Party shall contribute to the budget of the Energy Community as set out in Annex IV. The level of contributions may be reviewed every five years, on request of any Party, by a Procedural Act of the Ministerial Council.

Article 74

The Ministerial Council shall adopt the budget of the Energy Community by Procedural Act every two years. The budget shall cover the operational expenses of the Energy Community necessary for the functioning of its institutions. The expenditure of each institution shall be set out in a different part of the budget. The Ministerial Council shall adopt a Procedural Act specifying the procedure for the implementation of the budget, and for presenting and auditing accounts and inspection.

Article 75

The Director of the Secretariat shall implement the budget in accordance with the Procedural Act adopted pursuant to Article 74, and shall report annually to the Ministerial Council on the execution of the budget. The Ministerial Council may decide by Procedural Act, if appropriate, to entrust independent auditors with verifying the proper execution of the budget.

TITLE VI – DECISION MAKING PROCESS

CHAPTER I GENERAL PROVISIONS

Article 76

Measures may take the form of a Decision or a Recommendation.

A Decision is legally binding in its entirety upon those to whom it is addressed.

A Recommendation has no binding force. Parties shall use their best endeavours to carry out Recommendations.

Article 77

Save as provided in Article 80, each Party shall have one vote.

Article 78

The Ministerial Council, the Permanent High Level Group or the Regulatory Board may act only if two third of the Parties are represented. Abstentions in a vote from Parties present shall not count as votes cast.

CHAPTER II MEASURES UNDER TITLE II

Article 79

The Ministerial Council, the Permanent High Level Group or the Regulatory Board shall take Measures under Title II on a proposal from the European Commission. The European Commission may alter or withdraw its proposal at any time during the procedure leading to adoption of the Measures.

Article 80

Each Contracting Party shall have one vote.

Article 81

The Ministerial Council, the Permanent High Level Group or the Regulatory Board shall act by a majority of the votes cast.

CHAPTER III MEASURES UNDER TITLE III

Article 82

The Ministerial Council, the Permanent High Level Group or the Regulatory Board shall take Measures under Title III on a proposal from a Party or the Secretariat.

Article 83

The Ministerial Council, the Permanent High Level Group or the Regulatory Board shall act by a two third majority of the votes cast, including a positive vote of the European Community.

CHAPTER IV MEASURES UNDER TITLE IV

Article 84

The Ministerial Council, the Permanent High Level Group or the Regulatory Board shall take Measures under Title IV on a proposal from a Party.

Article 85

The Ministerial Council, the Permanent High Level Group or the Regulatory Board shall take Measures by unanimity.

CHAPTER V PROCEDURAL ACTS

Article 86

A Procedural Act shall regulate organizational, budgetary and transparency issues of the Energy Community, including the delegation of power from the Ministerial Council to the Permanent High Level Group, the Regulatory Board or the Secretariat, and shall have binding force on the institutions of the Energy Community, and, if the Procedural Act so provides, on the Parties.

Article 87

Save as provided in Article 88, Procedural Acts shall be adopted in compliance with the Decision Making Process set out in Chapter III of this Title.

Article 88

The Procedural Act appointing the Director of the Secretariat provided for in Article 69 shall be adopted by simple majority on a proposal from the European Commission. The Procedural Acts on budgetary matters provided for in Articles 73 and 74 shall be adopted by unanimity on a proposal from the European Commission. The Procedural Acts conferring powers on the Regulatory Board provided for in Article 47(c) shall be taken by unanimity on a proposal from a Party or the Secretariat.

TITLE VII – IMPLEMENTATION OF DECISIONS AND DISPUTE SETTLEMENT

Article 89

The Parties shall implement Decisions addressed to them in their domestic legal system within the period specified in the Decision.

Article 90

1. Failure by a Party to comply with a Treaty obligation or to implement a Decision addressed to it within the required period may be brought to the attention of the Ministerial Council by a reasoned request of any Party, the Secretariat or the Regulatory Board. Private bodies may approach the Secretariat with complaints.
2. The Party concerned may make observations in response to the request or complaint.

Article 91

1. The Ministerial Council may determine the existence of a breach by a Party of its obligations. The Ministerial Council shall decide:
 - (a) by a simple majority, if the breach relates to Title II;
 - (b) by a two-third majority, if the breach relates to Title III;
 - (c) by unanimity, if the breach relates to Title IV.
2. The Ministerial Council may subsequently decide by simple majority to revoke any decisions adopted under this Article.

Article 92

1. At the request of a Party, the Secretariat or the Regulatory Board, the Ministerial Council, acting by unanimity, may determine the existence of a serious and persistent breach by a Party of its obligations under this Treaty and may suspend certain of the rights deriving from application of this Treaty to the Party concerned, including the suspension of voting rights and exclusion from meetings or mechanisms provided for in this Treaty.
2. The Ministerial Council may subsequently decide by simple majority to revoke any decisions taken under this Article.

Article 93

When adopting the decisions referred to in Articles 91 and 92, the Ministerial Council shall act without taking into account the vote of the representative of the Party concerned.

TITLE VIII – INTERPRETATION

Article 94

The institutions shall interpret any term or other concept used in this Treaty that is derived from European Community law in conformity with the case law of the Court of Justice or the Court of First Instance of the European Communities. Where no interpretation from those Courts is available, the Ministerial Council shall give guidance in interpreting this Treaty. It may delegate that task to the Permanent High Level Group. Such guidance shall not prejudice any interpretation of the *acquis communautaire* by the Court of Justice or the Court of First Instance at a later stage.

TITLE IX – PARTICIPANTS AND OBSERVERS

Article 95

Upon a request to the Ministerial Council, any Member State of the European Community may be represented in the Ministerial Council, the Permanent High Level Group and the Regulatory Board under the conditions laid down in Articles 48, 54 and 59 as a Participant, and shall be permitted to participate in the discussions of the Ministerial Council, the Permanent High Level Group, the Regulatory Board and the Fora.

Article 96

1. Upon a reasoned request of a neighbouring third country, the Ministerial Council may, by unanimity, accept that country as an Observer. Upon a request presented to the Ministerial Council within six months of the date of entry into force of this Treaty, Moldova shall be accepted as an Observer.
2. Observers may attend the meetings of the Ministerial Council, the Permanent High Level Group, the Regulatory Board and the Fora, without participating in the discussions.

TITLE X – DURATION

Article 97

This Treaty is concluded for a period of 10 years from the date of entry into force¹⁵. The Ministerial Council, acting by unanimity, may decide to extend its duration. If no such decision is taken, the Treaty may continue to apply between those Parties who voted in favour of extension, provided that their number amounted to at least two thirds of the Parties to the Energy Community.

Article 98

Any party may withdraw from this Treaty by giving six months notice, addressed to the Secretariat.

Article 99

Upon accession to the European Community of an Adhering Party, that party shall become a Participant as provided for in Article 95.

TITLE XI – REVISION AND ACCESSION

Article 100

The Ministerial Council may, by unanimity of its Members:

- (i) amend the provisions of Title I to VII;
- (ii) decide to implement other parts of the *acquis communautaire* related to Network Energy;
- (iii) extend this Treaty to other energy products and carriers or other essential network infrastructures;
- (iv) agree on the accession to the Energy Community of a new Party.

¹⁵ According to Ministerial Council Decision 2013/03/MC-EnC on extending the duration of the Energy Community Treaty, the duration of the Treaty is extended for a period of 10 years.

TITLE XII – FINAL AND TRANSITIONAL PROVISIONS

Article 101

Without prejudice to Articles 102 and 103, the rights and obligations arising from agreements concluded by a Contracting Party before the signature of this Treaty shall not be affected by the provisions of this Treaty. To the extent that such agreements are not compatible with this Treaty, the Contracting Party concerned shall take all appropriate measures to eliminate the incompatibilities established, no later than one year after the date of entry into force of this Treaty.

Article 102

All obligations under this Treaty are without prejudice to existing legal obligations of the Parties under the Treaty establishing the World Trade Organisation.

Article 103

Any obligations under an agreement between the European Community and its Member States on the one hand, and a Contracting Party on the other hand shall not be affected by this Treaty. Any commitment taken in the context of negotiations for accession to the European Union shall not be affected by this Treaty.

Article 104

Until the adoption of the Procedural Act referred to in Article 50, the 2003 Athens Memorandum of Understanding¹⁶ shall define the order for holding the Presidency.¹⁷

Article 105

This Treaty shall be approved by the Parties in accordance with their internal procedures.

This Treaty shall enter into force on the first day of the month following the date on which the European Community and six Contracting Parties have notified the completion of the procedures necessary for this purpose.

Notification shall be sent to the Secretary-General of the Council of the European Union who shall be the depositary for this Treaty.

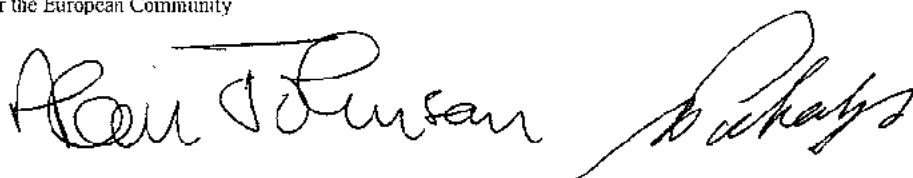
In witness thereof the duly authorised representatives have signed this Treaty.

¹⁶ Memorandum of Understanding on the Regional Energy Market in South East Europe and its Integration into the European Community Internal Energy Market, signed in Athens on 8 December 2003.

¹⁷ According to Annex point III(1) of Procedural Act 2006/01/MC-EnC, of 17 November 2006 on adoption of Internal Rules of Procedures of Ministerial Council of Energy Community, the Presidency of the Council shall be held in turn by each Contracting Party in alphabetical order, following the names of the Parties as indicated in the Treaty.

Done at Athens, on the twenty-fifth day of October in the year two thousand and five.

For the European Community

A handwritten signature in black ink, appearing to read "Alan Turing". The signature is written in a cursive style with a long horizontal line extending from the end.

For the Republic of Albania

A handwritten signature in black ink, appearing to read "Gene Rubini". The signature is written in a cursive style with a horizontal line at the end.

For the Republic of Bulgaria

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For Bosnia and Herzegovina

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For the Republic of Croatia

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For the former Yugoslav Republic of Macedonia

For the Republic of Montenegro

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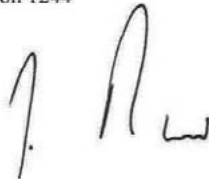
For Romania

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For the Republic of Serbia

A handwritten signature in black ink, appearing to be 'Borislav Stefanović', written in a cursive style.

For the United Nations Interim Administration Mission in Kosovo pursuant to the United Nations Security Council Resolution 1244

A handwritten signature in black ink, appearing to be 'J. Row', written in a cursive style.



Republic of Macedonia
– Office of the Deputy Prime Minister –
Minčo Jordanov

Athens, 25 October 2005

Your Excellency,

Hereby I declare that the text of the Treaty establishing the Energy Community is acceptable for the Government of the Republic of Macedonia.

With this letter, the Government of the Republic of Macedonia considers itself as signatory of the Treaty establishing the Energy Community.

However, I declare that the Republic of Macedonia does not accept the denomination used for my country in the above-mentioned documents having in view that the constitutional name of my country is the Republic of Macedonia.

Please accept, Your Excellency, the assurances of my highest consideration.

Minčo Jordanov

THE EUROPEAN COMMUNITY

Brussels

**COUNCIL OF
THE EUROPEAN UNION**
The Presidency

Athens, 25 October 2005

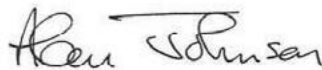
Mr. Mincio Jordanov,
Vice-President of the Government
of the former Yugoslav Republic of Macedonia.

Sir,

The European Community takes note of your letter of today's date and confirms that your letter and this reply shall together take the place of the signature of the Treaty establishing the Energy Community by the former Yugoslav Republic of Macedonia. However, this cannot be construed as acceptance or recognition by the European Community, in whatever form or content of a denomination other than "former Yugoslav Republic of Macedonia".

Please accept, Sir, the assurance of my highest consideration.

On behalf of
the European Community



UNITED NATIONS
United Nations Interim
Administration Mission in
Kosovo



NATIONS UNIES
Mission d'Administration
Interimaire des Nations Unies
au Kosovo

DECLARATION

I, Søren Jessen-Petersen, Special Representative of the Secretary General and Head of the United Nations Interim Administration Mission in Kosovo (UNMIK),

HEREBY DECLARE that the United Nations Interim Administration Mission in Kosovo (UNMIK) is signing the Treaty establishing the Energy Community on 25 October 2005, subject to the following terms:

- (i) The United Nations Interim Administration Mission in Kosovo (UNMIK) established by Security Council resolution 1244 (1999) of 10 June 1999 signs the Treaty on behalf of Kosovo;
- (ii) The Treaty is valid in respect of Kosovo for the duration of UNMIK administration under resolution 1244 (1999), and its continued validity beyond that would depend on the future administration of Kosovo; and
- (iii) The conclusion of the Treaty on the part of UNMIK is without prejudice to the future status of Kosovo.

Furthermore, the Treaty does not engage the responsibility of the United Nations, nor does it create for the Organization any legal, financial or other obligations.

I request that this Declaration be duly recorded and form part of the official records of the Treaty.

IN WITNESS WHEREOF, I have hereto set my hand and seal.



Done at Pristina on 21 October 2005.

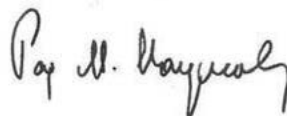
Søren Jessen-Petersen
Special Representative of the Secretary General

STATEMENT

Of the Serbian Delegation at the Ceremony of the signing of the Treaty establishing the Energy Community

"The Government of the Republic of Serbia would like to state that the signing of the Treaty establishing the Energy Community on behalf of the Special Representative of the Secretary General United Nations Interim Administration Mission in Kosovo shall in no way prejudice the final status of Kosovo and Metohija. The Government of the Republic of Serbia recalls the UN Security Council Resolution 1244 reaffirming the commitment of all Member States to the sovereignty and territorial integrity of the Serbia and Montenegro."

Athens, October 25, 2005



ANNEX I

LIST OF ACTS INCLUDED IN THE “ACQUIS COMMUNAUTAIRE ON ENERGY”

- (1) Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity, as adopted by Decision 2021/13/MCEnC of the Ministerial Council of 30 November 2021.
- (2) Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas, as adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011.
- (3) Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity, as adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011.
- (4) Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks, as amended by Commission Decision 2010/685/EU of 10 November 2010, as adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011.
- (5) Regulation (EU) 2019/941 of the European Parliament and of the Council of 5 June 2019 on risk-preparedness in the electricity sector, as adopted by Decision 2021/13/MCEnC of the Ministerial Council of 30 November 2021.
- (6) Regulation (EU) 2017/1938 of the European Parliament and of the Council of 25 October 2017 concerning measures to safeguard the security of gas supply and repealing Regulation (EU) No 994/2010, as adopted by Decision 2021/15/MC-EnC of the Ministerial Council of 30 November 2021.
- (7) Regulation (EU) No 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructure, as adopted by Ministerial Council Decision 2015/09/MC-EnC of 16 October 2015.
- (8) Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources, as adopted by Decision 2021/13/MCEnC of the Ministerial Council of 30 November 2021.
- (9) Directive (EU) 2018/2002 of the European Parliament and of the Council of 11 December 2018 amending Directive 2012/27/EU on energy efficiency, as adopted by Decision 2021/13/MC-EnC of the Ministerial Council of 30 November 2021.
- (10) Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council, as adopted by Decision 2021/13/MCEnC of the Ministerial Council of 30 November 2021.
- (11) Commission Delegated Regulation (EU) 2020/1044 of 8 May 2020 supplementing Regulation (EU) 2018/1999 of the European Parliament and of the Council with regard to values for global warming potentials and the inventory guidelines and with regard to the Union inventory system and repealing Commission Delegated Regulation (EU) No 666/2014, as adopted by Decision 2021/13/MCEnC of the

Ministerial Council of 30 November 2021.

(12) Commission Implementing Regulation (EU) 2020/1208 of 7 August 2020 on structure, format, submission processes and review of information reported by Member States pursuant to Regulation (EU) 2018/1999 of the European Parliament and of the Council and repealing Commission Implementing Regulation (EU) No 749/2014, as adopted by Decision 2021/13/MCEnC of the Ministerial Council of 30 November 2021.

(13) Regulation (EU) 838/2010 of 23 September 2010 on laying down guidelines relating to the inter- transmission system operator compensation mechanism and a common regulatory approach to transmission charging

(14) Regulation (EU) 543/2013 of 14 June 2013 on submission and publication of data in electricity markets

(15) Regulation (EU) 2016/1388 of 17 August 2016 establishing a network code on demand connection

(16) Regulation (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators

(17) Regulation (EU) 2016/1447 of 26 August 2016 establishing a network code on requirements for grid connection of high voltage direct current systems and direct current-connected power park modules

(18) Regulation (EU) 1227/2011 of 25 October 2011 on wholesale energy market integrity and transparency

(19) Regulation (EC) 715/2009 of 13 July 2009 on conditions for access to the natural gas transmission networks

(20) Regulation (EU) 703/2015 of 30 April 2015 establishing a network code on interoperability and data exchange rules

(21) Regulation (EU) 2017/459 of 16 March 2017 establishing a network code on capacity allocation mechanisms in gas transmission systems and repealing Regulation (EU) 984/2013

(22) Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonized transmission tariff structures for gas

(23) Regulation (EU) 312/2014 of 26 March 2014 establishing a network code on gas balancing of transmission networks

ANNEX II

TIMETABLE FOR THE IMPLEMENTATION OF THE ACQUIS ON ENVIRONMENT

1. Each Contracting Party shall implement Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment by 14 October 2016. Each Contracting Party shall implement Directive 2014/52/EU by 1 January 2019, with the exception of the provisions referring to Directives not covered by Article 16 of this Treaty.
2. Each Contracting Party shall implement Council Directive 1999/32/EC of 26 April 1999 relating to a reduction in the sulphur content of certain liquid fuels and amending Directive 93/12/EEC by 31 December 2011.
 - 2a. Each Contracting Party shall implement Directive (EU) 2016/802 of the European Parliament and of the Council of 11 May 2016 relating to a reduction in the sulphur content of certain liquid fuels and Commission Implementing Decision (EU) 2015/253 of 16 February 2015 laying down the rules concerning the sampling and reporting under Council Directive 1999/32/EC as regards the sulphur content of marine fuels by 30 June 2018.
3. Each Contracting Party shall implement Directive 2001/80/EC of the European Parliament and of the Council of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants by 31 December 2017.
4. Each Contracting Party shall implement Article 4(2) of Directive 79/409/EEC of the Council of 2 April 1979 on the conservation of wild birds on the entry into force of this Treaty.
5. Each Contracting Party shall implement Chapter III, Annex V, and Article 72(3)-(4) of Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) from 1 January 2018 for new plants. For existing plants, Contracting Parties shall implement those provisions by 1 January 2028 at the latest. Prior to that date, they shall endeavour to implement the provisions of Chapter III and Annex V within the shortest possible timeframe, in particular in the cases of retrofitting existing plants. Ukraine shall implement those provisions by 1 January 2029 at the latest for SO₂ and dust and by 1 January 2034 at the latest for NO_x.¹
6. Each Contracting Party shall implement Directive 2004/35/EU of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage, as amended by Directive 2006/21/EC, Directive 2009/31/EC and Directive 2013/30/EU by 1 January 2021.
7. Each Contracting Party shall transpose Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment by 1 January 2018 and implement those provisions by 31 March 2018.

¹ Amended by the Ministerial Council Decision 2015/07/MC-EnC on amending Decision D/2013/05/MC-EnC of 24 October 2013 on the implementation of Directive 2001/80/EC of the European Parliament and of the Council on the limitation of emissions of certain pollutants into the air from large combustion plants and on amending Annex II of the Energy Community Treaty.

ANNEX III

EC COMPETITION RULES

Article 81 of the EC Treaty

1. The following shall be prohibited as incompatible with the common market: all agreements between undertakings, decisions by associations of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the common market, and in particular those which:

- (a) directly or indirectly fix purchase or selling prices or any other trading conditions;
- (b) limit or control production, markets, technical development, or investment;
- (c) share markets or sources of supply;
- (d) apply dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;
- (e) make the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.

2. Any agreements or decisions prohibited pursuant to this article shall be automatically void.

3. The provisions of paragraph 1 may, however, be declared inapplicable in the case of:

- any agreement or category of agreements between undertakings,
- any decision or category of decisions by associations of undertakings,
- any concerted practice or category of concerted practices,

which contributes to improving the production or distribution of goods or to promoting technical or economic progress, while allowing consumers a fair share of the resulting benefit, and which does not:

- (a) impose on the undertakings concerned restrictions which are not indispensable to the attainment of these objectives;
- (b) afford such undertakings the possibility of eliminating competition in respect of a substantial part of the products in question.

Article 82 of the EC Treaty

Any abuse by one or more undertakings of a dominant position within the common market or in a substantial part of it shall be prohibited as incompatible with the common market in so far as it may affect trade between Member States.

Such abuse may, in particular, consist in:

- (a) directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions;
- (b) limiting production, markets or technical development to the prejudice of consumers;
- (c) applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;

(d) making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.

Article 86(1) and (2) of the EC Treaty

1. In the case of public undertakings and undertakings to which Member States grant special or exclusive rights, Member States shall neither enact nor maintain in force any measure contrary to the rules contained in this Treaty, in particular to those rules provided for in Article 12 and Articles 81 to 89.

2. Undertakings entrusted with the operation of services of general economic interest or having the character of a revenue-producing monopoly shall be subject to the rules contained in this Treaty, in particular to the rules on competition, in so far as the application of such rules does not obstruct the performance, in law or in fact, of the particular tasks assigned to them. The development of trade must not be affected to such an extent as would be contrary to the interests of the Community.

Article 87 of the EC Treaty

1. Save as otherwise provided in this Treaty, any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the common market.

2. The following shall be compatible with the common market:

(a) aid having a social character, granted to individual consumers, provided that such aid is granted without discrimination related to the origin of the products concerned;

(b) aid to make good the damage caused by natural disasters or exceptional occurrences;

(c) aid granted to the economy of certain areas of the Federal Republic of Germany affected by the division of Germany, in so far as such aid is required in order to compensate for the economic disadvantages caused by that division.

3. The following may be considered to be compatible with the common market:

(a) aid to promote the economic development of areas where the standard of living is abnormally low or where there is serious underemployment;

(b) aid to promote the execution of an important project of common European interest or to remedy a serious disturbance in the economy of a Member State;

(c) aid to facilitate the development of certain economic activities or of certain economic areas, where such aid does not adversely affect trading conditions to an extent contrary to the common interest;

(d) aid to promote culture and heritage conservation where such aid does not affect trading conditions and competition in the Community to an extent that is contrary to the common interest;

(e) such other categories of aid as may be specified by decision of the Council acting by a qualified majority on a proposal from the Commission.

PROTOCOL
CONCERNING THE ACCESSION OF THE REPUBLIC OF MOLDOVA TO THE
TREATY ESTABLISHING THE ENERGY COMMUNITY

The Energy Community, in accordance with the Treaty establishing the Energy Community (herein- after - the Treaty) on the one hand,

and the Republic of Moldova on the other hand,

Taking note of the outcome of negotiations on the Republic of Moldova's accession to the Energy Community,

Having regard to the Decision of the Ministerial Council of the Energy Community of 18 December 2009 approving the accession of the Republic of Moldova to the Energy Community on the conditions set out herein (Decision 2009/03/MC-EnC),

AGREED ON THE FOLLOWING:

Article 1

The Republic of Moldova accedes to the Energy Community as a Contracting Party under the terms and conditions set out in the Decision of the Ministerial Council of the Energy Community of 18 December 2009 on the accession of the Republic of Moldova to the Energy Community (Decision 2009/03/MC-EnC), as laid down in this Protocol.

Unless specified otherwise in this Protocol, by date of accession, the Republic of Moldova is entitled to all rights granted to Contracting Parties and is subject to all obligations imposed on Contracting Parties by the Treaty and by all Decisions and Procedural Acts adopted in application of the Treaty since its entry into force.

Article 2

1. For the purpose of compliance with Title II of the Treaty establishing the Energy Community and its related Annexes, the timetable for implementation by the Republic of Moldova of the *acquis communautaire* is defined as follows:

Directive 2003/55/EC concerning common rules for the internal market in natural gas	By 31 December 2009
Regulation 1775/2005 on conditions for access to the natural gas transmission networks	By 31 December 2010
Directive 2004/67/EC concerning measures to safeguard security of natural gas supply	By 31 December 2010
Directive 2003/54/EC concerning common rules for the internal market in electricity	By 31 December 2009
Regulation 1228/2003 on conditions for access to the network for cross-border exchanges in electricity	By 31 December 2010
Commission Decision 2006/770/EC amending the Annex to Regulation No 1228/2003 on conditions for access to the network for cross-border exchanges in electricity	By 31 December 2010
Directive 2005/89/EC concerning measures to safeguard security of electricity supply and infrastructure investment	By 31 December 2010
Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, as amended by Directive 97/11/EC and Directive 2003/35/EC	By 31 December 2010
Directive 1999/32/EC relating to a reduction in the sulphur content of certain liquid fuels	By 31 December 2014
Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants	By 31 December 2017
Directive 79/409/EC, Article 4(2), on the conservation of wild birds	By 31 December 2010
Plan for the implementation of Directive 2001/77/EEC on the promotion of electricity produced from renewable energy sources in the internal electricity market	By 31 December 2010
Plan for the implementation of Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport	By 31 December 2010

2. The Republic of Moldova must ensure that the eligible customers within the meaning of EC Directives 2003/54/EC and 2003/55/EC are:

- From 1 January 2013, all non-household customers; and
- From 1 January 2015, all customers.

3. In Article 19 of the Treaty, the reference “as from six months following the date of entry into force of this Treaty” shall be understood as meaning “as from six months following the date of accession of the Republic of Moldova”. In Article 22 of the Treaty, the reference “within one year of the adoption of the list” shall be understood as meaning “within one year of the date of accession of the Republic of Moldova”. In Article 29 of the Treaty, the reference “within one year of the date of entry into force of this Treaty” shall be understood as meaning “within one year of the date of accession of the Republic of Moldova”.

4. Article 15 of the Treaty shall apply to the Republic of Moldova as from one year following the date of accession of the Republic of Moldova.

Article 3

1. The contribution of the Republic of Moldova and of the other Parties to the budget of the Energy Community shall be set out in a Procedural Act to be adopted pursuant to Article 73 of the Treaty. The methodology to be applied shall be based on a pro-rata calculated in relation to GDP and Total Primary Energy Supply.

2. The first contribution of the Republic of Moldova shall be due for the first full budgetary year following accession.

Article 4

1. After adoption by the Ministerial Council of the Energy Community of its Decision on the Republic of Moldova’s accession to the Energy Community, the Republic of Moldova shall initiate its internal procedures required for entry into force of its accession to the Energy Community.

2. The accession to the Energy Community shall enter into force on the first day of the second month following the month of completion of the procedures provided in the first paragraph of this article.

Done at Vienna, this seventeenth day of March in the year two thousand and ten.

For the Energy Community

For the Republic of Moldova

PROTOCOL
CONCERNING THE ACCESSION OF UKRAINE
TO THE TREATY ESTABLISHING THE ENERGY COMMUNITY

The Energy Community, in accordance with the Treaty establishing the Energy Community (herein- after - the Treaty) on the one hand,

And Ukraine on the other hand,

Taking note of the outcome of negotiations on Ukraine's accession to the Energy Community Treaty,

Having regard to the Decision of the Ministerial Council of the Energy Community of 18 December 2009 approving the accession of Ukraine to the Energy Community Treaty on the conditions set out herein (Decision 2009/04/MC-EnC),

AGREED ON THE FOLLOWING:

Article 1

Ukraine accedes to the Treaty establishing the Energy Community as a Contracting Party under the terms and conditions set out in the Decision of the Ministerial Council of the Energy Community of 18 December 2009 on the accession of Ukraine to the Energy Community Treaty (Decision 2009/04/MC-EnC), as laid down in this Protocol.

Unless specified otherwise in this Protocol, by date of accession, Ukraine is entitled to all rights granted to Contracting Parties and is subject to all obligations imposed on Contracting Parties by the Treaty and by all Decisions and Procedural Acts adopted in application of the Treaty since its entry into force.

Article 2

1. For the purposes of compliance with Title II of the Treaty establishing the Energy Community and its related Annexes, the timetable for implementation of the *acquis communautaire* is defined as follows:

Directive 2003/55/EC concerning common rules for the internal market in natural gas	By 1st January 2012
Regulation 1775/2005 on conditions for access to the natural gas transmission networks	By 1st January 2012
Directive 2004/67/EC concerning measures to safeguard security of natural gas supply	By 1st January 2012
Directive 2003/54/EC concerning common rules for the internal market in electricity	By 1st January 2012
Regulation 1228/2003 on conditions for access to the network for cross-border exchanges in electricity	By 1st January 2012
Commission Decision 2006/770/EC amending the Annex to Regulation 1228/2003 on conditions for access to the network for cross-border exchanges in electricity	By 1st January 2012
Directive 2005/89/EC concerning measures to safeguard security of electricity supply and infrastructure investment	By 1st January 2012
Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, as amended by Directive 97/11/EC and Directive 2003/35/EC.	By 1st January 2013
Directive 1999/32/EC relating to a reduction in the sulphur content of certain liquid fuels	By 1st January 2012
Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants	By 1st January 2018
Directive 79/409/EC, Article 4(2), on the conservation of wild birds	By 1st January 2015
Plan for the implementation of Directive 2001/77/EEC on the promotion of electricity produced from renewable energy sources in the internal electricity market	By 1st January 2011
Plan for the implementation of Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport	By 1st January 2011

2. Ukraine must ensure that the eligible customers within the meaning of EC Directives 2003/154/EC and 2003/55/EC are:

- From 1 January 2012, all non-household customers; and
- From 1 January 2015, all customers.

3. In Article 19 of the Treaty, the reference "as from six months following the date of entry into force of this Treaty" shall be understood as meaning "as from six months following the date of accession of Ukraine".

In Article 22 of the Treaty, the reference “within one year of the adoption of the list” shall be understood as meaning “within one year of the date of accession of Ukraine”. In Article 29 of the Treaty, the reference “within one year of the date of entry into force of this Treaty” shall be understood as meaning “within one year of the date of accession of Ukraine”.

4. Article 15 of the Treaty shall apply to Ukraine as from two years following the date of accession of Ukraine.

Article 3

1. The contribution of Ukraine and of the other Parties to the budget of the Energy Community shall be set out in a Procedural Act to be adopted pursuant to Article 73 of the Treaty. The methodology to be applied shall be based on a pro-rata calculated in relation to GDP and Total Primary Energy Supply.

2. The first contribution of Ukraine shall be due for the first full budgetary year following accession.

Article 4

1. After adoption by the Ministerial Council of the Energy Community of its Decision on Ukraine’s accession to the Energy Community, Ukraine shall initiate its internal procedures required for entry into force of its accession to the Energy Community.

2. The accession to the Energy Community shall enter into force on the first day of the second month following the month of completion of the procedures provided in the first paragraph of this article.

Done at Skopje, this twenty fourth day of September in the year two thousand and ten.

For the Energy Community

For Ukraine

PROTOCOL
CONCERNING THE ACCESSION OF GEORGIA
TO THE TREATY ESTABLISHING THE ENERGY COMMUNITY

The Energy Community, in accordance with the Treaty establishing the Energy Community (hereinafter - the Treaty), on the one hand,

and Georgia, on the other hand,

Taking note of the outcome of negotiations on Georgia's accession to the Energy Community,

Having regard to the Decision of the Ministerial Council of the Energy Community of 14th October 2016 approving the accession of Georgia to the Energy Community (Decision 2016/18/MC-EnC),

Considering that Georgia is not directly interconnected to the energy network of any Contracting Party or any Member State of the European Union and that specific solutions need to be found as regards key gas transmission infrastructures mainly used for the shipment of gas through Georgia,

Considering that Georgia became an observer to the Energy Community in 2007, after the negotiation of the conditions ruling these gas transmission infrastructures,

AGREED ON THE FOLLOWING:

Article 1

1. Georgia hereby accedes to the Treaty establishing the Energy Community as a Contracting Party under the terms and conditions set out in the present Protocol.

2. Unless specified otherwise in this Protocol, by date of accession, Georgia is entitled to all rights granted to Contracting Parties and is subject to all obligations imposed on Contracting Parties by the Treaty and by all Decisions and Procedural Acts adopted in application of the Treaty since its entry into force.

Article 2

1. For the purpose of compliance with Title II of the Treaty establishing the Energy Community and its related Annexes, the timetable for implementation of the *acquis communautaire* is defined as follows:

Directive 2009/73/EC concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC	By 31 December 2020
Regulation (EC) No 715/2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005	By 31 December 2020
Directive 2004/67/EC concerning measures to safeguard security of natural gas supply	By 31 December 2020
Directive 2009/72/EC concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC	By 31 December 2018
Regulation (EC) No 714/2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003	By 31 December 2018
Directive 2005/89/EC concerning measures to safeguard security of electricity supply and infrastructure investment	By 31 December 2019
Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, as amended by Directive 97/11/EC and Directive 2003/35/EC	Without prejudice to commitments under EU-Georgia Association Agreement the entire Directive should be fully implemented by 1 September 2017.
Directive 1999/32/EC relating to a reduction in the sulphur content of certain liquid fuels	Without prejudice to commitments under EU-Georgia Association Agreement the entire Directive should be fully implemented by 1 September 2021.
Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants	By 31 December 2018
Chapter III, Annex V and Article 72(3)-(4) of Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control) – for new plants	By 1 September 2018
Chapter III, Annex V and Article 72(3)-(4) of Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control) – for existing plants	By 1 September 2026
Directive 79/409/EC, Article 4(2), on the conservation of wild birds	By 1 September 2019
Directive 2009/28/EC on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC	By 31 December 2018
Directive 2012/27/EU on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC.	By 31 December 2018

Directive 2010/30/EU on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products (recast)	By 31 December 2018
Directive 2010/31/EU on the energy performance of buildings (recast)	By 30 June 2019
Directive 2009/119/EC imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products	By 1 January 2023
Directive 2008/92/EC concerning a Community procedure to improve the transparency of gas and electricity prices charged to industrial end-users (recast)	By 31 December 2017
Regulation (EC) No 1099/2008 on energy statistics	By 31 December 2017

2. Georgia must ensure that the eligible customers within the meaning of EC Directives 2009/72/EC and 2009/73/EC are:

- From 31 December 2018, all non-household customers; and
- From 31 December 2019, all customers.

3. In Article 19 of the Treaty, the reference “as from 6 months following the date of entry into force of this Treaty” shall be understood as meaning “as from one year following the date of accession of Georgia”. In Article 22 of the Treaty, the reference “within one year of the adoption of the list” shall be understood as meaning “within one year of the date of accession of Georgia”. In Article 29 of the Treaty, the reference “within one year of the date of entry into force of this Treaty” shall be understood as meaning “within one year of the date of accession of Georgia”.

4. Article 15 of the Treaty shall apply to Georgia as from one year following the date of accession of Georgia.

5. The South Caucasus Pipeline¹ and the North South Gas Pipeline² are exempted from the implementation of Directive 2009/73/EC and Regulation (EC) No 715/2009 until 31 August 2026, the date of expiration of the Energy Community Treaty.

6. The present protocol of accession shall not affect the Intergovernmental Agreement between Georgia and the Azerbaijan Republic relating to the transit, transportation and sale of natural gas in and beyond the territories of Georgia and the Azerbaijan Republic through the South Caucasus Pipeline System.

¹ The South Caucasus Pipeline means SCP Project within the meaning ascribed to this term in the Intergovernmental Agreement between Georgia and the Azerbaijan Republic.

² The North-South Gas Pipeline is a part of the Georgian Main Gas Pipelines System consisting of 1200/1000 mm diameter gas pipeline sections (as may be renewed, repaired, modified, refurbished, reconstructed and/or replaced) primarily assigned for transportation of natural gas from Russian Federation to the Republic of Armenia.

7. As regards implementation of the provisions of Article 2(5) and 2(6) of this Protocol it is confirmed that Georgia is exempted from the application of the Treaty in relation to legal and/or regulatory regime and/or terms and conditions of cross-border transmission (transit) of natural gas, as well as to the terms and conditions of the existing agreements concluded to implement the Intergovernmental Agreement between Georgia and the Azerbaijan Republic relating to the transit, transportation and sale of natural gas in and beyond the territories of Georgia and the Azerbaijan Republic through the South Caucasus Pipeline System.

1 The South Caucasus Pipeline means SCP Project within the meaning ascribed to this term in the Intergovernmental Agreement between Georgia and the Azerbaijan Republic.

2 The North-South Gas Pipeline is a part of the Georgian Main Gas Pipelines System consisting of 1200/1000 mm diameter gas pipeline sections (as may be renewed, repaired, modified, refurbished, reconstructed and/or replaced) primarily assigned for transportation of natural gas from Russian Federation to the Republic of Armenia.

8. Should the Energy Community Treaty be extended beyond the date referred to in point 5, the provisions under points 5 and 6 of the present article shall be reviewed.

Article 3

The contribution of Georgia and of the other Parties to the budget of the Energy Community shall be set out in a Procedural Act to be adopted pursuant to Article 73 of the Treaty. The methodology to be applied shall be based on a pro-rata calculated in relation to GDP and Total Primary Energy Supply.

The first contribution of Georgia shall be due for the first full budgetary year following accession.

Article 4

After adoption by the Ministerial Council of the Energy Community of its Decision on Georgia's accession to the Treaty establishing the Energy Community, Georgia shall initiate its internal procedures required for entry into force of its accession to the Energy Community.

The accession to the Energy Community shall enter into force on the first day of the second month following the month of completion of the procedures provided in the first paragraph of this article. Notification thereof shall be sent to the Secretary General of the Council of the European Union, who shall be the depositary for this Protocol.

Done in Sarajevo, 14th October 2016

For the Energy Community For Georgia

ANNEX

COMMON UNDERSTANDING CONCERNING THE IMPLEMENTATION OF THE PROTOCOL

1. As regards the provisions included in the *acquis communautaire* listed under articles 2(1) and 2(2) of the protocol concerning energy cross-border exchanges with a Contracting Party or a Member State of the European Union, it shall be taken into account that Georgia is not directly interconnected to the energy network of any Contracting Party or Member State of the European Union. Georgia will start applying these rules and principles with respect to any Contracting Party or Member State of the European Union whenever it is physically interconnected to the energy network of any Contracting Party or Member State of the European Union. Rules and principles governing trade with countries which are not a Contracting Party of the Energy Community or a Member State of the European Union remains a national competence.

2. Any application of the provisions of the Chapter IV in Title II the Treaty (the *acquis* on competition) shall take into account that Georgia is currently an isolated market not having direct interconnections to the energy network of any Party. Georgia will promote and apply these provisions insofar as trade between the Contracting Parties may be affected.

3. For the implementation of Directive 2009/72/EC concerning common rules for the internal market in electricity, to be completed by 31 December 2018 and Directive 2005/89/EC concerning measures to safeguard security of electricity supply and infrastructure investment, to be completed by 31 December 2019, it is understood that a subsequent period of one year will be necessary for testing and adjusting the relevant implementing provisions and market instruments.

4. For the setting and level of electricity distribution tariffs, it is understood that Georgia may continue to observe its commitments with investors resulting from contracts concluded before the signature of this Protocol. It will engage in discussions with the Secretariat aimed at eliminating potential incompatibilities with the Treaty, no later than Article 2(1) and 2(2) become applicable.

5. Within the scope of Directive 2009/28/EC on the promotion of the use of energy from renewable sources, the applicability and, if appropriate, the calculation of the 2020 renewable energy target for Georgia will be established after the completion of the study appositely carried out under the responsibility of the Energy Community Secretariat.

6. With regard to Directives 2001/80/EC, 2012/27/EU, 2009/28/EC, 2010/30/EU, and 2010/31/EU, a number of specific deadlines differing from the overall Directives deadlines have been adapted by the Ministerial Council Decisions 2015/08/MC-EnC, 2013/05/MC-EnC, 2012/04/MC-EnC, 2014/02/MC-EnC and 2010/02/MC-EnC. In these specific cases, Georgia shall be granted the same adapted timeframe for implementation following the logic of the adaptations made for the existing Contracting Parties plus an additional period of 12 months. Within one month after signature of this Protocol, the Secretariat shall compile the deadlines applicable to Georgia under these Directives in a table for clarification.





PART II

ACQUIS COMMUNAUTAIRE

ELECTRICITY

DIRECTIVE (EU) 2019/944 of 5 June 2019 on common rules for the internal market for electricity < ... >¹

Incorporated and adapted by the Decision of the Ministerial Council of the Energy Community No 2021/13/MC-EnC of 30 November 2021 amending Annex I to the Treaty Establishing the Energy Community (Energy Community Treaty) and incorporating Directive (EU) 2019/944 and Regulation (EU) 2019/941 in the Energy Community acquis communautaire.

*The adaptations made by the Ministerial Council Decision 2021/13/MC-EnC are highlighted in **bold and blue**.*

CHAPTER I SUBJECT MATTER AND DEFINITIONS

Article 1

Subject matter

This Directive establishes common rules for the generation, transmission, distribution, energy storage and supply of electricity, together with consumer protection provisions, with a view to creating truly integrated competitive, consumer-centred, flexible, fair and transparent electricity markets in the **Energy Community**.

Using the advantages of an integrated market, this Directive aims to ensure affordable, transparent energy prices and costs for consumers, a high degree of security of supply and a smooth transition towards a sustainable low-carbon energy system. It lays down key rules relating to the organisation and functioning of the **Energy Community** electricity sector, in particular rules on consumer empowerment and protection, on open access to the integrated market, on third-party access to transmission and distribution infrastructure, unbundling requirements, and rules on the independence of regulatory authorities in the **Contracting Parties**.

This Directive also sets out modes for **Contracting Parties**, regulatory authorities and transmission system operators to cooperate towards the creation of a fully interconnected internal market for electricity that increases the integration of electricity from renewable sources, free competition and security of supply.

Article 2

Definitions

For the purposes of this Directive, the following definitions apply:

- (1) 'customer' means a wholesale or final customer of electricity;
- (2) 'wholesale customer' means a natural or legal person who purchases electricity for the purpose of resale inside or outside the system where that person is established;
- (3) 'final customer' means a customer who purchases electricity for own use;

¹ The adjusted title of the Directive corresponds to Article 1(1) of Ministerial Council Decision 2021/13/MC-EnC

(4) 'household customer' means a customer who purchases electricity for the customer's own household consumption, excluding commercial or professional activities;

(5) 'non-household customer' means a natural or legal person who purchases electricity that is not for own household use, including producers, industrial customers, small and medium-sized enterprises, businesses and wholesale customers;

(6) 'microenterprise' means an enterprise which employs fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 2 million;

(7) 'small enterprise' means an enterprise which employs fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 10 million;

(8) 'active customer' means a final customer, or a group of jointly acting final customers, who consumes or stores electricity generated within its premises located within confined boundaries or, where permitted by a **Contracting Party**, within other premises, or who sells self-generated electricity or participates in flexibility or energy efficiency schemes, provided that those activities do not constitute its primary commercial or professional activity;

(9) 'electricity markets' means markets for electricity, including over-the-counter markets and electricity exchanges, markets for the trading of energy, capacity, balancing and ancillary services in all timeframes, including forward, day-ahead and intraday markets;

(10) 'market participant' means **a natural or legal person who buys, sells or generates electricity, who is engaged in aggregation or who is an operator of demand response or energy storage services, including through the placing of orders to trade, in one or more electricity markets, including in balancing energy markets²**;

(11) 'citizen energy community' means a legal entity that:

(a) is based on voluntary and open participation and is effectively controlled by members or shareholders that are natural persons, local authorities, including municipalities, or small enterprises;

(b) has for its primary purpose to provide environmental, economic or social community benefits to its members or shareholders or to the local areas where it operates rather than to generate financial profits; and

(c) may engage in generation, including from renewable sources, distribution, supply, consumption, aggregation, energy storage, energy efficiency services or charging services for electric vehicles or provide other energy services to its members or shareholders;

(12) 'supply' means the sale, including the resale, of electricity to customers;

(13) 'electricity supply contract' means a contract for the supply of electricity, but does not include electricity derivatives;

(14) 'electricity derivative' means a financial instrument specified in point (5), (6) or (7) of Section C of Annex I to Directive 2014/65/EU of the European Parliament and of the Council, where that instrument relates to electricity;

(15) 'dynamic electricity price contract' means an electricity supply contract between a supplier and a final customer that reflects the price variation in the spot markets, including in the day-ahead and intraday markets, at intervals at least equal to the market settlement frequency;

² The definition displayed here corresponds to the first item in Article 4(2) of Ministerial Council Decision 2021/13/MC-EnC

- (16) ‘contract termination fee’ means a charge or penalty imposed on customers by suppliers or market participants engaged in aggregation, for terminating an electricity supply or service contract;
- (17) ‘switching-related fee’ means a charge or penalty for changing suppliers or market participants engaged in aggregation, including contract termination fees, that is directly or indirectly imposed on customers by suppliers, market participants engaged in aggregation or system operators;
- (18) ‘aggregation’ means a function performed by a natural or legal person who combines multiple customer loads or generated electricity for sale, purchase or auction in any electricity market;
- (19) ‘independent aggregator’ means a market participant engaged in aggregation who is not affiliated to the customer’s supplier;
- (20) ‘demand response’ means the change of electricity load by final customers from their normal or current consumption patterns in response to market signals, including in response to time-variable electricity prices or incentive payments, or in response to the acceptance of the final customer’s bid to sell demand reduction or increase at a price in an organised market as defined in point (4) of Article 2 of Commission Implementing Regulation (EU) No 1348/2014, whether alone or through aggregation;
- (21) ‘billing information’ means the information provided on a final customer’s bill, apart from a request for payment;
- (22) ‘conventional meter’ means an analogue or electronic meter with no capability to both transmit and receive data;
- (23) ‘smart metering system’ means an electronic system that is capable of measuring electricity fed into the grid or electricity consumed from the grid, providing more information than a conventional meter, and that is capable of transmitting and receiving data for information, monitoring and control purposes, using a form of electronic communication;
- (24) ‘interoperability’ means, in the context of smart metering, the ability of two or more energy or communication networks, systems, devices, applications or components to interwork to exchange and use information in order to perform required functions;
- (25) ‘imbalance settlement period’ means **time unit for which the imbalance of the balance responsible parties is calculated**³;
- (26) ‘near real-time’ means, in the context of smart metering, a short time period, usually down to seconds or up to the imbalance settlement period in the national market;
- (27) ‘best available techniques’ means, in the context of data protection and security in a smart metering environment, the most effective, advanced and practically suitable techniques for providing, in principle, the basis for complying with the **applicable**⁴ data protection and security rules;
- (28) ‘distribution’ means the transport of electricity on high-voltage, medium-voltage and low-voltage distribution systems with a view to its delivery to customers, but does not include supply;
- (29) ‘distribution system operator’ means a natural or legal person who is responsible for operating, ensuring the maintenance of and, if necessary, developing the distribution system in a given area and, where applicable, its interconnections with other systems, and for ensuring the long-term ability of the system to meet reasonable demands for the distribution of electricity;
- (30) ‘energy efficiency’ means the ratio of output of performance, service, goods or energy, to input of energy;

³ The definition displayed here corresponds to the second item in Article 4(2) of Ministerial Council Decision 2021/13/MC-EnC

⁴ The definition displayed here corresponds to the third item in Article 4(2) of Ministerial Council Decision 2021/13/MC-EnC

- (31) ‘energy from renewable sources’ or ‘renewable energy’ means energy from renewable non-fossil sources, namely wind, solar (solar thermal and solar photovoltaic) and geothermal energy, ambient energy, tide, wave and other ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas, and biogas;
- (32) ‘distributed generation’ means generating installations connected to the distribution system;
- (33) ‘recharging point’ means an interface that is capable of charging one electric vehicle at a time or exchanging the battery of one electric vehicle at a time;
- (34) ‘transmission’ means the transport of electricity on the extra high-voltage and high-voltage interconnected system with a view to its delivery to final customers or to distributors, but does not include supply;
- (35) ‘transmission system operator’ means a natural or legal person who is responsible for operating, ensuring the maintenance of and, if necessary, developing the transmission system in a given area and, where applicable, its interconnections with other systems, and for ensuring the long-term ability of the system to meet reasonable demands for the transmission of electricity;
- (36) ‘system user’ means a natural or legal person who supplies to, or is supplied by, a transmission system or a distribution system;
- (37) ‘generation’ means the production of electricity;
- (38) ‘producer’ means a natural or legal person who generates electricity;
- (39) ‘interconnector’ means equipment used to link electricity systems;
- (40) ‘interconnected system’ means a number of transmission and distribution systems linked together by means of one or more interconnectors;
- (41) ‘direct line’ means either an electricity line linking an isolated generation site with an isolated customer or an electricity line linking a producer and an electricity supply undertaking to supply directly their own premises, subsidiaries and customers;
- (42) ‘small isolated system’ means any system that had consumption of less than 3 000 GWh in the year 1996, where less than 5 % of annual consumption is obtained through interconnection with other systems;
- (43) ‘small connected system’ means any system that had consumption of less than 3 000 GWh in the year 1996, where more than 5 % of annual consumption is obtained through interconnection with other systems;
- (44) ‘congestion’ means congestion as defined in point **2(c) of Article 2 of Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision No 2011/02/MC-EnC of 6 October 2011**⁵;
- (45) ‘balancing’ means **all actions and processes, in all timelines, through which transmission system operators ensure, in an ongoing manner, maintenance of the system frequency within a predefined stability range and compliance with the amount of reserves needed with respect to the required quality**⁶;
- (46) ‘balancing energy’ means **energy used by transmission system operators to carry out balancing**⁷;
- (47) ‘balance responsible party’ means **a market participant or its chosen representative responsible for its imbalances in the electricity market**⁸;

5 The definition displayed here corresponds to the fourth item in Article 4(2) of Ministerial Council Decision 2021/13/MC-EnC

6 The definition displayed here corresponds to the fifth item in Article 4(2) of Ministerial Council Decision 2021/13/MC-EnC

7 The definition displayed here corresponds to the sixth item in Article 4(2) of Ministerial Council Decision 2021/13/MC-EnC

8 The definition displayed here corresponds to the seventh item in Article 4(2) of Ministerial Council Decision 2021/13/MC-EnC

(48) ‘ancillary service’ means a service necessary for the operation of a transmission or distribution system, including balancing and non-frequency ancillary services, but not including congestion management;

(49) ‘non-frequency ancillary service’ means a service used by a transmission system operator or distribution system operator for steady state voltage control, fast reactive current injections, inertia for local grid stability, short-circuit current, black start capability and island operation capability;

(50) < ... >⁹

(51) ‘fully integrated network components’ means network components that are integrated in the transmission or distribution system, including storage facilities, and that are used for the sole purpose of ensuring a secure and reliable operation of the transmission or distribution system, and not for balancing or congestion management;

(52) ‘integrated electricity undertaking’ means a vertically integrated undertaking or a horizontally integrated undertaking;

(53) ‘vertically integrated undertaking’ means an electricity undertaking or a group of electricity undertakings where the same person or the same persons are entitled, directly or indirectly, to exercise control, and where the undertaking or group of undertakings performs at least one of the functions of transmission or distribution, and at least one of the functions of generation or supply;

(54) ‘horizontally integrated undertaking’ means an electricity undertaking performing at least one of the functions of generation for sale, or transmission, or distribution, or supply, and another non-electricity activity;

(55) ‘related undertaking’ means affiliated undertakings as defined in point (12) of Article 2 of Directive 2013/34/EU of the European Parliament and of the Council, and undertakings which belong to the same shareholders;

(56) ‘control’ means rights, contracts or other means which, either separately or in combination and having regard to the considerations of fact or law involved, confer the possibility of exercising decisive influence on an undertaking, in particular by:

(a) ownership or the right to use all or part of the assets of an undertaking;

(b) rights or contracts which confer decisive influence on the composition, voting or decisions of the organs of an undertaking;

(57) ‘electricity undertaking’ means a natural or legal person who carries out at least one of the following functions: generation, transmission, distribution, aggregation, demand response, energy storage, supply or purchase of electricity, and who is responsible for the commercial, technical or maintenance tasks related to those functions, but does not include final customers;

(58) ‘security’ means both security of supply and provision of electricity, and technical safety;

(59) ‘energy storage’ means, in the electricity system, deferring the final use of electricity to a moment later than when it was generated, or the conversion of electrical energy into a form of energy which can be stored, the storing of such energy, and the subsequent reconversion of such energy into electrical energy or use as another energy carrier;

(60) ‘energy storage facility’ means, in the electricity system, a facility where energy storage occurs.

⁹ Not applicable according to the eight item in Article 4(2) of Ministerial Council Decision 2021/13/MC-EnC

CHAPTER II

GENERAL RULES FOR THE ORGANISATION OF THE ELECTRICITY SECTOR

Article 3

Competitive, consumer-centred, flexible and non-discriminatory electricity markets

1. **Contracting Parties** shall ensure that their national law does not unduly hamper cross-border trade in electricity, consumer participation, including through demand response, investments into, in particular, variable and flexible energy generation, energy storage, or the deployment of electromobility or new interconnectors between **Contracting Parties**, and shall ensure that electricity prices reflect actual demand and supply.
2. When developing new interconnectors, **Contracting Parties** shall take into account the electricity interconnection targets set out in point (1) of Article 4(d) of Regulation (EU) 2018/1999, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC of 30 November 2021**.
3. **Contracting Parties** shall ensure that no undue barriers exist within the internal market for electricity as regards market entry, operation and exit, without prejudice to the competence that **Contracting Parties** retain in relation to third countries.
4. **Contracting Parties** shall ensure a level playing field where electricity undertakings are subject to transparent, proportionate and non-discriminatory rules, fees and treatment, in particular with respect to balancing responsibility, access to wholesale markets, access to data, switching processes and billing regimes and, where applicable, licensing.
5. **Contracting Parties** shall ensure that market participants from third countries, when operating within the internal market for electricity, comply with applicable **Energy Community** and national law, including that concerning environmental and safety policy.

Article 4

Free choice of supplier

Contracting Parties shall ensure that all customers are free to purchase electricity from the supplier of their choice and shall ensure that all customers are free to have more than one electricity supply contract at the same time, provided that the required connection and metering points are established.

Article 5

Market-based supply prices

1. Suppliers shall be free to determine the price at which they supply electricity to customers. **Contracting Parties** shall take appropriate actions to ensure effective competition between suppliers.
2. **Contracting Parties** shall ensure the protection of energy poor and vulnerable household customers pursuant to Articles 28 and 29 by social policy or by other means than public interventions in the price setting for the supply of electricity.

3. By way of derogation from paragraphs 1 and 2, **Contracting Parties** may apply public interventions in the price setting for the supply of electricity to energy poor or vulnerable household customers. Such public interventions shall be subject to the conditions set out in paragraphs 4 and 5.

4. Public interventions in the price setting for the supply of electricity shall:

- (a) pursue a general economic interest and not go beyond what is necessary to achieve that general economic interest;
- (b) be clearly defined, transparent, non-discriminatory and verifiable;
- (c) guarantee equal access for **Energy Community** electricity undertakings to customers;
- (d) be limited in time and proportionate as regards their beneficiaries;
- (e) not result in additional costs for market participants in a discriminatory way.

5. Any **Contracting Party** applying public interventions in the price setting for the supply of electricity in accordance with paragraph 3 of this Article shall also comply with point (d) of Article 3(3) and with Article 24 of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC of 30 November 2021**, regardless of whether the **Contracting Party** concerned has a significant number of households in energy poverty.

6. For the purpose of a transition period to establish effective competition for electricity supply contracts between suppliers, and to achieve fully effective market-based retail pricing of electricity in accordance with paragraph 1, **Contracting Parties** may apply public interventions in the price setting for the supply of electricity to household customers and to microenterprises that do not benefit from public interventions pursuant to paragraph 3.

7. Public interventions pursuant to paragraph 6 shall comply with the criteria set out in paragraph 4 and shall:

- (a) be accompanied by a set of measures to achieve effective competition and a methodology for assessing progress with regard to those measures;
- (b) be set using a methodology that ensures non-discriminatory treatment of suppliers;
- (c) be set at a price that is above cost, at a level where effective price competition can occur;
- (d) be designed to minimise any negative impact on the wholesale electricity market;
- (e) ensure that all beneficiaries of such public interventions have the possibility to choose competitive market offers and are directly informed at least every quarter of the availability of offers and savings in the competitive market, in particular of dynamic electricity price contracts, and shall ensure that they are provided with assistance to switch to a market-based offer;
- (f) ensure that, pursuant to Articles 19 and 21, all beneficiaries of such public interventions are entitled to, and are offered to, have smart meters installed at no extra upfront cost to the customer, are directly informed of the possibility of installing smart meters and are provided with necessary assistance;
- (g) not lead to direct cross-subsidisation between customers supplied at free market prices and those supplied at regulated supply prices.

8. **Contracting Parties** shall notify the measures taken in accordance with paragraphs 3 and 6 to the **Energy Community Secretariat** within one month after their adoption and may apply them immediately. The notification shall be accompanied by an explanation of why other instruments were not sufficient to achieve the objective pursued, of how the requirements set out in paragraphs 4 and 7 are fulfilled and of

the effects of the notified measures on competition. The notification shall describe the scope of the beneficiaries, the duration of the measures and the number of household customers affected by the measures, and shall explain how the regulated prices have been determined.

9. By 1 January **2025** and 1 January **2028**, **Contracting Parties** shall submit reports to the **Energy Community Secretariat** on the implementation of this Article, the necessity and proportionality of public interventions under this Article, and an assessment of the progress towards achieving effective competition between suppliers and the transition to market-based prices. **Contracting Parties** that apply regulated prices in accordance with paragraph 6 shall report on the compliance with the conditions set out in paragraph 7, including on compliance by suppliers that are required to apply such interventions, as well as on the impact of regulated prices on the finances of those suppliers.¹⁰

10. By 31 December **2028**, the **Energy Community Secretariat** shall review and submit a report to the **Ministerial Council** on the implementation of this Article for the purpose of achieving market-based retail pricing of electricity < ... >.¹¹

Article 6

Third-party access

1. Contracting Parties shall ensure the implementation of a system of third-party access to the transmission and distribution systems based on published tariffs, applicable to all customers and applied objectively and without discrimination between system users. **Contracting Parties** shall ensure that those tariffs, or the methodologies underlying their calculation, are approved in accordance with Article 59 prior to their entry into force and that those tariffs, and the methodologies — where only methodologies are approved — are published prior to their entry into force.

2. The transmission or distribution system operator may refuse access where it lacks the necessary capacity. Duly substantiated reasons shall be given for such refusal, in particular having regard to Article 9, and based on objective and technically and economically justified criteria. **Contracting Parties** or, where **Contracting Parties** have so provided, the regulatory authorities of those **Contracting Parties**, shall ensure that those criteria are consistently applied and that the system user who has been refused access can make use of a dispute settlement procedure. The regulatory authorities shall also ensure, where appropriate and when refusal of access takes place, that the transmission system operator or distribution system operator provides relevant information on measures that would be necessary to reinforce the network. Such information shall be provided in all cases when access for recharging points has been denied. The party requesting such information may be charged a reasonable fee reflecting the cost of providing such information.

3. This Article shall also apply to citizen energy communities that manage distribution networks.

¹⁰ The text displayed in Article 5(9) corresponds to the first item in Article 4(3) of Ministerial Council Decision 2021/13/MC-EnC

¹¹ The text displayed in Article 5(10) corresponds to the second item in Article 4(3) of Ministerial Council Decision 2021/13/MC-EnC

Article 7

Direct lines

1. **Contracting Parties** shall take the measures necessary to enable:
 - (a) all producers and electricity supply undertakings established within their territory to supply their own premises, subsidiaries and customers through a direct line, without being subject to disproportionate administrative procedures or costs;
 - (b) all customers within their territory, individually or jointly, to be supplied through a direct line by producers and electricity supply undertakings.
2. **Contracting Parties** shall lay down the criteria for the grant of authorisations for the construction of direct lines in their territory. Those criteria shall be objective and non-discriminatory.
3. The possibility of supplying electricity through a direct line as referred to in paragraph 1 of this Article shall not affect the possibility of contracting electricity in accordance with Article 6.
4. **Contracting Parties** may issue authorisations to construct a direct line, subject either to the refusal of system access on the basis, as appropriate, of Article 6 or to the opening of a dispute settlement procedure under Article 60.
5. **Contracting Parties** may refuse to authorise a direct line if the granting of such an authorisation would obstruct the application of the provisions on public service obligations in Article 9. Duly substantiated reasons shall be given for such a refusal.

Article 8

Authorisation procedure for new capacity

1. For the construction of new generating capacity, **Contracting Parties** shall adopt an authorisation procedure, which shall be conducted in accordance with objective, transparent and non-discriminatory criteria.
2. **Contracting Parties** shall lay down the criteria for the grant of authorisations for the construction of generating capacity in their territory. In determining appropriate criteria, **Contracting Parties** shall consider:
 - (a) the safety and security of the electricity system, installations and associated equipment;
 - (b) the protection of public health and safety;
 - (c) the protection of the environment;
 - (d) land use and siting;
 - (e) the use of public ground;
 - (f) energy efficiency;
 - (g) the nature of the primary sources;
 - (h) the characteristics particular to the applicant, such as technical, economic and financial capabilities;
 - (i) compliance with measures adopted pursuant to Article 9;
 - (j) the contribution of generating capacity to meeting the **Contracting Party's share in contributing**

to the Energy Community target for 2030 target referred to in Article 3(1) of Directive (EU) 2018/2001, as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC of 30 November 2021;¹²

(k) the contribution of generating capacity to reducing emissions; and

(l) the alternatives to the construction of new generating capacity, such as demand response solutions and energy storage.

3. **Contracting Parties** shall ensure that specific, simplified and streamlined authorisation procedures exist for small decentralised and/or distributed generation, which take into account their limited size and potential impact.

Contracting Parties may set guidelines for that specific authorisation procedure. Regulatory authorities or other competent national authorities, including planning authorities, shall review those guidelines and may recommend amendments thereto.

Where **Contracting Parties** have established particular land use permit procedures applying to major new infrastructure projects in generation capacity, **Contracting Parties** shall, where appropriate, include the construction of new generation capacity within the scope of those procedures and shall implement them in a non-discriminatory manner and within an appropriate time frame.

4. The authorisation procedures and criteria shall be made public. Applicants shall be informed of the reasons for any refusal to grant an authorisation. Those reasons shall be objective, non-discriminatory, well-founded and duly substantiated. Appeal procedures shall be made available to applicants.

Article 9

Public service obligations¹³

1. Without prejudice to paragraph 2, **Contracting Parties** shall ensure, on the basis of their institutional organisation and with due regard to the principle of subsidiarity, that electricity undertakings operate in accordance with the principles of this Directive with a view to achieving a competitive, secure and environmentally sustainable market for electricity, and shall not discriminate between those undertakings as regards either rights or obligations.

2. Having full regard to the relevant provisions of the < ... > **Energy Community Treaty**, **Contracting Parties** may impose on undertakings operating in the electricity sector, in the general economic interest, public service obligations which may relate to security, including the security of supply, regularity, quality and price of supplies and environmental protection, including energy efficiency, energy from renewable sources and climate protection. Such obligations shall be clearly defined, transparent, non-discriminatory and verifiable, and shall guarantee equality of access for electricity undertakings of the **Energy Community** to national consumers. Public service obligations which concern the price setting for the supply of electricity shall comply with the requirements set out in Article 5 of this Directive.

3. Where financial compensation, other forms of compensation and exclusive rights which a **Contracting Party** grants for the fulfilment of the obligations set out in paragraph 2 of this Article or for the provision of universal service as set out in Article 27 are provided, this shall be done in a non-discriminatory and

¹² The text displayed in Article 8(2)(j) corresponds to Article 4(4) of Ministerial Council Decision 2021/13/MC-EnC

¹³ The text displayed in Articles 9(2) and (5) corresponds to Article 4(5) of Ministerial Council Decision 2021/13/MC-EnC

transparent way.

4. **Contracting Parties** shall, upon implementation of this Directive, inform the **Energy Community Secretariat** of all measures adopted to fulfil universal service and public service obligations, including consumer protection and environmental protection, and their possible effect on national and international competition, whether or not such measures require a derogation from this Directive. They shall subsequently inform the **Energy Community Secretariat** every two years of any changes to those measures, whether or not they require a derogation from this Directive.

5. **Contracting Parties** may decide not to apply Articles 6, 7 and 8 of this Directive insofar as their application would obstruct, in law or in fact, the performance of the obligations imposed on electricity undertakings in the general economic interest and insofar as the development of trade would not be affected to such an extent as would be contrary to the interests of the **Energy Community**. The interests of the **Energy Community** include, inter alia, competition with regard to customers in accordance with < ... > **Annex III of the Energy Community Treaty** and this Directive.

CHAPTER III

CONSUMER EMPOWERMENT AND PROTECTION

Article 10

Basic contractual rights

1. **Contracting Parties shall ensure that all final customers are entitled to have their electricity provided by a supplier, subject to the supplier's agreement, regardless of the Party to the Energy Community in which the supplier is registered, provided that the supplier follows the applicable trading and balancing rules. In that regard, Contracting Parties shall take all measures necessary to ensure that administrative procedures do not discriminate against suppliers already registered in another Party to the Energy Community.**¹⁴

2. Without prejudice to **stricter national** rules on consumer protection, **< ... > Contracting Parties** shall ensure that final customers have the rights provided for in paragraphs 3 to 12 of this Article.¹⁵

3. Final customers shall have the right to a contract with their supplier that specifies:

- (a) the identity and address of the supplier;
- (b) the services provided, the service quality levels offered, as well as the time for the initial connection;
- (c) the types of maintenance service offered;
- (d) the means by which up-to-date information on all applicable tariffs, maintenance charges and bundled products or services may be obtained;
- (e) the duration of the contract, the conditions for renewal and termination of the contract and services, including products or services that are bundled with those services, and whether terminating the contract without charge is permitted;
- (f) any compensation and the refund arrangements which apply if contracted service quality levels are not met, including inaccurate or delayed billing;
- (g) the method of initiating an out-of-court dispute settlement procedure in accordance with Article 26;
- (h) information relating to consumer rights, including information on complaint handling and all of the information referred to in this paragraph, that is clearly communicated on the bill or the electricity undertaking's web site.

Conditions shall be fair and well known in advance. In any case, this information shall be provided prior to the conclusion or confirmation of the contract. Where contracts are concluded through intermediaries, the information relating to the matters set out in this paragraph shall also be provided prior to the conclusion of the contract.

Final customers shall be provided with a summary of the key contractual conditions in a prominent manner and in concise and simple language.

4. Final customers shall be given adequate notice of any intention to modify contractual conditions and

¹⁴ The text displayed in Article 10(1) corresponds to item 1 in Article 4(6) of Ministerial Council Decision 2021/13/MC-EnC

¹⁵ The text displayed in Article 10(2) corresponds to item 2 in Article 4(6) of Ministerial Council Decision 2021/13/MC-EnC

shall be informed about their right to terminate the contract when the notice is given. Suppliers shall notify their final customers, in a transparent and comprehensible manner, directly of any adjustment in the supply price and of the reasons and preconditions for the adjustment and its scope, at an appropriate time no later than two weeks, or no later than one month in the case of household customers, before the adjustment comes into effect. **Contracting Parties** shall ensure that final customers are free to terminate contracts if they do not accept the new contractual conditions or adjustments in the supply price notified to them by their supplier.

5. Suppliers shall provide final customers with transparent information on applicable prices and tariffs and on standard terms and conditions, in respect of access to and use of electricity services.

6. Suppliers shall offer final customers a wide choice of payment methods. Such payment methods shall not unduly discriminate between customers. Any difference in charges related to payment methods or prepayment systems shall be objective, non-discriminatory and proportionate and shall not exceed the direct costs borne by the payee for the use of a specific payment method or a prepayment system < ... >. ¹⁶

7. Pursuant to paragraph 6, household customers who have access to prepayment systems shall not be placed at a disadvantage by the prepayment systems.

8. Suppliers shall offer final customers fair and transparent general terms and conditions, which shall be provided in plain and unambiguous language and shall not include non-contractual barriers to the exercise of customers' rights, such as excessive contractual documentation. Customers shall be protected against unfair or misleading selling methods.

9. Final customers shall have the right to a good standard of service and complaint handling by their suppliers. Suppliers shall handle complaints in a simple, fair and prompt manner.

10. When accessing universal service under the provisions adopted by **Contracting Parties** pursuant to Article 27, final customers shall be informed about their rights regarding universal service.

11. Suppliers shall provide household customers with adequate information on alternative measures to disconnection sufficiently in advance of any planned disconnection. Such alternative measures may refer to sources of support to avoid disconnection, prepayment systems, energy audits, energy consultancy services, alternative payment plans, debt management advice or disconnection moratoria and not constitute an extra cost to the customers facing disconnection.

12. Suppliers shall provide final customers with a final closure account after any switch of supplier no later than six weeks after such a switch has taken place.

Article 11

Entitlement to a dynamic electricity price contract

1. **Contracting Parties** shall ensure that the national regulatory framework enables suppliers to offer dynamic electricity price contracts. **Contracting Parties** shall ensure that final customers who have a smart meter installed can request to conclude a dynamic electricity price contract with at least one supplier and with every supplier that has more than 200 000 final customers.

¹⁶ The text displayed in Article 10(6) corresponds to item 3 in Article 4(6) of Ministerial Council Decision 2021/13/MC-EnC

2. **Contracting Parties** shall ensure that final customers are fully informed by the suppliers of the opportunities, costs and risks of such dynamic electricity price contracts, and shall ensure that suppliers are required to provide information to the final customers accordingly, including with regard to the need to have an adequate electricity meter installed. Regulatory authorities shall monitor the market developments and assess the risks that the new products and services may entail and deal with abusive practices.
3. Suppliers shall obtain each final customer's consent before that customer is switched to a dynamic electricity price contract.
4. For at least a ten-year period after dynamic electricity price contracts become available, **Contracting Parties** or their regulatory authorities shall monitor, and shall publish an annual report on the main developments of such contracts, including market offers and the impact on consumers' bills, and specifically the level of price volatility.

Article 12

Right to switch and rules on switching-related fees

1. Switching supplier or market participant engaged in aggregation shall be carried out within the shortest possible time. **Contracting Parties** shall ensure that a customer wishing to switch suppliers or market participants engaged in aggregation, while respecting contractual conditions, is entitled to such a switch within a maximum of three weeks from the date of the request. By no later than 2026, the technical process of switching supplier shall take no longer than 24 hours and shall be possible on any working day.
2. **Contracting Parties** shall ensure that at least household customers and small enterprises are not charged any switching-related fees.
3. By way of derogation from paragraph 2, **Contracting Parties** may permit suppliers or market participants engaged in aggregation to charge customers contract termination fees where those customers voluntarily terminate fixed-term, fixed-price electricity supply contracts before their maturity, provided that such fees are part of a contract that the customer has voluntarily entered into and that such fees are clearly communicated to the customer before the contract is entered into. Such fees shall be proportionate and shall not exceed the direct economic loss to the supplier or the market participant engaged in aggregation resulting from the customer's termination of the contract, including the costs of any bundled investments or services that have already been provided to the customer as part of the contract. The burden of proving the direct economic loss shall be on the supplier or market participant engaged in aggregation, and the permissibility of contract termination fees shall be monitored by the regulatory authority, or by another competent national authority.
4. **Contracting Parties** shall ensure that the right to switch supplier or market participants engaged in aggregation is granted to customers in a non-discriminatory manner as regards cost, effort and time.
5. Household customers shall be entitled to participate in collective switching schemes. **Contracting Parties** shall remove all regulatory or administrative barriers for collective switching, while providing a framework that ensures the utmost consumer protection to avoid any abusive practices.

Article 13

Aggregation contract

1. **Contracting Parties** shall ensure that all customers are free to purchase and sell electricity services, including aggregation, other than supply, independently from their electricity supply contract and from an electricity undertaking of their choice.
 2. **Contracting Parties** shall ensure that, where a final customer wishes to conclude an aggregation contract, the final customer is entitled to do so without the consent of the final customer's electricity undertakings.
- Contracting Parties** shall ensure that market participants engaged in aggregation fully inform customers of the terms and conditions of the contracts that they offer to them.
3. **Contracting Parties** shall ensure that final customers are entitled to receive all relevant demand response data or data on supplied and sold electricity free of charge at least once every billing period if requested by the customer.
 4. **Contracting Parties** shall ensure that the rights referred to in paragraphs 2 and 3 are granted to final customers in a non-discriminatory manner as regards cost, effort or time. In particular, **Contracting Parties** shall ensure that customers are not subject to discriminatory technical and administrative requirements, procedures or charges by their supplier on the basis of whether they have a contract with a market participant engaged in aggregation.

Article 14

Comparison tools

1. **Contracting Parties** shall ensure that at least household customers, and microenterprises with an expected yearly consumption of below 100 000 kWh, have access, free of charge, to at least one tool comparing the offers of suppliers, including offers for dynamic electricity price contracts. Customers shall be informed of the availability of such tools in or together with their bills or by other means. The tools shall meet at least the following requirements:
 - (a) they shall be independent from market participants and ensure that electricity undertakings are given equal treatment in search results;
 - (b) they shall clearly disclose their owners and the natural or legal person operating and controlling the tools, as well as information on how the tools are financed;
 - (c) they shall set out clear and objective criteria on which the comparison is to be based, including services, and disclose them;
 - (d) they shall use plain and unambiguous language;
 - (e) they shall provide accurate and up-to-date information and state the time of the last update;
 - (f) they shall be accessible to persons with disabilities, by being perceivable, operable, understandable and robust;
 - (g) they shall provide an effective procedure for reporting incorrect information on published offers; and

(h) they shall perform comparisons, while limiting the personal data requested to that strictly necessary for the comparison.

Contracting Parties shall ensure that at least one tool covers the entire market. Where multiple tools cover the market, those tools shall include, as complete as practicable, a range of electricity offers covering a significant part of the market and, where those tools do not completely cover the market, a clear statement to that effect, before displaying results.

2. The tools referred to in paragraph 1 may be operated by any entity, including private companies and public authorities or bodies.

3. **Contracting Parties** shall appoint a competent authority to be responsible for issuing trust marks for comparison tools that meet the requirements set out in paragraph 1, and for ensuring that comparison tools bearing a trust mark continue to meet the requirements set out in paragraph 1. That authority shall be independent of any market participants and comparison tool operators.

4. **Contracting Parties** may require comparison tools referred to in paragraph 1 to include comparative criteria relating to the nature of the services offered by the suppliers.

5. Any tool comparing the offers of market participants shall be eligible to apply for a trust mark in accordance with this Article on a voluntary and non-discriminatory basis.

6. By way of derogation from paragraphs 3 and 5, **Contracting Parties** may choose not to provide for the issuance of trust marks to comparison tools if a public authority or body provides a comparison tool that meets the requirements set out in paragraph 1.

Article 15

Active customers

1. **Contracting Parties** shall ensure that final customers are entitled to act as active customers without being subject to disproportionate or discriminatory technical requirements, administrative requirements, procedures and charges, and to network charges that are not cost-reflective.

2. **Contracting Parties** shall ensure that active customers are:

(a) entitled to operate either directly or through aggregation;

(b) entitled to sell self-generated electricity, including through power purchase agreements;

(c) entitled to participate in flexibility schemes and energy efficiency schemes;

(d) entitled to delegate to a third party the management of the installations required for their activities, including installation, operation, data handling and maintenance, without that third party being considered to be an active customer;

(e) subject to cost-reflective, transparent and non-discriminatory network charges that account separately for the electricity fed into the grid and the electricity consumed from the grid, in accordance with Article 59(9) of this Directive and **Article 14 of Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**, ensuring that they contribute in an adequate and balanced way to the overall cost sharing of the system;¹⁷

¹⁷ The number of corresponding Article of Regulation (EC) 714/2009 is adjusted, as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC.

(f) financially responsible for the imbalances they cause in the electricity system; to that extent they shall be balance responsible parties or shall delegate their balancing responsibility in accordance with Article 5 of Regulation (EU) 2019/943.

3. **Contracting Parties** may have different provisions applicable to individual and jointly-acting active customers in their national law, provided that all rights and obligations under this Article apply to all active customers. Any difference in the treatment of jointly-acting active customers shall be proportionate and duly justified.

4. **Contracting Parties** that have existing schemes that do not account separately for the electricity fed into the grid and the electricity consumed from the grid, shall not grant new rights under such schemes after 31 December 2026. In any event, customers subject to existing schemes shall have the possibility at any time to opt for a new scheme that accounts separately for the electricity fed into the grid and the electricity consumed from the grid as the basis for calculating network charges.¹⁸

5. **Contracting Parties** shall ensure that active customers that own an energy storage facility:

- (a) have the right to a grid connection within a reasonable time after the request, provided that all necessary conditions, such as balancing responsibility and adequate metering, are fulfilled;
- (b) are not subject to any double charges, including network charges, for stored electricity remaining within their premises or when providing flexibility services to system operators;
- (c) are not subject to disproportionate licensing requirements or fees;
- (d) are allowed to provide several services simultaneously, if technically feasible.

Article 16

Citizen energy communities

1. **Contracting Parties** shall provide an enabling regulatory framework for citizen energy communities ensuring that:

- (a) participation in a citizen energy community is open and voluntary;
- (b) members or shareholders of a citizen energy community are entitled to leave the community, in which case Article 12 applies;
- (c) members or shareholders of a citizen energy community do not lose their rights and obligations as household customers or active customers;
- (d) subject to fair compensation as assessed by the regulatory authority, relevant distribution system operators cooperate with citizen energy communities to facilitate electricity transfers within citizen energy communities;
- (e) citizen energy communities are subject to non-discriminatory, fair, proportionate and transparent procedures and charges, including with respect to registration and licensing, and to transparent, non-discriminatory and cost-reflective network charges in accordance with **Article 14 of Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**, ensuring that they contribute in an adequate and balanced way to the overall cost sharing of the system.¹⁹

¹⁸ The text displayed in Article 15(4) corresponds to Article 4(7) of Ministerial Council Decision 2021/13/MC-EnC

¹⁹ The number of corresponding Article of Regulation (EC) 714/2009 is adjusted, as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC.

2. **Contracting Parties** may provide in the enabling regulatory framework that citizen energy communities:

- (a) are open to cross-border participation;
- (b) are entitled to own, establish, purchase or lease distribution networks and to autonomously manage them subject to conditions set out in paragraph 4 of this Article;
- (c) are subject to the exemptions provided for in Article 38(2).

3. **Contracting Parties** shall ensure that citizen energy communities:

- (a) are able to access all electricity markets, either directly or through aggregation, in a non-discriminatory manner;
- (b) are treated in a non-discriminatory and proportionate manner with regard to their activities, rights and obligations as final customers, producers, suppliers, distribution system operators or market participants engaged in aggregation;

(c) are financially responsible for the imbalances they cause in the electricity system; to that extent they shall be balance responsible parties or shall delegate their balancing responsibility in accordance with **Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**;

(d) with regard to consumption of self-generated electricity, citizen energy communities are treated like active customers in accordance with point (e) of Article 15(2);

(e) are entitled to arrange within the citizen energy community the sharing of electricity that is produced by the production units owned by the community, subject to other requirements laid down in this Article and subject to the community members retaining their rights and obligations as final customers.

For the purposes of point (e) of the first subparagraph, where electricity is shared, this shall be without prejudice to applicable network charges, tariffs and levies, in accordance with a transparent cost-benefit analysis of distributed energy resources developed by the competent national authority.

4. **Contracting Parties** may decide to grant citizen energy communities the right to manage distribution networks in their area of operation and establish the relevant procedures, without prejudice to Chapter IV or to other rules and regulations applying to distribution system operators. If such a right is granted, **Contracting Parties** shall ensure that citizen energy communities:

(a) are entitled to conclude an agreement on the operation of their network with the relevant distribution system operator or transmission system operator to which their network is connected;

(b) are subject to appropriate network charges at the connection points between their network and the distribution network outside the citizen energy community and that such network charges account separately for the electricity fed into the distribution network and the electricity consumed from the distribution network outside the citizen energy community in accordance with Article 59(7);

(c) do not discriminate or harm customers who remain connected to the distribution system.

Article 17

Demand response through aggregation

1. **Contracting Parties** shall allow and foster participation of demand response through aggregation. **Contracting Parties** shall allow final customers, including those offering demand response through aggregation, to participate alongside producers in a non-discriminatory manner in all electricity markets.
2. **Contracting Parties** shall ensure that transmission system operators and distribution system operators, when procuring ancillary services, treat market participants engaged in the aggregation of demand response in a non-discriminatory manner alongside producers on the basis of their technical capabilities.
3. **Contracting Parties** shall ensure that their relevant regulatory framework contains at least the following elements:
 - (a) the right for each market participant engaged in aggregation, including independent aggregators, to enter electricity markets without the consent of other market participants;
 - (b) non-discriminatory and transparent rules that clearly assign roles and responsibilities to all electricity undertakings and customers;
 - (c) non-discriminatory and transparent rules and procedures for the exchange of data between market participants engaged in aggregation and other electricity undertakings that ensure easy access to data on equal and non-discriminatory terms while fully protecting commercially sensitive information and customers' personal data;
 - (d) an obligation on market participants engaged in aggregation to be financially responsible for the imbalances that they cause in the electricity system; to that extent they shall be balance responsible parties or shall delegate their balancing responsibility in accordance with **Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**;
 - (e) provision for final customers who have a contract with independent aggregators not to be subject to undue payments, penalties or other undue contractual restrictions by their suppliers;
 - (f) a conflict resolution mechanism between market participants engaged in aggregation and other market participants, including responsibility for imbalances.
4. **Contracting Parties** may require electricity undertakings or participating final customers to pay financial compensation to other market participants or to the market participants' balance responsible parties, if those market participants or balance responsible parties are directly affected by demand response activation. Such financial compensation shall not create a barrier to market entry for market participants engaged in aggregation or a barrier to flexibility. In such cases, the financial compensation shall be strictly limited to covering the resulting costs incurred by the suppliers of participating customers or the suppliers' balance responsible parties during the activation of demand response. The method for calculating compensation may take account of the benefits brought about by the independent aggregators to other market participants and, where it does so, the aggregators or participating customers may be required to contribute to such compensation but only where and to the extent that the benefits to all suppliers, customers and their balance responsible parties do not exceed the direct costs incurred. The calculation method shall be subject to approval by the regulatory authority or by another competent national authority.
5. **Contracting Parties** shall ensure that regulatory authorities or, where their national legal system so requires, transmission system operators and distribution system operators, acting in close cooperation with

market participants and final customers, establish the technical requirements for participation of demand response in all electricity markets on the basis of the technical characteristics of those markets and the capabilities of demand response. Such requirements shall cover participation involving aggregated loads.

Article 18

Bills and billing information

1. **Contracting Parties** shall ensure that bills and billing information are accurate, easy to understand, clear, concise, user-friendly and presented in a manner that facilitates comparison by final customers. On request, final customers shall receive a clear and understandable explanation of how their bill was derived, especially where bills are not based on actual consumption.
2. **Contracting Parties** shall ensure that final customers receive all their bills and billing information free of charge.
3. **Contracting Parties** shall ensure that final customers are offered the option of electronic bills and billing information and are offered flexible arrangements for the actual payment of the bills.
4. If the contract provides for a future change of the product or price, or a discount, this shall be indicated on the bill together with the date on which the change takes place.
5. **Contracting Parties** shall consult consumer organisations when they consider changes to the requirements for the content of bills.
6. **Contracting Parties** shall ensure that bills and billing information fulfil the minimum requirements set out in Annex I.

Article 19

Smart metering systems

1. In order to promote energy efficiency and to empower final customers, **Contracting Parties** or, where a **Contracting Party** has so provided, the regulatory authority shall strongly recommend that electricity undertakings and other market participants optimise the use of electricity, inter alia, by providing energy management services, developing innovative pricing formulas, and introducing smart metering systems that are interoperable, in particular with consumer energy management systems and with smart grids, in accordance with the applicable **Energy Community** data protection rules.
2. **Contracting Parties** shall ensure the deployment in their territories of smart metering systems that assist the active participation of customers in the electricity market. Such deployment may be subject to a cost-benefit assessment which shall be undertaken in accordance with the principles laid down in Annex II.
3. **Contracting Parties** that proceed with the deployment of smart metering systems shall adopt and publish the minimum functional and technical requirements for the smart metering systems to be deployed in their territories, in accordance with Article 20 and Annex II. **Contracting Parties** shall ensure the interoperability of those smart metering systems, as well as their ability to provide output for consumer energy management systems. In that respect, **Contracting Parties** shall have due regard to the use of the relevant available standards, including those enabling interoperability, to best practices and to the

importance of the development of smart grids and the development of the internal market for electricity.

4. **Contracting Parties** that proceed with the deployment of smart metering systems shall ensure that final customers contribute to the associated costs of the deployment in a transparent and non-discriminatory manner, while taking into account the long-term benefits to the whole value chain. **The extent of such contribution shall be decided by the national regulatory authorities of each Contracting Party.** **Contracting Parties** or, where a **Contracting Party** has so provided, the designated competent authorities, shall regularly monitor such deployment in their territories to track the delivery of benefits to consumers.²⁰

5. Where the deployment of smart metering systems has been negatively assessed as a result of the cost-benefit assessment referred to in paragraph 2, **Contracting Parties** shall ensure that this assessment is revised at least every four years, or more frequently, in response to significant changes in the underlying assumptions and in response to technological and market developments. **Contracting Parties** shall notify to the **Energy Community Secretariat** the outcome of their updated cost-benefit assessment as it becomes available.

6. The provisions in this Directive concerning smart metering systems shall apply to future installations and to installations that replace older smart meters. Smart metering systems that have already been installed, or for which the 'start of works' began, before **the date of entry into force of this Directive in the Energy Community**, may remain in operation over their lifetime but, in the case of smart metering systems that do not meet the requirements of Article 20 and Annex II, shall not remain in operation after 5 July 2031.²¹

For the purpose of this paragraph, 'start of works' means either the start of construction works on the investment or the first firm commitment to order equipment or other commitment that makes the investment irreversible, whichever is the first in time. Buying of land and preparatory works such as obtaining permits and conducting preliminary feasibility studies are not considered as start of works. For take-overs, 'start of works' means the moment of acquiring the assets directly linked to the acquired establishment.

Article 20

Functionalities of smart metering systems²²

Where the deployment of smart metering systems is positively assessed as a result of the cost-benefit assessment referred to in Article 19(2), or where smart metering systems are systematically deployed after **the date of entry into force of this Directive in the Energy Community**, **Contracting Parties** shall deploy smart metering systems in accordance with European standards, Annex II and the following requirements:

(a) the smart metering systems shall accurately measure actual electricity consumption and shall be capable of providing to final customers information on actual time of use. Validated historical consumption data shall be made easily and securely available and visualised to final customers on request and at no additional cost. Non-validated near real-time consumption data shall also be made easily and securely available to final customers at no additional cost, through a standardised interface or through remote access, in order to support automated energy efficiency programmes, demand response and other services;

²⁰ The text displayed in Article 19(4) corresponds to Article 4(8) of Ministerial Council Decision 2021/13/MC-EnC

²¹ The text displayed in Article 19(6) corresponds to Article 4(1) of Ministerial Council Decision 2021/13/MC-EnC

²² The text displayed here corresponds to Article 4(1) of Ministerial Council Decision 2021/13/MC-EnC

(b) the security of the smart metering systems and data communication shall comply with relevant **applicable** security rules, having due regard of the best available techniques for ensuring the highest level of cybersecurity protection while bearing in mind the costs and the principle of proportionality;

(c) the privacy of final customers and the protection of their data shall comply with relevant **applicable** data protection and privacy rules;

(d) meter operators shall ensure that the meters of active customers who feed electricity into the grid can account for electricity fed into the grid from the active customers' premises;

(e) if final customers request it, data on the electricity they fed into the grid and their electricity consumption data shall be made available to them, in accordance with the implementing acts adopted pursuant to Article 24, through a standardised communication interface or through remote access, or to a third party acting on their behalf, in an easily understandable format allowing them to compare offers on a like-for-like basis;

(f) appropriate advice and information shall be given to final customers prior to or at the time of installation of smart meters, in particular concerning their full potential with regard to the management of meter reading and the monitoring of energy consumption, and concerning the collection and processing of personal data in accordance with the **applicable** data protection rules;

(g) smart metering systems shall enable final customers to be metered and settled at the same time resolution as the imbalance settlement period in the national market.

For the purposes of point (e) of the first subparagraph, it shall be possible for final customers to retrieve their metering data or transmit them to another party at no additional cost and in accordance with their right to data portability under **applicable** data protection rules.

Article 21

Entitlement to a smart meter

1. Where the deployment of smart metering systems has been negatively assessed as a result of the cost-benefit assessment referred to in Article 19(2) and where smart metering systems are not systematically deployed, **Contracting Parties** shall ensure that every final customer is entitled on request, while bearing the associated costs, to have installed or, where applicable, to have upgraded, under fair, reasonable and cost-effective conditions, a smart meter that:

(a) is equipped, where technically feasible, with the functionalities referred to in Article 20, or with a minimum set of functionalities to be defined and published by **Contracting Parties** at national level in accordance with Annex II;

(b) is interoperable and able to deliver the desired connectivity of the metering infrastructure with consumer energy management systems in near real-time.

2. In the context of a customer request for a smart meter pursuant to paragraph 1, **Contracting Parties** or, where a **Contracting Party** has so provided, the designated competent authorities shall:

(a) ensure that the offer to the final customer requesting the installation of a smart meter explicitly states and clearly describes:

(i) the functions and interoperability that can be supported by the smart meter and the services that are feasible as well as the benefits that can be realistically attained by having that smart meter at that

moment in time;

(ii) any associated costs to be borne by the final customer;

- (b) ensure that it is installed within a reasonable time, no later than four months after the customer's request;
- (c) regularly, and at least every two years, review and make publicly available the associated costs, and trace the evolution of those costs as a result of technology developments and potential metering system upgrades.

Article 22

Conventional meters

1. Where final customers do not have smart meters, **Contracting Parties** shall ensure that final customers are provided with individual conventional meters that accurately measure their actual consumption.
2. **Contracting Parties** shall ensure that final customers are able to easily read their conventional meters, either directly or indirectly through an online interface or through another appropriate interface.

Article 23

Data management²³

1. When laying down the rules regarding the management and exchange of data, **Contracting Parties** or, where a **Contracting Party** has so provided, the designated competent authorities shall specify the rules on the access to data of the final customer by eligible parties in accordance with this Article and the applicable < ... > legal framework. For the purpose of this Directive, data shall be understood to include metering and consumption data as well as data required for customer switching, demand response and other services.
2. **Contracting Parties** shall organise the management of data in order to ensure efficient and secure data access and exchange, as well as data protection and data security.

Independently of the data management model applied in each **Contracting Party**, the parties responsible for data management shall provide access to the data of the final customer to any eligible party, in accordance with paragraph 1. Eligible parties shall have the requested data at their disposal in a non-discriminatory manner and simultaneously. Access to data shall be easy and the relevant procedures for obtaining access to data shall be made publicly available.

3. The rules on access to data and data storage for the purpose of this Directive shall comply with the relevant **applicable data protection rules**.

The processing of personal data within the framework of this Directive shall be carried out in accordance with **applicable data protection rules**.

4. **Contracting Parties** or, where a **Contracting Party** has so provided, the designated competent authorities, shall authorise and certify or, where applicable, supervise the parties responsible for the data management, in order to ensure that they comply with the requirements of this Directive.

²³ The text displayed in Article 23 corresponds to Article 4(10) of Ministerial Council Decision 2021/13/MC-EnC

Without prejudice to the tasks of the data protection officers under **applicable data protection rules**, **Contracting Parties** may decide to require that parties responsible for the data management appoint compliance officers who are to be responsible for monitoring the implementation of measures taken by those parties to ensure non-discriminatory access to data and compliance with the requirements of this Directive.

Contracting Parties may appoint compliance officers or bodies referred to in point (d) of Article 35(2) of this Directive to fulfil the obligations under this paragraph.

5. No additional costs shall be charged to final customers for access to their data or for a request to make their data available.

Contracting Parties shall be responsible for setting the relevant charges for access to data by eligible parties.

Contracting Parties or, where a **Contracting Party** has so provided, the designated competent authorities shall ensure that any charges imposed by regulated entities that provide data services are reasonable and duly justified.

Article 24

Interoperability requirements and procedures for access to data

1. In order to promote competition in the retail market and to avoid excessive administrative costs for the eligible parties, **Contracting Parties** shall facilitate the full interoperability of energy services within the **Energy Community**.

2. < ... >²⁴

3. **Contracting Parties** shall ensure that electricity undertakings apply the interoperability requirements and procedures for access to data referred to in paragraph 2. Those requirements and procedures shall be based on existing national practices.

Article 25

Single points of contact

Contracting Parties shall ensure the provision of single points of contact, to provide customers with all necessary information concerning their rights, the applicable law and dispute settlement mechanisms available to them in the event of a dispute. Such single points of contact may be part of general consumer information points.

Article 26

Right to out-of-court dispute settlement

1. **Contracting Parties** shall ensure that final customers have access to simple, fair, transparent, independent, effective and efficient out-of-court mechanisms for the settlement of disputes concerning rights

²⁴ Not applicable according to Article 4(11) of Ministerial Council Decision 2021/13/MC-EnC

and obligations established under this Directive, through an independent mechanism such as an energy ombudsman or a consumer body, or through a regulatory authority. Where the final customer is a consumer within the meaning of **applicable law**, such out-of-court dispute settlement mechanisms shall comply with the quality requirements of **applicable law** and shall provide, where warranted, for systems of reimbursement and compensation.²⁵

2. Where necessary, **Contracting Parties** shall ensure that alternative dispute resolution entities cooperate to provide simple, fair, transparent, independent, effective and efficient out-of-court dispute settlement mechanisms for any dispute that arises from products or services that are tied to, or bundled with, any product or service falling under the scope of this Directive.

3. The participation of electricity undertakings in out-of-court dispute settlement mechanisms for household customers shall be mandatory unless the **Contracting Party** demonstrates to the **Energy Community Secretariat** that other mechanisms are equally effective.

Article 27

Universal service

1. **Contracting Parties** shall ensure that all household customers, and, where **Contracting Parties** deem it to be appropriate, small enterprises, enjoy universal service, namely the right to be supplied with electricity of a specified quality within their territory at competitive, easily and clearly comparable, transparent and non-discriminatory prices. To ensure the provision of universal service, **Contracting Parties** may appoint a supplier of last resort. **Contracting Parties** shall impose on distribution system operators an obligation to connect customers to their network under terms, conditions and tariffs set in accordance with the procedure laid down in Article 59(7). This Directive does not prevent **Contracting Parties** from strengthening the market position of the household customers and small and medium-sized non-household customers by promoting the possibilities for the voluntary aggregation of representation for that class of customers.

2. Paragraph 1 shall be implemented in a transparent and non-discriminatory way, and shall not impede the free choice of supplier provided for in Article 4.

Article 28

Vulnerable customers

1. **Contracting Parties** shall take appropriate measures to protect customers and shall ensure, in particular, that there are adequate safeguards to protect vulnerable customers. In this context, each **Contracting Party** shall define the concept of vulnerable customers which may refer to energy poverty and, inter alia, to the prohibition of disconnection of electricity to such customers in critical times. The concept of vulnerable customers may include income levels, the share of energy expenditure of disposable income, the energy efficiency of homes, critical dependence on electrical equipment for health reasons, age or other criteria. **Contracting Parties** shall ensure that rights and obligations linked to vulnerable customers are applied. In particular, they shall take measures to protect customers in remote areas. They shall ensure high levels of consumer protection, particularly with respect to transparency regarding contractual terms

²⁵ The text displayed in Article 26(1) corresponds to Article 4(12) of Ministerial Council Decision 2021/13/MC-EnC

and conditions, general information and dispute settlement mechanisms.

2. **Contracting Parties** shall take appropriate measures, such as providing benefits by means of their social security systems to ensure the necessary supply to vulnerable customers, or providing for support for energy efficiency improvements, to address energy poverty where identified pursuant to point (d) of Article 3(3) of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC of 30 November 2021**, including in the broader context of poverty. Such measures shall not impede the effective opening of the market set out in Article 4 or market functioning and shall be notified to the **Energy Community Secretariat**, where relevant, in accordance with Article 9(4). Such notifications may also include measures taken within the general social security system.

Article 29

Energy poverty

When assessing the number of households in energy poverty pursuant to point (d) of Article 3(3) of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC of 30 November 2021**, **Contracting Parties** shall establish and publish a set of criteria, which may include low income, high expenditure of disposable income on energy and poor energy efficiency.

The **Energy Community Secretariat** shall provide guidance on the definition of 'significant number of households in energy poverty' in this context and in the context of Article 5(5), starting from the premise that any proportion of households in energy poverty can be considered to be significant.

CHAPTER IV

DISTRIBUTION SYSTEM OPERATION

Article 30

Designation of distribution system operators

Contracting Parties shall designate or shall require undertakings that own or are responsible for distribution systems to designate one or more distribution system operators for a period of time to be determined by the **Contracting Parties**, having regard to considerations of efficiency and economic balance.

Article 31

Tasks of distribution system operators

1. The distribution system operator shall be responsible for ensuring the long-term ability of the system to meet reasonable demands for the distribution of electricity, for operating, maintaining and developing under economic conditions a secure, reliable and efficient electricity distribution system in its area with due regard for the environment and energy efficiency.

2. In any event, the distribution system operator shall not discriminate between system users or classes of

system users, particularly in favour of its related undertakings.

3. The distribution system operator shall provide system users with the information they need for efficient access to, including use of, the system.

4. A **Contracting Party** may require the distribution system operator, when dispatching generating installations, to give priority to generating installations using renewable sources or using high-efficiency cogeneration, in accordance with **Article 16 of Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**.

5. Each distribution system operator shall act as a neutral market facilitator in procuring the energy it uses to cover energy losses in its system in accordance with transparent, non-discriminatory and market-based procedures, where it has such a function.

6. Where a distribution system operator is responsible for the procurement of products and services necessary for the efficient, reliable and secure operation of the distribution system, rules adopted by the distribution system operator for that purpose shall be objective, transparent and non-discriminatory, and shall be developed in coordination with transmission system operators and other relevant market participants. The terms and conditions, including rules and tariffs, where applicable, for the provision of such products and services to distribution system operators shall be established in accordance with Article 59(7) in a non-discriminatory and cost-reflective way and shall be published.

7. In performing the tasks referred to in paragraph 6, the distribution system operator shall procure the non-frequency ancillary services needed for its system in accordance with transparent, non-discriminatory and market-based procedures, unless the regulatory authority has assessed that the market-based provision of non-frequency ancillary services is economically not efficient and has granted a derogation. The obligation to procure non-frequency ancillary services does not apply to fully integrated network components.

8. The procurement of the products and services referred to in paragraph 6 shall ensure the effective participation of all qualified market participants, including market participants offering energy from renewable sources, market participants engaged in demand response, operators of energy storage facilities and market participants engaged in aggregation, in particular by requiring regulatory authorities and distribution system operators in close cooperation with all market participants, as well as transmission system operators, to establish the technical requirements for participation in those markets on the basis of the technical characteristics of those markets and the capabilities of all market participants.

9. Distribution system operators shall cooperate with transmission system operators for the effective participation of market participants connected to their grid in retail, wholesale and balancing markets. Delivery of balancing services stemming from resources located in the distribution system shall be agreed with the relevant transmission system operator in accordance with < ... > Article 182 of Commission Regulation (EU) 2017/1485.²⁶

10. **Contracting Parties** or their designated competent authorities may allow distribution system operators to perform activities other than those provided for in this Directive and in **Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**, where such activities are necessary for the distribution system operators to fulfil their obligations under this Directive or **Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**, provided that the regulatory authority has assessed the necessity of such a derogation. This paragraph shall be without prejudice to the right of the distribution

²⁶ The text displayed in Article 31(9) corresponds to Article 4(13) of Ministerial Council Decision 2021/13/MC-EnC

system operators to own, develop, manage or operate networks other than electricity networks where the **Contracting Party** or the designated competent authority has granted such a right.

Article 32

Incentives for the use of flexibility in distribution networks

1. **Contracting Parties** shall provide the necessary regulatory framework to allow and provide incentives to distribution system operators to procure flexibility services, including congestion management in their areas, in order to improve efficiencies in the operation and development of the distribution system. In particular, the regulatory framework shall ensure that distribution system operators are able to procure such services from providers of distributed generation, demand response or energy storage and shall promote the uptake of energy efficiency measures, where such services cost-effectively alleviate the need to upgrade or replace electricity capacity and support the efficient and secure operation of the distribution system. Distribution system operators shall procure such services in accordance with transparent, non-discriminatory and market-based procedures unless the regulatory authorities have established that the procurement of such services is not economically efficient or that such procurement would lead to severe market distortions or to higher congestion.

2. Distribution system operators, subject to approval by the regulatory authority, or the regulatory authority itself, shall, in a transparent and participatory process that includes all relevant system users and transmission system operators, establish the specifications for the flexibility services procured and, where appropriate, standardised market products for such services at least at national level. The specifications shall ensure the effective and non-discriminatory participation of all market participants, including market participants offering energy from renewable sources, market participants engaged in demand response, operators of energy storage facilities and market participants engaged in aggregation. Distribution system operators shall exchange all necessary information and shall coordinate with transmission system operators in order to ensure the optimal utilisation of resources, to ensure the secure and efficient operation of the system and to facilitate market development. Distribution system operators shall be adequately remunerated for the procurement of such services to allow them to recover at least their reasonable corresponding costs, including the necessary information and communication technology expenses and infrastructure costs.

3. The development of a distribution system shall be based on a transparent network development plan that the distribution system operator shall publish at least every two years and shall submit to the regulatory authority. The network development plan shall provide transparency on the medium and long-term flexibility services needed, and shall set out the planned investments for the next five-to-ten years, with particular emphasis on the main distribution infrastructure which is required in order to connect new generation capacity and new loads, including recharging points for electric vehicles. The network development plan shall also include the use of demand response, energy efficiency, energy storage facilities or other resources that the distribution system operator is to use as an alternative to system expansion.

4. The distribution system operator shall consult all relevant system users and the relevant transmission system operators on the network development plan. The distribution system operator shall publish the results of the consultation process along with the network development plan, and submit the results of the consultation and the network development plan to the regulatory authority. The regulatory authority may request amendments to the plan.

5. **Contracting Parties** may decide not to apply the obligation set out in paragraph 3 to integrated electricity undertakings which serve less than 100 000 connected customers or which serve small isolated systems.

Article 33

Integration of electromobility into the electricity network

1. < ... > **Contracting Parties** shall provide the necessary regulatory framework to facilitate the connection of publicly accessible and private recharging points to the distribution networks. **Contracting Parties** shall ensure that distribution system operators cooperate on a non-discriminatory basis with any undertaking that owns, develops, operates or manages recharging points for electric vehicles, including with regard to connection to the grid.²⁷

2. Distribution system operators shall not own, develop, manage or operate recharging points for electric vehicles, except where distribution system operators own private recharging points solely for their own use.

3. By way of derogation from paragraph 2, **Contracting Parties** may allow distribution system operators to own, develop, manage or operate recharging points for electric vehicles, provided that all of the following conditions are fulfilled:

(a) other parties, following an open, transparent and non-discriminatory tendering procedure that is subject to review and approval by the regulatory authority, have not been awarded a right to own, develop, manage or operate recharging points for electric vehicles, or could not deliver those services at a reasonable cost and in a timely manner;

(b) the regulatory authority has carried out an *ex ante* review of the conditions of the tendering procedure under point (a) and has granted its approval;

(c) the distribution system operator operates the recharging points on the basis of third-party access in accordance with Article 6 and does not discriminate between system users or classes of system users, and in particular in favour of its related undertakings.

The regulatory authority may draw up guidelines or procurement clauses to help distribution system operators ensure a fair tendering procedure.

4. Where **Contracting Parties** have implemented the conditions set out in paragraph 3, **Contracting Parties** or their designated competent authorities shall perform, at regular intervals or at least every five years, a public consultation in order to re-assess the potential interest of other parties in owning, developing, operating or managing recharging points for electric vehicles. Where the public consultation indicates that other parties are able to own, develop, operate or manage such points, **Contracting Parties** shall ensure that distribution system operators' activities in this regard are phased-out, subject to the successful completion of the tendering procedure referred to in point (a) of paragraph 3. As part of the conditions of that procedure, regulatory authorities may allow the distribution system operator to recover the residual value of its investment in recharging infrastructure.

²⁷ The text displayed in Article 33(1) corresponds to Article 4(14) of Ministerial Council Decision 2021/13/MC-EnC

Article 34

Tasks of distribution system operators in data management

Contracting Parties shall ensure that all eligible parties have non-discriminatory access to data under clear and equal terms, in accordance with the relevant data protection rules. In **Contracting Parties** where smart metering systems have been deployed in accordance with Article 19 and where distribution system operators are involved in data management, the compliance programmes referred to in point (d) of Article 35(2) shall include specific measures in order to exclude discriminatory access to data from eligible parties as provided for in Article 23. Where distribution system operators are not subject to Article 35(1), (2) or (3), **Contracting Parties** shall take all necessary measures to ensure that vertically integrated undertakings do not have privileged access to data for the conduct of their supply activities.

Article 35

Unbundling of distribution system operators

1. Where the distribution system operator is part of a vertically integrated undertaking, it shall be independent at least in terms of its legal form, organisation and decision-making from other activities not relating to distribution. Those rules shall not create an obligation to separate the ownership of assets of the distribution system operator from the vertically integrated undertaking.

2. In addition to the requirements under paragraph 1, where the distribution system operator is part of a vertically integrated undertaking, it shall be independent in terms of its organisation and decision-making from the other activities not related to distribution. In order to achieve this, the following minimum criteria shall apply:

(a) the persons responsible for the management of the distribution system operator must not participate in company structures of the integrated electricity undertaking responsible, directly or indirectly, for the day-to-day operation of the generation, transmission or supply of electricity;

(b) appropriate measures must be taken to ensure that the professional interests of the persons responsible for the management of the distribution system operator are taken into account in a manner that ensures that they are capable of acting independently;

(c) the distribution system operator must have effective decision-making rights, independent from the integrated electricity undertaking, with respect to assets necessary to operate, maintain or develop the network. In order to fulfil those tasks, the distribution system operator shall have at its disposal the necessary resources including human, technical, physical and financial resources. This should not prevent the existence of appropriate coordination mechanisms to ensure that the economic and management supervision rights of the parent company in respect of return on assets, regulated indirectly in accordance with Article 59(7), in a subsidiary are protected. In particular, this shall enable the parent company to approve the annual financial plan, or any equivalent instrument, of the distribution system operator and to set global limits on the levels of indebtedness of its subsidiary. It shall not permit the parent company to give instructions regarding day-to-day operations, nor with respect to individual decisions concerning the construction or upgrading of distribution lines, that do not exceed the terms of the approved financial plan, or any equivalent instrument; and

(d) the distribution system operator must establish a compliance programme, which sets out measures taken to ensure that discriminatory conduct is excluded, and ensure that observance of it is adequately monitored. The compliance programme shall set out the specific obligations of employees to meet that objective. An annual report, setting out the measures taken, shall be submitted by the person or body responsible for monitoring the compliance programme, the compliance officer of the distribution system operator, to the regulatory authority referred to in Article 57(1) and shall be published. The compliance officer of the distribution system operator shall be fully independent and shall have access to all the necessary information of the distribution system operator and any affiliated undertaking to fulfil its task.

3. Where the distribution system operator is part of a vertically integrated undertaking, the **Contracting Parties** shall ensure that the activities of the distribution system operator are monitored by regulatory authorities or other competent bodies so that it cannot take advantage of its vertical integration to distort competition. In particular, vertically integrated distribution system operators shall not, in their communication and branding, create confusion with respect to the separate identity of the supply branch of the vertically integrated undertaking.

4. **Contracting Parties** may decide not to apply paragraphs 1, 2 and 3 to integrated electricity undertakings which serve less than 100 000 connected customers, or serving small isolated systems.

Article 36

Ownership of energy storage facilities by distribution system operators

1. Distribution system operators shall not own, develop, manage or operate energy storage facilities.

2. By way of derogation from paragraph 1, **Contracting Parties** may allow distribution system operators to own, develop, manage or operate energy storage facilities, where they are fully integrated network components and the regulatory authority has granted its approval, or where all of the following conditions are fulfilled:

(a) other parties, following an open, transparent and non-discriminatory tendering procedure that is subject to review and approval by the regulatory authority, have not been awarded a right to own, develop, manage or operate such facilities, or could not deliver those services at a reasonable cost and in a timely manner;

(b) such facilities are necessary for the distribution system operators to fulfil their obligations under this Directive for the efficient, reliable and secure operation of the distribution system and the facilities are not used to buy or sell electricity in the electricity markets; and

(c) the regulatory authority has assessed the necessity of such a derogation and has carried out an assessment of the tendering procedure, including the conditions of the tendering procedure, and has granted its approval.

The regulatory authority may draw up guidelines or procurement clauses to help distribution system operators ensure a fair tendering procedure.

3. The regulatory authorities shall perform, at regular intervals or at least every five years, a public consultation on the existing energy storage facilities in order to assess the potential availability and interest in investing in such facilities. Where the public consultation, as assessed by the regulatory authority, indicates that third parties are able to own, develop, operate or manage such facilities in a cost-effective manner, the regulatory authority shall ensure that the distribution system operators' activities in this regard are

phased out within 18 months. As part of the conditions of that procedure, regulatory authorities may allow the distribution system operators to receive reasonable compensation, in particular to recover the residual value of their investment in the energy storage facilities.

4. Paragraph 3 shall not apply to fully integrated network components or for the usual depreciation period of new battery storage facilities with a final investment decision until **the date of entry into force of this Directive in the Energy Community**, provided that such battery storage facilities are:²⁸

- (a) connected to the grid at the latest two years thereafter;
- (b) integrated into the distribution system;
- (c) used only for the reactive instantaneous restoration of network security in the case of network contingencies where such restoration measure starts immediately and ends when regular re-dispatch can solve the issue; and
- (d) not used to buy or sell electricity in the electricity markets, including balancing.

Article 37

Confidentiality obligation of distribution system operators

Without prejudice to Article 55 or another legal requirement to disclose information, the distribution system operator shall preserve the confidentiality of commercially sensitive information obtained in the course of carrying out its business, and shall prevent information about its own activities which may be commercially advantageous from being disclosed in a discriminatory manner.

Article 38

Closed distribution systems

1. **Contracting Parties** may provide for regulatory authorities or other competent authorities to classify a system which distributes electricity within a geographically confined industrial, commercial or shared services site and does not, without prejudice to paragraph 4, supply household customers, as a closed distribution system if:

- (a) for specific technical or safety reasons, the operations or the production process of the users of that system are integrated; or
- (b) that system distributes electricity primarily to the owner or operator of the system or their related undertakings.

2. Closed distribution systems shall be considered to be distribution systems for the purposes of this Directive. **Contracting Parties** may provide for regulatory authorities to exempt the operator of a closed distribution system from:

- (a) the requirement under Article 31(5) and (7) to procure the energy it uses to cover energy losses and the non-frequency ancillary services in its system in accordance with transparent, non-discriminatory and market-based procedures;

²⁸ The text displayed in Article 36(4) corresponds to Article 4(1) of Ministerial Council Decision 2021/13/MC-EnC

- (b) the requirement under Article 6(1) that tariffs, or the methodologies underlying their calculation, are approved in accordance with Article 59(1) prior to their entry into force;
 - (c) the requirements under Article 32(1) to procure flexibility services and under Article 32(3) to develop the operator's system on the basis of network development plans;
 - (d) the requirement under Article 33(2) not to own, develop, manage or operate recharging points for electric vehicles; and
 - (e) the requirement under Article 36(1) not to own, develop, manage or operate energy storage facilities.
3. Where an exemption is granted under paragraph 2, the applicable tariffs, or the methodologies underlying their calculation, shall be reviewed and approved in accordance with Article 59(1) upon request by a user of the closed distribution system.
4. Incidental use by a small number of households with employment or similar associations with the owner of the distribution system and located within the area served by a closed distribution system shall not preclude an exemption under paragraph 2 being granted.

Article 39

Combined operator

Article 35(1) shall not prevent the operation of a combined transmission and distribution system operator, provided that the operator complies with Article 43(1), Articles 44 and 45, or Section 3 of Chapter VI, or that the operator falls under Article 66(3).

CHAPTER V

GENERAL RULES APPLICABLE TO TRANSMISSION SYSTEM OPERATORS

Article 40

Tasks of transmission system operators²⁹

1. Each transmission system operator shall be responsible for:
- (a) ensuring the long-term ability of the system to meet reasonable demands for the transmission of electricity, operating, maintaining and developing under economic conditions secure, reliable and efficient transmission system with due regard to the environment, in close cooperation with neighbouring transmission system operators and distribution system operators;
 - (b) ensuring adequate means to meet its obligations;
 - (c) contributing to security of supply through adequate transmission capacity and system reliability;
 - (d) managing electricity flows on the system, taking into account exchanges with other interconnected systems. To that end, the transmission system operator shall be responsible for ensuring a secure, reliable and efficient electricity system and, in that context, for ensuring the availability of all necessary ancillary

²⁹ Articles 40(1)(j) and (3) are not applicable according to items 1 and 2 of Article 4(15) of Ministerial Council Decision 2021/13/MC-EnC respectively.

services, including those provided by demand response and energy storage facilities, insofar as such availability is independent from any other transmission systems with which its system is interconnected;

(e) providing to the operator of other systems with which its system is interconnected sufficient information to ensure the secure and efficient operation, coordinated development and interoperability of the interconnected system;

(f) ensuring non-discrimination as between system users or classes of system users, particularly in favour of its related undertakings;

(g) providing system users with the information they need for efficient access to the system;

(h) collecting congestion rents and payments under the inter-transmission system operator compensation mechanism, in accordance with Article 49 of Regulation (EU) 2019/943, granting and managing third-party access and giving reasoned explanations when it denies such access, which shall be monitored by the regulatory authorities; in carrying out their tasks under this Article transmission system operators shall primarily facilitate market integration;

(i) procuring ancillary services to ensure operational security;

(j) < ... >

(k) participating in the establishment of the European and national resource adequacy assessments pursuant to Chapter IV of Regulation (EU) 2019/943;

(l) the digitalisation of transmission systems;

(m) data management, including the development of data management systems, cybersecurity and data protection, subject to the applicable rules, and without prejudice to the competence of other authorities.

2. Contracting Parties may provide that one or several responsibilities listed in paragraph 1 of this Article be assigned to a transmission system operator other than the one which owns the transmission system to which the responsibilities concerned would otherwise be applicable. The transmission system operator to which the tasks are assigned shall be certified under the ownership unbundling, the independent system operator or the independent transmission system operator model, and fulfil the requirements provided for in Article 43, but shall not be required to own the transmission system it is responsible for.

The transmission system operator which owns the transmission system shall fulfil the requirements provided for in Chapter VI and be certified in accordance with Article 43. This shall be without prejudice to the possibility for transmission system operators which are certified under the ownership unbundling, the independent system operator or the independent transmission system operator model to delegate, on their own initiative and under their supervision, certain tasks to other transmission system operators which are certified under the ownership unbundling, the independent system operator or the independent transmission system operator model where that delegation of tasks does not endanger the effective and independent decision-making rights of the delegating transmission system operator.

3. < ... >

4. In performing the task referred to in point (i) of paragraph 1, transmission system operators shall procure balancing services subject to the following:

(a) transparent, non-discriminatory and market-based procedures;

(b) the participation of all qualified electricity undertakings and market participants, including market participants offering energy from renewable sources, market participants engaged in demand response,

operators of energy storage facilities and market participants engaged in aggregation.

For the purpose of point (b) of the first subparagraph, regulatory authorities and transmission system operators shall, in close cooperation with all market participants, establish technical requirements for participation in those markets, on the basis of the technical characteristics of those markets.

5. Paragraph 4 shall apply to the provision of non-frequency ancillary services by transmission system operators, unless the regulatory authority has assessed that the market-based provision of non-frequency ancillary services is economically not efficient and has granted a derogation. In particular, the regulatory framework shall ensure that transmission system operators are able to procure such services from providers of demand response or energy storage and shall promote the uptake of energy efficiency measures, where such services cost-effectively alleviate the need to upgrade or replace electricity capacity and support the efficient and secure operation of the transmission system.

6. Transmission system operators, subject to approval by the regulatory authority, or the regulatory authority itself, shall, in a transparent and participatory process that includes all relevant system users and the distribution system operators, establish the specifications for the < ... > ancillary services procured and, where appropriate, standardised market products for such services at least at national level. The specifications shall ensure the effective and non-discriminatory participation of all market participants, including market participants offering energy from renewable sources, market participants engaged in demand response, operators of energy storage facilities and market participants engaged in aggregation. Transmission system operators shall exchange all necessary information and shall coordinate with distribution system operators in order to ensure the optimal utilisation of resources, to ensure the secure and efficient operation of the system and to facilitate market development. Transmission system operators shall be adequately remunerated for the procurement of such services to allow them to recover at least the reasonable corresponding costs, including the necessary information and communication technology expenses and infrastructure costs.³⁰

7 The obligation to procure non-frequency ancillary services referred to in paragraph 5 does not apply to fully integrated network components.

8. **Contracting Parties** or their designated competent authorities may allow transmission system operators to perform activities other than those provided for in this Directive and in **Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011** where such activities are necessary for the transmission system operators to fulfil their obligations under this Directive or **Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**, provided that the regulatory authority has assessed the necessity of such a derogation. This paragraph shall be without prejudice to the right of the transmission system operators to own, develop, manage or operate networks other than electricity networks where the **Contracting Party** or the designated competent authority has granted such a right.

³⁰ The text displayed in Article 40(6) corresponds to item 3 in 4(15) of Ministerial Council Decision 2021/13/MC-EnC

Article 41

Confidentiality and transparency requirements for transmission system operators and transmission system owners

1. Without prejudice to Article 55 or another legal duty to disclose information, each transmission system operator and each transmission system owner shall preserve the confidentiality of commercially sensitive information obtained in the course of carrying out its activities, and shall prevent information about its own activities which may be commercially advantageous from being disclosed in a discriminatory manner. In particular it shall not disclose any commercially sensitive information to the remaining parts of the undertaking, unless such disclosure is necessary for carrying out a business transaction. In order to ensure the full respect of the rules on information unbundling, **Contracting Parties** shall ensure that the transmission system owner and the remaining part of the undertaking do not use joint services, such as joint legal services, apart from purely administrative or IT functions.
2. Transmission system operators shall not, in the context of sales or purchases of electricity by related undertakings, misuse commercially sensitive information obtained from third parties in the context of providing or negotiating access to the system.
3. Information necessary for effective competition and the efficient functioning of the market shall be made public. That obligation shall be without prejudice to preserving the confidentiality of commercially sensitive information.

Article 42

Decision-making powers regarding the connection of new generating installations and energy storage facilities to the transmission system

1. The transmission system operator shall establish and publish transparent and efficient procedures for non-discriminatory connection of new generating installations and energy storage facilities to the transmission system. Those procedures shall be subject to approval by the regulatory authorities.
2. The transmission system operator shall not be entitled to refuse the connection of a new generating installation or energy storage facility on the grounds of possible future limitations to available network capacities, such as congestion in distant parts of the transmission system. The transmission system operator shall supply necessary information. The first subparagraph shall be without prejudice to the possibility for transmission system operators to limit the guaranteed connection capacity or to offer connections subject to operational limitations, in order to ensure economic efficiency regarding new generating installations or energy storage facilities, provided that such limitations have been approved by the regulatory authority. The regulatory authority shall ensure that any limitations in guaranteed connection capacity or operational limitations are introduced on the basis of transparent and non-discriminatory procedures and do not create undue barriers to market entry. Where the generating installation or energy storage facility bears the costs related to ensuring unlimited connection, no limitation shall apply.
3. The transmission system operator shall not be entitled to refuse a new connection point, on the ground that it would lead to additional costs resulting from the necessary capacity increase of system elements in the close-up range to the connection point.

CHAPTER VI

UNBUNDLING OF TRANSMISSION SYSTEM OPERATORS

Section 1

Ownership unbundling

Article 43

Ownership unbundling of transmission systems and transmission system operators³¹

1. **Contracting Parties** shall ensure that:

- (a) each undertaking which owns a transmission system acts as a transmission system operator;
- (b) the same person or persons are not entitled either:
 - (i) directly or indirectly to exercise control over an undertaking performing any of the functions of generation or supply, and directly or indirectly to exercise control or exercise any right over a transmission system operator or over a transmission system; or
 - (ii) directly or indirectly to exercise control over a transmission system operator or over a transmission system, and directly or indirectly to exercise control or exercise any right over an undertaking performing any of the functions of generation or supply;
- (c) the same person or persons are not entitled to appoint members of the supervisory board, the administrative board or bodies legally representing the undertaking, of a transmission system operator or a transmission system, and directly or indirectly to exercise control or exercise any right over an undertaking performing any of the functions of generation or supply; and
- (d) the same person is not entitled to be a member of the supervisory board, the administrative board or bodies legally representing the undertaking, of both an undertaking performing any of the functions of generation or supply and a transmission system operator or a transmission system.

2. The rights referred to in points (b) and (c) of paragraph 1 shall include, in particular:

- (a) the power to exercise voting rights;
- (b) the power to appoint members of the supervisory board, the administrative board or bodies legally representing the undertaking; or
- (c) the holding of a majority share.

3. For the purpose of point (b) of paragraph 1, the notion 'undertaking performing any of the functions of generation or supply' shall include 'undertaking performing any of the functions of production and supply' within the meaning of Directive 2009/73/EC, and the terms 'transmission system operator' and 'transmission system' shall include 'transmission system operator' and 'transmission system' within the meaning of that Directive.

³¹ The text displayed in Articles 43(7) and (8) correspond to Article 4(16) of Ministerial Council Decision 2021/13/MC-EnC

4. The obligation set out in point (a) of paragraph 1 shall be deemed to be fulfilled in a situation where two or more undertakings which own transmission systems have created a joint venture which acts as a transmission system operator in two or more **Contracting Parties** for the transmission systems concerned. No other undertaking may be part of the joint venture, unless it has been approved under Article 44 as an independent system operator or as an independent transmission operator for the purposes of Section 3.

5. For the implementation of this Article, where the person referred to in points (b), (c) and (d) of paragraph 1 is the **Contracting Party** or another public body, two separate public bodies exercising control over a transmission system operator or over a transmission system on the one hand, and over an undertaking performing any of the functions of generation or supply on the other, shall be deemed not to be the same person or persons.

6. **Contracting Parties** shall ensure that neither commercially sensitive information referred to in Article 41 held by a transmission system operator which was part of a vertically integrated undertaking, nor the staff of such a transmission system operator, is transferred to undertakings performing any of the functions of generation and supply.

7. Where on **6 October 2011**, the transmission system belongs to a vertically integrated undertaking a **Contracting Party** may decide not to apply paragraph 1.

In such case, the **Contracting Party** concerned shall either:

- (a) designate an independent system operator in accordance with Article 44; or
- (b) comply with Section 3.

8. Where, on **6 October 2011**, the transmission system belongs to a vertically integrated undertaking and there are arrangements in place which guarantee more effective independence of the transmission system operator than Section 3, a **Contracting Party** may decide not to apply paragraph 1.

9. Before an undertaking is approved and designated as a transmission system operator under paragraph 8 of this Article, it shall be certified in accordance with the procedures laid down in Article 52(4), (5), and (6) of this Directive and in **Article 3 of Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011, pursuant to which the Energy Community Secretariat** shall verify that the arrangements in place clearly guarantee more effective independence of the transmission system operator than Section 3 of this Chapter.

10. Vertically integrated undertakings which own a transmission system shall not in any event be prevented from taking steps to comply with paragraph 1.

11. Undertakings performing any of the functions of generation or supply shall not in any event be able to directly or indirectly take control over or exercise any right over unbundled transmission system operators in **Contracting Parties** which apply paragraph 1.

Section 2

Independent system operator

Article 44

Independent system operator

1. Where the transmission system belongs to a vertically integrated undertaking on 3 September 2009, **Contracting Parties** may decide not to apply Article 43(1) and designate an independent system operator upon a proposal from the transmission system owner. Such designation shall be subject to **opinion of the Energy Community Secretariat**.³²
2. The **Contracting Party** may approve and designate an independent system operator provided that:
 - (a) the candidate operator has demonstrated that it complies with the requirements laid down in points (b), (c) and (d) of Article 43(1);
 - (b) the candidate operator has demonstrated that it has at its disposal the required financial, technical, physical and human resources to carry out its tasks under Article 40;
 - (c) the candidate operator has undertaken to comply with a ten-year network development plan monitored by the regulatory authority;
 - (d) the transmission system owner has demonstrated its ability to comply with its obligations under paragraph 5. To that end, it shall provide all the draft contractual arrangements with the candidate operator and any other relevant entity; and
 - (e) the candidate operator has demonstrated its ability to comply with its obligations under **Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**, including the cooperation of transmission system operators at European and regional level.
3. Undertakings which have been certified by the regulatory authority as having complied with the requirements of Article 53 and paragraph 2 of this Article shall be approved and designated as independent system operators by **Contracting Parties**. The certification procedure in either Article 52 of this Directive and **Article 3 of Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011** or in Article 53 of this Directive shall be applicable.
4. Each independent system operator shall be responsible for granting and managing third-party access, including the collection of access charges, congestion charges, and payments under the inter-transmission system operator compensation mechanism in accordance with **Article 13 of Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**, as well as for operating, maintaining and developing the transmission system, and for ensuring the long-term ability of the system to meet reasonable demand through investment planning. When developing the transmission system, the independent system operator shall be responsible for planning (including authorisation procedure), construction and commissioning of the new infrastructure. For this purpose, the independent system operator shall act as a transmission system operator in accordance with this Section. The transmission system owner shall not be responsible for granting and managing third-party access, nor for investment planning.

³² The text displayed in Article 44(1) corresponds to Article 4(17) of Ministerial Council Decision 2021/13/MC-EnC

5. Where an independent system operator has been designated, the transmission system owner shall:
- (a) provide all the relevant cooperation and support to the independent system operator for the fulfilment of its tasks, including in particular all relevant information;
 - (b) finance the investments decided by the independent system operator and approved by the regulatory authority, or give its agreement to financing by any interested party including the independent system operator. The relevant financing arrangements shall be subject to approval by the regulatory authority. Prior to such approval, the regulatory authority shall consult the transmission system owner together with the other interested parties;
 - (c) provide for the coverage of liability relating to the network assets, excluding the liability relating to the tasks of the independent system operator; and
 - (d) provide guarantees to facilitate financing any network expansions with the exception of those investments where, pursuant to point (b), it has given its agreement to financing by any interested party including the independent system operator.
6. In close cooperation with the regulatory authority, the relevant national competition authority shall be granted all relevant powers to effectively monitor compliance of the transmission system owner with its obligations under paragraph 5.

Article 45

Unbundling of transmission system owners

1. A transmission system owner, where an independent system operator has been appointed, which is part of a vertically integrated undertaking shall be independent at least in terms of its legal form, organisation and decision-making from other activities not relating to transmission.
2. In order to ensure the independence of the transmission system owner referred to in paragraph 1, the following minimum criteria shall apply:
- (a) persons responsible for the management of the transmission system owner shall not participate in company structures of the integrated electricity undertaking responsible, directly or indirectly, for the day-to-day operation of the generation, distribution and supply of electricity;
 - (b) appropriate measures shall be taken to ensure that the professional interests of persons responsible for the management of the transmission system owner are taken into account in a manner that ensures that they are capable of acting independently; and
 - (c) the transmission system owner shall establish a compliance programme, which sets out measures taken to ensure that discriminatory conduct is excluded, and ensure that observance of it is adequately monitored. The compliance programme shall set out the specific obligations of employees to meet those objectives. An annual report, setting out the measures taken, shall be submitted by the person or body responsible for monitoring the compliance programme to the regulatory authority and shall be published.

Section 3

Independent transmission operators

Article 46

Assets, equipment, staff and identity

1. Transmission system operators shall be equipped with all human, technical, physical and financial resources necessary for fulfilling their obligations under this Directive and carrying out the activity of electricity transmission, in particular:

(a) assets that are necessary for the activity of electricity transmission, including the transmission system, shall be owned by the transmission system operator;

(b) personnel, necessary for the activity of electricity transmission, including the performance of all corporate tasks, shall be employed by the transmission system operator;

(c) leasing of personnel and rendering of services, to and from other parts of the vertically integrated undertaking shall be prohibited. A transmission system operator may, however, render services to the vertically integrated undertaking, provided that:

(i) the provision of those services does not discriminate between system users, is available to all system users on the same terms and conditions and does not restrict, distort or prevent competition in generation or supply; and

(ii) the terms and conditions of the provision of those services are approved by the regulatory authority;

(d) without prejudice to the decisions of the Supervisory Body under Article 49, appropriate financial resources for future investment projects and/or for the replacement of existing assets shall be made available to the transmission system operator in due time by the vertically integrated undertaking after an appropriate request from the transmission system operator.

2. The activity of electricity transmission shall include at least the following tasks in addition to those listed in Article 40:

(a) the representation of the transmission system operator and contacts to third parties and the regulatory authorities;

(b) the representation of the transmission system operator within the ENTSO for Electricity;

(c) granting and managing third-party access on a non-discriminatory basis between system users or classes of system users;

(d) the collection of all the transmission system related charges including access charges, energy for losses and ancillary services charges;

(e) the operation, maintenance and development of a secure, efficient and economic transmission system;

(f) investment planning ensuring the long-term ability of the system to meet reasonable demand and guaranteeing security of supply;

(g) the setting up of appropriate joint ventures, including with one or more transmission system operators, power exchanges, and the other relevant actors pursuing the objectives to develop the creation of regional

markets or to facilitate the liberalisation process; and

(h) all corporate services, including legal services, accountancy and IT services.

3. Transmission system operators shall be organised in a legal form as referred to in Annex I to Directive (EU) 2017/1132 of the European Parliament and of the Council.

4. The transmission system operator shall not, in its corporate identity, communication, branding and premises, create confusion with respect to the separate identity of the vertically integrated undertaking or any part thereof.

5. The transmission system operator shall not share IT systems or equipment, physical premises and security access systems with any part of the vertically integrated undertaking nor use the same consultants or external contractors for IT systems or equipment, and security access systems.

6. The accounts of transmission system operators shall be audited by an auditor other than the one auditing the vertically integrated undertaking or any part thereof.

Article 47

Independence of the transmission system operator

1. Without prejudice to the decisions of the Supervisory Body under Article 49, the transmission system operator shall have:

(a) effective decision-making rights, independent from the vertically integrated undertaking, with respect to assets necessary to operate, maintain or develop the transmission system; and

(b) the power to raise money on the capital market in particular through borrowing and capital increase.

2. The transmission system operator shall at all times act so as to ensure it has the resources it needs in order to carry out the activity of transmission properly and efficiently and develop and maintain an efficient, secure and economic transmission system.

3. Subsidiaries of the vertically integrated undertaking performing functions of generation or supply shall not have any direct or indirect shareholding in the transmission system operator. The transmission system operator shall neither have any direct or indirect shareholding in any subsidiary of the vertically integrated undertaking performing functions of generation or supply, nor receive dividends or other financial benefits from that subsidiary.

4. The overall management structure and the corporate statutes of the transmission system operator shall ensure effective independence of the transmission system operator in accordance with this Section. The vertically integrated undertaking shall not determine, directly or indirectly, the competitive behaviour of the transmission system operator in relation to the day-to-day activities of the transmission system operator and management of the network, or in relation to activities necessary for the preparation of the ten-year network development plan developed pursuant to Article 51.

5. In fulfilling their tasks in Article 40 and Article 46(2) of this Directive, and in complying with obligations set out in **Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**, transmission system operators shall not discriminate against different persons or entities and shall not restrict, distort or prevent competition in generation or supply.

6. Any commercial and financial relations between the vertically integrated undertaking and the transmission

system operator, including loans from the transmission system operator to the vertically integrated undertaking, shall comply with market conditions. The transmission system operator shall keep detailed records of such commercial and financial relations and make them available to the regulatory authority upon request.

7. The transmission system operator shall submit for approval by the regulatory authority all commercial and financial agreements with the vertically integrated undertaking.

8. The transmission system operator shall inform the regulatory authority of the financial resources, referred to in point (d) of Article 46(1), available for future investment projects and/or for the replacement of existing assets.

9. The vertically integrated undertaking shall refrain from any action impeding or prejudicing the transmission system operator from complying with its obligations in this Chapter and shall not require the transmission system operator to seek permission from the vertically integrated undertaking in fulfilling those obligations.

10. An undertaking which has been certified by the regulatory authority as being in accordance with the requirements of this Chapter shall be approved and designated as a transmission system operator by the **Contracting Party** concerned. The certification procedure in either Article 52 of this Directive and **Article 3 of Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011** or in Article 53 of this Directive shall apply.

Article 48

Independence of the staff and the management of the transmission system operator

1. Decisions regarding the appointment and renewal, working conditions including remuneration, and termination of the term of office of the persons responsible for the management and/or members of the administrative bodies of the transmission system operator shall be taken by the Supervisory Body of the transmission system operator appointed in accordance with Article 49.

2. The identity and the conditions governing the term, the duration and the termination of office of the persons nominated by the Supervisory Body for appointment or renewal as persons responsible for the executive management and/or as members of the administrative bodies of the transmission system operator, and the reasons for any proposed decision terminating such term of office, shall be notified to the regulatory authority. Those conditions and the decisions referred to in paragraph 1 shall become binding only if the regulatory authority has raised no objections within three weeks of notification.

The regulatory authority may object to the decisions referred to in paragraph 1 where:

(a) doubts arise as to the professional independence of a nominated person responsible for the management and/or member of the administrative bodies; or

(b) in the case of premature termination of a term of office, doubts exist regarding the justification of such premature termination.

3. No professional position or responsibility, interest or business relationship, directly or indirectly, with the vertically integrated undertaking or any part of it or its controlling shareholders other than the transmission system operator shall be exercised for a period of three years before the appointment of the persons responsible for the management and/or members of the administrative bodies of the transmission system

operator who are subject to this paragraph.

4. The persons responsible for the management and/or members of the administrative bodies, and employees of the transmission system operator shall have no other professional position or responsibility, interest or business relationship, directly or indirectly, with another part of the vertically integrated undertaking or with its controlling shareholders.

5. The persons responsible for the management and/or members of the administrative bodies, and employees of the transmission system operator shall hold no interest in or receive any financial benefit, directly or indirectly, from any part of the vertically integrated undertaking other than the transmission system operator. Their remuneration shall not depend on activities or results of the vertically integrated undertaking other than those of the transmission system operator.

6. Effective rights of appeal to the regulatory authority shall be guaranteed for any complaints by the persons responsible for the management and/or members of the administrative bodies of the transmission system operator against premature terminations of their term of office.

7. After termination of their term of office in the transmission system operator, the persons responsible for its management and/or members of its administrative bodies shall have no professional position or responsibility, interest or business relationship with any part of the vertically integrated undertaking other than the transmission system operator, or with its controlling shareholders for a period of not less than four years.

8. Paragraph 3 shall apply to the majority of the persons responsible for the management and/or members of the administrative bodies of the transmission system operator.

The persons responsible for the management and/or members of the administrative bodies of the transmission system operator who are not subject to paragraph 3 shall have exercised no management or other relevant activity in the vertically integrated undertaking for a period of at least six months before their appointment.

The first subparagraph of this paragraph and paragraphs 4 to 7 shall be applicable to all the persons belonging to the executive management and to those directly reporting to them on matters related to the operation, maintenance or development of the network.

Article 49

Supervisory Body

1. The transmission system operator shall have a Supervisory Body which shall be in charge of taking decisions which may have a significant impact on the value of the assets of the shareholders within the transmission system operator, in particular decisions regarding the approval of the annual and longer-term financial plans, the level of indebtedness of the transmission system operator and the amount of dividends distributed to shareholders. The decisions falling under the remit of the Supervisory Body shall exclude those that are related to the day-to-day activities of the transmission system operator and management of the network, and to activities necessary for the preparation of the ten-year network development plan developed pursuant to Article 51.

2. The Supervisory Body shall be composed of members representing the vertically integrated undertaking, members representing third-party shareholders and, where the relevant national law so provides, members representing other interested parties such as employees of the transmission system operator.

3. The first subparagraph of Article 48(2) and Article 48(3) to (7) shall apply to at least half of the members of the Supervisory Body minus one.

Point (b) of the second subparagraph of Article 48(2) shall apply to all the members of the Supervisory Body.

Article 50

Compliance programme and compliance officer

1. **Contracting Parties** shall ensure that transmission system operators establish and implement a compliance programme which sets out the measures taken in order to ensure that discriminatory conduct is excluded, and ensure that the compliance with that programme is adequately monitored. The compliance programme shall set out the specific obligations of employees to meet those objectives. It shall be subject to approval by the regulatory authority. Without prejudice to the powers of the regulatory authority, compliance with the programme shall be independently monitored by a compliance officer.

2. The compliance officer shall be appointed by the Supervisory Body, subject to approval by the regulatory authority. The regulatory authority may refuse the approval of the compliance officer only for reasons of lack of independence or professional capacity. The compliance officer may be a natural or legal person. Article 48(2) to (8) shall apply to the compliance officer.

3. The compliance officer shall be in charge of:

- (a) monitoring the implementation of the compliance programme;
- (b) elaborating an annual report, setting out the measures taken in order to implement the compliance programme and submitting it to the regulatory authority;
- (c) reporting to the Supervisory Body and issuing recommendations on the compliance programme and its implementation;
- (d) notifying the regulatory authority on any substantial breaches with regard to the implementation of the compliance programme; and
- (e) reporting to the regulatory authority on any commercial and financial relations between the vertically integrated undertaking and the transmission system operator.

4. The compliance officer shall submit the proposed decisions on the investment plan or on individual investments in the network to the regulatory authority. This shall occur at the latest when the management and/or the competent administrative body of the transmission system operator submits them to the Supervisory Body.

5. Where the vertically integrated undertaking, in the general assembly or through the vote of the members of the Supervisory Body it has appointed, has prevented the adoption of a decision with the effect of preventing or delaying investments, which under the ten-year network development plan was to be executed in the following three years, the compliance officer shall report this to the regulatory authority, which then shall act in accordance with Article 51.

6. The conditions governing the mandate or the employment conditions of the compliance officer, including the duration of its mandate, shall be subject to approval by the regulatory authority. Those conditions shall ensure the independence of the compliance officer, including by providing all the resources necessary for fulfilling the compliance officer's duties. During his or her mandate, the compliance officer shall have

no other professional position, responsibility or interest, directly or indirectly, in or with any part of the vertically integrated undertaking or with its controlling shareholders.

7. The compliance officer shall report regularly, either orally or in writing, to the regulatory authority and shall have the right to report regularly, either orally or in writing, to the Supervisory Body of the transmission system operator.

8. The compliance officer may attend all meetings of the management or administrative bodies of the transmission system operator, and those of the Supervisory Body and the general assembly. The compliance officer shall attend all meetings that address the following matters:

(a) conditions for access to the network, as laid down in **Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**, in particular regarding tariffs, third-party access services, capacity allocation and congestion management, transparency, ancillary services and secondary markets;

(b) projects undertaken in order to operate, maintain and develop the transmission system, including interconnection and connection investments;

(c) energy purchases or sales necessary for the operation of the transmission system.

9. The compliance officer shall monitor the compliance of the transmission system operator with Article 41.

10. The compliance officer shall have access to all relevant data and to the offices of the transmission system operator and to all the information necessary for the fulfilment of his task.

11. The compliance officer shall have access to the offices of the transmission system operator without prior announcement.

12. After prior approval by the regulatory authority, the Supervisory Body may dismiss the compliance officer. It shall dismiss the compliance officer for reasons of lack of independence or professional capacity upon request of the regulatory authority.

Article 51

Network development and powers to make investment decisions³³

1. At least every two years, transmission system operators shall submit to the regulatory authority a ten-year network development plan based on existing and forecast supply and demand after having consulted all the relevant stakeholders. That network development plan shall contain efficient measures in order to guarantee the adequacy of the system and the security of supply. The transmission system operator shall publish the ten-year network development plan on its website.

2. The ten-year network development plan shall in particular:

(a) indicate to market participants the main transmission infrastructure that needs to be built or upgraded over the next ten years;

(b) contain all the investments already decided and identify new investments which have to be executed in the next three years; and

(c) provide for a time frame for all investment projects.

³³ The text displayed in Articles 51(3) and (5) correspond to Article 4(18) of Ministerial Council Decision 2021/13/MC-EnC

3. When elaborating the ten-year network development plan, the transmission system operator shall fully take into account the potential for the use of demand response, energy storage facilities or other resources as alternatives to system expansion, as well as expected consumption, trade with other countries and investment plans for **Energy Community**-wide and regional networks, **as applicable**.

4. The regulatory authority shall consult all actual or potential system users on the ten-year network development plan in an open and transparent manner. Persons or undertakings claiming to be potential system users may be required to substantiate such claims. The regulatory authority shall publish the result of the consultation process, in particular possible needs for investments.

5. The regulatory authority shall examine whether the ten-year network development plan covers all investment needs identified during the consultation process, and whether it is consistent with the non-binding Union-wide ten-year network development plan ('Union-wide network development plan') < ... >. If any doubt arises as to the consistency with the Union-wide network development plan, the regulatory authority shall consult ACER. The regulatory authority may require the transmission system operator to amend its ten-year network development plan.

The competent national authorities shall examine the consistency of the ten-year network development plan with the national energy and climate plan submitted in accordance with Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC of 30 November 2021**.

6. The regulatory authority shall monitor and evaluate the implementation of the ten-year network development plan.

7. In circumstances where the transmission system operator, other than for overriding reasons beyond its control, does not execute an investment, which, under the ten-year network development plan, was to be executed in the following three years, **Contracting Parties** shall ensure that the regulatory authority is required to take at least one of the following measures to ensure that the investment in question is made if such investment is still relevant on the basis of the most recent ten-year network development plan:

- (a) to require the transmission system operator to execute the investments in question;
- (b) to organise a tender procedure open to any investors for the investment in question; or
- (c) to oblige the transmission system operator to accept a capital increase to finance the necessary investments and allow independent investors to participate in the capital.

8. Where the regulatory authority has made use of its powers under point (b) of paragraph 7, it may oblige the transmission system operator to agree to one or more of the following:

- (a) financing by any third party;
- (b) construction by any third party;
- (c) building the new assets concerned itself;
- (d) operating the new asset concerned itself.

The transmission system operator shall provide the investors with all information needed to realise the investment, shall connect new assets to the transmission network and shall generally make its best efforts to facilitate the implementation of the investment project.

The relevant financial arrangements shall be subject to approval by the regulatory authority.

9. Where the regulatory authority has made use of its powers under paragraph 7, the relevant tariff regulations shall cover the costs of the investments in question.

Section 4

Designation and certification of transmission system operators

Article 52

Designation and certification of transmission system operators

1. Before an undertaking is approved and designated as transmission system operator, it shall be certified in accordance with the procedures laid down in paragraphs 4, 5 and 6 of this Article and in **Article 3 of Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**.
2. Undertakings which have been certified by the regulatory authority as having complied with the requirements of Article 43 pursuant to the certification procedure below, shall be approved and designated as transmission system operators by **Contracting Parties**. The designation of transmission system operators shall be notified to the **Energy Community Secretariat** and published in the **Website of the Energy Community**.
3. Transmission system operators shall notify to the regulatory authority any planned transaction which may require a reassessment of their compliance with the requirements of Article 43.
4. Regulatory authorities shall monitor the continuing compliance of transmission system operators with the requirements of Article 43. They shall open a certification procedure to ensure such compliance:
 - (a) upon notification by the transmission system operator pursuant to paragraph 3;
 - (b) on their own initiative where they have knowledge that a planned change in rights or influence over transmission system owners or transmission system operators may lead to an infringement of Article 43, or where they have reason to believe that such an infringement may have occurred; or
 - (c) upon a reasoned request from the **Energy Community Secretariat**.
5. The regulatory authorities shall adopt a decision on the certification of a transmission system operator within four months of the date of the notification by the transmission system operator or from the date of the **Energy Community Secretariat** request. After expiry of that period, the certification shall be deemed to be granted. The explicit or tacit decision of the regulatory authority shall become effective only after conclusion of the procedure set out in paragraph 6.
6. The explicit or tacit decision on the certification of a transmission system operator shall be notified without delay to the **Energy Community Secretariat** by the regulatory authority, together with all the relevant information with respect to that decision. The **Energy Community Secretariat** shall act in accordance with the procedure laid down in **Article 3 of Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**.
7. The regulatory authorities and the **Energy Community Secretariat** may request from transmission system operators and undertakings performing any of the functions of generation or supply any information relevant for the fulfilment of their tasks under this Article.
8. Regulatory authorities and the **Energy Community Secretariat** shall preserve the confidentiality of commercially sensitive information.

Article 53**Certification in relation to third countries**

1. Where certification is requested by a transmission system owner or a transmission system operator which is controlled by a person or persons from a third country or third countries, the regulatory authority shall notify the **Energy Community Secretariat**.

The regulatory authority shall also notify to the **Energy Community Secretariat** without delay any circumstances that would result in a person or persons from a third country or third countries acquiring control of a transmission system or a transmission system operator.

2. The transmission system operator shall notify to the regulatory authority any circumstances that would result in a person or persons from a third country or third countries acquiring control of the transmission system or the transmission system operator.

3. The regulatory authority shall adopt a draft decision on the certification of a transmission system operator within four months of the date of notification by the transmission system operator. It shall refuse the certification if it has not been demonstrated:

(a) that the entity concerned complies with the requirements of Article 43; and

(b) to the regulatory authority or to another competent national authority designated by the **Contracting Party** that granting certification will not put at risk the security of energy supply of the **Contracting Party** and the **Energy Community**. In considering that question the regulatory authority or other competent national authority shall take into account:

(i) the rights and obligations of the **Energy Community** with respect to that third country arising under international law, including any agreement concluded with one or more third countries to which the **Energy Community** is a party and which addresses the issues of security of energy supply;

(ii) the rights and obligations of the **Contracting Party** with respect to that third country arising under agreements concluded with it, insofar as they comply with **Energy Community** law; and

(iii) other specific facts and circumstances of the case and the third country concerned.

4. The regulatory authority shall notify the decision to the **Energy Community Secretariat** without delay, together with all the relevant information with respect to that decision.

5. **Contracting Parties** shall provide for the regulatory authority or the designated competent authority referred to in point (b) of paragraph 3, before the regulatory authority adopts a decision on the certification, to request an opinion from the **Energy Community Secretariat** on whether:

(a) the entity concerned complies with the requirements of Article 43; and

(b) granting certification will not put at risk the security of energy supply to the **Energy Community**.

6. The **Energy Community Secretariat** shall examine the request referred to in paragraph 5 as soon as it is received. Within two months of receiving the request, it shall deliver its opinion to the regulatory authority or, if the request was made by the designated competent authority, to that authority.

In preparing the opinion, the **Energy Community Secretariat** may request the views of the **Energy Community Regulatory Board**, the **Contracting Party** concerned, and interested parties. In the event that the **Energy Community Secretariat** makes such a request, the two-month period shall be extended by two months.

In the absence of an opinion by the **Energy Community Secretariat** within the period referred to in the first and second subparagraphs, the **Energy Community Secretariat** shall be deemed not to raise objections to the decision of the regulatory authority.

7. When assessing whether the control by a person or persons from a third country or third countries will put at risk the security of energy supply to the **Energy Community**, the **Energy Community Secretariat** shall take into account:

(a) the specific facts of the case and the third country or third countries concerned; and

(b) the rights and obligations of the **Energy Community** with respect to that third country or third countries arising under international law, including an agreement concluded with one or more third countries to which the **Energy Community** is a party and which addresses the issues of security of supply.

8. The regulatory authority shall, within two months of the expiry of the period referred to in paragraph 6, adopt its final decision on the certification. In adopting its final decision the regulatory authority shall take utmost account of the **Energy Community Secretariat's** opinion. In any event **Contracting Parties** shall have the right to refuse certification where granting certification puts at risk the **Contracting Party's** security of energy supply or the security of energy supply of another **Contracting Party**. Where the **Contracting Party** has designated another competent national authority to make the assessment referred to in point (b) of paragraph 3, it may require the regulatory authority to adopt its final decision in accordance with the assessment of that competent national authority. The regulatory authority's final decision and the **Energy Community Secretariat's** opinion shall be published together. Where the final decision diverges from the **Energy Community Secretariat's** opinion, the **Contracting Party** concerned shall provide and publish, together with that decision, the reasoning underlying such decision.

9. Nothing in this Article shall affect the right of **Contracting Parties** to exercise, in accordance with **Energy Community** law, national legal controls to protect legitimate public security interests.

10. < ... >³⁴

Article 54

Ownership of energy storage facilities by transmission system operators

1. Transmission system operators shall not own, develop, manage or operate energy storage facilities.

2. By way of derogation from paragraph 1, **Contracting Parties** may allow transmission system operators to own, develop, manage or operate energy storage facilities, where they are fully integrated network components and the regulatory authority has granted its approval, or where all of the following conditions are fulfilled:

(a) other parties, following an open, transparent and non-discriminatory tendering procedure that is subject to review and approval by the regulatory authority, have not been awarded a right to own, develop, manage or operate such facilities, or could not deliver those services at a reasonable cost and in a timely manner;

(b) such facilities or non-frequency ancillary services are necessary for the transmission system operators to fulfil their obligations under this Directive for the efficient, reliable and secure operation of the transmission system and they are not used to buy or sell electricity in the electricity markets; and

³⁴ Not applicable according to Article 4(19) of Ministerial Council Decision 2021/13/MC-Enc

(c) the regulatory authority has assessed the necessity of such a derogation, has carried out an *ex ante* review of the applicability of a tendering procedure, including the conditions of the tendering procedure, and has granted its approval.

The regulatory authority may draw up guidelines or procurement clauses to help transmission system operators ensure a fair tendering procedure.

3. The decision to grant a derogation shall be notified to the **Energy Community Secretariat** and **Energy Community Regulatory Board** together with relevant information about the request and the reasons for granting the derogation.

4. The regulatory authorities shall perform, at regular intervals or at least every five years, a public consultation on the existing energy storage facilities in order to assess the potential availability and interest of other parties in investing in such facilities. Where the public consultation, as assessed by the regulatory authority, indicates that other parties are able to own, develop, operate or manage such facilities in a cost-effective manner, the regulatory authority shall ensure that transmission system operators' activities in this regard are phased-out within 18 months. As part of the conditions of that procedure, regulatory authorities may allow the transmission system operators to receive reasonable compensation, in particular to recover the residual value of their investment in the energy storage facilities.

5. Paragraph 4 shall not apply to fully integrated network components or for the usual depreciation period of new battery storage facilities with a final investment decision until **2026**, provided that such battery storage facilities are:

- (a) connected to the grid at the latest two years thereafter;
- (b) integrated into the transmission system;
- (c) used only for the reactive instantaneous restoration of network security in the case of network contingencies where such restoration measure starts immediately and ends when regular re-dispatch can solve the issue; and
- (d) not used to buy or sell electricity in the electricity markets, including **balancing**.³⁵

Section 5

Unbundling and transparency of accounts

Article 55

Right of access to accounts

1. **Contracting Parties** or any competent authority that they designate, including the regulatory authorities referred to in Article 57, shall, insofar as necessary to carry out their functions, have right of access to the accounts of electricity undertakings as set out in Article 56.

2. **Contracting Parties** and any designated competent authority, including the regulatory authorities, shall preserve the confidentiality of commercially sensitive information. **Contracting Parties** may provide for the disclosure of such information where such disclosure is necessary in order for the competent

³⁵ The text displayed here corresponds to Article 4(20) of Ministerial Council Decision 2021/13/MC-Enc

authorities to carry out their functions.

Article 56

Unbundling of accounts³⁶

1. **Contracting Parties** shall take the necessary steps to ensure that the accounts of electricity undertakings are kept in accordance with paragraphs 2 and 3.

2. Electricity undertakings, whatever their system of ownership or legal form, shall draw up, submit to audit and publish their annual accounts in accordance with the rules of national law concerning the annual accounts of limited liability companies < ... >.

Undertakings which are not legally obliged to publish their annual accounts shall keep a copy of these at the disposal of the public in their head office.

3. Electricity undertakings shall, in their internal accounting, keep separate accounts for each of their transmission and distribution activities as they would be required to do if the activities in question were carried out by separate undertakings, with a view to avoiding discrimination, cross-subsidisation and distortion of competition. They shall also keep accounts, which may be consolidated, for other electricity activities not relating to transmission or distribution. Revenue from ownership of the transmission or distribution system shall be specified in the accounts. Where appropriate, they shall keep consolidated accounts for other, non-electricity activities. The internal accounts shall include a balance sheet and a profit and loss account for each activity.

4. The audit referred to in paragraph 2 shall, in particular, verify that the obligation to avoid discrimination and cross-subsidisation referred to in paragraph 3 is respected.

CHAPTER VII

REGULATORY AUTHORITIES

Article 57

Designation and independence of regulatory authorities

1. Each **Contracting Party** shall designate a single regulatory authority at national level.

2. Paragraph 1 shall be without prejudice to the designation of other regulatory authorities at regional level within **Contracting Parties**, provided that there is one senior representative for representation and contact purposes at **Energy Community** level within **Energy Community Regulatory Board**.

3. By way of derogation from paragraph 1, a **Contracting Party** may designate regulatory authorities for small systems in a geographically separate region whose consumption, in 2008, accounted for less than 3 % of the total consumption of the **Contracting Party** of which it is part. That derogation shall be without prejudice to the appointment of one senior representative for representation and contact purposes at **Energy Community** level within **Energy Community Regulatory Board < ... >**.³⁷

³⁶ The text displayed in Article 56(2) corresponds to Article 4(21) of Ministerial Council Decision 2021/13/MC-EnC

³⁷ The text displayed in Article 57(3) corresponds to Article 4(22) of Ministerial Council Decision 2021/13/MC-EnC

4. **Contracting Parties** shall guarantee the independence of the regulatory authority and shall ensure that it exercises its powers impartially and transparently. For that purpose, **Contracting Parties** shall ensure that, when carrying out the regulatory tasks conferred upon it by this Directive and related legislation, the regulatory authority:

- (a) is legally distinct and functionally independent from other public or private entities;
- (b) ensures that its staff and the persons responsible for its management:
 - (i) act independently from any market interest; and
 - (ii) do not seek or take direct instructions from any government or other public or private entity when carrying out the regulatory tasks. That requirement is without prejudice to close cooperation, as appropriate, with other relevant national authorities or to general policy guidelines issued by the government not related to the regulatory powers and duties under Article 59.

5. In order to protect the independence of the regulatory authority, **Contracting Parties** shall in particular ensure that:

- (a) the regulatory authority can take autonomous decisions, independently from any political body;
- (b) the regulatory authority has all the necessary human and financial resources it needs to carry out its duties and exercise its powers in an effective and efficient manner;
- (c) the regulatory authority has a separate annual budget allocation and autonomy in the implementation of the allocated budget;
- (d) the members of the board of the regulatory authority or, in the absence of a board, the regulatory authority's top management are appointed for a fixed term of five up to seven years, renewable once;
- (e) the members of the board of the regulatory authority or, in the absence of a board, the regulatory authority's top management are appointed based on objective, transparent and published criteria, in an independent and impartial procedure, which ensures that the candidates have the necessary skills and experience for the relevant position in the regulatory authority;
- (f) conflict of interest provisions are in place and confidentiality obligations extend beyond the end of the mandate of the members of the board of the regulatory authority or, in the absence of a board, the end of the mandate of the regulatory authority's top management;
- (g) the members of the board of the regulatory authority or, in the absence of a board, the regulatory authority's top management can be dismissed only based on transparent criteria in place.

In regard to point (d) of the first subparagraph, **Contracting Parties** shall ensure an appropriate rotation scheme for the board or the top management. The members of the board or, in the absence of a board, members of the top management may be relieved from office during their term only if they no longer fulfil the conditions set out in this Article or have been guilty of misconduct under national law.

6. **Contracting Parties** may provide for the *ex post* control of the regulatory authorities' annual accounts by an independent auditor.

7. By 5 July 2022 and every four years thereafter, the **Energy Community Secretariat** shall submit a report to the **Ministerial Council** on the compliance of national authorities with the principle of independence set out in this Article.

Article 58

General objectives of the regulatory authority

In carrying out the regulatory tasks specified in this Directive, the regulatory authority shall take all reasonable measures in pursuit of the following objectives within the framework of its duties and powers as laid down in Article 59, in close consultation with other relevant national authorities, including competition authorities, as well as authorities, including regulatory authorities, from neighbouring **Contracting Parties** and neighbouring third countries, as appropriate, and without prejudice to their competence:

(a) promoting, in close cooperation with regulatory authorities of other **Contracting Parties**, the **Energy Community Secretariat** and **Energy Community Regulatory Board**, a competitive, flexible, secure and environmentally sustainable internal market for electricity within the **Energy Community**, and effective market opening for all customers and suppliers in the **Energy Community**, and ensuring appropriate conditions for the effective and reliable operation of electricity networks, taking into account long-term objectives;

(b) developing competitive and properly functioning regional cross-border markets within the **Energy Community** with a view to achieving the objectives referred to in point (a);

(c) eliminating restrictions on trade in electricity between **Contracting Parties**, including developing appropriate cross-border transmission capacities to meet demand and enhancing the integration of national markets which may facilitate electricity flows across the **Energy Community**;

(d) helping to achieve, in the most cost-effective way, the development of secure, reliable and efficient non-discriminatory systems that are consumer-oriented, and promoting system adequacy and, in accordance with general energy policy objectives, energy efficiency, as well as the integration of large and small-scale production of electricity from renewable sources and distributed generation in both transmission and distribution networks, and facilitating their operation in relation to other energy networks of gas or heat;

(e) facilitating access to the network for new generation capacity and energy storage facilities, in particular removing barriers that could prevent access for new market entrants and of electricity from renewable sources;

(f) ensuring that system operators and system users are granted appropriate incentives, in both the short and the long term, to increase efficiencies, especially energy efficiency, in system performance and to foster market integration;

(g) ensuring that customers benefit through the efficient functioning of their national market, promoting effective competition and helping to ensure a high level of consumer protection, in close cooperation with relevant consumer protection authorities;

(h) helping to achieve high standards of universal service and of public service in electricity supply, contributing to the protection of vulnerable customers and contributing to the compatibility of necessary data exchange processes for customer switching.

Article 59**Duties and powers of the regulatory authorities**

1. The regulatory authority shall have the following duties:

- (a) fixing or approving, in accordance with transparent criteria, transmission or distribution tariffs or their methodologies, or both;
- (b) ensuring the compliance of transmission system operators and distribution system operators and, where relevant, system owners, as well as the compliance of any electricity undertakings and other market participants, with their obligations under this Directive, **Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**, the network codes and the guidelines adopted pursuant to Articles **6 and 7 of Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**, and other relevant **Energy Community** law, including as regards cross-border issues, as well as with **Energy Community Regulatory Board** 's decisions;
- (c) < ... >³⁸
- (d) approving products and procurement process for < ... > ancillary services;
- (e) implementing the network codes and guidelines adopted pursuant to Articles **6 and 7 of Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011** through national measures or, where so required, coordinated regional or **Energy Community**-wide measures;
- (f) cooperating in regard to cross-border issues with the regulatory authority or authorities of the **Contracting Parties** concerned and with **the Energy Community Regulatory Board < ... >**;³⁹
- (g) complying with, and implementing, any relevant legally binding decisions of the **Energy Community Secretariat** and of **Energy Community Regulatory Board**;
- (h) ensuring that transmission system operators make available interconnector capacities to the utmost extent pursuant to **Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**;
- (i) reporting annually on its activity and the fulfilment of its duties to the relevant authorities of the **Contracting Parties**, the **Energy Community Secretariat** and **Energy Community Regulatory Board**, including on the steps taken and the results obtained as regards each of the tasks listed in this Article;
- (j) ensuring that there is no cross-subsidisation between transmission, distribution and supply activities or other electricity or non-electricity activities;
- (k) monitoring investment plans of the transmission system operators and providing in its annual report an assessment of the investment plans of the transmission system operators as regards their consistency with the **Energy Community**-wide network development plan; such assessment may include recommendations to amend those investment plans;
- (l) monitoring and assessing the performance of transmission system operators and distribution system operators in relation to the development of a smart grid that promotes energy efficiency and the integration of energy from renewable sources, based on a limited set of indicators, and publish a national report every

³⁸ Article 59(1)(c) is not applicable according to item 1 in Article 4(23) of Ministerial Council Decision 2021/13/MC-EnC

³⁹ The text displayed in Articles 59(1)(d) and (f) correspond to items 2 and 3 in Article 4(23) of Ministerial Council Decision 2021/13/MC-EnC

two years, including recommendations;

(m) setting or approving standards and requirements for quality of service and quality of supply or contributing thereto together with other competent authorities and monitoring compliance with and reviewing the past performance of network security and reliability rules;

(n) monitoring the level of transparency, including of wholesale prices, and ensuring compliance of electricity undertakings with transparency obligations;

(o) monitoring the level and effectiveness of market opening and competition at wholesale and retail levels, including on electricity exchanges, prices for household customers including prepayment systems, the impact of dynamic electricity price contracts and of the use of smart metering systems, switching rates, disconnection rates, charges for maintenance services, the execution of maintenance services, the relationship between household and wholesale prices, the evolution of grid tariffs and levies, and complaints by household customers, as well as any distortion or restriction of competition, including by providing any relevant information, and bringing any relevant cases to the relevant competition authorities;

(p) monitoring the occurrence of restrictive contractual practices, including exclusivity clauses which may prevent customers from contracting simultaneously with more than one supplier or restrict their choice to do so, and, where appropriate, informing the national competition authorities of such practices;

(q) monitoring the time taken by transmission system operators and distribution system operators to make connections and repairs;

(r) helping to ensure, together with other relevant authorities, that the consumer protection measures are effective and enforced;

(s) publishing recommendations, at least annually, in relation to compliance of supply prices with Article 5, and providing those recommendations to the competition authorities, where appropriate;

(t) ensuring non-discriminatory access to customer consumption data, the provision, for optional use, of an easily understandable harmonised format at national level for consumption data, and prompt access for all customers to such data pursuant to Articles 23 and 24;

(u) monitoring the implementation of rules relating to the roles and responsibilities of transmission system operators, distribution system operators, suppliers, customers and other market participants pursuant to **Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**;

(v) monitoring investment in generation and storage capacities in relation to security of supply;

(w) monitoring technical cooperation between **Energy Community** and third-country transmission system operators;

(x) contributing to the compatibility of data exchange processes for the most important market processes at regional level;

(y) monitoring the availability of comparison tools that meet the requirements set out in Article 14;

(z) monitoring the removal of unjustified obstacles to and restrictions on the development of consumption of self-generated electricity and citizen energy communities.

2. Where a **Contracting Party** has so provided, the monitoring duties set out in paragraph 1 may be carried out by other authorities than the regulatory authority. In such a case, the information resulting from such monitoring shall be made available to the regulatory authority as soon as possible.

While preserving their independence, without prejudice to their own specific competence and consistent with the principles of better regulation, the regulatory authority shall, as appropriate, consult transmission system operators and, as appropriate, closely cooperate with other relevant national authorities when carrying out the duties set out in paragraph 1.

Any approvals given by a regulatory authority or **Energy Community Regulatory Board** under this Directive are without prejudice to any duly justified future use of its powers by the regulatory authority under this Article or to any penalties imposed by other relevant authorities < ... >.⁴⁰

3. **Contracting Parties** shall ensure that regulatory authorities are granted the powers enabling them to carry out the duties referred to in this Article in an efficient and expeditious manner. For this purpose, the regulatory authority shall have at least the following powers:

(a) to issue binding decisions on electricity undertakings;

(b) to carry out investigations into the functioning of the electricity markets, and to decide upon and impose any necessary and proportionate measures to promote effective competition and ensure the proper functioning of the market. Where appropriate, the regulatory authority shall also have the power to cooperate with the national competition authority and the financial market regulators or the **Energy Community Secretariat** in conducting an investigation relating to competition law;

(c) to require any information from electricity undertakings relevant for the fulfilment of its tasks, including the justification for any refusal to grant third-party access, and any information on measures necessary to reinforce the network;

(d) to impose effective, proportionate and dissuasive penalties on electricity undertakings not complying with their obligations under this Directive, **Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011** or any relevant legally binding decisions of the regulatory authority or of **Energy Community Regulatory Board**, or to propose that a competent court impose such penalties, including the power to impose or propose the imposition of penalties of up to 10 % of the annual turnover of the transmission system operator on the transmission system operator or of up to 10 % of the annual turnover of the vertically integrated undertaking on the vertically integrated undertaking, as the case may be, for non-compliance with their respective obligations pursuant to this Directive; and

(e) appropriate rights of investigation and relevant powers of instruction for dispute settlement under Article 60(2) and (3).

4. < ... >⁴¹

5. In addition to the duties conferred upon it under paragraphs 1 and 3 of this Article, when an independent system operator has been designated under Article 44, the regulatory authority shall:

(a) monitor the transmission system owner's and the independent system operator's compliance with their obligations under this Article, and issue penalties for non-compliance in accordance with point (d) of paragraph 3;

(b) monitor the relations and communications between the independent system operator and the transmission system owner so as to ensure compliance of the independent system operator with its obligations, and in particular approve contracts and act as a dispute settlement authority between the independent system operator and the transmission system owner with respect to any complaint submitted by either

⁴⁰ The text displayed in Article 59(2) corresponds to item 4 in Article 4(23) of Ministerial Council Decision 2021/13/MC-EnC

⁴¹ Not applicable according to item 5 in Article 4(23) of Ministerial Council Decision 2021/13/MC-EnC

party pursuant to Article 60(2);

(c) without prejudice to the procedure under point (c) of Article 44(2), for the first ten-year network development plan, approve the investments planning and the multi-annual network development plan submitted at least every two years by the independent system operator;

(d) ensure that network access tariffs collected by the independent system operator include remuneration for the network owner or network owners, which provides for adequate remuneration of the network assets and of any new investments made therein, provided they are economically and efficiently incurred;

(e) have the powers to carry out inspections, including unannounced inspections, at the premises of transmission system owner and independent system operator; and

(f) monitor the use of congestion charges collected by the independent system operator in accordance with **Article 14 of Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**.

6. In addition to the duties and powers conferred on it under paragraphs 1 and 3 of this Article, when a transmission system operator has been designated in accordance with Section 3 of Chapter VI, the regulatory authority shall be granted at least the following duties and powers:

(a) to impose penalties in accordance with point (d) of paragraph 3 for discriminatory behaviour in favour of the vertically integrated undertaking;

(b) to monitor communications between the transmission system operator and the vertically integrated undertaking so as to ensure compliance of the transmission system operator with its obligations;

(c) to act as dispute settlement authority between the vertically integrated undertaking and the transmission system operator with respect to any complaint submitted pursuant to Article 60(2);

(d) to monitor commercial and financial relations including loans between the vertically integrated undertaking and the transmission system operator;

(e) to approve all commercial and financial agreements between the vertically integrated undertaking and the transmission system operator on the condition that they comply with market conditions;

(f) to request a justification from the vertically integrated undertaking when notified by the compliance officer in accordance with Article 50(4), such justification including, in particular, evidence demonstrating that no discriminatory behaviour to the advantage of the vertically integrated undertaking has occurred;

(g) to carry out inspections, including unannounced ones, on the premises of the vertically integrated undertaking and the transmission system operator; and

(h) to assign all or specific tasks of the transmission system operator to an independent system operator appointed in accordance with Article 44 in the case of a persistent breach by the transmission system operator of its obligations under this Directive, in particular in the case of repeated discriminatory behaviour to the benefit of the vertically integrated undertaking.

7. The regulatory authorities, except where **Energy Community Regulatory Board** is competent to fix and approve the terms and conditions or methodologies for the implementation of network codes and guidelines under **Articles 6 and 7 of Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011 < ... >** because of their coordinated nature, shall be responsible for fixing or approving sufficiently in advance of their entry into force at least the national methodologies used to calculate or establish the terms and conditions for:⁴²

⁴² The text displayed in Article 59(7) corresponds to item 6 in Article 4(23) of Ministerial Council Decision 2021/13/MC-EnC

(a) connection and access to national networks, including transmission and distribution tariffs or their methodologies, those tariffs or methodologies shall allow the necessary investments in the networks to be carried out in a manner allowing those investments to ensure the viability of the networks;

(b) the provision of ancillary services which shall be performed in the most economic manner possible and provide appropriate incentives for network users to balance their input and off-takes, such ancillary services shall be provided in a fair and non-discriminatory manner and be based on objective criteria; and

(c) access to cross-border infrastructures, including the procedures for the allocation of capacity and congestion management.

8. The methodologies or the terms and conditions referred to in paragraph 7 shall be published.

9. With a view to increasing transparency in the market and providing all interested parties with all necessary information and decisions or proposals for decisions concerning transmission and distribution tariffs as referred in Article 60(3), regulatory authorities shall make publicly available the detailed methodology and underlying costs used for the calculation of the relevant network tariffs, while preserving the confidentiality of commercially sensitive information.

10. The regulatory authorities shall monitor congestion management of national electricity systems including interconnectors, and the implementation of congestion management rules. To that end, transmission system operators or market operators shall submit their congestion management rules, including capacity allocation, to the regulatory authorities. Regulatory authorities may request amendments to those rules.

Article 60

Decisions and complaints

1. Regulatory authorities shall have the authority to require transmission system operators and distribution system operators, if necessary, to modify the terms and conditions, including tariffs or methodologies referred to Article 59 of this Directive, to ensure that they are proportionate and applied in a non-discriminatory manner, in accordance with **Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**. In the event of delay in the fixing of transmission and distribution tariffs, regulatory authorities shall have the power to fix or approve provisional transmission and distribution tariffs or methodologies and to decide on the appropriate compensatory measures if the final transmission and distribution tariffs or methodologies deviate from those provisional tariffs or methodologies.

2. Any party having a complaint against a transmission or distribution system operator in relation to that operator's obligations under this Directive may refer the complaint to the regulatory authority which, acting as dispute settlement authority, shall issue a decision within two months of receipt of the complaint. That period may be extended by two months where additional information is sought by the regulatory authority. That extended period may be further extended with the agreement of the complainant. The regulatory authority's decision shall have binding effect unless and until overruled on appeal.

3. Any party who is affected and who has a right to complain concerning a decision on methodologies taken pursuant to Article 59 or, where the regulatory authority has a duty to consult, concerning the proposed tariffs or methodologies, may, within two months, or within a shorter period as provided for by **Contracting Parties**, after publication of the decision or proposal for a decision, submit a complaint for

review. Such a complaint shall not have suspensive effect.

4. **Contracting Parties** shall create appropriate and efficient mechanisms for regulation, control and transparency so as to avoid any abuse of a dominant position, in particular to the detriment of consumers, and any predatory behaviour. Those mechanisms shall take account of the provisions of the **Energy Community Treaty**, and in particular Article **18(1)(b) of the Treaty**.⁴³

5. **Contracting Parties** shall ensure that the appropriate measures are taken, including administrative action or criminal proceedings in conformity with their national law, against the natural or legal persons responsible where confidentiality rules imposed by this Directive have not been respected.

6. Complaints referred to in paragraphs 2 and 3 shall be without prejudice to the exercise of rights of appeal under **Energy Community** or national law.

7. Decisions taken by regulatory authorities shall be fully reasoned and justified to allow for judicial review. The decisions shall be available to the public while preserving the confidentiality of commercially sensitive information.

8. **Contracting Parties** shall ensure that suitable mechanisms exist at national level under which a party affected by a decision of a regulatory authority has a right of appeal to a body independent of the parties involved and of any government.

Article 61

Regional cooperation between regulatory authorities on cross-border issues

1. Regulatory authorities shall closely consult and cooperate with each other, in particular within **Energy Community Regulatory Board**, and shall provide each other and **the Energy Community Regulatory Board** with any information necessary for the fulfilment of their tasks under this Directive. With respect to the information exchanged, the receiving authority shall ensure the same level of confidentiality as that required of the originating authority.

2. Regulatory authorities shall cooperate at least at a regional level to:

(a) foster the creation of operational arrangements in order to enable an optimal management of the network, promote joint electricity exchanges and the allocation of cross-border capacity, and to enable an adequate level of interconnection capacity, including through new interconnection, within the region and between regions to allow for development of effective competition and improvement of security of supply, without discriminating between suppliers in different **Contracting Parties**;

(b) coordinate the joint oversight of entities performing functions at regional level;

(c) coordinate, in cooperation with other involved authorities, the joint oversight of national, regional and European resource adequacy assessments;

(d) coordinate the development of all network codes and guidelines for the relevant transmission system operators and other market actors; and

(e) coordinate the development of the rules governing the management of congestion.

3. Regulatory authorities shall have the right to enter into cooperative arrangements with each other to foster regulatory cooperation.

⁴³ The text displayed in Article 60(4) corresponds to Article 4(24) of Ministerial Council Decision 2021/13/MC-EnC

4. The actions referred to in paragraph 2 shall be carried out, as appropriate, in close consultation with other relevant national authorities and without prejudice to their specific competence.
5. < ... >⁴⁴

Article 62

Duties and powers of regulatory authorities with respect to regional coordination centres⁴⁵

< ... >

Article 63

Compliance with the network codes and guidelines⁴⁶

1. Any regulatory authority and the **Energy Community Secretariat** may request the opinion of **Energy Community Regulatory Board** on the compliance of a decision taken by a regulatory authority with the network codes and guidelines referred to in this Directive or in **Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**.
2. **The Energy Community Regulatory Board** shall provide its opinion to the regulatory authority which has requested it or to the **Energy Community Secretariat**, respectively, and to the regulatory authority which has taken the decision in question within three months of the date of receipt of the request.
3. Where the regulatory authority which has taken the decision does not comply with **Energy Community Regulatory Board**'s opinion within four months of the date of receipt of that opinion, **the Energy Community Regulatory Board** shall inform the **Energy Community Secretariat** accordingly.
4. Any regulatory authority may inform the **Energy Community Secretariat** where it considers that a decision relevant for cross-border trade taken by another regulatory authority does not comply with the network codes and guidelines referred to in this Directive or in **Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011** within two months of the date of that decision.
5. Where the **Energy Community Secretariat**, within two months of having been informed by **the Energy Community Regulatory Board** in accordance with paragraph 3, or by a regulatory authority in accordance with paragraph 4, or, on its own initiative, within three months of the date of the decision, finds that the decision of a regulatory authority raises serious doubts as to its compatibility with the network codes and guidelines referred to in this Directive or in < ... > **Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**, the **Energy Community Secretariat** may < ... > examine the case further. In such a case, it shall invite the regulatory authority and the parties to the proceedings before the regulatory authority to submit observations.
6. Where the **Energy Community Secretariat** < ... > **examines** the case further, it shall, within four months of the date of such decision, issue a final decision:
- (a) not to raise objections against the decision of the regulatory authority; or

⁴⁴ Not applicable according to Article 4(25) of Ministerial Council Decision 2021/13/MC-EnC

⁴⁵ Not applicable according to Article 4(26) of Ministerial Council Decision 2021/13/MC-EnC

⁴⁶ The text displayed in Articles 63(5), (6) and (8) correspond to items 1, 2, 3 and 5 in Article 4(27) of Ministerial Council Decision 2021/13/MC-EnC

(b) To < ... > **invite** the regulatory authority concerned to withdraw its decision on the basis that network codes and guidelines have not been complied with.

7. **In the absence of an opinion by paragraph 6, the Energy Community Secretariat shall be deemed not to raise objections to the decision of the regulatory authority.**⁴⁷

8. The regulatory authority shall < ... > **take into utmost account** the **Energy Community Secretariat's** decision requiring it to withdraw its decision within two months and shall inform the **Energy Community Secretariat** accordingly.

9. < ... >⁴⁸

Article 64

Record keeping

1. **Contracting Parties** shall require suppliers to keep at the disposal of the national authorities, including the regulatory authority, the national competition authorities and the **Energy Community Secretariat**, for the fulfilment of their tasks, for at least five years, the relevant data relating to all transactions in electricity supply contracts and electricity derivatives with wholesale customers and transmission system operators.

2. The data shall include details on the characteristics of the relevant transactions such as duration, delivery and settlement rules, the quantity, the dates and times of execution and the transaction prices and means of identifying the wholesale customer concerned, as well as specified details of all unsettled electricity supply contracts and electricity derivatives.

3. The regulatory authority may decide to make available to market participants elements of that information provided that commercially sensitive information on individual market players or individual transactions is not released. This paragraph shall not apply to information about financial instruments which fall within the scope of Directive 2014/65/EU.

4. This Article shall not create additional obligations towards the authorities referred to in paragraph 1 for entities falling within the scope of Directive 2014/65/EU.

5. In the event that the authorities referred to in paragraph 1 need access to data kept by entities falling within the scope of Directive 2014/65/EU, the authorities responsible under that Directive shall provide them with the required data.

⁴⁷ The text displayed in Article 63(7) corresponds to item 4 in Article 4(27) of Ministerial Council Decision 2021/13/MC-EnC

⁴⁸ Not applicable according to item 6 in Article 4(27) of Ministerial Council Decision 2021/13/MC-EnC

CHAPTER VIII

FINAL PROVISIONS

Article 65

Level playing field⁴⁹

1. Measures that the **Contracting Parties** may take pursuant to this Directive in order to ensure a level playing field shall be compatible with the **Energy Community Treaty**, in particular < ... > **Article 41** thereof, and with **Energy Community** law.
2. The measures referred to in paragraph 1 shall be proportionate, non-discriminatory and transparent. Those measures may be put into effect only following the notification to and approval by the **Energy Community Secretariat**.
3. The **Energy Community Secretariat** shall act on the notification referred to in paragraph 2 within two months of the receipt of the notification. That period shall begin on the day after receipt of the complete information. In the event that the **Energy Community Secretariat** has not acted within that two-month period, it shall be deemed not to have raised objections to the notified measures.

Article 66

Derogations⁵⁰

1. < ... >
2. < ... >
3. < ... > For the purposes of point (b) of Article 43(1), the notion 'undertaking performing any of the functions of generation or supply' shall not include final customers who perform any of the functions of generation and/or supply of electricity, either directly or via undertakings over which they exercise control, either individually or jointly, provided that the final customers including their shares of the electricity produced in controlled undertakings are, on an annual average, net consumers of electricity and provided that the economic value of the electricity they sell to third parties is insignificant in proportion to their other business operations.⁵¹
4. < ... >
5. < ... >

⁴⁹ The text displayed in Article 65(1) corresponds to Article 4(28) of Ministerial Council Decision 2021/13/MC-EnC

⁵⁰ Articles 66(1), (2), (4) and (5) are not applicable according to item 1 in Article 4(29) of Ministerial Council Decision 2021/13/MC-EnC

⁵¹ The text displayed in Article 66(3) corresponds to item 2 in Article 4(29) of Ministerial Council Decision 2021/13/MC-EnC

Article 67

Exercise of the delegation⁵²

< ... >

Article 68

Committee procedure⁵²

< ... >

Article 69

Energy Community Secretariat monitoring, reviewing and reporting⁵³

1. The **Energy Community Secretariat** shall monitor and review the implementation of this Directive and shall submit a progress report to the **Ministerial Council** as an annex to the State of the Energy Union Report referred to in Article 35 of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC of 30 November 2021**.

2. By 31 December 2025, the **Energy Community Secretariat** shall review the implementation of this Directive and shall submit a report to the **Ministerial Council**. < ... >

The **Energy Community Secretariat**'s review shall, in particular, assess whether customers, especially those who are vulnerable or in energy poverty, are adequately protected under this Directive.

Article 70

Amendments to Directive 2012/27/EU⁵²

< ... >

Article 71

Transposition⁵⁴

1. **Contracting Parties** shall bring into force the laws, regulations and administrative provisions necessary to comply with Articles 2 to 5, Article 6(2) and (3), Article 7(1), point (j) and (l) of Article 8(2), Article 9(2), Article 10(2) to (12), Articles 11 to 24, Articles 26, 28 and 29, Articles 31 to 34 and 36, Article 38(2), Articles 40 and 42, point (d) of Article 46(2), Articles 51 and 54, Articles 57 to 59, Articles 61 to 63, points (1) to (3), (5)(b) and (6) of Article 70 and Annexes I and II by 31 December **2023**. They shall immediately communicate the text of those provisions to the **Energy Community Secretariat**.

However, **Contracting Parties** shall bring into force the laws, regulations and administrative provisions necessary to comply with:

(a) point (5)(a) of Article 70 by **30 June 2023**;

⁵² Articles 67, 68 and 70 are not applicable according to Article 4(30) of Ministerial Council Decision 2021/13/MC-EnC

⁵³ The text displayed in Article 69(2) corresponds to Article 4(31) of Ministerial Council Decision 2021/13/MC-EnC

⁵⁴ The text displayed in Article 71(1) corresponds to items 1, 2 and 3 in Article 4(32) of Ministerial Council Decision 2021/13/MC-EnC

(b) point (4) of Article 70 by **31 December 2023**.

When **Contracting Parties** adopt those measures, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. They shall also include a statement that references in existing laws, regulations and administrative provisions to the Directive repealed by this Directive shall be construed as references to this Directive. **Contracting Parties** shall determine how such reference is to be made and how that statement is to be formulated.

2. **Contracting Parties** shall communicate to the **Energy Community Secretariat** the text of the main provisions of national law which they adopt in the field covered by this Directive.

Article 72

Repeal

< ... >

Article 73

Entry into force⁵⁵

This Directive enters into force on the day of adoption of Ministerial Council Decision 2021/13/MC-ENC. < ... >

Article 74

Addressees⁵⁵

This Directive is addressed to the Contracting Parties and the institutions of the Energy Community. < ... >

⁵⁵ The text displayed in Articles 73 and 74 correspond to Article 8 of Ministerial Council Decision 2021/13/MC-EnC

ANNEX I

MINIMUM REQUIREMENTS FOR BILLING AND BILLING INFORMATION

1. Minimum information to be contained on the bill and in the billing information

1.1. The following key information shall be prominently displayed to final customers in their bills, distinctly separate from other parts of the bill:

(a) the price to be paid and a breakdown of the price where possible, together with a clear statement that all energy sources may also benefit from incentives that were not financed through the levies indicated in the breakdown of the price;

(b) the date on which payment is due.

1.2. The following key information shall be prominently displayed to final customers in their bills and billing information, distinctly separate from other parts of the bill and billing information:

(a) electricity consumption for the billing period;

(b) the name and contact details of the supplier, including a consumer support hotline and email address;

(c) the tariff name;

(d) the end date of the contract, if applicable;

(e) the information on the availability and benefits of switching;

(f) the final customer's switching code or unique identification code for the final customer's supply point;

(g) information on final customers' rights as regards out-of-court dispute settlement, including the contact details of the entity responsible pursuant to Article 26;

(h) the single point of contact referred to in Article 25;

(i) a link or reference to where comparison tools referred to in Article 14 can be found.

1.3. Where bills are based on actual consumption or remote reading by the operator, the following information shall be made available to final customers in, with or signposted to within their bills and periodic settlement bills:

(a) comparisons of the final customer's current electricity consumption with the final customer's consumption for the same period in the previous year in graphic form;

(b) contact information for consumer organisations, energy agencies or similar bodies, including website addresses, from which information may be obtained on available energy efficiency improvement measures for energy-using equipment;

(c) comparisons with an average normalised or benchmarked final customer in the same user category.

2. Frequency of billing and the provision of billing information:

(a) billing on the basis of actual consumption shall take place at least once a year;

(b) where the final customer does not have a meter that allows remote reading by the operator, or where the final customer has actively chosen to disable remote reading in accordance with national law, accurate billing information based on actual consumption shall be made available to the final customer at least every six months, or once every three months, if requested or where the final customer has opted to

receive electronic billing;

(c) where the final customer does not have a meter that allows remote reading by the operator, or where the final customer has actively chosen to disable remote reading in accordance with national law, the obligations in points (a) and (b) may be fulfilled by means of a system of regular self-reading by the final customer, whereby the final customer communicates readings from the meter to the operator; billing or billing information may be based on estimated consumption or a flat rate only where the final customer has not provided a meter reading for a given billing interval;

(d) where the final customer has a meter that allows remote reading by the operator, accurate billing information based on actual consumption shall be provided at least every month; such information may also be made available via the internet, and shall be updated as frequently as allowed by the measurement devices and systems used.

3. Breakdown of the final customer's price

The customer's price is the sum of the following three components: the energy and supply component, the network component (transmission and distribution) and the component comprising taxes, levies, fees and charges.

Where a breakdown of the final customer's price is presented in bills, the common definitions of the three components in that breakdown established under Regulation (EU) 2016/1952 of the European Parliament and of the Council shall be used throughout the **Energy Community**.

4. Access to complementary information on historical consumption

Contracting Parties shall require that, to the extent that complementary information on historical consumption is available, such information is made available, at the request of the final customer, to the supplier or service provider designated by the final customer.

Where the final customer has a meter that allows remote reading by the operator installed, the final customer shall have easy access to complementary information on historical consumption allowing detailed self-checks.

Complementary information on historical consumption shall include:

(a) cumulative data for at least the three previous years or the period since the start of the electricity supply contract, if that period is shorter. The data shall correspond to the intervals for which frequent billing information has been produced; and

(b) detailed data according to the time of use for any day, week, month and year, which is made available to the final customer without undue delay via the internet or the meter interface, covering the period of at least the previous 24 months or the period since the start of the electricity supply contract, if that period is shorter.

5. Disclosure of energy sources

Suppliers shall specify in bills the contribution of each energy source to the electricity purchased by the final customer in accordance with the electricity supply contract (product level disclosure).

The following information shall be made available to final customers in, with, or signposted to within their bills and billing information:

(a) the contribution of each energy source to the overall energy mix of the supplier (at national level, namely in the **Contracting Party** in which the electricity supply contract has been concluded, as well as at the

level of the supplier if the supplier is active in several **Contracting Parties**) over the preceding year in a comprehensible and clearly comparable manner;

(b) information on the environmental impact, in at least terms of CO₂ emissions and the radioactive waste resulting from the electricity produced by the overall energy mix of the supplier over the preceding year.

As regards point (a) of the second subparagraph, with respect to electricity obtained via an electricity exchange or imported from an undertaking situated outside the **Energy Community**, aggregate figures provided by the exchange or the undertaking in question over the preceding year may be used.

For the disclosure of electricity from high efficiency cogeneration, guarantees of origin issued under Article 14(10) of Directive 2012/27/EU may be used. The disclosure of electricity from renewable sources shall be done by using guarantees of origin, except in the cases referred to in points (a) and (b) of Article 19(8) of Directive (EU) 2018/2001 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC of 30 November 2021**.

The regulatory authority or another competent national authority shall take the necessary steps to ensure that the information provided by suppliers to final customers pursuant to this point is reliable and is provided at a national level in a clearly comparable manner.

ANNEX II

SMART METERING SYSTEMS

1. **Contracting Parties** shall ensure the deployment of smart metering systems in their territories that may be subject to an economic assessment of all of the long-term costs and benefits to the market and the individual consumer or which form of smart metering is economically reasonable and cost-effective and which time frame is feasible for their distribution.
2. Such assessment shall take into consideration the methodology for the cost-benefit analysis and the minimum functionalities for smart metering systems provided for in Commission Recommendation 2012/148/EU as well as the best available techniques for ensuring the highest level of cybersecurity and data protection.
3. Subject to that assessment, **Contracting Parties** or, where a **Contracting Party** has so provided, the designated competent authority, shall prepare a timetable with a target of up to ten years for the deployment of smart metering systems. Where the deployment of smart metering systems is assessed positively, at least 80 % of final customers shall be equipped with smart meters either within seven years of the date of the positive assessment or by 2024 for those **Contracting Parties** that have initiated the systematic deployment of smart metering systems before **the date of entry into force of this Directive in the Energy Community**⁵⁶.

⁵⁶ The text displayed here corresponds to Article 4(1) of Ministerial Council Decision 2021/13/MC-Enc

DIRECTIVE 2009/72/EC of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC

Incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011 on the implementation of Directive 2009/72/EC, Directive 2009/73/EC, Regulation (EC) 714/2009 and Regulation (EC) 715/2009 and amending Articles 11 and 59 of the Energy Community Treaty.

*The adaptations made by Ministerial Council Decision 2011/02/MC-EnC are highlighted in **bold and blue**.*

CHAPTER I

SUBJECT MATTER, SCOPE AND DEFINITIONS

Article 1

Subject matter and scope

This Directive establishes common rules for the generation, transmission, distribution and supply of electricity, of electricity, together with consumer protection provisions, with a view to improving and integrating competitive electricity markets in the **Energy Community**. It lays down the rules relating to the organization and functioning of the electricity sector, open access to the market, the criteria and procedures applicable to calls for tenders and the granting of authorizations and the operation of systems. It also lays down universal service obligations and the rights of electricity consumers and clarifies competition requirements.

Article 2

Definitions

For the purposes of this Directive, the following definitions apply:

1. "generation" means the production of electricity;
2. "producer" means a natural or legal person generating electricity;
3. "transmission" means the transport of electricity on the extra high-voltage and high-voltage interconnected system with a view to its delivery to final customers or to distributors, but does not include supply;
4. "transmission system operator" means a natural or legal person responsible for operating, ensuring the maintenance of and, if necessary, developing the transmission system in a given area and, where applicable, its interconnections with other systems, and for ensuring the long-term ability of the system to meet reasonable demands for the transmission of electricity;
5. "distribution" means the transport of electricity on high-voltage, medium-voltage and low-voltage distribution systems with a view to its delivery to customers, but does not include supply;
6. "distribution system operator" means a natural or legal person responsible for operating, ensuring the maintenance of and, if necessary, developing the distribution system in a given area and, where applica-

ble, its interconnections with other systems and for ensuring the long-term ability of the system to meet reasonable demands for the distribution of electricity;

7. "customer" means a wholesale or final customer of electricity;

8. "wholesale customer" means a natural or legal person purchasing electricity for the purpose of resale inside or outside the system where he is established;

9. "final customer" means a customer purchasing electricity for his own use;

10. "household customer" means a customer purchasing electricity for his own household consumption, excluding commercial or professional activities;

11. "non-household customer" means a natural or legal persons purchasing electricity which is not for their own household use and includes producers and wholesale customers;

12. "eligible customer" means a customer who is free to purchase electricity from the supplier of his choice within the meaning of Article 33;

13. "interconnector" means equipment used to link electricity systems;

14. "interconnected system" means a number of transmission and distribution systems linked together by means of one or more interconnectors;

15. "direct line" means either an electricity line linking an isolated generation site with an isolated customer or an electricity line linking an electricity producer and an electricity supply undertaking to supply directly their own premises, subsidiaries and eligible customers;

16. "economic precedence" means the ranking of sources of electricity supply in accordance with economic criteria;

17. "ancillary service" means a service necessary for the operation of a transmission or distribution system;

18. "system user" means a natural or legal person supplying to, or being supplied by, a transmission or distribution system;

19. "supply" means the sale, including resale, of electricity to customers;

20. "integrated electricity undertaking" means a vertically or horizontally integrated undertaking;

21. "vertically integrated undertaking" means an electricity undertaking or a group of electricity undertakings where the same person or the same persons are entitled, directly or indirectly, to exercise control, and where the undertaking or group of undertakings perform at least one of the functions of transmission or distribution, and at least one of the functions of generation or supply of electricity;

22. "related undertaking" means affiliated undertakings, within the meaning of Article 41 of the Seventh Council Directive 83/349/EEC of 13 June 1983 based on Article 44(2)(g) of the Treaty on consolidated accounts, and/or associated undertakings, within the meaning of Article 33(1) of that Directive, and/or undertakings which belong to the same shareholders;

23. "horizontally integrated undertaking" means an undertaking performing at least one of the functions of generation for sale, or transmission, or distribution, or supply of electricity, and another non-electricity activity;

24. "tendering procedure" means the procedure through which planned additional requirements and replacement capacity are covered by supplies from new or existing generating capacity;

25. "long-term planning" means the planning of the need for investment in generation and transmission

and distribution capacity on a long-term basis, with a view to meeting the demand of the system for electricity and securing supplies to customers;

26. “small isolated system” means any system with consumption of less than 3000 GWh in the year **2006**, where less than 5% of annual consumption is obtained through interconnection with other systems;

27. “micro isolated system” means any system with consumption less than 500 GWh in the year **2006**, where there is no connection with other systems;

28. “security” means both security of supply and provision of electricity, and technical safety;

29. “energy efficiency/demand-side management” means a global or integrated approach aimed at influencing the amount and timing of electricity consumption in order to reduce primary energy consumption and peak loads by giving precedence to investments in energy efficiency measures, or other measures, such as interruptible supply contracts, over investments to increase generation capacity, if the former are the most effective and economical option, taking into account the positive environmental impact of reduced energy consumption and the security of supply and distribution cost aspects related to it;

30. “renewable energy sources” means renewable non-fossil energy sources (wind, solar, geothermal, wave, tidal, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases);

31. “distributed generation” means generation plants connected to the distribution system;

32. “electricity supply contract” means a contract for the supply of electricity, but does not include an electricity derivative;

33. “electricity derivative” means a financial instrument specified in points 5, 6 or 7 of Section C of Annex I to Directive 2004/39/EC of the European Parliament and of the Council of 21 April 2004 on markets in financial instruments, where that instrument relates to electricity;

34. “control” means rights, contracts or any other means which, either separately or in combination and having regard to the considerations of fact or law involved, confer the possibility of exercising decisive influence on an undertaking, in particular by:

(a) ownership or the right to use all or part of the assets of an undertaking;

(b) rights or contracts which confer decisive influence on the composition, voting or decisions of the organs of an undertaking;

35. “electricity undertaking” means any natural or legal person carrying out at least one of the following functions: generation, transmission, distribution, supply, or purchase of electricity, which is responsible for the commercial, technical or maintenance tasks related to those functions, but does not include final customers.

CHAPTER II

GENERAL RULES FOR THE ORGANISATION OF THE SECTOR

Article 3

Public service obligations and customer protection

1. **Contracting Parties** shall ensure, on the basis of their institutional organisation and with due regard to the principle of subsidiarity, that, without prejudice to paragraph 2, electricity undertakings are operated in accordance with the principles of this Directive with a view to achieving a competitive, secure and environmentally sustainable market in electricity, and shall not discriminate between those undertakings as regards either rights or obligations.

2. Having full regard to the relevant provisions of the **Energy Community Treaty, in particular Annex III thereof, Contracting Parties** may impose on undertakings operating in the electricity sector, in the general economic interest, public service obligations which may relate to security, including security of supply, regularity, quality and price of supplies and environmental protection, including energy efficiency, energy from renewable sources and climate protection. Such obligations shall be clearly defined, transparent, non-discriminatory, verifiable and shall guarantee equality of access for electricity undertakings of the **Energy Community** to national consumers. In relation to security of supply, energy efficiency/demand-side management and for the fulfilment of environmental goals and goals for energy from renewable sources, as referred to in this paragraph, **Contracting Parties** may introduce the implementation of long-term planning, taking into account the possibility of third parties seeking access to the system.

3. **Contracting Parties** shall ensure that all household customers, and, where **Contracting Parties** deem it appropriate, small enterprises (namely enterprises with fewer than 50 occupied persons and an annual turnover or balance sheet not exceeding EUR 10 million), enjoy universal service, that is the right to be supplied with electricity of a specified quality within their territory at reasonable, easily and clearly comparable, transparent and non-discriminatory prices. To ensure the provision of universal service, **Contracting Parties** may appoint a supplier of last resort. **Contracting Parties** shall impose on distribution companies an obligation to connect customers to their network under terms, conditions and tariffs set in accordance with the procedure laid down in Article 37(6). Nothing in this Directive shall prevent **Contracting Parties** from strengthening the market position of the household, small and medium-sized consumers by promoting the possibilities of voluntary aggregation of representation for that class of consumers.

The first subparagraph shall be implemented in a transparent and non-discriminatory way and shall not impede the opening of the market provided for in Article 33.

4. **Contracting Parties** shall ensure that all customers are entitled to have their electricity provided by a supplier, subject to the supplier's agreement, regardless of the **Contracting Party** in which the supplier is registered, as long as the supplier follows the applicable trading and balancing rules. In this regard, **Contracting Parties** shall take all measures necessary to ensure that administrative procedures do not discriminate against supply undertakings already registered in another **Contracting Party**.

5. **Contracting Parties** shall ensure that:

(a) where a customer, while respecting contractual conditions, wishes to change supplier, the change is effected by the operator(s) concerned within three weeks; and

(b) customers are entitled to receive all relevant consumption data.

Contracting Parties shall ensure that the rights referred to in points (a) and (b) are granted to customers in a non-discriminatory manner as regards cost, effort or time.

6. Where financial compensation, other forms of compensation and exclusive rights which a **Contracting Party** grants for the fulfilment of the obligations set out in paragraphs 2 and 3 are provided, this shall be done in a non-discriminatory and transparent way.

7. **Contracting Parties** shall take appropriate measures to protect final customers, and shall, in particular, ensure that there are adequate safeguards to protect vulnerable customers. In this context, each **Contracting Party** shall define the concept of vulnerable customers which may refer to energy poverty and, *inter alia*, to the prohibition of disconnection of electricity to such customers in critical times. **Contracting Parties** shall ensure that rights and obligations linked to vulnerable customers are applied. In particular, they shall take measures to protect final customers in remote areas. They shall ensure high levels of consumer protection, particularly with respect to transparency regarding contractual terms and conditions, general information and dispute settlement mechanisms. **Contracting Parties** shall ensure that the eligible customer is in fact able easily to switch to a new supplier. As regards at least household customers, those measures shall include those set out in Annex I.

8. **Contracting Parties** shall take appropriate measures, such as formulating national energy action plans, providing benefits in social security systems to ensure the necessary electricity supply to vulnerable customers, or providing for support for energy efficiency improvements, to address energy poverty where identified, including in the broader context of poverty. Such measures shall not impede the effective opening of the market set out in Article 33 or market functioning and shall be notified **to the Energy Community Secretariat**, where relevant, in accordance with the provisions of paragraph 15 of this Article. Such notification may also include measures taken within the general social security system.

9. **Contracting Parties** shall ensure that electricity suppliers specify in or with the bills and in promotional materials made available to final customers:

(a) the contribution of each energy source to the overall fuel mix of the supplier over the preceding year in a comprehensible and, at a national level, clearly comparable manner;

(b) at least the reference to existing reference sources, such as web pages, where information on the environmental impact, in terms of at least CO₂ emissions and the radioactive waste resulting from the electricity produced by the overall fuel mix of the supplier over the preceding year is publicly available;

(c) information concerning their rights as regards the means of dispute settlement available to them in the event of a dispute.

As regards points (a) and (b) of the first subparagraph with respect to electricity obtained via an electricity exchange or imported from an undertaking situated outside the **Energy Community**, aggregate figures provided by the exchange or the undertaking in question over the preceding year may be used.

The regulatory authority or another competent national authority shall take the necessary steps to ensure that the information provided by suppliers to their customers pursuant to this Article is reliable and is provided, at a national level, in a clearly comparable manner.

10. **Contracting Parties** shall implement measures to achieve the objectives of social and economic cohesion and environmental protection, which shall include energy efficiency/demand-side management measures and means to combat climate change, and security of supply, where appropriate. Such measures

may include, in particular, the provision of adequate economic incentives, using, where appropriate, all existing national and **Energy Community** tools, for the maintenance and construction of the necessary network infrastructure, including interconnection capacity.

11. In order to promote energy efficiency, **Contracting Parties** or, where a **Contracting Party** has so provided, the regulatory authority shall strongly recommend that electricity undertakings optimize the use of electricity, for example by providing energy management services, developing innovative pricing formulas, or introducing intelligent metering systems or smart grids, where appropriate.

12. **Contracting Parties** shall ensure the provision of single points of contact to provide consumers with all necessary information concerning their rights, current legislation and the means of dispute settlement available to them in the event of a dispute. Such contact points may be part of general consumer information points.

13. **Contracting Parties** shall ensure that an independent mechanism such as an energy ombudsman or a consumer body is in place in order to ensure efficient treatment of complaints and out-of-court dispute settlements.

14. **Contracting Parties** may decide not to apply the provisions of Articles 7, 8, 32 and/or 34 insofar as their application would obstruct the performance, in law or in fact, of the obligations imposed on electricity undertakings in the general economic interest and insofar as the development of trade would not be affected to such an extent as would be contrary to the interests of the **Energy Community**. The interests of the **Energy Community** include, *inter alia*, competition with regard to eligible customers in accordance with this Directive and **Annex III of the Energy Community Treaty**.

15. **Contracting Parties** shall, upon implementation of this Directive, inform the **Energy Community Secretariat** of all measures adopted to fulfil universal service and public service obligations, including consumer protection and environmental protection, and their possible effect on national and international competition, whether or not such measures require a derogation from this Directive. They shall inform the **Energy Community Secretariat** subsequently every two years of any changes to such measures, whether or not they require a derogation from this Directive.

16.¹ **Contracting Parties shall ensure that electricity <...> suppliers or distribution system operators, in cooperation with the regulatory authority, take the necessary steps to provide their consumers with a copy of the energy consumer checklists established by the European Commission <...> .**

The checklists shall be adopted by the Permanent High Level Group, following the procedure laid down in Article 79 of the Treaty.

Article 4

Monitoring of security of supply

Contracting Parties shall ensure the monitoring of security of supply issues. Where **Contracting Parties** consider it appropriate, they may delegate that task to the regulatory authorities referred to in Article 35. Such monitoring shall, in particular, cover the balance of supply and demand on the national market, the level of expected future demand and envisaged additional capacity being planned or under construction,

¹ The text displayed in Article 3(16) corresponds to Article 6 of Decision 2011/02/MC-EnC.

and the quality and level of maintenance of the networks, as well as measures to cover peak demand and to deal with shortfalls of one or more suppliers. The competent authorities shall publish every two years, by 31 July, a report outlining the findings resulting from the monitoring of those issues, as well as any measures taken or envisaged to address them and shall forward that report to the **Energy Community Secretariat** forthwith.

Article 5

Technical rules

The regulatory authorities where **Contracting Parties** have so provided or **Contracting Parties** shall ensure that technical safety criteria are defined and that technical rules establishing the minimum technical design and operational requirements for the connection to the system of generating installations, distribution systems, directly connected consumers' equipment, interconnector circuits and direct lines are developed and made public. Those technical rules shall ensure the interoperability of systems and shall be objective and non-discriminatory. <...>

Article 6²

Promotion of regional cooperation

1. **Contracting Parties** as well as the regulatory authorities shall cooperate with each other for the purpose of integrating their national markets at regional levels, as a first step towards the creation of a fully liberalized internal market. In particular, the regulatory authorities where **Contracting Parties** have so provided or **Contracting Parties** shall promote and facilitate the cooperation of transmission system operators at a regional level, including on cross-border issues, with the aim of creating a competitive internal market in electricity, foster the consistency of their legal, regulatory and technical framework and facilitate integration of the isolated systems forming electricity islands that persist in the **Energy Community**. **Such regional cooperation shall concern cooperation in the geographical area defined under Title III of the Treaty establishing the Energy Community. It may cover other geographical areas.**

2. The **Energy Community Regulatory Board** shall cooperate with national regulatory authorities and transmission system operators to ensure the compatibility of regulatory frameworks with other European regions with the aim of creating a competitive internal market in electricity that can be fully integrated with the EU internal market.

3. **Contracting Parties** shall ensure, through the implementation of this Directive, that transmission system operators have one or more integrated system(s) at regional level covering two or more **Contracting Parties** for capacity allocation and for checking the security of the network.

4. Where vertically integrated transmission system operators participate in a joint undertaking established for implementing such cooperation, the joint undertaking shall establish and implement a compliance program which sets out the measures to be taken to ensure that discriminatory and anticompetitive con-

² In addition, Article 25 of Decision 2011/02/MC-EnC reads: 'Transmission system operators shall promote operational arrangements in order to ensure the optimum management of the Energy Community network and shall promote the development of energy exchanges, the coordinated allocation of cross-border capacity through non-discriminatory market-based solutions, paying due attention to the specific merits of implicit auctions for short-term allocations, and the integration of balancing and reserve power mechanisms.'

duct is excluded. That compliance programme shall set out the specific obligations of employees to meet the objective of excluding discriminatory and anticompetitive conduct. It shall be notified to the **Energy Community Regulatory Board**. Compliance with the programme shall be independently monitored by the compliance officers of the vertically integrated transmission system operators.

CHAPTER III GENERATION

Article 7

Authorisation procedure for new capacity

1. For the construction of new generating capacity, **Contracting Parties** shall adopt an authorisation procedure, which shall be conducted in accordance with objective, transparent and non-discriminatory criteria.

2. **Contracting Parties** shall lay down the criteria for the grant of authorisations for the construction of generating capacity in their territory. In determining appropriate criteria, **Contracting Parties** shall consider:

- (a) the safety and security of the electricity system, installations and associated equipment;
- (b) the protection of public health and safety;
- (c) the protection of the environment;
- (d) land use and siting;
- (e) the use of public ground;
- (f) energy efficiency;
- (g) the nature of the primary sources;
- (h) the characteristics particular to the applicant, such as technical, economic and financial capabilities;
- (i) compliance with measures adopted pursuant to Article 3;
- (j) the contribution of the generating capacity to meeting the overall Energy Community target of at least a 20% share of energy from renewable sources in the Energy Community's gross final consumption of energy in 2020 referred to in Article 3(1) of Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources;³ and
- (k) the contribution of generating capacity to reducing emissions.

3. **Contracting Parties** shall ensure that specific authorisation procedures exist for small decentralised and/or distributed generation, which take into account their limited size and potential impact.

Contracting Parties may set guidelines for that specific authorisation procedure. National regulatory authorities or other competent national authorities including planning authorities shall review those guidelines and may recommend amendments thereto.

Where **Contracting Parties** have established particular land use permit procedures applying to major new infrastructure projects in generation capacity, **Contracting Parties** shall, where appropriate, include

³ Directive 2009/28/EC was incorporated to the Energy Community acquis and adapted by Decision 2012/04/MC-EnC of 18 October 2012. According to Article 4(1) of that Decision, the second sentence of Article 3(1) of Directive 2009/28/EC shall not be applicable in the Energy Community.

the construction of new generation capacity within the scope of those procedures and shall implement them in a non-discriminatory manner and within an appropriate time-frame.

4. The authorisation procedures and criteria shall be made public. Applicants shall be informed of the reasons for any refusal to grant an authorisation. Those reasons shall be objective, non-discriminatory, well-founded and duly substantiated. Appeal procedures shall be made available to the applicant.

Article 8

Tendering for new capacity

1. **Contracting Parties** shall ensure the possibility, in the interests of security of supply, of providing for new capacity or energy efficiency/demand-side management measures through a tendering procedure or any procedure equivalent in terms of transparency and non-discrimination, on the basis of published criteria. Those procedures may, however, be launched only where, on the basis of the authorisation procedure, the generating capacity to be built or the energy efficiency/demand-side management measures to be taken are insufficient to ensure security of supply.

2. **Contracting Parties** may ensure the possibility, in the interests of environmental protection and the promotion of infant new technologies, of tendering for new capacity on the basis of published criteria. Such tendering may relate to new capacity or to energy efficiency/demand-side management measures. A tendering procedure may, however, be launched only where, on the basis of the authorisation procedure the generating capacity to be built or the measures to be taken, are insufficient to achieve those objectives.

3. Details of the tendering procedure for means of generating capacity and energy efficiency/demand-side management measures shall be published **in a dedicated section of the web site of the Energy Community** at least six months prior to the closing date for tenders.

The tender specifications shall be made available to any interested undertaking established in the territory of a **Contracting Party** so that it has sufficient time in which to submit a tender.

With a view to ensuring transparency and non-discrimination, the tender specifications shall contain a detailed description of the contract specifications and of the procedure to be followed by all tenderers and an exhaustive list of criteria governing the selection of tenderers and the award of the contract, including incentives, such as subsidies, which are covered by the tender. Those specifications may also relate to the fields referred to in Article 7(2).

4. In invitations to tender for the requisite generating capacity, consideration must also be given to electricity supply offers with long-term guarantees from existing generating units, provided that additional requirements can be met in this way.

5. **Contracting Parties** shall designate an authority or a public or private body independent from electricity generation, transmission, distribution and supply activities, which may be a regulatory authority referred to in Article 35(1), to be responsible for the organisation, monitoring and control of the tendering procedure referred to in paragraphs 1 to 4 of this Article. Where a transmission system operator is fully independent from other activities not relating to the transmission system in ownership terms, the transmission system operator may be designated as the body responsible for organising, monitoring and controlling the tendering procedure. That authority or body shall take all necessary steps to ensure confidentiality of the information contained in the tenders.

CHAPTER IV

TRANSMISSION SYSTEM OPERATION

Article 9

Unbundling of transmission systems and transmission system operators

1. **Contracting Parties** shall ensure that from **1 June 2016**:

- (a) each undertaking which owns a transmission system acts as a transmission system operator;
- (b) the same person or persons are entitled neither:
 - (i) directly or indirectly to exercise control over an undertaking performing any of the functions of generation or supply, and directly or indirectly to exercise control or exercise any right over a transmission system operator or over a transmission system; nor
 - (ii) directly or indirectly to exercise control over a transmission system operator or over a transmission system, and directly or indirectly to exercise control or exercise any right over an undertaking performing any of the functions of generation or supply;
- (c) the same person or persons are not entitled to appoint members of the supervisory board, the administrative board or bodies legally representing the undertaking, of a transmission system operator or a transmission system, and directly or indirectly to exercise control or exercise any right over an undertaking performing any of the functions of generation or supply; and
- (d) the same person is not entitled to be a member of the supervisory board, the administrative board or bodies legally representing the undertaking, of both an undertaking performing any of the functions of generation or supply and a transmission system operator or a transmission system.

2. The rights referred to in points (b) and (c) of paragraph 1 shall include, in particular:

- (a) the power to exercise voting rights;
- (b) the power to appoint members of the supervisory board, the administrative board or bodies legally representing the undertaking; or
- (c) the holding of a majority share.

3. For the purpose of paragraph 1(b), the notion “undertaking performing any of the functions of generation or supply” shall include “undertaking performing any of the functions of production and supply” within the meaning of Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas, and the terms “transmission system operator” and “transmission system” shall include “transmission system operator” and “transmission system” within the meaning of that Directive.

4. **Contracting Parties** may allow for derogations from points (b) and (c) of paragraph 1 until **1 June 2017**, provided that transmission system operators are not part of a vertically integrated undertaking.

5. The obligation set out in paragraph 1(a) shall be deemed to be fulfilled in a situation where two or more undertakings which own transmission systems have created a joint venture which acts as a transmission system operator in two or more **Contracting Parties** for the transmission systems concerned. No other undertaking may be part of the joint venture, unless it has been approved under Article 13 as an

independent system operator or as an independent transmission operator for the purposes of Chapter V.

6. For the implementation of this Article, where the person referred to in points (b), (c) and (d) of paragraph 1 is the **Contracting Party** or another public body, two separate public bodies exercising control over a transmission system operator or over a transmission system on the one hand, and over an undertaking performing any of the functions of generation or supply on the other, shall be deemed not to be the same person or persons.

7. **Contracting Parties** shall ensure that neither commercially sensitive information referred to in Article 16 held by a transmission system operator which was part of a vertically integrated undertaking, nor the staff of such a transmission system operator, is transferred to undertakings performing any of the functions of generation and supply.

8. Where on **6 October 2011**, the transmission system belongs to a vertically integrated undertaking a **Contracting Party** may decide not to apply paragraph 1.

In such case, the **Contracting Party** concerned shall either:

- (a) designate an independent system operator in accordance with Article 13; or
- (b) comply with the provisions of Chapter V.

9. Where, on **6 October 2011**, the transmission system belongs to a vertically integrated undertaking and there are arrangements in place which guarantee more effective independence of the transmission system operator than the provisions of Chapter V, a Contracting Party may decide not to apply paragraph 1.

10. Before an undertaking is approved and designated as a transmission system operator under paragraph 9 of this Article, it shall be certified according to the procedures laid down in Article 10(4), (5) and (6) of this Directive and in Article 3 of Regulation (EC) No 714/2009, pursuant to which the **Energy Community Secretariat**, shall verify that the arrangements in place clearly guarantee more effective independence of the transmission system operator than the provisions of Chapter V.

11. Vertically integrated undertakings which own a transmission system shall not in any event be prevented from taking steps to comply with paragraph 1.

12. Undertakings performing any of the functions of generation or supply shall not in any event be able to directly or indirectly take control over or exercise any right over unbundled transmission system operators in **Contracting Parties** which apply paragraph 1.

Article 10

Designation and certification of transmission system operators

1. Before an undertaking is approved and designated as transmission system operator, it shall be certified according to the procedures laid down in paragraphs 4, 5 and 6 of this Article and in Article 3 of Regulation (EC) No 714/2009.

2. Undertakings which own a transmission system and which have been certified by the national regulatory authority as having complied with the requirements of Article 9, pursuant to the certification procedure below, shall be approved and designated as transmission system operators by the **Contracting Parties**. The designation of transmission system operators shall be notified to the **Energy Community Secretariat** and published in **a dedicated section of the website of the Energy Community**.

3. Transmission system operators shall notify to the regulatory authority any planned transaction which may require a reassessment of their compliance with the requirements of Article 9.
4. Regulatory authorities shall monitor the continuing compliance of transmission system operators with the requirements of Article 9. They shall open a certification procedure to ensure such compliance:
 - (a) upon notification by the transmission system operator pursuant to paragraph 3;
 - (b) on their own initiative where they have knowledge that a planned change in rights or influence over transmission system owners or transmission system operators may lead to an infringement of Article 9, or where they have reason to believe that such an infringement may have occurred; or
 - (c) upon a reasoned request from the **Energy Community Secretariat**.
5. The regulatory authorities shall adopt a decision on the certification of a transmission system operator within a period of four months from the date of the notification by the transmission system operator or from the date of the **Energy Community Secretariat**'s request. After expiry of that period, the certification shall be deemed to be granted. The explicit or tacit decision of the regulatory authority shall become effective only after the conclusion of the procedure set out in paragraph 6.
6. The explicit or tacit decision on the certification of a transmission system operator shall be notified without delay to the **Energy Community Secretariat** by the regulatory authority, together with all the relevant information with respect to that decision. The Energy Community Secretariat shall act in accordance with the procedure laid down in Article 3 of Regulation (EC) No 714/2009.
7. The regulatory authorities and the **Energy Community Secretariat** may request from transmission system operators and undertakings performing any of the functions of generation or supply any information relevant for the fulfilment of their tasks under this Article.
8. Regulatory authorities and the **Energy Community Secretariat** shall preserve the confidentiality of commercially sensitive information.

Article 11

Certification in relation to third countries

1. Where certification is requested by a transmission system owner or a transmission system operator which is controlled by a person or persons from a third country or third countries, the regulatory authority shall notify the **Energy Community Secretariat**.
The regulatory authority shall also notify to the **Energy Community Secretariat** without delay any circumstances that would result in a person or persons from a third country or third countries acquiring control of a transmission system or a transmission system operator.
2. The transmission system operator shall notify to the regulatory authority any circumstances that would result in a person or persons from a third country or third countries acquiring control of the transmission system or the transmission system operator.
3. The regulatory authority shall adopt a draft decision on the certification of a transmission system operator within four months from the date of notification by the transmission system operator. It shall refuse the certification if it has not been demonstrated:
 - (a) that the entity concerned complies with the requirements of Article 9; and

(b) to the regulatory authority or to another competent authority designated by the **Contracting Party** that granting certification will not put at risk the security of energy supply of the **Contracting Party** and the **Energy Community**. In considering that question the regulatory authority or other competent authority so designated shall take into account:

- (i) the rights and obligations of the **Energy Community** with respect to that third country arising under international law, including any agreement concluded with one or more third countries to which the **Energy Community** is a party and which addresses the issues of security of energy supply
- (ii) the rights and obligations of the **Contracting Party** with respect to that third country arising under agreements concluded with it, insofar as they are in compliance with Energy Community law; and
- (iii) other specific facts and circumstances of the case and the third country concerned.⁴

4. The regulatory authority shall notify the decision to the **Energy Community Secretariat** without delay, together with all the relevant information with respect to that decision.

5. **Contracting Parties** shall provide for the regulatory authority or the designated competent authority referred to in paragraph 3(b), before the regulatory authority adopts a decision on the certification, to request an opinion from the **Energy Community Secretariat** on whether:

- (a) the entity concerned complies with the requirements of Article 9; and
- (b) granting certification will not put at risk the security of energy supply to the **Energy Community**.

6. The **Energy Community Secretariat** shall examine the request referred to in paragraph 5 as soon as it is received. Within a period of two months after receiving the request, it shall deliver its opinion to the national regulatory authority or, if the request was made by the designated competent authority, to that authority.

In preparing its opinion, the Energy Community Secretariat shall request the views of the Energy Community Regulatory Board. It may also request the views of the **Contracting Party** concerned, and interested parties. In the event that the **Energy Community Secretariat** makes such a request, the two-month period shall be extended by two months.

In the absence of an opinion by the **Energy Community Secretariat** within the period referred to in the first and second subparagraphs, the **Energy Community Secretariat** shall be deemed not to raise objections to the decision of the regulatory authority.

7. When assessing whether the control by a person or persons from a third country or third countries will put at risk the security of energy supply to the **Energy Community**, the **Energy Community Secretariat** shall take into account:

- (a) the specific facts of the case and the third country or third countries concerned; and
- (b) the rights and obligations of the **Energy Community** with respect to that third country arising under international law, including any agreement concluded with one or more third countries to which the Energy Community is a party and which addresses the issues of security of energy supply.⁵

⁴ According to Article 10(1) of Decision 2011/02/MC-EnC, 'the regulatory authority or other competent authority designated shall also take into account the rights and obligations resulting from association or trade agreements between the Contracting Party and the European Union'

⁵ According to Article 10(2) of Decision 2011/02/MC-EnC, Article 10(1) of the same Decision applies 'the regulatory authority or other competent authority designated shall also take into account the rights and obligations resulting from association or trade agreements between the Contracting Party and the European Union'.

8. The national regulatory authority shall, within a period of two months after the expiry of the period referred to in paragraph 6, adopt its final decision on the certification. In adopting its final decision the national regulatory authority shall take utmost account of the opinion of the **Energy Community Secretariat**. In any event **Contracting Parties** shall have the right to refuse certification where granting certification puts at risk the **Contracting Party's** security of energy supply or the security of energy supply of another **Contracting Party**. Where the **Contracting Party** has designated another competent authority to assess paragraph 3(b), it may require the national regulatory authority to adopt its final decision in accordance with the assessment of that competent authority. The national regulatory authority's final decision and the opinion of the **Energy Community Secretariat** shall be published together. Where the final decision diverges from the Secretariat's opinion, the **Contracting Party** concerned shall provide and publish, together with that decision, the reasoning underlying such decision.

9. Nothing in this Article shall affect the right of **Contracting Parties** to exercise, in compliance with **Energy Community** law, national legal controls to protect legitimate public security interests.

10. <...>

11. <...>

Article 12

Tasks of transmission system operators

Each transmission system operator shall be responsible for:

(a) ensuring the long-term ability of the system to meet reasonable demands for the transmission of electricity, operating, maintaining and developing under economic conditions secure, reliable and efficient transmission systems with due regard to the environment;

(b) ensuring adequate means to meet service obligations;

(c) contributing to security of supply through adequate transmission capacity and system reliability;

(d) managing electricity flows on the system, taking into account exchanges with other interconnected systems. To that end, the transmission system operator shall be responsible for ensuring a secure, reliable and efficient electricity system and, in that context, for ensuring the availability of all necessary ancillary services, including those provided by demand response, insofar as such availability is independent from any other transmission system with which its system is interconnected;

(e) providing to the operator of any other system with which its system is interconnected sufficient information to ensure the secure and efficient operation, coordinated development and interoperability of the interconnected system;

(f) ensuring non-discrimination as between system users or classes of system users, particularly in favour of its related undertakings;

(g) providing system users with the information they need for efficient access to the system; and

(h) collecting congestion rents and payments under the inter-transmission system operator compensation mechanism, in compliance with Article 13 of Regulation (EC) No 714/2009, granting and managing third-party access and giving reasoned explanations when it denies such access, which shall be monitored by the national regulatory authorities; in carrying out their tasks under this Article transmission system operators shall primarily facilitate market integration.

Article 13

Independent system operator

1. Where the transmission system belongs to a vertically integrated undertaking on **6 October 2011**, **Contracting Parties** may decide not to apply Article 9(1) and designate an independent system operator upon a proposal from the transmission system owner. Such designation shall be subject to **the opinion of the Energy Community Secretariat**.
2. The **Contracting Party** may approve and designate an independent system operator only where:
 - (a) the candidate operator has demonstrated that it complies with the requirements of Article 9(1) (b), (c) and (d);
 - (b) the candidate operator has demonstrated that it has at its disposal the required financial, technical, physical and human resources to carry out its tasks under Article 12;
 - (c) the candidate operator has undertaken to comply with a ten-year network development plan monitored by the regulatory authority;
 - (d) the transmission system owner has demonstrated its ability to comply with its obligations under paragraph 5. To that end, it shall provide all the draft contractual arrangements with the candidate undertaking and any other relevant entity; and
 - (e) the candidate operator has demonstrated its ability to comply with its obligations under Regulation (EC) No 714/2009, including the cooperation of transmission system operators at European and regional level.
3. Undertakings which have been certified by the regulatory authority as having complied with the requirements of Article 11 and paragraph 2 of this Article shall be approved and designated as independent system operators by **Contracting Parties**. The certification procedure in either Article 10 of this Directive and Article 3 of Regulation (EC) No 714/2009, or in Article 11 of this Directive shall be applicable.
4. Each independent system operator shall be responsible for granting and managing third-party access, including the collection of access charges, congestion charges, and payments under the inter-transmission system operator compensation mechanism in compliance with Article 13 of Regulation (EC) No 714/2009, as well as for operating, maintaining and developing the transmission system, and for ensuring the long-term ability of the system to meet reasonable demand through investment planning. When developing the transmission system, the independent system operator shall be responsible for planning (including authorization procedure), construction and commissioning of the new infrastructure. For this purpose, the independent system operator shall act as a transmission system operator in accordance with this Chapter. The transmission system owner shall not be responsible for granting and managing third-party access, nor for investment planning.
5. Where an independent system operator has been designated, the transmission system owner shall:
 - (a) provide all the relevant cooperation and support to the independent system operator for the fulfillment of its tasks, including in particular all relevant information;
 - (b) finance the investments decided by the independent system operator and approved by the regulatory authority, or give its agreement to financing by any interested party including the independent system operator. The relevant financial arrangements shall be subject to approval by the regulatory authority. Prior to such approval, the regulatory authority shall consult the transmission system owner together with the

other interested parties;

(c) provide for the coverage of liability relating to the network assets, excluding the liability relating to the tasks of the independent system operator; and

(d) provide guarantees to facilitate financing any network expansions with the exception of those investments where, pursuant to point (b), it has given its agreement to financing by any interested party including the independent system operator.

6. In close cooperation with the regulatory authority, the relevant national competition authority shall be granted all relevant powers to effectively monitor compliance of the transmission system owner with its obligations under paragraph 5.

Article 14

Unbundling of transmission system owners

1. A transmission system owner, where an independent system operator has been appointed, which is part of a vertically integrated undertaking shall be independent at least in terms of its legal form, organization and decision making from other activities not relating to transmission.

2. In order to ensure the independence of the transmission system owner referred to in paragraph 1, the following minimum criteria shall apply:

(a) persons responsible for the management of the transmission system owner shall not participate in company structures of the integrated electricity undertaking responsible, directly or indirectly, for the day-to-day operation of the generation, distribution and supply of electricity;

(b) appropriate measures shall be taken to ensure that the professional interests of persons responsible for the management of the transmission system owner are taken into account in a manner that ensures that they are capable of acting independently; and

(c) the transmission system owner shall establish a compliance program, which sets out measures taken to ensure that discriminatory conduct is excluded, and ensure that observance of it is adequately monitored. The compliance program shall set out the specific obligations of employees to meet those objectives. An annual report, setting out the measures taken, shall be submitted by the person or body responsible for monitoring the compliance program to the regulatory authority and shall be published.

3. <...>

Article 15

Dispatching and balancing

1. Without prejudice to the supply of electricity on the basis of contractual obligations, including those which derive from the tendering specifications, the transmission system operator shall, where it has such a function, be responsible for dispatching the generating installations in its area and for determining the use of interconnectors with other systems.

2. The dispatching of generating installations and the use of interconnectors shall be determined on the basis of criteria which shall be approved by national regulatory authorities where competent and which must

be objective, published and applied in a non-discriminatory manner, ensuring the proper functioning of the internal market in electricity. The criteria shall take into account the economic precedence of electricity from available generating installations or interconnector transfers and the technical constraints on the system.

3. A **Contracting Party** shall require system operators to act in accordance with Article 16 of Directive 2009/28/EC, when dispatching generating installations using renewable energy sources. They also may require the system operator to give priority when dispatching generating installations producing combined heat and power.

4. A **Contracting Party** may, for reasons of security of supply, direct that priority be given to the dispatch of generating installations using indigenous primary energy fuel sources, to an extent not exceeding, in any calendar year, 15% of the overall primary energy necessary to produce the electricity consumed in the **Contracting Party** concerned.

5. The regulatory authorities where **Contracting Parties** have so provided or **Contracting Parties** shall require transmission system operators to comply with minimum standards for the maintenance and development of the transmission system, including interconnection capacity.

6. Transmission system operators shall procure the energy they use to cover energy losses and reserve capacity in their system according to transparent, non-discriminatory and market-based procedures, whenever they have such a function.

7. Rules adopted by transmission system operators for balancing the electricity system shall be objective, transparent and non-discriminatory, including rules for charging system users of their networks for energy imbalance. The terms and conditions, including the rules and tariffs, for the provision of such services by transmission system operators shall be established pursuant to a methodology compatible with Article 37(6) in a non-discriminatory and cost-reflective way and shall be published.

Article 16

Confidentiality for transmission system operators and transmission system owners

1. Without prejudice to Article 30 or any other legal duty to disclose information, each transmission system operator and each transmission system owner shall preserve the confidentiality of commercially sensitive information obtained in the course of carrying out its activities, and shall prevent information about its own activities which may be commercially advantageous from being disclosed in a discriminatory manner. In particular it shall not disclose any commercially sensitive information to the remaining parts of the undertaking, unless this is necessary for carrying out a business transaction.

In order to ensure the full respect of the rules on information unbundling, **Contracting Parties** shall ensure that the transmission system owner and the remaining part of the undertaking do not use joint services, such as joint legal services, apart from purely administrative or IT functions.

2. Transmission system operators shall not, in the context of sales or purchases of electricity by related undertakings, misuse commercially sensitive information obtained from third parties in the context of providing or negotiating access to the system.

Information necessary for effective competition and the efficient functioning of the market shall be made public. That obligation shall be without prejudice to preserving the confidentiality of commercially sensitive information.

CHAPTER V

INDEPENDENT TRANSMISSION OPERATOR

Article 17

Assets, equipment, staff and identity

1. Transmission system operators shall be equipped with all human, technical, physical and financial resources necessary for fulfilling their obligations under this Directive and carrying out the activity of electricity transmission, in particular:

(a) assets that are necessary for the activity of electricity transmission, including the transmission system, shall be owned by the transmission system operator;

(b) personnel, necessary for the activity of electricity transmission, including the performance of all corporate tasks, shall be employed by the transmission system operator;

(c) leasing of personnel and rendering of services, to and from any other parts of the vertically integrated undertaking shall be prohibited. A transmission system operator may, however, render services to the vertically integrated undertaking as long as:

(i) the provision of those services does not discriminate between system users, is available to all system users on the same terms and conditions and does not restrict, distort or prevent competition in generation or supply; and

(ii) the terms and conditions of the provision of those services are approved by the regulatory authority;

(d) without prejudice to the decisions of the Supervisory Body under Article 20, appropriate financial resources for future investment projects and/or for the replacement of existing assets shall be made available to the transmission system operator in due time by the vertically integrated undertaking following an appropriate request from the transmission system operator.

2. The activity of electricity transmission shall include at least the following tasks in addition to those listed in Article 12:

(a) the representation of the transmission system operator and contacts to third parties and the regulatory authorities;

(b) <...>

(c) granting and managing third-party access on a non-discriminatory basis between system users or classes of system users;

(d) the collection of all the transmission system related charges including access charges, balancing charges for ancillary services such as purchasing of services (balancing costs, energy for losses);

(e) the operation, maintenance and development of a secure, efficient and economic transmission system;

(f) investment planning ensuring the long-term ability of the system to meet reasonable demand and guaranteeing security of supply;

(g) the setting up of appropriate joint ventures, including with one or more transmission system operators, power exchanges, and the other relevant actors pursuing the objectives to develop the creation of regional markets or to facilitate the liberalisation process; and

(h) all corporate services, including legal services, accountancy and IT services.

3. Transmission system operators shall be organized in a legal form as referred to in Article 1 of Council Directive 68/151/EEC.

4. The transmission system operator shall not, in its corporate identity, communication, branding and premises, create confusion in respect of the separate identity of the vertically integrated undertaking or any part thereof.

5. The transmission system operator shall not share IT systems or equipment, physical premises and security access systems with any part of the vertically integrated undertaking nor use the same consultants or external contractors for IT systems or equipment, and security access systems.

6. The accounts of transmission system operators shall be audited by an auditor other than the one auditing the vertically integrated undertaking or any part thereof.

Article 18

Independence of the transmission system operator

1. Without prejudice to the decisions of the Supervisory Body under Article 20, the transmission system operator shall have:

(a) effective decision-making rights, independent from the vertically integrated undertaking, with respect to assets necessary to operate, maintain or develop the transmission system; and

(b) the power to raise money on the capital market in particular through borrowing and capital increase.

2. The transmission system operator shall at all times act so as to ensure it has the resources it needs in order to carry out the activity of transmission properly and efficiently and develop and maintain an efficient, secure and economic transmission system.

3. Subsidiaries of the vertically integrated undertaking performing functions of generation or supply shall not have any direct or indirect shareholding in the transmission system operator. The transmission system operator shall neither have any direct or indirect shareholding in any subsidiary of the vertically integrated undertaking performing functions of generation or supply, nor receive dividends or any other financial benefit from that subsidiary.

4. The overall management structure and the corporate statutes of the transmission system operator shall ensure effective independence of the transmission system operator in compliance with this Chapter. The vertically integrated undertaking shall not determine, directly or indirectly, the competitive behaviour of the transmission system operator in relation to the day to day activities of the transmission system operator and management of the network, or in relation to activities necessary for the preparation of the ten-year network development plan developed pursuant to Article 22.

5. In fulfilling their tasks in Article 12 and Article 17(2) of this Directive, and in complying with Articles 14, 15 and 16 of Regulation (EC) No 714/2009, transmission system operators shall not discriminate against different persons or entities and shall not restrict, distort or prevent competition in generation or supply.

6. Any commercial and financial relations between the vertically integrated undertaking and the transmission system operator, including loans from the transmission system operator to the vertically integrated undertaking, shall comply with market conditions. The transmission system operator shall keep detailed records of such commercial and financial relations and make them available to the regulatory authority upon request.

7. The transmission system operator shall submit for approval by the regulatory authority all commercial and financial agreements with the vertically integrated undertaking.
8. The transmission system operator shall inform the regulatory authority of the financial resources, referred to in Article 17(1)(d), available for future investment projects and/or for the replacement of existing assets.
9. The vertically integrated undertaking shall refrain from any action impeding or prejudicing the transmission system operator from complying with its obligations in this Chapter and shall not require the transmission system operator to seek permission from the vertically integrated undertaking in fulfilling those obligations.
10. An undertaking which has been certified by the regulatory authority as being in compliance with the requirements of this Chapter shall be approved and designated as a transmission system operator by the **Contracting Party** concerned. The certification procedure in either Article 10 of this Directive and Article 3 of Regulation (EC) No 714/2009, or in Article 11 of this Directive shall apply.

Article 19

Independence of the staff and the management of the transmission system operator

1. Decisions regarding the appointment and renewal, working conditions including remuneration, and termination of the term of office of the persons responsible for the management and/or members of the administrative bodies of the transmission system operator shall be taken by the Supervisory Body of the transmission system operator appointed in accordance with Article 20.
2. The identity and the conditions governing the term, the duration and the termination of office of the persons nominated by the Supervisory Body for appointment or renewal as persons responsible for the executive management and/or as members of the administrative bodies of the transmission system operator, and the reasons for any proposed decision terminating such term of office, shall be notified to the regulatory authority. Those conditions and the decisions referred to in paragraph 1 shall become binding only if the regulatory authority has raised no objections within three weeks of notification.
The regulatory authority may object to the decisions referred to in paragraph 1 where:
 - (a) doubts arise as to the professional independence of a nominated person responsible for the management and/or member of the administrative bodies; or
 - (b) in the case of premature termination of a term of office, doubts exist regarding the justification of such premature termination.
3. No professional position or responsibility, interest or business relationship, directly or indirectly, with the vertically integrated undertaking or any part of it or its controlling shareholders other than the transmission system operator shall be exercised for a period of three years before the appointment of the persons responsible for the management and/or members of the administrative bodies of the transmission system operator who are subject to this paragraph.
4. The persons responsible for the management and/or members of the administrative bodies, and employees of the transmission system operator shall have no other professional position or responsibility, interest or business relationship, directly or indirectly, with any other part of the vertically integrated undertaking or with its controlling shareholders.

5. The persons responsible for the management and/or members of the administrative bodies, and employees of the transmission system operator shall hold no interest in or receive any financial benefit, directly or indirectly, from any part of the vertically integrated undertaking other than the transmission system operator. Their remuneration shall not depend on activities or results of the vertically integrated undertaking other than those of the transmission system operator.

6. Effective rights of appeal to the regulatory authority shall be guaranteed for any complaints by the persons responsible for the management and/or members of the administrative bodies of the transmission system operator against premature terminations of their term of office.

7. After termination of their term of office in the transmission system operator, the persons responsible for its management and/or members of its administrative bodies shall have no professional position or responsibility, interest or business relationship with any part of the vertically integrated undertaking other than the transmission system operator, or with its controlling shareholders for a period of not less than four years.

8. Paragraph 3 shall apply to the majority of the persons responsible for the management and/or members of the administrative bodies of the transmission system operator.

The persons responsible for the management and/or members of the administrative bodies of the transmission system operator who are not subject to paragraph 3 shall have exercised no management or other relevant activity in the vertically integrated undertaking for a period of at least six months before their appointment.

The first subparagraph of this paragraph and paragraphs 4 to 7 shall be applicable to all the persons belonging to the executive management and to those directly reporting to them on matters related to the operation, maintenance or development of the network.

Article 20

Supervisory Body

1. The transmission system operator shall have a Supervisory Body which shall be in charge of taking decisions which may have a significant impact on the value of the assets of the shareholders within the transmission system operator, in particular decisions regarding the approval of the annual and longer-term financial plans, the level of indebtedness of the transmission system operator and the amount of dividends distributed to shareholders. The decisions falling under the remit of the Supervisory Body shall exclude those that are related to the day to day activities of the transmission system operator and management of the network, and to activities necessary for the preparation of the ten-year network development plan developed pursuant to Article 22.

2. The Supervisory Body shall be composed of members representing the vertically integrated undertaking, members representing third party shareholders and, where the relevant legislation of a **Contracting Party** so provides, members representing other interested parties such as employees of the transmission system operator.

3. The first subparagraph of Article 19(2) and Article 19(3) to (7) shall apply to at least half of the members of the Supervisory Body minus one.

Point (b) of the second subparagraph of Article 19(2) shall apply to all the members of the Supervisory Body.

Article 21

Compliance programme and compliance officer

1. **Contracting Parties** shall ensure that transmission system operators establish and implement a compliance programme which sets out the measures taken in order to ensure that discriminatory conduct is excluded, and ensure that the compliance with that programme is adequately monitored. The compliance programme shall set out the specific obligations of employees to meet those objectives. It shall be subject to approval by the regulatory authority. Without prejudice to the powers of the national regulator, compliance with the program shall be independently monitored by a compliance officer.
2. The compliance officer shall be appointed by the Supervisory Body, subject to the approval by the regulatory authority. The regulatory authority may refuse the approval of the compliance officer only for reasons of lack of independence or professional capacity. The compliance officer may be a natural or legal person. Article 19(2) to (8) shall apply to the compliance officer.
3. The compliance officer shall be in charge of:
 - (a) monitoring the implementation of the compliance programme;
 - (b) elaborating an annual report, setting out the measures taken in order to implement the compliance programme and submitting it to the regulatory authority;
 - (c) reporting to the Supervisory Body and issuing recommendations on the compliance programme and its implementation;
 - (d) notifying the regulatory authority on any substantial breaches with regard to the implementation of the compliance programme; and
 - (e) reporting to the regulatory authority on any commercial and financial relations between the vertically integrated undertaking and the transmission system operator.
4. The compliance officer shall submit the proposed decisions on the investment plan or on individual investments in the network to the regulatory authority. This shall occur at the latest when the management and/or the competent administrative body of the transmission system operator submits them to the Supervisory Body.
5. Where the vertically integrated undertaking, in the general assembly or through the vote of the members of the Supervisory Body it has appointed, has prevented the adoption of a decision with the effect of preventing or delaying investments, which under the ten-year network development plan was to be executed in the following three years, the compliance officer shall report this to the regulatory authority, which then shall act in accordance with Article 22.
6. The conditions governing the mandate or the employment conditions of the compliance officer, including the duration of its mandate, shall be subject to approval by the regulatory authority. Those conditions shall ensure the independence of the compliance officer, including by providing him with all the resources necessary for fulfilling his duties. During his mandate, the compliance officer shall have no other professional position, responsibility or interest, directly or indirectly, in or with any part of the vertically integrated undertaking or with its controlling shareholders.
7. The compliance officer shall report regularly, either orally or in writing, to the regulatory authority and shall have the right to report regularly, either orally or in writing, to the Supervisory Body of the transmission system operator.

8. The compliance officer may attend all meetings of the management or administrative bodies of the transmission system operator, and those of the Supervisory Body and the general assembly. The compliance officer shall attend all meetings that address the following matters:

(a) conditions for access to the network, as defined in Regulation (EC) No 714/2009, in particular regarding tariffs, third party access services, capacity allocation and congestion management, transparency, balancing and secondary markets;

(b) projects undertaken in order to operate, maintain and develop the transmission system, including interconnection and connection investments;

(c) energy purchases or sales necessary for the operation of the transmission system.

9. The compliance officer shall monitor the compliance of the transmission system operator with Article 16.

10. The compliance officer shall have access to all relevant data and to the offices of the transmission system operator and to all the information necessary for the fulfilment of his task.

11. After prior approval by the regulatory authority, the Supervisory Body may dismiss the compliance officer. It shall dismiss the compliance officer for reasons of lack of independence or professional capacity upon request of the regulatory authority.

12. The compliance officer shall have access to the offices of the transmission system operator without prior announcement.

Article 22

Network development and powers to make investment decisions

1. Every year, transmission system operators shall submit to the regulatory authority a ten-year network development plan based on existing and forecast supply and demand after having consulted all the relevant stakeholders. That network development plan shall contain efficient measures in order to guarantee the adequacy of the system and the security of supply.

2. The ten-year network development plan shall in particular:

(a) indicate to market participants the main transmission infrastructure that needs to be built or upgraded over the next ten years;

(b) contain all the investments already decided and identify new investments which have to be executed in the next three years; and

(c) provide for a time frame for all investment projects.

3. When elaborating the ten-year network development plan, the transmission system operator shall make reasonable assumptions about the evolution of the generation, supply, consumption and exchanges with other countries, taking into account investment plans for regional and **Energy Community**-wide networks.

4. The regulatory authority shall consult all actual or potential system users on the ten-year network development plan in an open and transparent manner. Persons or undertakings claiming to be potential system users may be required to substantiate such claims. The regulatory authority shall publish the result of the consultation process, in particular possible needs for investments.

5. The regulatory authority shall examine whether the ten-year network development plan covers all in-

vestment needs identified during the consultation process <...>. The regulatory authority may require the transmission system operator to amend its ten-year network development plan.

6. The regulatory authority shall monitor and evaluate the implementation of the ten-year network development plan.

7. In circumstances where the transmission system operator, other than for overriding reasons beyond its control, does not execute an investment, which, under the ten-year network development plan, was to be executed in the following three years, **Contracting Parties** shall ensure that the regulatory authority is required to take at least one of the following measures to ensure that the investment in question is made if such investment is still relevant on the basis of the most recent ten-year network development plan:

- (a) to require the transmission system operator to execute the investments in question;
- (b) to organise a tender procedure open to any investors for the investment in question; or
- (c) to oblige the transmission system operator to accept a capital increase to finance the necessary investments and allow independent investors to participate in the capital.

Where the regulatory authority has made use of its powers under point (b) of the first subparagraph, it may oblige the transmission system operator to agree to one or more of the following:

- (a) financing by any third party;
- (b) construction by any third party;
- (c) building the new assets concerned itself;
- (d) operating the new asset concerned itself.

The transmission system operator shall provide the investors with all information needed to realise the investment, shall connect new assets to the transmission network and shall generally make its best efforts to facilitate the implementation of the investment project.

The relevant financial arrangements shall be subject to approval by the regulatory authority.

8. Where the regulatory authority has made use of its powers under the first subparagraph of paragraph 7, the relevant tariff regulations shall cover the costs of the investments in question.

Article 23

Decision-making powers regarding the connection of new power plant to the transmission system

1. The transmission system operator shall establish and publish transparent and efficient procedures for non-discriminatory connection of new power plants to the transmission system. Those procedures shall be subject to the approval of national regulatory authorities.

2. The transmission system operator shall not be entitled to refuse the connection of a new power plant on the grounds of possible future limitations to available network capacities, such as congestion in distant parts of the transmission system. The transmission system operator shall supply necessary information.

3. The transmission system operator shall not be entitled to refuse a new connection point, on the ground that it will lead to additional costs linked with necessary capacity increase of system elements in the close-up range to the connection point.

CHAPTER VI

DISTRIBUTION SYSTEM OPERATION

Article 24

Designation of distribution system operators

Contracting Parties shall designate or shall require undertakings that own or are responsible for distribution systems to designate, for a period of time to be determined by **Contracting Parties** having regard to considerations of efficiency and economic balance, one or more distribution system operators. **Contracting Parties** shall ensure that distribution system operators act in accordance with Articles 25, 26 and 27.

Article 25

Tasks of distribution system operators

1. The distribution system operator shall be responsible for ensuring the long-term ability of the system to meet reasonable demands for the distribution of electricity, for operating, maintaining and developing under economic conditions a secure, reliable and efficient electricity distribution system in its area with due regard for the environment and energy efficiency.
2. In any event, it must not discriminate between system users or classes of system users, particularly in favour of its related undertakings.
3. The distribution system operator shall provide system users with the information they need for efficient access to, including use of the system.
4. A **Contracting Party** may require the distribution system operator, when dispatching generating installations, to give priority to generating installations using renewable energy sources or waste or producing combined heat and power.
5. Each distribution system operator shall procure the energy it uses to cover energy losses and reserve capacity in its system according to transparent, non-discriminatory and market based procedures, whenever it has such a function. That requirement shall be without prejudice to using electricity acquired under contracts concluded before **1 January 2006**.
6. Where a distribution system operator is responsible for balancing the distribution system, rules adopted by it for that purpose shall be objective, transparent and non-discriminatory, including rules for the charging of system users of their networks for energy imbalance. Terms and conditions, including rules and tariffs, for the provision of such services by distribution system operators shall be established in accordance with Article 37(6) in a non-discriminatory and cost-reflective way and shall be published.
7. When planning the development of the distribution network, energy efficiency/demand-side management measures or distributed generation that might supplant the need to upgrade or replace electricity capacity shall be considered by the distribution system operator.

Article 26

Unbundling of distribution system operators

1. Where the distribution system operator is part of a vertically integrated undertaking, it shall be independent at least in terms of its legal form, organisation and decision making from other activities not relating to distribution. Those rules shall not create an obligation to separate the ownership of assets of the distribution system operator from the vertically integrated undertaking.

2. In addition to the requirements under paragraph 1, where the distribution system operator is part of a vertically integrated undertaking, it shall be independent in terms of its organisation and decision-making from the other activities not related to distribution. In order to achieve this, the following minimum criteria shall apply:

(a) those persons responsible for the management of the distribution system operator must not participate in company structures of the integrated electricity undertaking responsible, directly or indirectly, for the day-to-day operation of the generation, transmission or supply of electricity;

(b) appropriate measures must be taken to ensure that the professional interests of the persons responsible for the management of the distribution system operator are taken into account in a manner that ensures that they are capable of acting independently;

(c) the distribution system operator must have effective decision-making rights, independent from the integrated electricity undertaking, with respect to assets necessary to operate, maintain or develop the network. In order to fulfil those tasks, the distribution system operator shall have at its disposal the necessary resources including human, technical, physical and financial resources. This should not prevent the existence of appropriate coordination mechanisms to ensure that the economic and management supervision rights of the parent company in respect of return on assets, regulated indirectly in accordance with Article 37(6), in a subsidiary are protected. In particular, this shall enable the parent company to approve the annual financial plan, or any equivalent instrument, of the distribution system operator and to set global limits on the levels of indebtedness of its subsidiary. It shall not permit the parent company to give instructions regarding day-to-day operations, nor with respect to individual decisions concerning the construction or upgrading of distribution lines, that do not exceed the terms of the approved financial plan, or any equivalent instrument; and

(d) the distribution system operator must establish a compliance programme, which sets out measures taken to ensure that discriminatory conduct is excluded, and ensure that observance of it is adequately monitored. The compliance programme shall set out the specific obligations of employees to meet that objective. An annual report, setting out the measures taken, shall be submitted by the person or body responsible for monitoring the compliance programme, the compliance officer of the distribution system operator, to the regulatory authority referred to in Article 35(1) and shall be published. The compliance officer of the distribution system operator shall be fully independent and shall have access to all the necessary information of the distribution system operator and any affiliated undertaking to fulfil his task.

3. Where the distribution system operator is part of a vertically integrated undertaking, the Contracting Parties shall ensure that the activities of the distribution system operator are monitored by regulatory authorities or other competent bodies so that it cannot take advantage of its vertical integration to distort competition. In particular, vertically integrated distribution system operators shall not, in their communication and branding, create confusion in respect of the separate identity of the supply branch of the

vertically integrated undertaking.

4. **Contracting Parties** may decide not to apply paragraphs 1, 2 and 3 to integrated electricity undertakings serving less than 100 000 connected customers, or serving small isolated systems.

Article 27

Confidentiality obligation of distribution system operators

Without prejudice to Article 30 or any other legal duty to disclose information, the distribution system operator must preserve the confidentiality of commercially sensitive information obtained in the course of carrying out its business, and shall prevent information about its own activities which may be commercially advantageous being disclosed in a discriminatory manner.

Article 28

Closed distribution systems

1. **Contracting Parties** may provide for national regulatory authorities or other competent authorities to classify a system which distributes electricity within a geographically confined industrial, commercial or shared services site and does not, without prejudice to paragraph 4, supply household customers, as a closed distribution system if:

- (a) for specific technical or safety reasons, the operations or the production process of the users of that system are integrated; or
- (b) that system distributes electricity primarily to the owner or operator of the system or their related undertakings.

2. **Contracting Parties** may provide for national regulatory authorities to exempt the operator of a closed distribution system from:

- (a) the requirement under Article 25(5) to procure the energy it uses to cover energy losses and reserve capacity in its system according to transparent, non-discriminatory and market based procedures;
- (b) the requirement under Article 32(1) that tariffs, or the methodologies underlying their calculation, are approved prior to their entry into force in accordance with Article 37.

3. Where an exemption is granted under paragraph 2, the applicable tariffs, or the methodologies underlying their calculation, shall be reviewed and approved in accordance with Article 37 upon request by a user of the closed distribution system.

4. Incidental use by a small number of households with employment or similar associations with the owner of the distribution system and located within the area served by a closed distribution system shall not preclude an exemption under paragraph 2 being granted.

Article 29

Combined operator

Article 26(1) shall not prevent the operation of a combined transmission and distribution system operator provided that operator complies with Articles 9(1), or 13 and 14, or Chapter V or falls under Article 44(2).

CHAPTER VII

UNBUNDLING AND TRANSPARENCY OF ACCOUNTS

Article 30

Right of access to accounts

1. **Contracting Parties** or any competent authority they designate, including the regulatory authorities referred to in Article 35, shall, insofar as necessary to carry out their functions, have right of access to the accounts of electricity undertakings as set out in Article 31.
2. **Contracting Parties** and any designated competent authority, including the regulatory authorities, shall preserve the confidentiality of commercially sensitive information. Contracting Parties may provide for the disclosure of such information where this is necessary in order for the competent authorities to carry out their functions.

Article 31

Unbundling of accounts

1. **Contracting Parties** shall take the necessary steps to ensure that the accounts of electricity undertakings are kept in accordance with paragraphs 2 and 3.
2. Electricity undertakings, whatever their system of ownership or legal form, shall draw up, submit to audit and publish their annual accounts in accordance with the rules of national law concerning the annual accounts of limited liability companies adopted pursuant to the Fourth Council Directive 78/660/EEC of 25 July 1978 based on Article 44(2)(g) of the Treaty on the annual accounts of certain types of companies. Undertakings which are not legally obliged to publish their annual accounts shall keep a copy of these at the disposal of the public in their head office.
3. Electricity undertakings shall, in their internal accounting, keep separate accounts for each of their transmission and distribution activities as they would be required to do if the activities in question were carried out by separate undertakings, with a view to avoiding discrimination, cross-subsidisation and distortion of competition. They shall also keep accounts, which may be consolidated, for other electricity activities not relating to transmission or distribution. Until **1 January 2015**, they shall keep separate accounts for supply activities for eligible customers and supply activities for non-eligible customers. Revenue from ownership of the transmission or distribution system shall be specified in the accounts. Where appropriate, they shall keep consolidated accounts for other, non-electricity activities. The internal accounts shall include a balance

sheet and a profit and loss account for each activity.

4. The audit referred to in paragraph 2 shall, in particular, verify that the obligation to avoid discrimination and cross-subsidies referred to in paragraph 3 is respected.

CHAPTER VIII ORGANISATION OF ACCESS TO THE SYSTEM

Article 32

Third-party access

1. **Contracting Parties** shall ensure the implementation of a system of third party access to the transmission and distribution systems based on published tariffs, applicable to all eligible customers and applied objectively and without discrimination between system users. **Contracting Parties** shall ensure that those tariffs, or the methodologies underlying their calculation, are approved prior to their entry into force in accordance with Article 37 and that those tariffs, and the methodologies - where only methodologies are approved - are published prior to their entry into force.

2. The transmission or distribution system operator may refuse access where it lacks the necessary capacity. Duly substantiated reasons must be given for such refusal, in particular having regard to Article 3, and based on objective and technically and economically justified criteria. The regulatory authorities where **Contracting Parties** have so provided or **Contracting Parties** shall ensure that those criteria are consistently applied and that the system user who has been refused access can make use of a dispute settlement procedure. The regulatory authorities shall also ensure, where appropriate and when refusal of access takes place, that the transmission or distribution system operator provides relevant information on measures that would be necessary to reinforce the network. The party requesting such information may be charged a reasonable fee reflecting the cost of providing such information.

Article 33

Market opening and reciprocity

1. **Contracting Parties** shall ensure that the eligible customers comprise⁶:

- (a) <...>;
- (b) **from 1 January 2008**, all non-household customers;
- (c) **from 1 January 2015**, all customers.

2. To avoid imbalance in the opening of electricity markets:

- (a) contracts for the supply of electricity with an eligible customer in the system of another **Contracting Party** shall not be prohibited if the customer is considered as eligible in both systems involved; and
- (b) <...>

⁶ According to Article 17(2) of Decision 2011/02/MC-EnC, the following deadlines 'shall apply without prejudice to special deadlines agreed in the Protocols of Accession to the Energy Community'.

Article 34**Direct lines**

1. **Contracting Parties** shall take the measures necessary to enable:
 - (a) all electricity producers and electricity supply undertakings established within their territory to supply their own premises, subsidiaries and eligible customers through a direct line; and
 - (b) all eligible customers within their territory to be supplied through a direct line by a producer and supply undertakings.
2. **Contracting Parties** shall lay down the criteria for the grant of authorisations for the construction of direct lines in their territory. Those criteria shall be objective and non-discriminatory.
3. The possibility of supplying electricity through a direct line as referred to in paragraph 1 of this Article shall not affect the possibility of contracting electricity in accordance with Article 32.
4. **Contracting Parties** may issue an authorisation to construct a direct line subject either to the refusal of system access on the basis, as appropriate, of Article 32 or to the opening of a dispute settlement procedure under Article 37.
5. **Contracting Parties** may refuse to authorise a direct line if the granting of such an authorisation would obstruct the provisions of Article 3. Duly substantiated reasons shall be given for such refusal.

CHAPTER IX**NATIONAL REGULATORY AUTHORITIES****Article 35****Designation and independence of regulatory authorities**

1. Each **Contracting Party** shall designate a single national regulatory authority at national level.
2. Paragraph 1 of this Article shall be without prejudice to the designation of other regulatory authorities at regional level within **Contracting Parties**, provided that there is one senior representative for representation and contact purposes at **Energy Community** level.
3. By way of derogation from paragraph 1 of this Article, a **Contracting Party** may designate regulatory authorities for small systems on a geographically separate region whose consumption, in 2008, accounted for less than 3% of the total consumption of the **Contracting Party** of which it is part. This derogation shall be without prejudice to the appointment of one senior representative for representation and contact purposes at **Energy Community** level.
4. **Contracting Parties** shall guarantee the independence of the regulatory authority and shall ensure that it exercises its powers impartially and transparently. For this purpose, Contracting Party shall ensure that, when carrying out the regulatory tasks conferred upon it by this Directive and related legislation, the regulatory authority:
 - (a) is legally distinct and functionally independent from any other public or private entity;

(b) ensures that its staff and the persons responsible for its management:

- (i) act independently from any market interest; and
- (ii) do not seek or take direct instructions from any government or other public or private entity when carrying out the regulatory tasks. This requirement is without prejudice to close cooperation, as appropriate, with other relevant national authorities or to general policy guidelines issued by the government not related to the regulatory powers and duties under Article 37.

5. In order to protect the independence of the regulatory authority, **Contracting Parties** shall in particular ensure that:

(a) the regulatory authority can take autonomous decisions, independently from any political body, and has separate annual budget allocations, with autonomy in the implementation of the allocated budget, and adequate human and financial resources to carry out its duties; and

(b) the members of the board of the regulatory authority or, in the absence of a board, the regulatory authority's top management are appointed for a fixed term of five up to seven years, renewable once.

In regard to point (b) of the first subparagraph, **Contracting Parties** shall ensure an appropriate rotation scheme for the board or the top management. The members of the board or, in the absence of a board, members of the top management may be relieved from office during their term only if they no longer fulfil the conditions set out in this Article or have been guilty of misconduct under national law.

Article 36

General objectives of the regulatory authority

In carrying out the regulatory tasks specified in this Directive, the regulatory authority shall take all reasonable measures in pursuit of the following objectives within the framework of their duties and powers as laid down in Article 37, in close consultation with other relevant national authorities including competition authorities, as appropriate, and without prejudice to their competencies:

(a) promoting, in close cooperation with the **Energy Community Regulatory Board**, regulatory authorities of other **Contracting Parties** and the **Energy Community Secretariat**, a competitive, secure and environmentally sustainable internal market in electricity within the **Energy Community**, and effective market opening for all customers and suppliers in the **Energy Community** and ensuring appropriate conditions for the effective and reliable operation of electricity networks, taking into account long-term objectives;

(b) developing competitive and properly functioning regional markets within the **Energy Community** in view of the achievement of the objectives referred to in point (a);

(c) eliminating restrictions on trade in electricity between **Contracting Parties**, including developing appropriate cross-border transmission capacities to meet demand and enhancing the integration of national markets which may facilitate electricity flows across the **Energy Community**;

(d) helping to achieve, in the most cost-effective way, the development of secure, reliable and efficient non-discriminatory systems that are consumer oriented, and promoting system adequacy and, in line with general energy policy objectives, energy efficiency as well as the integration of large and small-scale production of electricity from renewable energy sources and distributed generation in both transmission

and distribution networks;

(e) facilitating access to the network for new generation capacity, in particular removing barriers that could prevent access for new market entrants and of electricity from renewable energy sources;

(f) ensuring that system operators and system users are granted appropriate incentives, in both the short and the long term, to increase efficiencies in system performance and foster market integration;

(g) ensuring that customers benefit through the efficient functioning of their national market, promoting effective competition and helping to ensure consumer protection;

(h) helping to achieve high standards of universal and public service in electricity supply, contributing to the protection of vulnerable customers and contributing to the compatibility of necessary data exchange processes for customer switching.

Article 37

Duties and powers of the regulatory authority

1. The regulatory authority shall have the following duties:

(a) fixing or approving, in accordance with transparent criteria, transmission or distribution tariffs or their methodologies;

(b) ensuring compliance of transmission and distribution system operators and, where relevant, system owners, as well as of any electricity undertakings, with their obligations under this Directive and other relevant **Energy Community** legislation, including as regards cross-border issues;

(c) cooperating in regard to cross-border issues with the regulatory authority or authorities of the Contracting Parties concerned and with the **Energy Community Regulatory Board**;

(d) complying with, and implementing, any relevant legally binding decisions of the **Energy Community Regulatory Board** <...>;

(e) reporting annually on its activity and the fulfilment of its duties to the relevant authorities of the **Contracting Parties, Energy Community Regulatory Board** and the **Energy Community Secretariat**. Such reports shall cover the steps taken and the results obtained as regards each of the tasks listed in this Article;

(f) ensuring that there are no cross-subsidies between transmission, distribution, and supply activities;

(g) monitoring investment plans of the transmission system operators, and providing in its annual report an assessment of the **investment plans of the transmission system operators** <...>; such assessment may, which may include recommendations to amend those investment plans;

(h) monitoring compliance with and reviewing the past performance of network security and reliability rules and setting or approving standards and requirements for quality of service and supply or contributing thereto together with other competent authorities;

(i) monitoring the level of transparency, including of wholesale prices, and ensuring compliance of electricity undertakings with transparency obligations;

(j) monitoring the level and effectiveness of market opening and competition at wholesale and retail levels, including on electricity exchanges, prices for household customers including prepayment systems, switching rates, disconnection rates, charges for and the execution of maintenance services, and complaints by

household customers, as well as any distortion or restriction of competition, including providing any relevant information, and bringing any relevant cases to the relevant competition authorities;

(k) monitoring the occurrence of restrictive contractual practices, including exclusivity clauses which may prevent large non-household customers from contracting simultaneously with more than one supplier or restrict their choice to do so, and, where appropriate, informing the national competition authorities of such practices;

(l) respecting contractual freedom with regard to interruptible supply contracts and with regard to long-term contracts provided that they are compatible with Energy Community law;

(m) monitoring the time taken by transmission and distribution system operators to make connections and repairs;

(n) helping to ensure, together with other relevant authorities, that the consumer protection measures, including those set out in Annex I, are effective and enforced;

(o) publishing recommendations, at least annually, in relation to compliance of supply prices with Article 3, and providing these to the competition authorities, where appropriate;

(p) ensuring access to customer consumption data, the provision, for optional use, of an easily understandable harmonised format at national level for consumption data, and prompt access for all customers to such data under point (h) of Annex I;

(q) monitoring the implementation of rules relating to the roles and responsibilities of transmission system operators, distribution system operators, suppliers and customers and other market parties pursuant to Regulation (EC) No 714/2009;

(r) monitoring investment in generation capacities in relation to security of supply;

(s) monitoring technical cooperation between **Energy Community** and third-country transmission system operators;

(t) monitoring the implementation of safeguards measures as referred to in Article 42; and

(u) contributing to the compatibility of data exchange processes for the most important market processes at regional level.

2. Where a **Contracting Party** has so provided, the monitoring duties set out in paragraph 1 may be carried out by other authorities than the regulatory authority. In such a case, the information resulting from such monitoring shall be made available to the regulatory authority as soon as possible.

While preserving their independence, without prejudice to their own specific competencies and consistent with the principles of better regulation, the regulatory authority shall, as appropriate, consult transmission system operators and, as appropriate, closely cooperate with other relevant national authorities when carrying out the duties set out in paragraph 1.

Any approvals given by a regulatory authority or the **Energy Community Regulatory Board** under this Directive are without prejudice to any duly justified future use of its powers by the regulatory authority under this Article or to any penalties imposed by other relevant authorities <...>.

3. In addition to the duties conferred upon it under paragraph 1 of this Article, when an independent system operator has been designated under Article 13, the regulatory authority shall:

(a) monitor the transmission system owner's and the independent system operator's compliance with their obligations under this Article, and issue penalties for non-compliance in accordance with paragraph 4(d);

(b) monitor the relations and communications between the independent system operator and the transmission system owner so as to ensure compliance of the independent system operator with its obligations, and in particular approve contracts and act as a dispute settlement authority between the independent system operator and the transmission system owner in respect of any complaint submitted by either party pursuant to paragraph 11;

(c) without prejudice to the procedure under Article 13(2)(c), for the first ten-year network development plan, approve the investments planning and the multi-annual network development plan presented annually by the independent system operator;

(d) ensure that network access tariffs collected by the independent system operator include remuneration for the network owner or network owners, which provides for adequate remuneration of the network assets and of any new investments made therein, provided they are economically and efficiently incurred;

(e) have the powers to carry out inspections, including unannounced inspections, at the premises of transmission system owner and independent system operator; and

(f) monitor the use of congestion charges collected by the independent system operator in accordance with Article 16(6) of Regulation (EC) No 714/2009.

4. **Contracting Parties** shall ensure that regulatory authorities are granted the powers enabling them to carry out the duties referred to in paragraphs 1, 3 and 6 in an efficient and expeditious manner. For this purpose, the regulatory authority shall have at least the following powers:

(a) to issue binding decisions on electricity undertakings;

(b) to carry out investigations into the functioning of the electricity markets, and to decide upon and impose any necessary and proportionate measures to promote effective competition and ensure the proper functioning of the market. Where appropriate, the regulatory authority shall also have the power to cooperate with the national competition authority and the financial market regulators or the **Energy Community Secretariat** in conducting an investigation relating to competition law;

(c) to require any information from electricity undertakings relevant for the fulfilment of its tasks, including the justification for any refusal to grant third-party access, and any information on measures necessary to reinforce the network;

(d) to impose effective, proportionate and dissuasive penalties on electricity undertakings not complying with their obligations under this Directive or any relevant legally binding decisions of the regulatory authority or the **Energy Community Regulatory Board**, or to propose that a competent court impose such penalties. This shall include the power to impose or propose the imposition of penalties of up to 10% of the annual turnover of the transmission system operator on the transmission system operator or of up to 10% of the annual turnover of the vertically integrated undertaking on the vertically integrated undertaking, as the case may be, for non-compliance with their respective obligations pursuant to this Directive; and

(e) appropriate rights of investigations and relevant powers of instructions for dispute settlement under paragraphs 11 and 12.

5. In addition to the duties and powers conferred on it under paragraphs 1 and 4 of this Article, when a transmission system operator has been designated in accordance with Chapter V, the regulatory authority shall be granted at least the following duties and powers:

(a) to issue penalties in accordance with paragraph 4(d) for discriminatory behaviour in favour of the vertically integrated undertaking;

- (b) to monitor communications between the transmission system operator and the vertically integrated undertaking so as to ensure compliance of the transmission system operator with its obligations;
- (c) to act as dispute settlement authority between the vertically integrated undertaking and the transmission system operator in respect of any complaint submitted pursuant to paragraph 11;
- (d) to monitor commercial and financial relations including loans between the vertically integrated undertaking and the transmission system operator;
- (e) to approve all commercial and financial agreements between the vertically integrated undertaking and the transmission system operator on the condition that they comply with market conditions;
- (f) to request justification from the vertically integrated undertaking when notified by the compliance officer in accordance with Article 21(4). Such justification shall, in particular, include evidence to the end that no discriminatory behaviour to the advantage of the vertically integrated undertaking has occurred;
- (g) to carry out inspections, including unannounced ones, on the premises of the vertically integrated undertaking and the transmission system operator; and
- (h) to assign all or specific tasks of the transmission system operator to an independent system operator appointed in accordance with Article 13 in case of a persistent breach by the transmission system operator of its obligations under this Directive, in particular in case of repeated discriminatory behaviour to the benefit of the vertically integrated undertaking.

6. The regulatory authorities shall be responsible for fixing or approving sufficiently in advance of their entry into force at least the methodologies used to calculate or establish the terms and conditions for:

- (a) connection and access to national networks, including transmission and distribution tariffs or their methodologies. Those tariffs or methodologies shall allow the necessary investments in the networks to be carried out in a manner allowing those investments to ensure the viability of the networks;
- (b) the provision of balancing services which shall be performed in the most economic manner possible and provide appropriate incentives for network users to balance their input and off-takes. The balancing services shall be provided in a fair and non-discriminatory manner and be based on objective criteria; and
- (c) access to cross-border infrastructures, including the procedures for the allocation of capacity and congestion management.

7. The methodologies or the terms and conditions referred to in paragraph 6 shall be published.

8. In fixing or approving the tariffs or methodologies and the balancing services, the regulatory authorities shall ensure that transmission and distribution system operators are granted appropriate incentive, over both the short and long term, to increase efficiencies, foster market integration and security of supply and support the related research activities.

9. The regulatory authorities shall monitor congestion management of national electricity systems including interconnectors, and the implementation of congestion management rules. To that end, transmission system operators or market operators shall submit their congestion management rules, including capacity allocation, to the national regulatory authorities. National regulatory authorities may request amendments to those rules.

10. Regulatory authorities shall have the authority to require transmission and distribution system operators, if necessary, to modify the terms and conditions, including tariffs or methodologies referred to in this Article, to ensure that they are proportionate and applied in a non-discriminatory manner. In the event

of delay in the fixing of transmission and distribution tariffs, regulatory authorities shall have the power to fix or approve provisional transmission and distribution tariffs or methodologies and to decide on the appropriate compensatory measures if the final transmission and distribution tariffs or methodologies deviate from those provisional tariffs or methodologies.

11. Any party having a complaint against a transmission or distribution system operator in relation to that operator's obligations under this Directive may refer the complaint to the regulatory authority which, acting as dispute settlement authority, shall issue a decision within a period of two months after receipt of the complaint. That period may be extended by two months where additional information is sought by the regulatory authority. That extended period may be further extended with the agreement of the complainant. The regulatory authority's decision shall have binding effect unless and until overruled on appeal.

12. Any party who is affected and who has a right to complain concerning a decision on methodologies taken pursuant to this Article or, where the regulatory authority has a duty to consult, concerning the proposed tariffs or methodologies, may, at the latest within two months, or a shorter time period as provided by **Contracting Parties**, following publication of the decision or proposal for a decision, submit a complaint for review. Such a complaint shall not have suspensive effect.

13. **Contracting Parties** shall create appropriate and efficient mechanisms for regulation, control and transparency so as to avoid any abuse of a dominant position, in particular to the detriment of consumers, and any predatory behaviour. Those mechanisms shall take account of the provisions of the Treaty, and in particular Article 82 thereof.⁷

14. **Contracting Parties** shall ensure that the appropriate measures are taken, including administrative action or criminal proceedings in conformity with their national law, against the natural or legal persons responsible where confidentiality rules imposed by this Directive have not been respected.

15. Complaints referred to in paragraphs 11 and 12 shall be without prejudice to the exercise of rights of appeal under national law.

16. Decisions taken by regulatory authorities shall be fully reasoned and justified to allow for judicial review. The decisions shall be available to the public while preserving the confidentiality of commercially sensitive information.

17. **Contracting Parties** shall ensure that suitable mechanisms exist at national level under which a party affected by a decision of a regulatory authority has a right of appeal to a body independent of the parties involved and of any government.

Article 38

Regulatory regime for cross-border issues

1. Regulatory authorities shall closely consult and cooperate with each other, and shall provide each other and the **Energy Community Regulatory Board** with any information necessary for the fulfilment of their tasks under this Directive. In respect of the information exchanged, the receiving authority shall ensure the same level of confidentiality as that required of the originating authority.

2. Regulatory authorities shall cooperate at least at a regional level to:

⁷ In the Energy Community Treaty, Article 82 of the EC Treaty is incorporated through Article 18 and Annex III.

- (a) foster the creation of operational arrangements in order to enable an optimal management of the network, promote joint electricity exchanges and the allocation of cross-border capacity, and to enable an adequate level of interconnection capacity, including through new interconnection, within the region and between regions to allow for development of effective competition and improvement of security of supply, without discriminating between supply undertakings in different **Contracting Parties**;
- (b) coordinate the development of all network codes for the relevant transmission system operators and other market actors; and
- (c) coordinate the development of the rules governing the management of congestion.
3. National regulatory authorities shall have the right to enter into cooperative arrangements with each other to foster regulatory cooperation.
4. The actions referred to in paragraph 2 shall be carried out, as appropriate, in close consultation with other relevant national authorities and without prejudice to their specific competencies.
5. <...>

Article 39

Compliances with the Guidelines⁸

The Energy Community shall endeavour to apply the Guidelines adopted by the European Commission under Directive 2009/72/EC, [and] Regulation (EC) No 714/2009 <...> .

These Guidelines, which may need to be adapted to the institutional framework of the Energy Community, shall be adopted by the Permanent High Level Group, following the procedure laid down in Article 79 of the Treaty.

The Permanent High Level Group shall adopt a Procedural Act on application of this article.⁹

Article 40

Record keeping

1. **Contracting Parties** shall require supply undertakings to keep at the disposal of the national authorities, including the national regulatory authority, the national competition authorities and of the **Energy Community Secretariat**, for the fulfilment of their tasks, for at least five years, the relevant data relating to all transactions in electricity supply contracts and electricity derivatives with wholesale customers and transmission system operators.
2. The data shall include details on the characteristics of the relevant transactions such as duration, delivery and settlement rules, the quantity, the dates and times of execution and the transaction prices and means of identifying the wholesale customer concerned, as well as specified details of all unsettled electricity supply contracts and electricity derivatives.
3. The regulatory authority may decide to make available to market participants elements of that information

⁸ Not applicable, according to Article 21 of Decision 2011/02/MC-EnC. The following text corresponds to Article 27 of Decision 2011/02/MC-EnC.

⁹ Procedural Act 01/2012/PHLG-EnC of Permanent High Level Group of 21 June 2012 laying down the rules governing the adoption of Guidelines and Network Codes in the Energy Community was adopted on 21 June 2012.

provided that commercially sensitive information on individual market players or individual transactions is not released <...>.

4. <...>

5. With respect to transactions in electricity derivatives of supply undertakings with wholesale customers and transmission system operators, this Article shall apply only once **the Permanent High Level Group** has endorsed the Guidelines referred to in paragraph 4.

6. <...>

7. <...>

CHAPTER X RETAIL MARKETS

Article 41

Retail markets

In order to facilitate the emergence of well functioning and transparent retail markets in the **Energy Community**, **Contracting Parties** shall ensure that the roles and responsibilities of transmission system operators, distribution system operators, supply undertakings and customers and if necessary other market participants are defined with respect to contractual arrangements, commitment to customers, data exchange and settlement rules, data ownership and metering responsibility.

Those rules shall be made public, be designed with the aim to facilitate customers' and suppliers' access to networks, and they shall be subject to review by the regulatory authorities or other relevant national authorities.

Large non-household customers shall have the right to contract simultaneously with several suppliers.

CHAPTER XI FINAL PROVISIONS

Article 42

Safeguard measures

In the event of a sudden crisis in the energy market and where the physical safety or security of persons, apparatus or installations or system integrity is threatened, a **Contracting Party** may temporarily take the necessary safeguard measures.

Instead of the second and third subparagraphs, Articles 36 to 39 of the Energy Community Treaty apply.

Article 43**Level playing field**

1. Measures that the **Contracting Parties** may take pursuant to this Directive in order to ensure a level playing field shall be compatible with the Treaty, notably Article 30 thereof,¹⁰ and with **Energy Community law**.
2. The measures referred to in paragraph 1 shall be proportionate, non-discriminatory and transparent. Those measures may be put into effect only **following notification to the Secretariat, which shall issue an opinion**.
3. The **Energy Community Secretariat** shall act on the notification referred to in paragraph 2 within two months of the receipt of the notification. That period shall begin on the day following receipt of the complete information. In the event that the **Energy Community Secretariat** has not acted within that two-month period, it shall be deemed not to have raised objections to the notified measures.

Article 44**Derogations**

1. <...>
2. <...> For the purposes of Article 9(1)(b), the notion “undertaking performing any of the functions of generation or supply” shall not include final customers who perform any of the functions of generation and/ or supply of electricity, either directly or via undertakings over which they exercise control, either individually or jointly, provided that the final customers including their shares of the electricity produced in controlled undertakings are, on an annual average, net consumers of electricity and provided that the economic value of the electricity they sell to third parties is insignificant in proportion to their other business operations.

Article 45**Review procedure**

<...>

Article 46**Committee**

<...>

¹⁰ Procedural Act 01/2012/PHLG-EnC of Permanent High Level Group of 21 June 2012 laying down the rules governing the adoption of Guidelines and Network Codes in the Energy Community was adopted on 21 June 2012,

Article 47
Reporting¹¹

1. The Secretariat shall monitor and review application of this Decision in the Contracting Parties.

2. The Secretariat shall submit an overall progress report to the Ministerial Council for the first time by 30 June 2012, and thereafter on an annual basis. The progress report shall reflect the progress made on creating a complete and fully operational internal market in electricity and gas and the obstacles that remain in this respect, including aspects of market dominance, market concentration, predatory or anti-competitive behaviour and the effect thereof in terms of market distortion. It shall in particular consider:

- the implementation by each Contracting Party of the provisions on unbundling, certification and on independence of the national regulatory authorities and application of these provisions in practice,**
- the existence of non-discriminatory network access,**
- effective regulation,**
- the development of interconnection infrastructure and the security of supply situation in the Energy Community,**
- the extent to which the full benefits of the opening of markets are accruing to small enterprises and household customers, notably with respect to public service and universal service standards,**
- the extent to which markets are in practice open to effective competition, including aspects of market dominance, market concentration and predatory or anti-competitive behaviour,**
- the extent to which customers are actually switching suppliers and renegotiating tariffs,**
- price developments, including supply prices, in relation to the degree of opening of the markets, and**
- the experience gained from application of this Decision as far as effective independence of system operators in vertically integrated undertakings is concerned and whether other measures in addition to functional independence and separation of accounts have been developed which have effects equivalent to legal unbundling.**

3. The Secretariat shall present a report to the Ministerial Council for the first time by 30 June 2012, and thereafter on an annual basis, summarising the opinions issued by the Secretariat in application of the acts referred to in Article 1, as adapted by this Decision.

¹¹ The text displayed here corresponds to Article 31 of Decision 2011/02/MC-EnC.

Article 48

Repeal

<...>

Article 49

Implementation of the energy acquis¹²

1. Each Contracting Party shall bring into force the laws, regulations and administrative provisions necessary to comply with Directive 2009/72/EC <...>, as adapted by this Decision, by 1 January 2015. They shall forthwith inform the Energy Community Secretariat thereof.

The Contracting Parties¹³ shall apply the measures referred to in the previous paragraph with effect from 1 January 2015 with the following exceptions:

– Article 11 of Directive 2009/72/EC, which they shall apply from 1 January 2017;

– <...>

2. The Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by this Decision.

Articles 50 and 51

Entry into force and Addressees

This Decision [2011/02/MC-EnC] enters into force upon its adoption and is addressed to the Contracting Parties.¹⁴

¹² The text displayed here corresponds to Article 3 of Decision 2011/02/MC-EnC.

¹³ In accordance with the Accession Protocol, the corresponding date for Georgia is 31 December 2018.

¹⁴ The text displayed here corresponds to Article 32 of Decision 2011/02/MC-EnC

ANNEX I

MEASURES ON CONSUMER PROTECTION

1. Without prejudice to Energy Community rules on consumer protection <...> the measures referred to in Article 3 are to ensure that customers:

(a) have a right to a contract with their electricity service provider that specifies:

- the identity and address of the supplier,
- the services provided, the service quality levels offered, as well as the time for the initial connection,
- the types of maintenance service offered,
- the means by which up-to-date information on all applicable tariffs and maintenance charges may be obtained,
- the duration of the contract, the conditions for renewal and termination of services and of the contract and whether withdrawal from the contract without charge is permitted,
- any compensation and the refund arrangements which apply if contracted service quality levels are not met, including inaccurate and delayed billing,
- the method of initiating procedures for settlement of disputes in accordance with point (f),
- information relating to consumer rights, including on the complaint handling and all of the information referred to in this point, clearly communicated through billing or the electricity undertaking's web site,

Conditions shall be fair and well-known in advance. In any case, this information should be provided prior to the conclusion or confirmation of the contract. Where contracts are concluded through intermediaries, the information relating to the matters set out in this point shall also be provided prior to the conclusion of the contract;

(b) are given adequate notice of any intention to modify contractual conditions and are informed about their right of withdrawal when the notice is given. Service providers shall notify their subscribers directly of any increase in charges, at an appropriate time no later than one normal billing period after the increase comes into effect in a transparent and comprehensible manner. The **Contracting Parties** shall ensure that customers are free to withdraw from contracts if they do not accept the new conditions notified to them by their electricity service provider;

(c) receive transparent information on applicable prices and tariffs and on standard terms and conditions, in respect of access to and use of electricity services;

(d) are offered a wide choice of payment methods, which do not unduly discriminate between customers. Prepayment systems shall be fair and adequately reflect likely consumption. Any difference in terms and conditions shall reflect the costs to the supplier of the different payment systems. General terms and conditions shall be fair and transparent. They shall be given in clear and comprehensible language and shall not include non-contractual barriers to the exercise of customers' rights, for example excessive contractual documentation. Customers shall be protected against unfair or misleading selling methods;

(e) are not charged for changing supplier;

(f) benefit from transparent, simple and inexpensive procedures for dealing with their complaints. In particular, all consumers shall have the right to a good standard of service and complaint handling by their

electricity service provider. Such out-of-court dispute settlements procedures shall enable disputes to be settled fairly and promptly, preferably within three months, with provision, where warranted, for a system of reimbursement and/or compensation. They should, wherever possible, be in line with the principles set out in Commission Recommendation 98/257/EC of 30 March 1998 on the principles applicable to the bodies responsible for out-of-court settlement of consumer disputes;

(g) when having access to universal service under the provisions adopted by **Contracting Parties** pursuant to Article 3(3), are informed about their rights regarding universal service;

(h) have at their disposal their consumption data, and shall be able to, by explicit agreement and free of charge, give any registered supply undertaking access to its metering data. The party responsible for data management shall be obliged to give those data to the undertaking. Contracting Parties shall define a format for the data and a procedure for suppliers and consumers to have access to the data. No additional costs shall be charged to the consumer for that service;

(i) are properly informed of actual electricity consumption and costs frequently enough to enable them to regulate their own electricity consumption. That information shall be given by using a sufficient time frame, which takes account of the capability of customer's metering equipment and the electricity product in question. Due account shall be taken of the cost-efficiency of such measures. No additional costs shall be charged to the consumer for that service;

(j) receive a final closure account following any change of electricity supplier no later than six weeks after the change of supplier has taken place.

2. **Contracting Parties** shall ensure the implementation of intelligent metering systems that shall assist the active participation of consumers in the electricity supply market. The implementation of those metering systems may be subject to an economic assessment of all the long-term costs and benefits to the market and the individual consumer or which form of intelligent metering is economically reasonable and cost-effective and which timeframe is feasible for their distribution.

Such assessment shall take place by **1 January 2014**.

Subject to that assessment, **Contracting Parties** or any competent authority they designate shall prepare a timetable with a target of up to 10 years for the implementation of intelligent metering systems.

Where roll-out of smart meters is assessed positively, at least 80% of consumers shall be equipped with intelligent metering systems by 2020.

The **Contracting Parties**, or any competent authority they designate, shall ensure the interoperability of those metering systems to be implemented within their territories and shall have due regard to the use of appropriate standards and best practice and the importance of the development of the internal market in electricity.



REGULATION (EC) 714/2009 of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity

Incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011 on the implementation of Directive 2009/72/EC, Directive 2009/73/EC, Regulation (EC) 714/2009 and Regulation (EC) 715/2009 and amending Articles 11 and 59 of the Energy Community Treaty.

The adaptations made by Ministerial Council Decision 2011/02/MC-EnC are highlighted in bold and blue.

Article 1

Subject-matter and scope

This Regulation aims at:

- (a) setting fair rules for cross-border exchanges in electricity, thus enhancing competition within the internal market in electricity, taking into account the particular characteristics of national and regional markets. This will involve the establishment of a compensation mechanism for cross-border flows of electricity and the setting of harmonised principles on cross-border transmission charges and the allocation of available capacities of interconnections between national transmission systems;
- (b) facilitating the emergence of a well-functioning and transparent wholesale market with a high level of security of supply in electricity. It provides for mechanisms to harmonise the rules for cross-border exchanges in electricity.

Article 2

Definitions

1. For the purpose of this Regulation, the definitions contained in Article 2 of Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity apply, with the exception of the definition of "interconnector" which shall be replaced by the following:

- "interconnector" means a transmission line which crosses or spans a border between **Contracting Parties** and which connects the national transmission systems of the **Contracting Parties**.

2. The following definitions shall apply:

- (a) "regulatory authorities" means the regulatory authorities referred to in Article 35(1) of Directive 2009/72/EC;
- (b) "cross-border flow" means a physical flow of electricity on a transmission network of a **Contracting Party** that results from the impact of the activity of producers and/or consumers outside that **Contracting Party** on its transmission network;
- (c) "congestion" means a situation in which an interconnection linking national transmission networks cannot accommodate all physical flows resulting from international trade requested by market participants,

because of a lack of capacity of the interconnectors and/or the national transmission systems concerned;

(d) “declared export” means the dispatch of electricity in one **Contracting Party** on the basis of an underlying contractual arrangement to the effect that the simultaneous corresponding take-up (declared import) of electricity will take place in another **Contracting Party** or a third country;

(e) “declared transit” means a circumstance where a declared export of electricity occurs and where the nominated path for the transaction involves a country in which neither the dispatch nor the simultaneous corresponding take-up of the electricity will take place;

(f) “declared import” means the take-up of electricity in a **Contracting Party** or a third country simultaneously with the dispatch of electricity (declared export) in another **Contracting Party**;

(g) “new interconnector” means an interconnector not completed by **1 July 2007**.

For the purpose of the inter-transmission system operator compensation mechanism referred to in Article 13 only, where transmission networks of two or more **Contracting Parties** form part, in whole or in part, of a single control block, the control block as a whole shall be considered as forming part of the transmission network of one of the **Contracting Parties** concerned, in order to avoid flows within control blocks being considered as cross-border flows under point (b) of the first subparagraph of this paragraph and giving rise to compensation payments under Article 13. The regulatory authorities of the Contracting Parties concerned may decide which of the Contracting Parties concerned shall be that of which the control block as a whole is to be considered to form part.

Article 3

Certification of transmission system operators

1. The **Energy Community Secretariat** shall examine any notification of a decision on the certification of a transmission system operator as laid down in Article 10(6) of Directive 2009/72/EC as soon as it is received. Within **four months** of the day of receipt of such notification, the **Energy Community Secretariat** shall deliver its opinion to the relevant national regulatory authority as to its compatibility with Article 10(2) or Article 11, and Article 9 of Directive 2009/72/EC.

When preparing the opinion referred to in the first subparagraph, the Secretariat shall request the Energy Community Regulatory Board to provide its opinion on the national regulatory authority’s decision.

In the absence of an opinion by the **Energy Community Secretariat** within the periods referred to in the first subparagraph, **the Energy Community Secretariat** shall be deemed not to raise objections to the regulatory authority’s decision.

2. Within two months of receiving an opinion of the **Energy Community Secretariat**, the national regulatory authority shall adopt its final decision regarding the certification of the transmission system operator, taking the utmost account of that opinion. The regulatory authority’s decision and the **Energy Community Secretariat’s** opinion shall be published together.

3. At any time during the procedure, regulatory authorities and/or the **Energy Community Secretariat** may request from a transmission system operator and/or an undertaking performing any of the functions of generation or supply any information relevant to the fulfilment of their tasks under this Article.

4. Regulatory authorities and the **Energy Community Secretariat** shall preserve the confidentiality of commercially sensitive information.

5. <...>

6. Where the **Energy Community Secretariat** has received notification of the certification of a transmission system operator under Article 9(10) of Directive 2009/72/EC, the **Secretariat shall issue an opinion relating to certification. The regulatory authority shall take the utmost account of that opinion. Where the final decision diverges from the Secretariat's opinion, the regulatory authority concerned shall provide and publish, together with that decision, the reasoning underlying its decision. Diverging decisions shall be included in the agenda of the first meeting of the Ministerial Council following the date of the decision, for information and discussion.**

Article 4

European network of transmission system operators for electricity

<...>

Article 5

Establishment of the ENTSO for Electricity

<...>

Article 6

Establishment of network codes¹

1. The Energy Community shall endeavour to apply the network codes developed at European Union level <...>.

2. The relevant network codes shall be adopted by the Permanent High Level Group, following the procedure laid down in Article 79 of the Treaty. Before taking a decision, the Permanent High Level Group shall seek the opinion of the Energy Community Regulatory Board.

3. The Permanent High Level Group shall adopt a procedural act on application of this Article.²

Article 7

Amendments of network codes

<...>

Article 8

Tasks of the ENTSO for Electricity

<...>

¹ The following text corresponds to Article 28 of Decision 2011/02/MC-EnC.

² Procedural Act 01/2012/PHLG-EnC of Permanent High Level Group of 21 June 2012 laying down the rules governing the adoption of Guidelines and Network Codes in the Energy Community was adopted on 21 June 2012.

Article 9

Monitoring by the Agency

<...>

Article 10

Consultations

<...>

Article 11

Costs

<...>

Article 12³

Regional cooperation of transmission system operators

Transmission system operators shall promote operational arrangements in order to ensure the optimum management of the Energy Community network and shall promote the development of energy exchanges, the coordinated allocation of cross-border capacity through non-discriminatory market-based solutions, paying due attention to the specific merits of implicit auctions for short-term allocations, and the integration of balancing and reserve power mechanisms.

Article 13

Inter-transmission system operator compensation mechanism

1. Transmission system operators shall receive compensation for costs incurred as a result of hosting cross-border flows of electricity on their networks.
2. The compensation referred to in paragraph 1 shall be paid by the operators of national transmission systems from which cross-border flows originate and the systems where those flows end.
3. Compensation payments shall be made on a regular basis with regard to a given period of time in the past. Ex-post adjustments of compensation paid shall be made where necessary, to reflect costs actually incurred.

<...>

4. <...>⁴

5. The magnitude of cross-border flows hosted and the magnitude of cross-border flows designated as originating and/or ending in national transmission systems shall be determined on the basis of the physical flows of electricity actually measured during a given period of time.

³ In accordance with Article 7(3) of Decision 2011/02/MC-EnC, Article 25 of that Decision is displayed here.

⁴ Not applicable in accordance with Article 12(1) of Decision 2011/02/MC-EnC. According to Article 12(2) of that Decision, "[t]he Energy Community shall endeavour to adopt as soon as possible Commission Regulation (EU) No 774/2010 of 2 September 2010 on laying down guidelines relating to inter-transmission system operator compensation and a common regulatory approach to transmission charging."

6. The costs incurred as a result of hosting cross-border flows shall be established on the basis of the forward-looking long-run average incremental costs, taking into account losses, investment in new infrastructure, and an appropriate proportion of the cost of existing infrastructure, in so far as such infrastructure is used for the transmission of cross-border flows, in particular taking into account the need to guarantee security of supply. When establishing the costs incurred, recognized standard-costing methodologies shall be used. Benefits that a network incurs as a result of hosting cross-border flows shall be taken into account to reduce the compensation received.

Article 14

Charges for access to networks

1. Charges applied by network operators for access to networks shall be transparent, take into account the need for network security and reflect actual costs incurred insofar as they correspond to those of an efficient and structurally comparable network operator and are applied in a non-discriminatory manner. Those charges shall not be distance-related.
2. Where appropriate, the level of the tariffs applied to producers and/or consumers shall provide locational signals at **Energy Community** level, and take into account the amount of network losses and congestion caused, and investment costs for infrastructure.
3. When setting the charges for network access, the following shall be taken into account:
 - (a) payments and receipts resulting from the inter-transmission system operator compensation mechanism;
 - (b) actual payments made and received as well as payments expected for future periods of time, estimated on the basis of past periods.
4. Setting the charges for network access under this Article shall be without prejudice to charges on declared exports and declared imports resulting from congestion management referred to in Article 16.
5. There shall be no specific network charge on individual transactions for declared transits of electricity.

Article 15

Provision of information

1. Transmission system operators shall put in place coordination and information exchange mechanisms to ensure the security of the networks in the context of congestion management.
2. The safety, operational and planning standards used by transmission system operators shall be made public. The information published shall include a general scheme for the calculation of the total transfer capacity and the transmission reliability margin based upon the electrical and physical features of the network. Such schemes shall be subject to the approval of the regulatory authorities.
3. Transmission system operators shall publish estimates of available transfer capacity for each day, indicating any available transfer capacity already reserved. Those publications shall be made at specified intervals before the day of transport and shall include, in any event, week-ahead and month-ahead estimates, as well as a quantitative indication of the expected reliability of the available capacity.

4. Transmission system operators shall publish relevant data on aggregated forecast and actual demand, on availability and actual use of generation and load assets, on availability and use of the networks and interconnections, and on balancing power and reserve capacity. For availability and actual use of small generation and load units, aggregated estimate data may be used.

5. The market participants concerned shall provide the transmission system operators with the relevant data.

6. Generation undertakings which own or operate generation assets, where at least one generation asset has an installed capacity of at least 250 MW, shall keep at the disposal of the national regulatory authority, the national competition authority and the **Energy Community Secretariat**, for five years all hourly data per plant that is necessary to verify all operational dispatching decisions and the bidding behaviour at power exchanges, interconnection auctions, reserve markets and over-the-counter-markets. The per-plant and per hour information to be stored shall include, but shall not be limited to, data on available generation capacity and committed reserves, including allocation of those committed reserves on a per-plant level, at the times the bidding is carried out and when production takes place.

Article 16

General principles of congestion management

1. Network congestion problems shall be addressed with non-discriminatory market-based solutions which give efficient economic signals to the market participants and transmission system operators involved. Network congestion problems shall preferentially be solved with non-transaction based methods, i.e. methods that do not involve a selection between the contracts of individual market participants.

2. Transaction curtailment procedures shall only be used in emergency situations where the transmission system operator must act in an expeditious manner and re-dispatching or countertrading is not possible. Any such procedure shall be applied in a non-discriminatory manner.

Except in cases of force majeure, market participants who have been allocated capacity shall be compensated for any curtailment.

3. The maximum capacity of the interconnections and/or the transmission networks affecting cross-border flows shall be made available to market participants, complying with safety standards of secure network operation.

4. Market participants shall inform the transmission system operators concerned a reasonable time in advance of the relevant operational period whether they intend to use allocated capacity. Any allocated capacity that will not be used shall be reattributed to the market, in an open, transparent and non-discriminatory manner.

5. Transmission system operators shall, as far as technically possible, net the capacity requirements of any power flows in opposite direction over the congested interconnection line in order to use that line to its maximum capacity. Having full regard to network security, transactions that relieve the congestion shall never be denied.

6. Any revenues resulting from the allocation of interconnection shall be used for the following purposes:

(a) guaranteeing the actual availability of the allocated capacity; and/or

(b) maintaining or increasing interconnection capacities through network investments, in particular in new

interconnectors.

If the revenues cannot be efficiently used for the purposes set out in points (a) and/or (b) of the first subparagraph, they may be used, subject to approval by the regulatory authorities of the **Contracting Parties** concerned, up to a maximum amount to be decided by those regulatory authorities, as income to be taken into account by the regulatory authorities when approving the methodology for calculating network tariffs and/or fixing network tariffs.

The rest of revenues shall be placed on a separate internal account line until such time as it can be spent on the purposes set out in points (a) and/or (b) of the first subparagraph. The regulatory authority shall inform the **Energy Community Secretariat** of the approval referred to in the second subparagraph.

Article 17

New interconnectors

1. New direct current interconnectors may, upon request, be exempted, for a limited period of time, from the provisions of Article 16(6) of this Regulation and Articles 9, 32 and Article 37(6) and (10) of Directive 2009/72/EC under the following conditions:

- (a) the investment must enhance competition in electricity supply;
- (b) the level of risk attached to the investment is such that the investment would not take place unless an exemption is granted;
- (c) the interconnector must be owned by a natural or legal person which is separate at least in terms of its legal form from the system operators in whose systems that interconnector will be built;
- (d) charges are levied on users of that interconnector;
- (e) since **1 July 2007**, no part of the capital or operating costs of the interconnector has been recovered from any component of charges made for the use of transmission or distribution systems linked by the interconnector; and
- (f) the exemption must not be to the detriment of competition or the effective functioning of the internal market in electricity, or the efficient functioning of the regulated system to which the interconnector is linked.

2. Paragraph 1 shall also apply, in exceptional cases, to alternating current interconnectors provided that the costs and risks of the investment in question are particularly high when compared with the costs and risks normally incurred when connecting two neighbouring national transmission systems by an alternating current interconnector.

3. Paragraph 1 shall also apply to significant increases of capacity in existing interconnectors.

4. The decision on the exemption under paragraphs 1, 2 and 3 shall be taken on a case-by-case basis by the regulatory authorities of the **Contracting Parties** concerned. An exemption may cover all or part of the capacity of the new interconnector, or of the existing interconnector with significantly increased capacity.

Within two months from the date on which the request for exemption was received by the last of the regulatory authorities concerned, the **Energy Community Regulatory Board** may submit an advisory opinion to those regulatory authorities which could provide a basis for their decision.

In deciding to grant an exemption, consideration shall be given, on a case-by-case basis, to the need to impose conditions regarding the duration of the exemption and non-discriminatory access to the interconnector. When deciding those conditions, account shall, in particular, be taken of additional capacity to be built or the modification of existing capacity, the time-frame of the project and national circumstances.

Before granting an exemption, the regulatory authorities of the **Contracting Parties** concerned shall decide upon the rules and mechanisms for management and allocation of capacity.

Congestion-management rules shall include the obligation to offer unused capacity on the market and users of the facility shall be entitled to trade their contracted capacities on the secondary market. In the assessment of the criteria referred to in points (a), (b) and (f) of paragraph 1, the results of the capacity-allocation procedure shall be taken into account.

Where all the regulatory authorities concerned have reached agreement on the exemption decision within six months, they shall inform the **Energy Community Regulatory Board** of that decision.

The exemption decision, including any conditions referred to in the second subparagraph of this paragraph, shall be duly reasoned and published.

5. The decision referred to in paragraph 4 shall be taken by the **Energy Community Regulatory Board**:

- (a) where all the regulatory authorities concerned have not been able to reach an agreement within six months from the date the exemption was requested before the last of those regulatory authorities; or
- (b) upon a joint request from the regulatory authorities concerned.

Before taking such a decision, the **Energy Community Regulatory Board** shall consult the regulatory authorities concerned and the applicants.

6. Notwithstanding paragraphs 4 and 5, **Contracting Parties** may provide for the regulatory authority or the **Energy Community Regulatory Board**, as the case may be, to submit, for formal decision, to the relevant body in the Contracting Party, its opinion on the request for an exemption. That opinion shall be published together with the decision.

7. A copy of every request for exemption shall be transmitted for information without delay by the regulatory authorities to the **Energy Community Regulatory Board** and to the **Energy Community Secretariat** on receipt. The decision shall be notified, without delay, by the regulatory authorities concerned or by the **Energy Community Regulatory Board** (notifying bodies), to the **Energy Community Secretariat**, together with all the relevant information with respect to the decision. That information may be submitted to the **Energy Community Secretariat** in aggregate form, enabling the **Energy Community Secretariat** to reach a well-founded decision. In particular, the information shall contain:

- (a) the detailed reasons on the basis of which the exemption was granted or refused, including the financial information justifying the need for the exemption;
- (b) the analysis undertaken of the effect on competition and the effective functioning of the internal market in electricity resulting from the grant of the exemption;
- (c) the reasons for the time period and the share of the total capacity of the interconnector in question for which the exemption is granted; and
- (d) the result of the consultation of the regulatory authorities concerned.

8. Within a period of two months from the day following receipt of notification under paragraph 7, the **Secretariat may issue an opinion inviting** the notifying bodies to amend or withdraw the decision

to grant an exemption. That two-month period may be extended by an additional period of two months where further information is sought by the **Energy Community Secretariat**. That additional period shall begin on the day following receipt of the complete information. The initial two-month period may also be extended by consent of both the **Energy Community Secretariat** and the notifying bodies.

When the requested information is not provided within the period set out in the request, the notification shall be deemed to be withdrawn unless, before the expiry of that period, either the period is extended by consent of both the Secretariat and the notifying bodies, or the notifying bodies, in a duly reasoned statement, inform the Secretariat that they consider the notification to be complete.

The notifying bodies shall take the utmost account of a Secretariat opinion that recommends to amend or withdraw the exemption decision. Where the final decision diverges from the Secretariat's opinion, the regulatory authority concerned shall provide and publish, together with that decision, the reasoning underlying its decision. Diverting decisions shall be included in the agenda of the first meeting of the Ministerial Council following the date of the decision, for information and discussion.

The **Secretariat** shall preserve the confidentiality of commercially sensitive information.

The **Secretariat's opinion** on an exemption decision shall expire two years after the date of its adoption in the event that construction of the interconnector has not yet started by that date, and five years after the date of its adoption if the interconnector has not become operational by that date, unless the **Secretariat** considers that any delay is due to major obstacles beyond the control of the person to whom the exemption has been granted.

9. <...>

Article 18 **Guidelines⁵**

The Energy Community shall endeavour to apply the Guidelines adopted by the European Commission under <...> Regulation (EC) No 714/2009 <...>.

These Guidelines, which may need to be adapted to the institutional framework of the Energy Community, shall be adopted by the Permanent High Level Group, following the procedure laid down in Article 79 of the Treaty.

The Permanent High Level Group shall adopt a Procedural Act on the application of this article.⁶

Article 19 **Regulatory authorities**

The regulatory authorities, when carrying out their responsibilities, shall ensure compliance with this Regulation and the Guidelines adopted pursuant to Article 18.⁷

⁵ The text displayed here corresponds to Article 27 of Decision 2011/02/MC-EnC.

⁶ Procedural Act 01/2012/PHLG-EnC of Permanent High Level Group of 21 June 2012 laying down the rules governing the adoption of Guidelines and Network Codes in the Energy Community was adopted on 21 June 2012.

⁷ As adopted by the Permanent High Level Group under Procedural Act 01/2012/PHLG-EnC.

Where appropriate to fulfil the aims of this Regulation the regulatory authorities shall cooperate with each other, with the **Energy Community Secretariat** and the **Energy Community Regulatory Board** in compliance with Chapter IX of Directive 2009/72/EC.

Article 20

Provision of information and confidentiality

1. **Contracting Parties** and the regulatory authorities shall, on request, provide to the **Energy Community Secretariat** all information necessary for the purposes of <...> Article 18.⁸

In particular, for the purposes of Article 13 <...> (6), regulatory authorities shall, on a regular basis, provide information on the actual costs incurred by national transmission system operators, as well as data and all relevant information relating to the physical flows in transmission system operators' networks and the cost of the networks.

The **Energy Community Secretariat** shall fix a reasonable time limit within which the information is to be provided, taking into account the complexity of the information required and the urgency with which the information is needed.

2. If the **Contracting Party** or the regulatory authority concerned does not provide the information referred to in paragraph 1 within the given time-limit pursuant to paragraph 1 of this Article, the **Energy Community Secretariat** may request all information necessary for the purpose of <...> Article 18 directly from the undertakings concerned.

When sending a request for information to an undertaking, the **Energy Community Secretariat** shall at the same time forward a copy of the request to the regulatory authorities of the **Contracting Party** in whose territory the seat of the undertaking is situated.

3. In its request for information under paragraph 1, the **Energy Community Secretariat** shall state the legal basis of the request, the time-limit within which the information is to be provided, the purpose of the request <...>.⁹ The **Energy Community Secretariat** shall fix a reasonable time-limit taking into account the complexity of the information required and the urgency with which the information is needed.

4. The owners of the undertakings or their representatives and, in the case of legal persons, the persons authorised to represent them by law or by their instrument of incorporation, shall supply the information requested. Where lawyers duly authorised so to act supply the information on behalf of their clients, the client shall remain fully responsible in the event that the information supplied is incomplete, incorrect or misleading.

5. <...>

6. The information referred to in paragraphs 1 and 2 shall be used only for the purposes of <...> Article 18.

The **Energy Community Secretariat** shall not disclose information acquired pursuant to this Regulation of the kind covered by the obligation of professional secrecy.

⁸ As adopted by the Permanent High Level Group under Procedural Act 01/2012/PHLG-EnC.

⁹ According to Article 19(2) of Decision 2011/02/MC-EnC, Article 22(2) of Regulation (EC) 714/2009 shall not be applicable.

Article 21**Right of Contracting Parties to provide for more detailed measures**

This Regulation shall be without prejudice to the rights of **Contracting Parties** to maintain or introduce measures that contain more detailed provisions than those set out herein or in the Guidelines referred to in Article 18.¹⁰

Article 22**Penalties¹¹**

1. Contracting Parties shall lay down rules on penalties applicable to infringements of the provisions of this Regulation and shall take all measures necessary to ensure that those provisions are implemented. The penalties provided for must be effective, proportionate and dissuasive. Contracting Parties shall notify these provisions to the Secretariat by 1 January 2015 and shall notify the Secretariat without delay of any subsequent amendment affecting them.

2. <...>

3. Penalties provided for pursuant to paragraph 1 shall not be of a criminal law nature.

Article 23**Committee procedure**

<...>

Article 24**Secretariat report¹²**

1. The Secretariat shall monitor and review the application of this Decision in the Contracting Parties.

2. The Secretariat shall submit an overall progress report to the Ministerial Council for the first time by 30 June 2012, and thereafter on an annual basis. The progress report shall reflect the progress made on creating a complete and fully operational internal market in electricity and gas and the obstacles that remain in this respect, including aspects of market dominance, market concentration, predatory or anti-competitive behaviour and the effect thereof in terms of market distortion. It shall in particular consider:

- the implementation by each Contracting Party of the provisions on unbundling, certification and on independence of the national regulatory authorities and application of these provisions in practice,

¹⁰ As adopted by the Permanent High Level Group under Procedural Act 01/2012/PHLG-EnC.

¹¹ As adapted by Article 19 of Decision 2011/02/MC-EnC.

¹² The text displayed here corresponds to Article 31 of Decision 2011/02/MC-EnC.

- the existence of non-discriminatory network access,
- effective regulation,
- the development of interconnection infrastructure and the security of supply situation in the Energy Community,
- the extent to which the full benefits of the opening of markets are accruing to small enterprises and household customers, notably with respect to public service and universal service standards,
- the extent to which markets are in practice open to effective competition, including aspects of market dominance, market concentration and predatory or anti-competitive behaviour,
- the extent to which customers are actually switching suppliers and renegotiating tariffs, price developments, including supply prices, in relation to the degree of opening of the markets, and
- the experience gained from application of this Decision as far as effective independence of system operators in vertically integrated undertakings is concerned and whether other measures in addition to functional independence and separation of accounts have been developed which have effects equivalent to legal unbundling.

3. The Secretariat shall present a report to the Ministerial Council for the first time by 30 June 2012, and thereafter on an annual basis, summarising the opinions issued by the Secretariat in application of the acts referred to in Article 1, as adapted by this Decision.

Article 25

Repeal

<...>

Article 26

Entry into force¹³

This Decision [2011/02/MC-EnC] enters into force upon its adoption and is addressed to the Contracting Parties.

Article 3 of Decision 2011/02/MC-EnC

Each Contracting Party shall bring into force the laws, regulations and administrative provisions necessary to comply with <...> Regulation (EC) 714/2009 <...>, as adapted by this Decision, by 1 January 2015.¹⁴ They shall forthwith inform the Energy Community Secretariat thereof.

<...>

The Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by this Decision.

¹³ The text displayed here corresponds to Article 32 of Decision 2011/02/MC-EnC.

¹⁴ In accordance with the Accession Protocol, the corresponding date for Georgia is 31 December 2018.

ANNEX I

GUIDELINES ON THE MANAGEMENT AND ALLOCATION OF AVAILABLE TRANSFER CAPACITY OF INTERCONNECTIONS BETWEEN NATIONAL SYSTEMS

1. General Provisions

1.1. Transmission system operators (TSOs) shall endeavour to accept all commercial transactions, including those involving cross-border-trade.

1.2. When there is no congestion, there shall be no restriction of access to the interconnection. Where this is usually the case, there need be no permanent general allocation procedure for access to a cross-border transmission service.

1.3. Where scheduled commercial transactions are not compatible with secure network operation, the TSOs shall alleviate congestion in compliance with the requirements of network operational security while endeavouring to ensure that any associated costs remain at an economically efficient level. Curative re-dispatching or countertrading shall be envisaged in case lower cost measures cannot be applied.

1.4. If structural congestion appears, appropriate congestion-management methods and arrangements defined and agreed upon in advance shall be implemented immediately by the TSOs. The congestion-management methods shall ensure that the physical power flows associated with all allocated transmission capacity comply with network security standards.

1.5. The methods adopted for congestion management shall give efficient economic signals to market participants and TSOs, promote competition and be suitable for regional and Community-wide application.

1.6. No transaction-based distinction shall be applied in congestion management. A particular request for transmission service shall be denied only when the following cumulative conditions are fulfilled:

- (a) the incremental physical power flows resulting from the acceptance of that request imply that secure operation of the power system may no longer be guaranteed, and
- (b) the monetary value of the request in the congestion-management procedure is lower than all other requests intended to be accepted for the same service and conditions.

1.7. When defining appropriate network areas in and between which congestion management is to apply, TSOs shall be guided by the principles of cost-effectiveness and minimisation of negative impacts on the internal market in electricity. Specifically, TSOs shall not limit interconnection capacity in order to solve congestion inside their own control area, save for the abovementioned reasons and reasons of operational security.¹⁵ If such a situation occurs, this shall be described and transparently presented by the TSOs to all the system users. Such a situation shall be tolerated only until a long-term solution is found. The methodology and projects for achieving the long-term solution shall be described and transparently presented by the TSOs to all the system users.

1.8. When balancing the network inside the control area through operational measures in the network and through re-dispatching, the TSO shall take into account the effect of those measures on neighbouring control areas.

¹⁵ Operational security means "keeping the transmission system within agreed security limits".

1.9. By **31 December 2009**¹⁶, mechanisms for the intra-day congestion management of interconnector capacity shall be established in a coordinated way and under secure operational conditions, in order to maximise opportunities for trade and to provide for cross-border balancing.

1.10. The national regulatory authorities shall regularly evaluate the congestion-management methods, paying particular attention to compliance with the principles and rules established in this Regulation and those Guidelines and with the terms and conditions set by the regulatory authorities themselves under those principles and rules. Such evaluation shall include consultation of all market participants and dedicated studies.

2. Congestion-management methods

2.1. Congestion-management methods shall be market-based in order to facilitate efficient cross-border trade. For that purpose, capacity shall be allocated only by means of explicit (capacity) or implicit (capacity and energy) auctions. Both methods may coexist on the same interconnection. For intra-day trade continuous trading may be used.

2.2. Depending on competition conditions, the congestion-management mechanisms may need to allow for both long and short-term transmission capacity allocation.

2.3. Each capacity-allocation procedure shall allocate a prescribed fraction of the available interconnection capacity plus any remaining capacity not previously allocated and any capacity released by capacity holders from previous allocations.

2.4. TSOs shall optimise the degree to which capacity is firm, taking into account the obligations and rights of the TSOs involved and the obligations and rights of market participants, in order to facilitate effective and efficient competition. A reasonable fraction of capacity may be offered to the market at a reduced degree of firmness, but the exact conditions for transport over cross-border lines shall, at all times, be made known to market participants.

2.5. The access rights for long and medium-term allocations shall be firm transmission capacity rights. They shall be subject to the use-it-or-lose-it or use-it-or-sell-it principles at the time of nomination.

2.6. TSOs shall define an appropriate structure for the allocation of capacity between different timeframes. This may include an option for reserving a minimum percentage of interconnection capacity for daily or intra-daily allocation. Such an allocation structure shall be subject to review by the respective regulatory authorities. In drawing up their proposals, the TSOs shall take into account:

- (a) the characteristics of the markets;
- (b) the operational conditions, such as the implications of netting firmly declared schedules;
- (c) the level of harmonisation of the percentages and timeframes adopted for the different capacity-allocation mechanisms in place.

2.7. Capacity allocation shall not discriminate between market participants that wish to use their rights to make use of bilateral supply contracts or to bid into power exchanges. The highest value bids, whether implicit or explicit in a given timeframe, shall be successful.

2.8. In regions where forward financial electricity markets are well developed and have shown their efficiency, all interconnection capacity may be allocated through implicit auctioning.

¹⁶ Adapted by Article 2(2) of Decision 2008/02/MC-EnC.

2.9. Other than in the case of new interconnectors which benefit from an exemption under Article 7 of Regulation (EC) No 1228/2003 or Article 17 of this Regulation, establishing reserve prices in capacity-allocation methods shall not be allowed.

2.10. In principle, all potential market participants shall be permitted to participate in the allocation process without restriction. To avoid creating or aggravating problems related to the potential use of dominant position of any market player, the relevant regulatory and/or competition authorities, where appropriate, may impose restrictions in general or on an individual company on account of market dominance.

2.11. Market participants shall firmly nominate their use of the capacity to the TSOs by a defined deadline for each timeframe. That deadline shall be such that TSOs are able to reassign unused capacity for reallocation in the next relevant timeframe including intra-day sessions.

2.12. Capacity shall be freely tradable on a secondary basis, provided that the TSO is informed sufficiently in advance. Where a TSO refuses any secondary trade (transaction), this must be clearly and transparently communicated and explained to all the market participants by that TSO and notified to the regulatory authority.

2.13. The financial consequences of failure to honour obligations associated with the allocation of capacity shall be attributed to those who are responsible for such a failure. Where market participants fail to use the capacity that they have committed to use, or, in the case of explicitly auctioned capacity, fail to trade on a secondary basis or give the capacity back in due time, they shall lose the rights to such capacity and pay a cost-reflective charge. Any cost-reflective charges for the non-use of capacity shall be justified and proportionate. Likewise, if a TSO does not fulfil its obligation, it shall be liable to compensate the market participant for the loss of capacity rights. No consequential losses shall be taken into account for that purpose. The key concepts and methods for the determination of liabilities that accrue upon failure to honour obligations shall be set out in advance in respect of the financial consequences, and shall be subject to review by the relevant national regulatory authority or authorities.

3. Coordination

3.1. Capacity allocation at an interconnection shall be coordinated and implemented using common allocation procedures by the TSOs involved. In cases where commercial exchanges between two countries (TSOs) are expected to affect physical flow conditions in any third-country (TSO) significantly, congestion-management methods shall be coordinated between all the TSOs so affected through a common congestion-management procedure. National regulatory authorities and TSOs shall ensure that no congestion-management procedure with significant effects on physical electric power flows in other networks is devised unilaterally.

3.2. A common coordinated congestion-management method and procedure for the allocation of capacity to the market at least annually, monthly and day-ahead shall be applied by 1 January 2007 between countries in the following regions:

- (a) Northern Europe (i.e. Denmark, Sweden, Finland, Germany and Poland),
- (b) North-West Europe (i.e. Benelux, Germany and France),
- (c) Italy (i.e. Italy, France, Germany, Austria, Slovenia and Greece),
- (d) Central Eastern Europe (i.e. Germany, Poland, Czech Republic, Slovakia, Hungary, Austria and Slovenia),
- (e) South-West Europe (i.e. Spain, Portugal and France),

(f) UK, Ireland and France,

(g) Baltic states (i.e. Estonia, Latvia and Lithuania).

At an interconnection involving countries belonging to more than one region, the congestion-management method applied may differ in order to ensure the compatibility with the methods applied in the other regions to which those countries belong. In that case, the relevant TSOs shall propose the method which shall be subject to review by the relevant regulatory authorities.

3.3. The regions referred to in point 2.8. may allocate all interconnection capacity through day-ahead allocation.

3.4. Compatible congestion-management procedures shall be defined in all those seven regions with a view to forming a truly integrated internal market in electricity. Market participants shall not be confronted with incompatible regional systems.

3.5. With a view to promoting fair and efficient competition and cross-border trade, coordination between TSOs within the regions set out in point 3.2. shall include all the steps from capacity calculation and optimisation of allocation to secure operation of the network, with clear assignments of responsibility. Such coordination shall include, in particular:

(a) the use of a common transmission model dealing efficiently with interdependent physical loopflows and having regard to discrepancies between physical and commercial flows,

(b) allocation and nomination of capacity to deal efficiently with interdependent physical loop-flows,

(c) identical obligations on capacity holders to provide information on their intended use of the capacity, i.e. nomination of capacity (for explicit auctions),

(d) identical timeframes and closing times,

(e) identical structure for the allocation of capacity among different timeframes (for example, 1 day, 3 hours, 1 week, etc.) and in terms of blocks of capacity sold (amount of power in MW, MWh, etc.),

(f) consistent contractual framework with market participants,

(g) verification of flows to comply with the network security requirements for operational planning and for real-time operation,

(h) accounting and settlement of congestion-management actions.

3.6. Coordination shall also include the exchange of information between TSOs. The nature, time and frequency of information exchange shall be compatible with the activities set out in point 3.5 and the functioning of the electricity markets. That information exchange shall, in particular, enable the TSOs to make the best possible forecast of the global network situation in order to assess the flows in their network and the available interconnection capacities. Any TSO collecting information on behalf of other TSOs shall give back to the participating TSO the results of the collection of data.

4. Timetable for market operations

4.1. The allocation of the available transmission capacity shall take place sufficiently in advance. Prior to each allocation, the involved TSOs shall, jointly, publish the capacity to be allocated, taking into account where appropriate the capacity released from any firm transmission rights and, where relevant, associated netted nominations, along with any time periods during which the capacity will be reduced or not available (for the purpose of maintenance, for example).

4.2. Having full regard to network security, the nomination of transmission rights shall take place sufficiently in advance, before the day-ahead sessions of all the relevant organised markets and before the publication of the capacity to be allocated under the day-ahead or intra-day allocation mechanism. Nominations of transmission rights in the opposite direction shall be netted in order to make efficient use of the interconnection.

4.3. Successive intra-day allocations of available transmission capacity for day D shall take place on days D-1 and D, after the issuing of the indicated or actual day-ahead production schedules.

4.4. When preparing day-ahead network operation, the TSOs shall exchange information with neighbouring TSOs, including their forecast network topology, the availability and forecasted production of generation units, and load flows in order to optimise the use of the overall network through operational measures in compliance with the rules for secure network operation.

5. Transparency

5.1. TSOs shall publish all relevant data related to network availability, network access and network use, including a report on where and why congestion exists, the methods applied for managing the congestion and the plans for its future management.

5.2. TSOs shall publish a general description of the congestion-management method applied under different circumstances for maximising the capacity available to the market, and a general scheme for the calculation of the interconnection capacity for the different timeframes, based upon the electrical and physical realities of the network. Such a scheme shall be subject to review by the regulatory authorities of the **Contracting Parties** concerned.

5.3. The congestion management and capacity-allocation procedures in use, together with the times and procedures for applying for capacity, a description of the products offered and the obligations and rights of both the TSOs and the party obtaining the capacity, including the liabilities that accrue upon failure to honour obligations, shall be described in detail and made available in a transparent manner to all potential network users by TSOs.

5.4. The operational and planning security standards shall form an integral part of the information that TSOs publish in an open and public document. That document shall also be subject to review of the national regulatory authorities.

5.5. TSOs shall publish all relevant data concerning cross-border trade on the basis of the best possible forecast. In order to fulfil that obligation the market participants concerned shall provide the TSOs with the relevant data. The manner in which such information is published shall be subject to review by the regulatory authorities. TSOs shall publish at least:

(a) annually: information on the long-term evolution of the transmission infrastructure and its impact on cross-border transmission capacity;

(b) monthly: month and year-ahead forecasts of the transmission capacity available to the market, taking into account all relevant information available to the TSO at the time of the forecast calculation (for example, impact of summer and winter seasons on the capacity of lines, maintenance of the network, availability of production units, etc.);

(c) weekly: week-ahead forecasts of the transmission capacity available to the market, taking into account all relevant information available to the TSOs at the time of calculation of the forecast, such as the weather

forecast, planned network maintenance work, availability of production units, etc.;

(d) daily: day-ahead and intra-day transmission capacity available to the market for each market time unit, taking into account all netted day-ahead nominations, day-ahead production schedules, demand forecasts and planned network maintenance work;

(e) total capacity already allocated, by market time unit, and all relevant conditions under which that capacity may be used (for example, auction clearing price, obligations on how to use the capacity, etc.), so as to identify any remaining capacity;

(f) allocated capacity as soon as possible after each allocation, as well as an indication of prices paid;

(g) total capacity used, by market time unit, immediately after nomination;

(h) as closely as possible to real time: aggregated realised commercial and physical flows, by market time unit, including a description of the effects of any corrective actions taken by the TSOs (such as curtailment) for solving network or system problems;

(i) *ex-ante* information on planned outages and *ex-post* information for the previous day on planned and unplanned outages of generation units larger than 100 MW.

5.6. All relevant information shall be available for the market in due time for the negotiation of all transactions (such as the time of negotiation of annual supply contracts for industrial customers or the time when bids have to be sent into organised markets).

5.7. The TSO shall publish the relevant information on forecast demand and on generation according to the timeframes referred to in points 5.5 and 5.6. The TSO shall also publish the relevant information necessary for the cross-border balancing market.

5.8. When forecasts are published, the *ex-post* realised values for the forecast information shall also be published in the time period following that to which the forecast applies or at the latest on the following day (D + 1).

5.9. All information published by the TSOs shall be made freely available in an easily accessible form. All data shall also be accessible through adequate and standardised means of information exchange, to be defined in close cooperation with market participants. The data shall include information on past time periods with a minimum of two years, so that new market entrants may also have access to such data.

5.10.¹⁷ TSOs shall exchange regularly a set of sufficiently accurate network and load flow data in order to enable load flow calculations for each TSO in their relevant area. The same set of data shall be made available to the regulatory authorities and to the **Energy Community Secretariat** upon request. The regulatory authorities and the **Energy Community Secretariat** shall ensure the confidential treatment of that set of data, by themselves and by any consultant carrying out analytical work for them on the basis of those data.

¹⁷ Adapted by Article 4(1)(d) of Decision 2011/02/MC-EnC.

6. Use of congestion income

6.1. Congestion-management procedures associated with a pre-specified timeframe may generate revenue only in the event of congestion which arises for that timeframe, except in the case of new interconnectors which benefit from an exemption under Article 7 of Regulation (EC) No 1228/2003 or Article 17 of this Regulation. The procedure for the distribution of those revenues shall be subject to review by the regulatory authorities and shall neither distort the allocation process in favour of any party requesting capacity or energy nor provide a disincentive to reduce congestion.

6.2. National regulatory authorities shall be transparent regarding the use of revenues resulting from the allocation of interconnection capacity.

6.3. The congestion income shall be shared among the TSOs involved in accordance with criteria agreed between the TSOs involved and reviewed by the respective regulatory authorities.

6.4. TSOs shall clearly establish beforehand the use they will make of any congestion income they may obtain and report on the actual use of that income. Regulatory authorities shall verify that such use complies with this Regulation and those Guidelines,¹⁸ and that the total amount of congestion income resulting from the allocation of interconnection capacity is devoted to one or more of the three purposes set out in Article 16(6) of this Regulation.

6.5. On an annual basis, and by 31 July each year, the regulatory authorities shall publish a report setting out the amount of revenue collected for the 12-month period up to 30 June of the same year and the use made of the revenues in question, together with verification that that use complies with this Regulation and those Guidelines,¹⁹ and that the total amount of congestion income is devoted to one or more of the three prescribed purposes.

6.6. The use of congestion income for investment to maintain or increase interconnection capacity shall preferably be assigned to specific predefined projects which contribute to relieving the existing associated congestion and which may also be implemented within a reasonable time, particularly as regards the authorisation process.

¹⁸ As adopted by the Permanent High Level Group under Procedural Act 01/2012/PHLG-EnC.

¹⁹ As adopted by the Permanent High Level Group under Procedural Act 01/2012/PHLG-EnC.



REGULATION (EU) 838/2010 of 23 September 2010 on laying down guidelines relating to the inter-transmission system operator compensation mechanism and a common regulatory approach to transmission charging.

Incorporated and adapted by Permanent High Level Group Decision 2013/01/PHLG-EnC of 23 October 2013 on the incorporation of the Commission Regulation (EU) 838/2010 in the Energy Community.

*The adaptations made by Permanent High Level Group Decision 2013/01/PHLG-EnC are highlighted in **bold and blue**.*

Article 1

Transmission system operators shall receive compensation for costs incurred as a result of hosting cross-border flows of electricity on their networks on the basis of the guidelines set out in Part A of the Annex.

Article 2

Charges applied by network operators for access to the transmission system shall be in accordance with guidelines set out in Part B of the Annex.

Article 3

This Decision [2013/01/PHLG-EnC] enters into force upon its adoption and is addressed to the Contracting Parties.¹

Each Contracting Party shall transpose and implement Commission Regulation (EU) No 838/2010 of 23 September 2010 on laying down guidelines relating to the inter-transmission system operator comprehension mechanism and a common regulatory approach to transmission charging by 1 January 2014.²

The transposition shall be made without changes to the structure and text of Commission Regulation (EU) No 838/2010 other than translation.³

Commission Regulation (EU) No 838/2010 shall be made binding on market participants.

The national regulatory authorities shall be tasked with monitoring and enforcing compliance with Commission Regulation (EU) No 838/2010.⁴

Contracting Parties shall notify the Secretariat of the measures transposing this Decision, and of any subsequent changes made to those measures, within two weeks of the adoption of such measures.⁵

¹ The text displayed here corresponds to Article 4 of Decision 2013/01/PHLG-EnC.

² The text displayed here corresponds to Article 1(1) of Decision 2013/01/PHLG-EnC.

³ The text displayed here corresponds to Article Article 1(2) of Decision 2013/01/PHLG-EnC.

⁴ The text displayed here corresponds to Article 2 of Decision 2013/01/PHLG-EnC.

⁵ The text displayed here corresponds to Article 3 of Decision 2013/01/PHLG-EnC.

ANNEX

PART A

Guidelines on the Inter-Transmission System Operator Compensation Mechanism

1. General Provisions

1.1. The Inter-Transmission System Operator Compensation (ITC) mechanism shall provide for compensation for the costs of hosting cross-border flows of electricity including providing cross-border access to the interconnected system.

1.2. The European Network of Transmission System Operators for Electricity (ENTSO for Electricity) set up in accordance with Article 5 of Regulation (EC) 714/2009 shall establish an ITC fund for the purpose of compensating transmission system operators for the costs of hosting cross-border flows of electricity.

The ITC fund shall provide compensation for:

(1) the costs of losses incurred national transmission systems as a result of hosting cross-border flows of electricity; and,

(2) the costs of making infrastructure available to host cross-border flows of electricity.

1.3. Contributions to the ITC Fund shall be calculated in accordance with points 6 and 7. Payments from the ITC Fund shall be calculated in accordance with points 4 and 5.

ENTSO for Electricity shall be responsible for establishing arrangements for the collection and disbursement of all payments relating to the ITC Fund, and shall also be responsible for determining the timing of payments. All contributions and payments shall be made as soon as possible, and at the latest within six months of the end of the period to which they apply.

1.4. The Agency shall oversee the implementation of the ITC mechanism and report to the Commission each year on the implementation of the ITC mechanism and the management of the ITC fund.

ENTSO for Electricity shall co-operate with the Commission and with the Agency in this task and shall provide the Agency with all information necessary for this purpose.

Each transmission system operator shall provide ENTSO for Electricity and the Agency with all information necessary for the implementation of the ITC Mechanism.

1.5. Until such time as ENTSO for Electricity has been established, transmission system operators shall co-operate amongst themselves to carry out the tasks assigned to ENTSO for Electricity in relation to the ITC mechanism.

1.6. Transit of electricity shall be calculated, normally on an hourly basis, by taking the lower of the absolute amount of imports of electricity and the absolute amount of exports of electricity on interconnections between national transmission systems.

For the purpose of calculating transits of electricity the amount of imports and the amount of exports at each interconnection between national transmission systems shall be reduced in proportion to the share of capacity allocated in a manner which is not compatible with Point 2 of the guidelines on congestion

management set out in Annex I of Regulation (EC) No 714/2009.

Notwithstanding the provisions of the second subparagraph of this point imports and exports of electricity on interconnections with third countries to which the provisions of point 7.1 apply shall be included in the calculation of transit of electricity.

1.7. For the purposes of this part of the Annex, the net flow of electricity shall mean the absolute value of the difference between total exports of electricity from a given national transmission system to countries where the TSOs participate in the ITC Mechanism and total imports of electricity from countries where the TSOs participate in the ITC Mechanism to the same transmission system.

For ITC mechanism parties with a common border with at least one third country to which the provisions of Point 7.1 apply the following adjustments to the calculation of net flow shall be made:

(1) if total exports of electricity to countries where the TSOs participate in the ITC Mechanism are greater than total imports of electricity from countries where the TSOs participate in the ITC Mechanism, net flows shall be reduced by the lower of:

(a) net import flows from those third countries; or

(b) net export flows to countries where the transmission system operator participates in the ITC Mechanism.

(2) if total imports of electricity from countries where the TSOs participate in the ITC Mechanism are greater than total exports of electricity to countries where the TSOs participate in the ITC Mechanism then net flows shall be reduced by the lower of

(a) net export flows to those third countries; or

(b) net import flows from countries where the transmission system operator participates in the ITC mechanism.

1.8. For the purposes of this annex load shall mean the total amount of electricity which exits the national transmission system to connected distribution systems, end consumers connected to the transmission system and to electricity producers for consumption in the generation of electricity.

2. Participation in the ITC mechanism

2.1. Each regulatory authority shall ensure that transmission system operators in its area of competence participate in the ITC mechanism and that no additional charges for hosting cross-border flows of electricity are included in charges applied by transmission system operators for access to networks.

2.2. Transmission system operators from third countries which have concluded agreements with the Union whereby they have adopted and are applying Union law in the field of electricity shall be entitled to participate in the ITC mechanism.

In particular, the transmission system operators operating in the territories referred to in Article 9 of the Energy Community Treaty shall be entitled to participate in the ITC mechanism.

Each transmission system operator from a third country participating in the ITC mechanism shall be treated on an equivalent basis to a transmission system operator of a Member State.

3. Multi-Party Agreements

3.1. ENTSO for Electricity shall facilitate the conclusion of multi-party agreements relating to the compensation for the costs of hosting cross-border flows of electricity between transmission system operators participating in the ITC mechanism and those transmission system operators from third countries which have not concluded agreements with the Union whereby they have adopted and are applying Union law in the field of electricity, and which, on 16 December 2009, signed the voluntary agreement between transmission system operators on inter-transmission system operator compensation.

3.2. Such multi-party agreements shall aim at ensuring that the transmission system operator from the third country be treated on an equivalent basis to a transmission system operator in a country participating in the ITC Mechanism.

3.3. Where necessary such multi-party agreements may recommend appropriate adjustment to total compensation for the compensation for making infrastructure available to host cross-border flows of electricity determined in accordance with point 5. Any such adjustment shall be subject to approval by the Commission, taking account of the opinion of the Agency.

3.4. The treatment of the transmission system operator from the third country shall not be more favourable in comparison to that which would apply to a transmission system operator participating in the ITC Mechanism.

3.5. ENTSO for Electricity shall submit all such multi-party agreements to the Commission for its opinion as to whether continuation of the multi-party agreement promotes the completion and functioning of the internal market in electricity and cross-border trade. The opinion of the Commission shall address in particular:

(1) whether the agreement relates only to compensation between transmission system operators (TSOs) for the costs of hosting cross-border flows of electricity;

(2) whether the requirements of points 3.2 and 3.4 are respected.

3.6. In preparing the opinion referred to in point 3.5 the Commission shall consult all the Member States, taking particular account of the views of those Member States sharing a border with the relevant third country.

In preparing its opinion the Commission may consult the Agency.

4. Compensation for Losses

4.1. Compensation for losses incurred on national transmission systems as a result of hosting cross-border flows of electricity shall be calculated separately from compensation for costs incurred associated with making infrastructure available to host cross-border flows of electricity.

4.2. The amount of losses incurred on a national transmission system shall be established by calculating the difference between:

(1) the amount of losses actually incurred on the transmission system during the relevant period; and,

(2) the estimated amount of losses on the transmission system which would have been incurred on the system during the relevant period if no transits of electricity had occurred.

4.3. ENTSO for Electricity shall be responsible for carrying out the calculation referred to in point 4.2 and shall publish this calculation and its method in an appropriate format. This calculation may be derived from estimates for a number of points of time during the relevant period.

4.4. The value of losses incurred by a national transmission system as a result of the cross-border flow of electricity shall be calculated on the same basis as that approved by the regulatory authority in respect of all losses on the national transmission systems. The Agency shall verify the criteria for the valuation of losses at national level taking particular account that losses are valued in a fair and non-discriminatory way. Where the relevant regulatory authority has not approved a basis for the calculation of losses for a period of time for which the ITC mechanism applies, the value of losses for the purposes of the ITC mechanism shall be estimated by ENTSO for Electricity.

5. Compensation for provision of infrastructure for cross-border flows of electricity

5.1. Following a proposal from the Agency made in accordance with point 5.3, the Commission shall determine the annual cross-border infrastructure compensation sum which shall be apportioned among TSOs as compensation for the costs incurred as a result of making infrastructure available to host cross-border flows of electricity. If the Commission disagrees with the proposal of the Agency, it shall ask the Agency for a second opinion.

5.2. The annual cross-border infrastructure compensation sum shall be apportioned amongst transmission system operators responsible for national transmission systems in proportion to:

- (1) transit factor, referring to transits on that national transmission system state as a proportion of total transits on all national transmission systems;
- (2) load factor, referring to the square of transits of electricity, in proportion to load plus transits on that national transmission system relative to the square of transits of electricity in proportion to load plus transit for all national transmission systems.

The transit factor shall be weighted 75% and the load factor 25%.

5.3. The Agency shall make the proposal on the annual cross-border infrastructure compensation sum referred to in point 5.1 based on a Union-wide assessment of the infrastructure of electricity transmission associated with facilitating cross-border flows of electricity. The Agency shall undertake its best endeavours to carry out an assessment within two years of the date of application of this Regulation. ENTSO for Electricity shall provide the Agency with all assistance necessary for the purposes of carrying out this assessment. This assessment shall consist of a technical and economic assessment of the forward-looking longrun average incremental costs on an annual basis of making such electricity transmission infrastructure available for cross-border flows of electricity over the relevant period, and shall be based on recognised standard-costing methodologies.

Where infrastructure is financed by sources other than charges for access to networks applied in accordance with Article 14 of Regulation (EC) No 714/2009 the assessment of costs of making infrastructure available for cross-border flows of electricity shall be appropriately adjusted to reflect this.

This Union-wide assessment of the electricity transmission infrastructure shall include infrastructure in all Member States and third countries participating in the ITC mechanism and in systems operated by trans-

mission system operators who have concluded multi-party agreements referred to in point 3.

5.4. Until such time as the Agency has carried out the assessment referred to in point 5.3 and the Commission has determined the annual cross-border infrastructure compensation sum in accordance with point 5.1, the annual cross-border infrastructure compensation sum shall be EUR 100 000 000.

5.5. When making the proposal referred to in point 5.1, the Agency shall also provide its opinion to the Commission as to suitability of using long run average incremental costs for the assessment of the costs of making infrastructure available for hosting cross-border flows of electricity.

6. Contributions to the ITC Fund

6.1. The transmission system operators shall contribute to the ITC fund in proportion to the absolute value of net flows onto and from their national transmission system as a share of the sum of the absolute value of net flows onto and from all national transmission systems.

7. Transmission system use fee on third country imports and exports of electricity

7.1. A transmission system use fee shall be paid on all scheduled imports and exports of electricity from all third countries where:

- (1) that country has not concluded agreement with the Union whereby it has adopted and is applying Union law in the field of electricity; or,
- (2) the transmission system operator responsible for the system from which electricity is imported or to which electricity is exported has not concluded a multi-party agreement referred to in point 3.

This fee shall be expressed in Euros per megawatt hour.

7.2. Each participant in the ITC Mechanism shall levy the transmission system use fee on scheduled imports and exports of electricity between the national transmission system and the transmission system of the third country.

7.3. The transmission system use fee for each year shall be calculated in advance by ENTSO for Electricity. It shall be set at the estimated contribution per megawatt hour transmission system operators from a participating country would make to the ITC Fund based on projected cross-border flows of electricity for the relevant year.

PART B

Guidelines for A Common Regulatory Approach to Transmission Charging

1. Annual average transmission charges paid by producers in each **Contracting Party**⁶ shall be within the ranges set out in point 3.
2. Annual average transmission charges paid by producers is annual total transmission tariff charges paid by producers divided by the total measured energy injected annually by producers to the transmission system of a **Contracting Party**.

For the calculation set out at Point 3, transmission charges shall exclude:

- (1) charges paid by producers for physical assets required for connection to the system or the upgrade of the connection;
- (2) charges paid by producers related to ancillary services;
- (3) specific system loss charges paid by producers.

3. The value of the annual average transmission charges paid by producers shall be within a range of 0 to 0,5 EUR/MWh, except those applying in Denmark, Sweden, Finland, Romania Ireland, Great Britain and Northern Ireland.

The value of the annual average transmission charges paid by producers in Denmark, Sweden and Finland shall be within a range of 0 to 1,2 EUR/MWh.

Annual average transmission charges paid by producers in Ireland, Great Britain and Northern Ireland shall be within a range of 0 to 2,5 EUR/MWh, and in Romania within a range of 0 to 2,0 EUR/MWh.

4. The Agency shall monitor the appropriateness of the ranges of allowable transmission charges, taking particular account of their impact on the financing of transmission capacity needed for Member States to achieve their targets under the Directive 2009/28/EC of the European Parliament and of the Council and their impact on system users in general.
5. By 1 January 2014 the Agency shall provide its opinion to the Commission as to the appropriate range or ranges of charges for the period after 1 January 2015.

⁶ Decision 2013/01/PHLG-EnC, incorporating this Regulation is addressed to the Contracting Parties.



REGULATION (EU) 1227/2011 of 25 October 2011 on wholesale energy market integrity and transparency¹

Incorporated and adapted by Ministerial Council Decision 2018/01/MC-EnC of 29 November 2018.

The adaptations made by Ministerial Council Decision 2018/01/MC-EnC are highlighted in bold and blue.

Article 1

Subject matter, scope and relationship with other Energy Community legislation

1. This Regulation establishes rules prohibiting abusive practices affecting wholesale energy markets which are coherent <...> with the proper functioning of those wholesale energy markets whilst taking into account their specific characteristics. It provides for the monitoring of wholesale energy markets by <...> national regulatory authorities <...>.
2. This Regulation applies to trading in wholesale energy products. <...> This Regulation is without prejudice to <...> the application of **Energy Community** and national competition law to the practices covered by this Regulation
3. <...> National regulatory authorities <...> and, where appropriate, national competition authorities <...> and other relevant national authorities shall cooperate to ensure that a coordinated approach is taken to the enforcement of the relevant rules where actions relate <...> to one or more wholesale energy products to which Articles 3, 4 and 5 of this Regulation apply.
4. <...>
5. <...>

Article 2

Definitions

For the purposes of this Regulation the following definitions shall apply:

(1) 'inside information' means information of a precise nature which has not been made public, which relates, directly or indirectly, to one or more wholesale energy products and which, if it were made public, would be likely to significantly affect the prices of those wholesale energy products.

For the purposes of this definition, 'information' means:

- (a) information which is required to be made public in accordance with Regulations (EC) No 714/2009 and (EC) No 715/2009, including guidelines and network codes adopted pursuant to those Regulations;
- (b) information relating to the capacity and use of facilities for production, storage, consumption or transmission of electricity or natural gas or related to the capacity and use of LNG facilities, including planned or unplanned unavailability of these facilities;

¹ Applicable for both electricity and gas

(c) information which is required to be disclosed in accordance with legal or regulatory provisions at **Energy Community** or national level, market rules, and contracts or customs on the relevant wholesale energy market, in so far as this information is likely to have a significant effect on the prices of wholesale energy products; and

(d) other information that a reasonable market participant would be likely to use as part of the basis of its decision to enter into a transaction relating to, or to issue an order to trade in, a wholesale energy product. Information shall be deemed to be of a precise nature if it indicates a set of circumstances which exists or may reasonably be expected to come into existence, or an event which has occurred or may reasonably be expected to do so, and if it is specific enough to enable a conclusion to be drawn as to the possible effect of that set of circumstances or event on the prices of wholesale energy products;

(2) 'market manipulation' means:

(a) entering into any transaction or issuing any order to trade in wholesale energy products which:

(i) gives, or is likely to give, false or misleading signals as to the supply of, demand for, or price of wholesale energy products;

(ii) secures or attempts to secure, by a person, or persons acting in collaboration, the price of one or several wholesale energy products at an artificial level, unless the person who entered into the transaction or issued the order to trade establishes that his reasons for doing so are legitimate and that that transaction or order to trade conforms to accepted market practices on the wholesale energy market concerned; or

(iii) employs or attempts to employ a fictitious device or any other form of deception or contrivance which gives, or is likely to give, false or misleading signals regarding the supply of, demand for, or price of wholesale energy products;

Or

(b) disseminating information through the media, including the internet, or by any other means, which gives, or is likely to give, false or misleading signals as to the supply of, demand for, or price of wholesale energy products, including the dissemination of rumours and false or misleading news, where the disseminating person knew, or ought to have known, that the information was false or misleading.

When information is disseminated for the purposes of journalism or artistic expression, such dissemination of information shall be assessed taking into account the rules governing the freedom of the press and freedom of expression in other media, unless:

(i) those persons derive, directly or indirectly, an advantage or profits from the dissemination of the information in question; or

(ii) the disclosure or dissemination is made with the intention of misleading the market as to the supply of, demand for, or price of wholesale energy products;

(3) 'attempt to manipulate the market' means:

(a) entering into any transaction, issuing any order to trade or taking any other action relating to a wholesale energy product with the intention of:

(i) giving false or misleading signals as to the supply of, demand for, or price of wholesale energy products;

(ii) securing the price of one or several wholesale energy products at an artificial level, unless the person

who entered into the transaction or issued the order to trade establishes that his reasons for doing so are legitimate and that that transaction or order to trade conforms to accepted market practices on the wholesale energy market concerned; or

(iii) employing a fictitious device or any other form of deception or contrivance which gives, or is likely to give, false or misleading signals regarding the supply of, demand for, or price of wholesale energy products;

Or

(b) disseminating information through the media, including the internet, or by any other means with the intention of giving false or misleading signals as to the supply of, demand for, or price of wholesale energy products;

(4) 'wholesale energy products' means the following contracts and derivatives, irrespective of where and how they are traded:

(a) contracts for the supply of electricity or natural gas where delivery is in the **Contracting Parties**;

(b) <...>

(c) contracts relating to the transportation of electricity or natural gas in the **Contracting Parties**;

(d) <...> Contracts for the supply and distribution of electricity or natural gas for the use of final customers are not wholesale energy products. However, contracts for the supply and distribution of electricity or natural gas to final customers with a consumption capacity greater than the threshold set out in the second paragraph of point (5) shall be treated as wholesale energy products;

(5) 'consumption capacity' means the consumption of a final customer of either electricity or natural gas at full use of that customer's production capacity. It comprises all consumption by that customer as a single economic entity, in so far as consumption takes place on markets with interrelated wholesale prices.

For the purposes of this definition, consumption at individual plants under the control of a single economic entity that have a consumption capacity of less than 600 GWh per year shall not be taken into account in so far as those plants do not exert a joint influence on wholesale energy market prices due to their being located in different relevant geographical markets;

(6) 'wholesale energy market' means any market within the **Contracting Parties** on which wholesale energy products are traded;

(7) 'market participant' means any person, including transmission and distribution system operators, who enters into transactions, including the placing of orders to trade, in one or more wholesale energy markets;

(8) 'person' means any natural or legal person;

(9) <...>

(10) 'national regulatory authority' means a national regulatory authority designated in accordance with Article 35(1) of Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity or Article 39(1) of Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas;

(11) 'transmission system operator' has the meaning set out in point 4 of Article 2 of Directive 2009/72/EC and in point 4 of Article 2 of Directive 2009/73/EC;

(12) 'parent undertaking' means a parent undertaking within the meaning of Articles 1 and 2 of the Sev-

ent Council Directive 83/349/EEC of 13 June 1983 based on Article 54(3)(g) of the Treaty on consolidated accounts;

(13) 'related undertaking' means either a subsidiary or other undertaking in which a participation is held, or an undertaking linked with another undertaking by a relationship within the meaning of Article 12(1) of Directive 83/349/EEC;

(14) 'distribution of natural gas' has the meaning set out in point (5) of Article 2 of Directive 2009/73/EC;

(15) 'distribution of electricity' has the meaning set out in point (5) of Article 2 of Directive 2009/72/EC.

(16) 'sensitive critical infrastructure protection related information' means facts about a critical infrastructure, which if disclosed could be used to plan and act with a view to causing disruption or destruction of critical infrastructure installations;

(17) 'critical infrastructure' means an asset, system or part thereof located in Contracting Parties which is essential for the maintenance of vital societal functions, health, safety, security, economic or social well-being of people, and the disruption or destruction of which would have a significant impact in a Contracting Parties as a result of the failure to maintain those functions.

Article 3

Prohibition of insider trading

1. Persons who possess inside information in relation to a wholesale energy product shall be prohibited from:

(a) using that information by acquiring or disposing of, or by trying to acquire or dispose of, for their own account or for the account of a third party, either directly or indirectly, wholesale energy products to which that information relates;

(b) disclosing that information to any other person unless such disclosure is made in the normal course of the exercise of their employment, profession or duties;

(c) recommending or inducing another person, on the basis of inside information, to acquire or dispose of wholesale energy products to which that information relates.

2. The prohibition set out in paragraph 1 applies to the following persons who possess inside information in relation to a wholesale energy product:

(a) members of the administrative, management or supervisory bodies of an undertaking;

(b) persons with holdings in the capital of an undertaking;

(c) persons with access to the information through the exercise of their employment, profession or duties;

(d) persons who have acquired such information through criminal activity;

(e) persons who know, or ought to know, that it is inside information.

3. Points (a) and (c) of paragraph 1 of this Article shall not apply to transmission system operators when purchasing electricity or natural gas in order to ensure the safe and secure operation of the system in accordance with their obligations under points (d) and (e) of Article 12 of Directive 2009/72/EC or points (a) and (c) of Article 13(1) of Directive 2009/73/EC.

4. This Article shall not apply to:

(a) transactions conducted in the discharge of an obligation that has become due to acquire or dispose of wholesale energy products where that obligation results from an agreement concluded, or an order to trade placed, before the person concerned came into possession of inside information;

(b) transactions entered into by electricity and natural gas producers, operators of natural gas storage facilities or operators of LNG import facilities the sole purpose of which is to cover the immediate physical loss resulting from unplanned outages, where not to do so would result in the market participant not being able to meet existing contractual obligations or where such action is undertaken in agreement with the transmission system operator(s) concerned in order to ensure safe and secure operation of the system. In such a situation, the relevant information relating to the transactions shall be reported to the national regulatory authority. This reporting obligation is without prejudice to the obligation set out in Article 4(1);

(c) market participants acting under national emergency rules, where national authorities have intervened in order to secure the supply of electricity or natural gas and market mechanisms have been suspended in a **Contracting Party** or parts thereof. In this case the authority competent for emergency planning shall ensure publication in accordance with Article 4.

5. Where the person who possesses inside information in relation to a wholesale energy product is a legal person, the prohibitions laid down in paragraph 1 shall also apply to the natural persons who take part in the decision to carry out the transaction for the account of the legal person concerned.

6. When information is disseminated for the purposes of journalism or artistic expression such dissemination of information shall be assessed taking into account the rules governing the freedom of the press and freedom of expression in other media, unless:

(a) those persons derive, directly or indirectly, an advantage or profits from the dissemination of the information in question; or

(b) the disclosure or dissemination is made with the intention of misleading the market as to the supply of, demand for, or price of wholesale energy products.

Article 4

Obligation to publish inside information

1. Market participants shall publicly disclose in an effective and timely manner inside information which they possess in respect of business or facilities which the market participant concerned, or its parent undertaking or related undertaking, owns or controls or for whose operational matters that market participant or undertaking is responsible, either in whole or in part. Such disclosure shall include information relevant to the capacity and use of facilities for production, storage, consumption or transmission of electricity or natural gas or related to the capacity and use of LNG facilities, including planned or unplanned unavailability of these facilities.

2. A market participant may under its own responsibility exceptionally delay the public disclosure of inside information so as not to prejudice its legitimate interests provided that such omission is not likely to mislead the public and provided that the market participant is able to ensure the confidentiality of that information and does not make decisions relating to trading in wholesale energy products based upon that information. In such a situation the market participant shall without delay provide that information, together with a justification for the delay of the public disclosure, to <...> the relevant national regulatory authority <...>.

3. Whenever a market participant or a person employed by, or acting on behalf of, a market participant discloses inside information in relation to a wholesale energy product in the normal exercise of his employment, profession or duties as referred to in point (b) of Article 3(1), that market participant or person shall ensure simultaneous, complete and effective public disclosure of that information. In the event of a non-intentional disclosure the market participant shall ensure complete and effective public disclosure of the information as soon as possible following the non-intentional disclosure. This paragraph shall not apply if the person receiving the information has a duty of confidentiality, regardless of whether such duty derives from law, regulation, articles of association or a contract.

4. The publication of inside information, including in aggregated form, in accordance with Regulation (EC) No 714/2009 or (EC) No 715/2009, or guidelines and network codes adopted pursuant to those Regulations constitutes simultaneous, complete and effective public disclosure.

5. Where an exemption from the obligation to publish certain data has been granted to a transmission system operator, in accordance with Regulation (EC) No 714/2009 or (EC) No 715/2009, that operator is thereby also exempted from the obligation set out in paragraph 1 of this Article in respect of that data.

6. Paragraphs 1 and 2 are without prejudice to the obligations of market participants under Directives 2009/72/EC and 2009/73/EC, and Regulations (EC) No 714/2009 and (EC) No 715/2009, including guidelines and network codes adopted pursuant to those Directives and Regulations, in particular regarding the timing and method of publication of information.

7. Paragraphs 1 and 2 are without prejudice to the right of market participants to delay the disclosure of sensitive information relating to the protection of critical infrastructure <...> and the assessment of the need to improve their protection, if it is classified in their country **according to national legislation**.

Article 5

Prohibition of market manipulation

Any engagement in, or attempt to engage in, market manipulation on wholesale energy markets shall be prohibited.

Article 6

<...>

Article 7

Market monitoring

1. **National regulatory authorities** shall monitor trading activity in wholesale energy products to detect and prevent trading based on inside information and market manipulation **in their national market. For this purpose they may use the user manuals developed by the Agency for the Cooperation of Energy Regulators and may adopt rules on related data provision requirements from market participants.** <...>

2. National regulatory authorities shall cooperate at regional level **via the Energy Community Regulatory Board** in carrying out the monitoring of wholesale energy markets referred to in paragraph 1. <...> **Contracting Parties** may provide for their national competition authority or a market monitoring body established within that authority to carry out market monitoring with the national regulatory authority. In carrying out such market monitoring, the national competition authority or the market monitoring body shall have the same rights and obligations as the national regulatory authority pursuant to the first subparagraph of this paragraph, the second sentence of the second subparagraph of paragraph 3 of this Article, the second sentence of Article 4(2) <...> and Article 16.

3. **National regulatory authorities** shall at least on an annual basis submit a report to **the Secretariat on their** activities under this Regulation and make this report publicly available.

<...>

4. The Secretariat shall report to the Ministerial Council on an annual basis including but not limited to the information provided under paragraph (3).

Article 8

<...>

Article 9

Registration of market participants

1. Market participants entering into transactions **with wholesale energy products or expressing interest to enter into such transactions through orders to trade** <...> shall register with the national regulatory authority in the **Contracting Party where the delivery of the wholesale energy products takes or will take place. For the purpose of registration, national regulatory authorities shall apply the registration format developed by the Agency for the Cooperation of Energy Regulators under Regulation No 1227/2011. The Energy Community Regulatory Board shall make available an online compilation of all national registrations in the Contracting Parties.**

<...> The registration of market participants is without prejudice to obligations to comply with applicable trading and balancing rules.

2. Not later than **6 months after the deadline for national transposition of this Regulation in the Energy Community**, national regulatory authorities shall establish national registers of market participants which they shall keep up to date. The register shall give each market participant a unique identifier and shall contain sufficient information to identify the market participant, including relevant details relating to its value added tax number, its place of establishment, the persons responsible for its operational and trading decisions, and the ultimate controller or beneficiary of the market participant's trading activities. **National regulatory authorities shall apply the register format developed by the Agency for the Cooperation of Energy Regulators under Article 9(3) of Regulation No 1227/2011.**

3. National regulatory authorities shall transmit the information in their national registers to the **Energy Community Regulatory Board** <...>. Based on the information provided by national regulatory authorities the **Energy Community Regulatory Board** shall establish a **central** register of market participants.

National regulatory authorities and other relevant authorities shall have access to **this** register. Subject to Article 17, the **Energy Community Regulatory Board** may decide to make the central register, or extracts thereof, publicly available provided that commercially sensitive information on individual market participants is not disclosed.

4. Market participants referred to in paragraph 1 of this Article shall submit the registration form to the national regulatory authority prior to entering into a transaction **with wholesale energy products <...>**.

5. Market participants referred to in paragraph 1 shall communicate promptly to the national regulatory authority any change which has taken place as regards the information provided in the registration form.

Article 10

<...>

Article 11

Data protection

This Regulation shall be without prejudice to the obligations of **Contracting Parties and national regulatory authorities to preserve the confidentiality of commercially sensitive information laid down in national legislation.** <...>

Article 12

Operational reliability

1. The **national regulatory authorities** shall ensure the confidentiality, integrity and protection of the information received pursuant to Article 4(2) <...>. The **national regulatory authorities** shall take all necessary measures to prevent any misuse of, and unauthorised access to, the information maintained in its systems. National regulatory authorities, <...>, national competition authorities, <...> and other relevant authorities shall ensure the confidentiality, integrity and protection of the information which they receive pursuant to Articles 4(2), 7(2) <...> and shall take steps to prevent any misuse of such information.

<...>

2. Subject to Article 17, the **national regulatory authorities** may decide to make publicly available parts of the information which it possesses, provided that commercially sensitive information on individual market participants or individual transactions or individual market places are not disclosed and cannot be inferred.

The **national regulatory authorities** shall make its commercially non-sensitive trade database available for scientific purposes, subject to confidentiality requirements.

Information shall be published or made available in the interest of improving transparency of wholesale energy markets and provided it is not likely to create any distortion in competition on those energy markets.

The **national regulatory authorities** shall disseminate information in a fair manner according to transparent rules which it shall draw up and make publicly available.

Article 13

Implementation of prohibitions against market abuse

1. National regulatory authorities shall ensure that the prohibitions set out in Articles 3 and 5 and the obligation set out in Article 4 are applied.

Each **Contracting Party** shall ensure that its national regulatory authorities have the investigatory and enforcement powers necessary for the exercise of that function <...>. Those powers shall be exercised in a proportionate manner.

Those powers may be exercised:

- (a) directly;
- (b) in collaboration with other authorities; or
- (c) by application to the competent judicial authorities.

Where appropriate, the national regulatory authorities may exercise their investigatory powers in collaboration with organised markets, trade-matching systems or other persons professionally arranging transactions <...>.

2. The investigatory and enforcement powers referred to in paragraph 1 shall be limited to the aim of the investigation. They shall be exercised in conformity with national law and include the right to:

- (a) have access to any relevant document in any form, and to receive a copy of it;
- (b) demand information from any relevant person, including those who are successively involved in the transmission of orders or conduct of the operations concerned, as well as their principals, and, if necessary, the right to summon and hear any such person or principal;
- (c) carry out on-site inspections;
- (d) require existing telephone and existing data traffic records;
- (e) require the cessation of any practice that is contrary to this Regulation or delegated acts or implementing acts adopted on the basis thereof;
- (f) request a court to freeze or sequester assets;
- (g) request a court or any competent authority to impose a temporary prohibition of professional activity.

Article 14

Right of appeal

Contracting Parties shall ensure that suitable mechanisms exist at national level under which a party affected by a decision of the regulatory authority has a right of appeal to a body independent of the parties involved and of any government.

Article 15

Obligations of persons professionally arranging transactions

Any person professionally arranging transactions in wholesale energy products who reasonably suspects that a transaction might breach Article 3 or 5 shall notify the national regulatory authority without further delay.

Persons professionally arranging transactions in wholesale energy products shall establish and maintain effective arrangements and procedures to identify breaches of Article 3 or 5.

Article 16

Cooperation at Energy Community and national level

1. The **Energy Community Regulatory Board** shall **facilitate** that national regulatory authorities carry out their tasks under this Regulation in a coordinated and consistent way.

<...> National regulatory authorities shall cooperate <...> with each other, including at regional level **via the Energy Community Regulatory Board** for the purpose of carrying out their duties in accordance with this Regulation.

National regulatory authorities <...> and the national competition authority in a **Contracting Party** may establish appropriate forms of cooperation in order to ensure effective and efficient investigation and enforcement and to contribute to a coherent and consistent approach to investigation, judicial proceedings and to the enforcement of this Regulation and relevant financial and competition law.

2. National regulatory authorities shall without delay inform the **Energy Community Regulatory Board and the Secretariat** in as specific a manner as possible where they have reasonable grounds to suspect that acts in breach of this Regulation are being, or have been, carried out either in that **Contracting Party** or in another **Contracting Party**.

Where a national regulatory authority suspects that acts which affect wholesale energy markets or the price of wholesale energy products in that **Contracting Party** are being carried out in another **Contracting Party**, it may request the **Energy Community Regulatory Board and the Secretariat** to **ensure that the requirements of this Regulation are implemented in such Contracting Party <...>**.

3. In order to ensure a coordinated and consistent approach to market abuse on wholesale energy markets:

(a) <...>

(b) <...>

(c) <...>

national regulatory authorities shall inform the national competition authority of their **Contracting Party**, the Secretariat and the **Energy Community Regulatory Board** where they have reasonable grounds to suspect that acts are being, or have been, carried out on wholesale energy market which are likely to constitute a breach of competition law.

4. In order to carry out its functions under paragraph 1, where, *inter alia*, on the basis of initial assessments or analysis, the **Energy Community Regulatory Board** suspects that there has been a breach of this Regulation, it shall **be entitled**:

(a) to request one or more national regulatory authorities to supply any information related to the suspected breach;

(b) to request one or more national regulatory authorities to commence an investigation of the suspected breach, and to take appropriate action to remedy any breach found. Any decision as regards the appropriate action to be taken to remedy any breach found shall be the responsibility of the national regulatory authority concerned;

(c) where it considers that the possible breach has, or has had, a cross-border impact, to establish and coordinate an investigatory group consisting of representatives of concerned national regulatory authorities to investigate whether this Regulation has been breached and in which **Contracting Party** the breach took place. Where appropriate, the **Energy Community Regulatory Board** may also seek the participation of representatives of **the Agency** or other relevant authority of one or more **Contracting Party and/or Member States** in the investigatory group.

5. A national regulatory authority receiving a request for information under point (a) of paragraph 4, or receiving a request to commence an investigation of a suspected breach under point (b) of paragraph 4, shall immediately take the necessary measures in order to comply with that request. If that national regulatory authority is not able to supply the required information immediately, it shall without further delay notify the **Energy Community Regulatory Board** of the reasons.

By way of derogation from the first subparagraph, a national regulatory authority may refuse to act on a request where:

- (a) compliance might adversely affect the sovereignty or security of the **Contracting Party** addressed;
- (b) judicial proceedings have already been initiated in respect of the same actions and against the same persons before the authorities of the **Contracting Party** addressed; or
- (c) a final judgment has already been delivered in relation to such persons for the same actions in the **Contracting Party** addressed.

In any such case, the national regulatory authority shall notify the **Energy Community Regulatory Board** accordingly, providing as detailed information as possible on those proceedings or the judgment. National regulatory authorities shall participate in an investigatory group convened in accordance with point (c) of paragraph 4, rendering all necessary assistance. The investigatory group shall be subject to coordination by the **Energy Community Regulatory Board**.

6. <...>

Article 17

Professional secrecy

1. Any confidential information received, exchanged or transmitted pursuant to this Regulation shall be subject to the conditions of professional secrecy laid down in paragraphs 2, 3 and 4.

2. The obligation of professional secrecy shall apply to:

- (a) persons who work or who have worked for an **Energy Community institution**;
- (b) auditors and experts instructed by an **Energy Community institution**;

(c) persons who work or who have worked for the national regulatory authorities or for other relevant authorities;

(d) auditors and experts instructed by national regulatory authorities or by other relevant authorities who receive confidential information in accordance with this Regulation.

3. Confidential information received by the persons referred to in paragraph 2 in the course of their duties may not be divulged to any other person or authority, except in summary or aggregate form such that an individual market participant or market place cannot be identified, without prejudice to cases covered by criminal law, the other provisions of this Regulation or other relevant **Energy Community** legislation.

4. Without prejudice to cases covered by criminal law, the <...> national regulatory authorities, <...> bodies or persons which receive confidential information pursuant to this Regulation may use it only in the performance of their duties and for the exercise of their functions. Other authorities, bodies or persons may use that information for the purpose for which it was provided to them or in the context of administrative or judicial proceedings specifically related to the exercise of those functions. The authority receiving the information may use it for other purposes, provided that the **Energy Community Regulatory Board**, national regulatory authorities, <...> bodies or persons communicating information consent thereto.

5. This Article shall not prevent an authority in a **Contracting Party** from exchanging or transmitting, in accordance with national law, confidential information provided that it has not been received from an authority of another **Contracting Party** or from the **Energy Community Regulatory Board** or the **Secretariat** under this Regulation.

Article 18

Penalties

The **Contracting Parties** shall lay down the rules on penalties applicable to infringements of this Regulation and shall take all measures necessary to ensure that they are implemented. The penalties provided for must be effective, dissuasive and proportionate, reflecting the nature, duration and seriousness of the infringement, the damage caused to consumers and the potential gains from trading on the basis of inside information and market manipulation.

The **Contracting Parties** shall notify those provisions to the **Secretariat** by **the deadline for transposition of this Regulation in the Energy Community** at the latest and shall notify it without delay of any subsequent amendment affecting them.

Contracting Parties shall provide that the national regulatory authority may disclose to the public measures or penalties imposed for infringement of this Regulation unless such disclosure would cause disproportionate damage to the parties involved.

Article 19

<...>

Article 20

<...>

Article 21

<...>

Article 22

<...>

REGULATION (EU) 543/2013 of 14 June 2013 on submission and publication of data in electricity markets

Incorporated and adapted by Permanent High Level Group Decision 2015/01/PHLG-EnC of 24 June 2015.

*The adaptations made by Permanent High Level Group Decision 2015/01/PHLG-EnC are highlighted in **bold and blue**.*

Article 1

Subject matter

This Regulation lays down the minimum common set of data relating to generation, transportation and consumption of electricity to be made available to market participants. It also provides for a central collection and publication of the data.

Article 2

Definitions

For the purposes of this Regulation, the definitions in Article 2 of Regulation (EC) No 714/2009 shall apply. In addition, the following definitions shall apply:

- (1) 'balancing reserves' mean all resources, if procured *ex ante* or in real time, or according to legal obligations, which are available to the TSO for balancing purposes;
- (2) 'balancing time unit' means the time period for which the price for balancing reserves is established;
- (3) 'bidding zone' means the largest geographical area within which market participants are able to exchange energy without capacity allocation;
- (4) 'capacity allocation' means the attribution of cross zonal capacity;
- (5) 'consumption unit' means a resource which receives electrical energy for its own use, excluding TSOs and Distribution Systems Operators (DSOs);
- (6) 'control area' means a coherent part of the interconnected system, operated by a single system operator and shall include connected physical loads and/or generation units if any;
- (7) 'coordinated net transmission capacity' means a capacity calculation method based on the principle of assessing and defining *ex ante* a maximum energy exchange between adjacent bidding zones;
- (8) 'critical network element' means a network element either within a bidding zone or between bidding zones taken into account in the capacity calculation process, limiting the amount of power that can be exchanged;
- (9) 'cross-control area balancing' means a balancing scheme where a TSO can receive bids for activation coming from other TSOs' areas. It does not include re-dispatching or the delivery of emergency energy;
- (10) 'cross zonal capacity' means the capability of the interconnected system to accommodate energy transfer between bidding zones;

- (11) 'currency' is euro if at least one part of the bidding zone(s) concerned is part of a country in which euro is a legal tender. In any other case it is the local currency;
- (12) 'cut-off time' means the point in time where TSOs have to confirm all matched nominations to the market. The cut-off time refers not only to daily or intra daily markets but also to the different markets that cover imbalance adjustments and reserve allocation;
- (13) 'countertrading' means a cross zonal exchange initiated by system operators between two bidding zones to relieve physical congestion;
- (14) 'data provider' means the entity that is sending the data to the central information transparency platform;
- (15) 'explicit allocation' means the allocation of cross zonal capacity only, without the energy transfer;
- (16) 'flow based parameters' mean the available margins on critical network elements with associated power transfer distribution factors;
- (17) 'generation unit' means a single electricity generator belonging to a production unit;
- (18) 'implicit allocation' means a congestion management method in which energy is obtained at the same time as cross zonal capacity;
- (19) 'market time unit' means the period for which the market price is established or the shortest possible common time period for the two bidding zones, if their market time units are different;
- (20) 'offered capacity' means the cross zonal capacity offered by the transmission capacity allocator to the market;
- (21) 'planned' means an event known ex ante by the primary owner of the data;
- (22) 'power transfer distribution factor' means a representation of the physical flow on a critical network element induced by the variation of the net position of a bidding zone;
- (23) 'primary owner of the data' means the entity which creates the data;
- (24) 'production unit' means a facility for generation of electricity made up of a single generation unit or of an aggregation of generation units;
- (25) 'profile' means a geographical boundary between one bidding zone and several neighbouring bidding zones;
- (26) 'redispatching' means a measure activated by one or several system operators by altering the generation and/or load pattern in order to change physical flows in the transmission system and relieve a physical congestion;
- (27) 'total load', including losses without power used for energy storage, means a load equal to generation and any imports deducting any exports and power used for energy storage;
- (28) 'transmission capacity allocator' means the entity empowered by TSOs to manage the allocation of cross zonal capacities;
- (29) 'vertical load' means the total amount of power flowing out of the transmission network to the distribution networks, to directly connected final customers or to the consuming part of generation;
- (30) 'year-ahead forecast margin' means the difference between the yearly forecast of available generation capacity and the yearly forecast of maximum total load taking into account the forecast of total generation capacity, the forecast of availability of generation and the forecast of reserves contracted for system services;
- (31) 'time' means the local time in Brussels.

Article 3¹**Establishment of a central information transparency platform**

1. A central information transparency platform shall be established and operated in an efficient and cost effective manner within the European Network of Transmission System Operators for Electricity (the 'ENTSO for Electricity'). The ENTSO for Electricity shall publish on the central information transparency platform all data which TSOs are required to submit to the ENTSO for Electricity in accordance with this Regulation.

The central information transparency platform shall be available to the public free of charge through the internet and shall be available at least in English.

The data shall be up to date, easily accessible, downloadable and available for at least five years. Data updates shall be time-stamped, archived and made available to the public.

2. <...>

3. <...>

Article 4**Submission and publication of data**

1. Primary owners of data shall submit data to TSOs in accordance with Articles 6 to 17. They shall ensure that the data they provide to TSOs, or where provided for in accordance with paragraph 2 to data providers, are complete, of the required quality and provided in a manner that allows TSOs or data providers to process and deliver the data to the ENTSO for Electricity in sufficient time to allow the ENTSO for Electricity to meet its obligations under this Regulation in relation to the timing of the publication of information.

TSOs, and where relevant data providers, shall process the data they receive and provide them to the ENTSO for Electricity in due time for publication.

2. Primary owners of data may fulfil their obligation laid down in paragraph 1 by submitting data directly to the central information transparency platform provided they use a third party acting as data provider on their behalf. This way of submitting data shall be subject to the prior agreement of the TSO in whose control area the primary owner is located. When providing its agreement the TSO shall assess whether the data provider fulfils the requirements referred to in points (b) and (c) of Article 5, first subparagraph.

3. TSOs shall be considered as primary owners of data for the purposes of Articles 6 to 17, except when stated otherwise.

4. In case a bidding zone consists of several control areas in different **Contracting Parties**, the ENTSO for Electricity shall publish the data referred to in paragraph 1 separately for the concerned **Contracting Parties**.

5. Without prejudice to the obligations of the TSOs and of the ENTSO for Electricity laid down in paragraph 1 and Article 3, data can also be published on TSOs' or other parties' websites.

6. National regulatory authorities shall ensure that the primary owners of the data, TSOs and data providers comply with their obligations under this Regulation.

¹ Adapted by Article 3(1) of Decision 2015/01/PHLG-EnC.

Article 5²

Manual of procedures

The ENTSO for Electricity shall develop a manual specifying:

- (a) details and format of the submission of data laid down in Article 4(1);
- (b) standardised ways and formats of data communication and exchange between primary owners of data, TSOs, data providers and the ENTSO for Electricity;
- (c) technical and operational criteria which data providers would need to fulfil when providing data to the central information transparency platform;
- (d) appropriate classification of production types referred to in Articles 14(1), 15(1) and 16(1).

<...>

Article 6

Information on total load

1. For their control areas, TSOs shall calculate and submit the following data to the ENTSO for Electricity for each bidding zone:

- (a) the total load per market time unit;
- (b) a day-ahead forecast of the total load per market time unit;
- (c) a week-ahead forecast of the total load for every day of the following week, which shall for each day include a maximum and a minimum load value;
- (d) a month-ahead forecast of the total load for every week of the following month, which shall include, for a given week, a maximum and a minimum load value;
- (e) a year-ahead forecast of the total load for every week of the following year, which shall for a given week include a maximum and a minimum load value.

2. The information referred to:

- (a) in point (a) of paragraph 1 shall be published no later than one hour after the operating period;
- (b) in point (b) of paragraph 1 shall be published no later than two hours before the gate closure of the day-ahead market in the bidding zone and be updated when significant changes occur;
- (c) in point (c) of paragraph 1 shall be published each Friday no later than two hours before the gate closure of the day-ahead market in the bidding zone and be updated when significant changes occur;
- (d) in point (d) of paragraph 1 shall be published no later than one week before the delivery month and be updated when significant changes occur;
- (e) in point (e) of paragraph 1 shall be published no later than the 15th calendar day of the month before the year to which the data relates.

3. Generation units located within a TSO's control area shall provide that TSO with all the relevant information required to calculate the data referred to in point (a) of paragraph 1.

² Adapted by Article 3(2) of Decision 2015/01/PHLG-EnC.

Generation units shall be considered as primary owners of the relevant information they provide.

4. Distribution system operators (DSO), located within a TSO's control area shall provide that TSO with all the relevant information required to calculate the data referred to in points (b) to (e) of paragraph 1.

DSOs shall be considered as primary owners of the relevant information they provide.

Article 7

Information relating to the unavailability of consumption units

1. For their control areas, TSOs shall provide the following information to the ENTSO for Electricity:

(a) the planned unavailability of 100 MW or more of a consumption unit, including changes of 100 MW or more in the planned unavailability of consumption units, lasting at least one market time unit, specifying:

- bidding zone,
- available capacity per market time unit during the event,
- reason for the unavailability,
- the estimated start and end date (day, hour) of the change in availability;

(b) changes in actual availability of a consumption unit with a power rating of 100 MW or more, specifying:

- bidding zone,
- available capacity per market time unit during the event,
- reason for the unavailability,
- the start date and the estimated end date (day, hour) of the change in availability.

2. The information laid down in point (a) of paragraph 1 shall be published in aggregated form per bidding zone indicating the sum of unavailable consumption capacity per market time unit during a given period as soon as possible but no later than one hour after the decision regarding the planned unavailability is made.

The information laid down point (b) of paragraph 1 shall be published in aggregated form per bidding zone indicating the sum of unavailable consumption capacity per market time unit during a given period as soon as possible but no later than one hour after the change in actual availability.

3. Consumption units located in a TSO's control area shall calculate and submit the data laid down in paragraph 1 to that TSO.

The consumption units shall be considered as primary owner of the data they submit.

Article 8

Year-ahead forecast margin

1. For their control areas, TSOs shall calculate and provide for each bidding zone the year-ahead forecast margin evaluated at the local market time unit to the ENTSO for Electricity.

The information shall be published one week before the yearly capacity allocation but no later than the 15th calendar day of the month before the year to which the data relates.

2. Generation units and DSOs, located within a TSO's control area shall provide that TSO with any relevant information required to calculate the data referred to in paragraph 1.

Generation units and DSOs shall be considered as primary owners of the data they submit.

Article 9

Transmission infrastructure

TSOs shall establish and provide information on future changes to network elements and interconnector projects including expansion or dismantling in their transmission grids within the next three years, to the ENTSO for Electricity. This information shall only be given for measures expected to have an impact of at least 100 MW on cross zonal capacity between bidding zones or on profiles at least during one market time unit. The information shall include:

- (a) the identification of the assets concerned;
- (b) the location;
- (c) type of asset;
- (d) the impact on interconnection capacity per direction between the bidding zones;
- (e) the estimated date of completion. The information shall be published one week before the yearly capacity allocation but no later than the 15th calendar day of the month before the year to which the allocation relates. The information shall be updated with relevant changes before the end of March, the end of June and the end of September of the year to which the allocation relates.

Article 10

Information relating to the unavailability of transmission infrastructure

1. For their control areas TSOs shall calculate and provide to the ENTSO for Electricity:

(a) the planned unavailability, including changes in the planned unavailability of interconnections and in the transmission grid that reduce cross zonal capacities between bidding zones by 100 MW or more during at least one market time unit, specifying:

- the identification of the assets concerned,
- the location,
- the type of asset,
- the estimated impact on cross zonal capacity per direction between bidding zones,
- reasons for the unavailability,
- the estimated start and end date (day, hour) of the change in availability;

(b) changes in the actual availability of interconnections and in the transmission grid that reduce cross zonal capacities between bidding zones by 100 MW or more during at least one market time unit, specifying:

- the identification of the assets concerned,
- the location,

- the type of asset,
 - the estimated impact on cross zonal capacity per direction between bidding zones,
 - reasons for the unavailability,
 - the start and estimated end date (day, hour) of the change in availability;
- (c) changes in the actual availability of off-shore grid infrastructure that reduce wind power feed-in by 100 MW or more during at least one market time unit, specifying:
- the identification of the assets concerned,
 - the location,
 - the type of asset,
 - the installed wind power generation capacity (MW) connected to the asset,
 - wind power fed in (MW) at the time of the change in the availability,
 - reasons for the unavailability,
 - the start and estimated end date (day, hour) of the change in availability.
2. The information laid down in point (a) of paragraph 1 shall be published as soon as possible, but no later than one hour after the decision regarding the planned unavailability is made.
3. The information laid down in points (b) and (c) of paragraph 1 shall be published as soon as possible but no later than one hour after the change in actual availability.
4. For the information laid down in points (a) and (b) of paragraph 1 TSOs may choose not to identify the asset concerned and specify its location if it is classified as sensitive critical infrastructure protection related information in their **Contracting Parties** as provided for in point (d) of Article 2 of Council Directive 2008/114/EC. This is without prejudice to their other obligations laid down in paragraph 1 of this Article.

Article 11

Information relating to the estimation and offer of cross zonal capacities

1. For their control areas TSOs or, if applicable, transmission capacity allocators, shall calculate and provide the following information to the ENTSO for Electricity sufficiently in advance of the allocation process:
- (a) the forecasted and offered capacity (MW) per direction between bidding zones in case of coordinated net transmission capacity based capacity allocation; or
 - (b) the relevant flow based parameters in case of flow based capacity allocation.
- TSOs or, if applicable, transmission capacity allocators shall be considered as the primary owners of the information they calculate and provide.
2. The information laid down in paragraph 1(a) shall be published as set out in the Annex.
3. In relation to direct current links, TSOs shall provide updated information on any restrictions placed on the use of available cross-border capacity including through the application of ramping restrictions or intraday transfer limits not later than one hour after the information is known to the ENTSO for Electricity. Operators of direct current links shall be considered as primary owners of the updated information they provide.

4. TSOs or, if applicable, transmission capacity allocators, shall provide a yearly report to the ENTSO for Electricity indicating:

- (a) the main critical network elements limiting the offered capacity;
- (b) the control area(s) which the critical network elements belong to;
- (c) the extent to which relieving the critical network elements would increase the offered capacity;
- (d) all possible measures that could be implemented to increase the offered capacity, together with their estimated costs.

When preparing the report TSOs may choose not to identify the asset concerned and specify its location if it is classified as sensitive critical infrastructure protection related information in their **Contracting Parties** as provided for in point (d) of Article 2 of Directive 2008/114/EC.

TSOs or, if applicable, transmission capacity allocators shall be considered as primary owners of the report they provide.

Article 12

Information relating to the use of cross zonal capacities

1. For their control areas TSOs shall calculate and provide the following information to the ENTSO for Electricity:

- (a) in case of explicit allocations, for every market time unit and per direction between bidding zones:
 - the capacity (MW) requested by the market,
 - capacity (MW) allocated to the market,
 - the price of the capacity (Currency/MW),
 - the auction revenue (in Currency) per border between bidding zones;
- (b) for every market time unit and per direction between bidding zones the total capacity nominated;
- (c) prior to each capacity allocation the total capacity already allocated through previous allocation procedures per market time unit and per direction;
- (d) for every market time unit the day-ahead prices in each bidding zone (Currency/MWh);
- (e) in case of implicit allocations, for every market time unit the net positions of each bidding zone (MW) and the congestion income (in Currency) per border between bidding zones;
- (f) scheduled day-ahead commercial exchanges in aggregated form between bidding zones per direction and market time unit;
- (g) physical flows between bidding zones per market time unit;
- (h) cross zonal capacities allocated between bidding zones in **Contracting Parties** and third countries per direction, per allocated product and period.

2. The information laid down:

- (a) in points (a) and (e) of paragraph 1 shall be published no later than one hour after each capacity allocation;
- (b) in point (b) of paragraph 1 shall be published no later than one hour after each round of nomination;

(c) in point (c) of paragraph 1 shall be published at the latest when publication of offered capacity figures become due as set out in the Annex;

(d) in point (d) of paragraph 1 shall be published no later than one hour after gate closure;

(e) in point (f) of paragraph 1 shall be published every day no later than one hour after the last cutoff time and, if applicable, shall be updated no later than two hours after each intra-day nomination process;

(f) in point (g) of paragraph 1 shall be published for each market time unit as closely as possible to real time but no later than one hour after the operational period;

(g) in point (h) of paragraph 1 shall be published no later than one hour after the allocation.

3. Transmission capacity allocators, or where applicable power exchanges, shall provide the TSOs with all the relevant information required to calculate the data laid down in paragraph 1.

Transmission capacity allocators shall be considered as primary owners of the information they provide.

Power exchanges shall be considered primary owners of the information they provide.

Article 13

Information relating to congestion management measures

1. For their control areas TSOs shall provide the following information to the ENTSO for Electricity:

(a) information relating to redispatching per market time unit, specifying:

- the action taken (that is to say production increase or decrease, load increase or decrease),
- the identification, location and type of network elements concerned by the action,
- the reason for the action,
- capacity affected by the action taken (MW);

(b) information relating to countertrading per market time unit, specifying:

- the action taken (that is to say cross-zonal exchange increase or decrease),
- the bidding zones concerned,
- the reason for the action,
- change in cross-zonal exchange (MW);

(c) the costs incurred in a given month from actions referred to in points (a) and (b) and from any other remedial action.

2. The information laid down:

(a) in points (a) and (b) of paragraph 1 shall be published as soon as possible but no later than one hour after the operating period, except for the reasons which shall be published as soon as possible but not later than one day after the operating period;

Article 14

Forecast generation

1. For their control areas, TSOs shall calculate and provide the following information to the ENTSO for Electricity:

(a) the sum of generation capacity (MW) installed for all existing production units equalling to or exceeding 1 MW installed generation capacity, per production type;

(b) information about production units (existing and planned) with an installed generation capacity equalling to or exceeding 100 MW. The information shall contain:

- the unit name,
- the installed generation capacity (MW),
- the location,
- the voltage connection level,
- the bidding zone,
- the production type;

(c) an estimate of the total scheduled generation (MW) per bidding zone, per each market time unit of the following day;

(d) a forecast of wind and solar power generation (MW) per bidding zone, per each market time unit of the following day.

2. The information laid down:

(a) in point (a) of paragraph 1 shall be published annually no later than one week before the end of the year;

(b) in point (b) of paragraph 1 shall be published annually for the three following years no later than one week before the beginning of the first year to which the data relates;

(c) in point (c) of paragraph 1 shall be published no later than 18.00 Brussels time, one day before actual delivery takes place;

(d) in point (d) of paragraph 1 shall be published no later than 18.00 Brussels time, one day before actual delivery takes place. The information shall be regularly updated and published during intra-day trading with at least one update to be published at 8.00 Brussels time on the day of actual delivery. The information shall be provided for all bidding zones only in Contracting Parties with more than 1% feed-in of wind or solar power generation per year or for bidding zones with more than 5% feed-in of wind or solar power generation per year.

3. Production units located in a TSO's control area shall provide that TSO with all the relevant information required to calculate the data laid down in paragraph 1.

Production units shall be considered as primary owners of the relevant information they provide.

Article 15**Information relating to the unavailability of generation and production units**

1. For their control areas, TSOs shall provide the following information to the ENTSO for Electricity:

(a) the planned unavailability of 100 MW or more of a generation unit including changes of 100 MW or more in the planned unavailability of that generation unit, expected to last for at least one market time unit up to three years ahead, specifying:

- the name of the production unit,
- the name of the generation unit,
- location,
- bidding zone,
- installed generation capacity (MW),
- the production type,
- available capacity during the event,
- reason for the unavailability,
- start date and estimated end date (day, hour) of the change in availability;

(b) changes of 100 MW or more in actual availability of a generation unit, expected to last for at least one market time unit, specifying:

- the name of the production unit,
- the name of the generation unit,
- location,
- bidding zone,
- installed generation capacity (MW),
- the production type,
- available capacity during the event,
- reason for the unavailability, and
- start date and estimated end date (day, hour) of the change in availability;

(c) the planned unavailability of a production unit of 200 MW or more including changes of 100 MW or more in the planned unavailability of that production unit, but not published in accordance with subparagraph (a), expected to last for at least one market time unit up to three years ahead, specifying:

- the name of the production unit,
- location,
- bidding zone,
- installed generation capacity (MW),
- the production type,
- available capacity during the event,

- reason for the unavailability,
 - start date and estimated end date (day, hour) of the change in availability;
- (d) changes of 100 MW or more in actual availability of a production unit with an installed generation capacity of 200 MW or more, but not published in accordance with subparagraph (b), expected to last for at least one market time unit, specifying:
- the name of the production unit,
 - location,
 - bidding zone,
 - installed generation capacity (MW),
 - the production type,
 - available capacity during the event,
 - reason for the unavailability, and
 - start date and estimated end date (day, hour) of the change in availability.
2. The information laid down in points (a) and (c) of paragraph 1 shall be published as soon as possible, but no later than one hour after the decision regarding the planned unavailability is made.
- The information laid down in points (b) and (d) of paragraph 1 shall be published as soon as possible but no later than one hour after the change in actual availability.
3. Generation units located in a TSO's control area shall provide that TSO with the data laid down in paragraph 1.
- Generation units shall be considered as primary owners of the data they provide.

Article 16

Actual generation

1. For their control areas, TSOs shall calculate and provide the following information to the ENTSO for Electricity:
- (a) actual generation output (MW) per market time unit and per generation unit of 100 MW or more installed generation capacity;
 - (b) aggregated generation output per market time unit and per production type;
 - (c) actual or estimated wind and solar power generation (MW) in each bidding zone per market time unit;
 - (d) aggregated weekly average filling rate of all water reservoir and hydro storage plants (MWh) per bidding zone including the figure for the same week of the previous year.
2. The information laid down:
- (a) in point (a) of paragraph 1 shall be published five days after the operational period;
 - (b) in point (b) of paragraph 1 shall be published no later than one hour after the operational period;
 - (c) in point (c) of paragraph 1 shall be published no later than one hour after the operational period and be updated on the basis of measured values as soon as they become available. The information shall

be provided for all bidding zones only in **Contracting Parties** with more than 1% feed-in of wind or solar power generation per year or for bidding zones with more than 5% feed-in of wind or solar power generation per year;

(d) in point (d) of paragraph 1 shall be published on the third working day following the week to which the information relates. The information shall be provided for all bidding zones only in **Contracting Parties** with more than 10% feed-in of this type of generation per year or for bidding zones with more than 30% feed-in of this type of generation per year.

3. Generation units and production units located within a TSOs' control area shall provide that TSO with all the relevant information to calculate the data laid down in paragraph 1.

Generation units and production units respectively shall be considered as primary owners of the relevant information they provide.

Article 17

Balancing

1. For their control areas, TSOs or where applicable operators of balancing markets, where such markets exist shall provide the following information to the ENTSO for Electricity:

(a) rules on balancing including:

- processes for the procurement of different types of balancing reserves and of balancing energy,
- the methodology of remuneration for both the provision of reserves and activated energy for balancing,
- the methodology for calculating imbalance charges,
- if applicable, a description on how cross-border balancing between two or more control areas is carried out and the conditions for generators and load to participate;

(b) the amount of balancing reserves under contract (MW) by the TSO, specifying:

- the source of reserve (generation or load),
- the type of reserve (e.g. Frequency Containment Reserve, Frequency Restoration Reserve, Replacement Reserve),
- the time period for which the reserves are contracted (e.g. hour, day, week, month, year, etc.);

(c) prices paid by the TSO per type of procured balancing reserve and per procurement period (Currency/MW/period);

(d) accepted aggregated offers per balancing time unit, separately for each type of balancing reserve;

(e) the amount of activated balancing energy (MW) per balancing time unit and per type of reserve;

(f) prices paid by the TSO for activated balancing energy per balancing time unit and per type of reserve; price information shall be provided separately for up and down regulation;

(g) imbalance prices per balancing time unit;

(h) total imbalance volume per balancing time unit;

(i) monthly financial balance of the control area, specifying:

- the expenses incurred to the TSO for procuring reserves and activating balancing energy,

- the net income to the TSO after settling the imbalance accounts with balance responsible parties;
- (j) if applicable, information regarding Cross Control Area Balancing per balancing time unit, specifying:
 - the volumes of exchanged bids and offers per procurement time unit,
 - maximum and minimum prices of exchanged bids and offers per procurement time unit,
 - volume of balancing energy activated in the control areas concerned. Operators of balancing markets shall be considered as primary owners of the information they provide.

2. The information laid down:

(a) in point (b) of paragraph 1 shall be published as soon as possible but no later than two hours before the next procurement process takes place;

(b) in point (c) of paragraph 1 shall be published as soon as possible but no later than one hour after the procurement process ends;

(c) in point (d) of paragraph 1 shall be published as soon as possible but no later than one hour after the operating period;

(d) in point (e) of paragraph 1 shall be published as soon as possible but no later than 30 minutes after the operating period. In case the data are preliminary, the figures shall be updated when the data become available;

(e) in point (f) of paragraph 1 shall be published as soon as possible but no later than one hour after the operating period;

(f) in point (g) of paragraph 1 shall be published as soon as possible;

(g) in point (h) of paragraph 1 shall be published as soon as possible but no later than 30 minutes after the operating period. In case the data are preliminary, the figures shall be updated when the data become available;

(h) in point (i) of paragraph 1 shall be published no later than three months after the operational month. In case the settlement is preliminary, the figures shall be updated after the final settlement;

(i) in point (j) of paragraph 1 shall be published no later than one hour after the operating period.

Article 18

Liability

The liability of the primary owner of the data, the data provider and the ENTSO for Electricity under this Regulation shall be limited to cases of gross negligence and/or wilful misconduct. In any event they shall not be liable to compensate the person who uses the data for any loss of profit, loss of business, or any other indirect incidental, special or consequential damages of any kind arising from a breach of their obligations under this Regulation.

Article 19

Amendment to Regulation (EC) No 714/2009

Points 5.5 to 5.9 of Annex I to Regulation (EC) No 714/2009 are deleted with effect from 5 January 2015.

Article 20³

This Regulation shall enter into force on the twentieth day following that of its publication in a **dedicated section of the website of the Energy Community**.

Article 4(1) shall apply 18 months after the entry into force of Decision 2015/01/PHLG-EnC.⁴

This Regulation shall be binding in its entirety and directly applicable in all **Contracting Parties**.

The references to the obligations of the ENTSO for Electricity are applicable upon the agreement of ENTSO for Electricity.⁵

³ Adapted by Article 4(3) of Decision 2011/02/MC-EnC.

⁴ Decision 2015/01/PHLG-EnC entered into force on 24 June 2015.

⁵ According to Article 2(1)(c) of Decision 2015/01/PHLG-EnC.

ANNEX

Publication of the information referred to in Article 11(2)

Capacity allocation period	Forecasted cross zonal capacity to be published	Offered capacity to be published
Yearly	One week before the yearly allocation process but no later than 15 December, for all months of the following year	One week before the yearly allocation process but no later than 15 December
Monthly	Two working days before the monthly allocation process for all days of the following month	Two working days before the monthly allocation process
Weekly	Each Friday, for all days of the following week	One day before the weekly allocation process
Day-ahead		One hour before spot market gate closure, for each market time unit
Intra-day		One hour before the first intra-day allocation and then real-time, for each market time unit

REGULATION (EU) 2016/1388 of 17 August 2016 establishing a network code on demand connection

Incorporated and adapted by Permanent High Level Group Decision 2018/05/PHLG-EnC of 12 January 2018

The adaptations made by Permanent High Level Group Decision 2018/05/PHLG-EnC are highlighted in bold and blue

TITLE I GENERAL PROVISIONS

Article 1

Subject matter

1. This Regulation establishes a network code which lays down the requirements for grid connection of:
 - (a) transmission-connected demand facilities;
 - (b) transmission-connected distribution facilities;
 - (c) distribution systems, including closed distribution systems;
 - (d) demand units, used by a demand facility or a closed distribution system to provide demand response services to relevant system operators and relevant TSOs.
2. This Regulation, therefore, helps to ensure fair conditions of competition in the internal electricity market, to ensure system security and the integration of renewable electricity sources, and to facilitate **Energy Community** -wide trade in electricity.
3. This Regulation also lays down the obligations for ensuring that system operators make appropriate use of the demand facilities' and distribution systems' capabilities in a transparent and non-discriminatory manner to provide a level playing field throughout the **Energy Community**.

Article 2

Definitions

For the purposes of this Regulation, the definitions in Article 2 of Directive 2012/27/EU of the European Parliament and of the Council, Article 2 of Regulation (EC) No 714/2009, <...>, Article 2 of Commission Regulation (EU) 2016/631, Article 2 of Commission Regulation (EU) No 543/2013 and Article 2 of Directive 2009/72/EC shall apply.

In addition, the following definitions shall apply:

- (1) 'demand facility' means a facility which consumes electrical energy and is connected at one or more connection points to the transmission or distribution system. A distribution system and/or auxiliary supplies of a power generating module do not constitute a demand facility;
- (2) 'transmission-connected demand facility' means a demand facility which has a connection point to a

transmission system;

(3) 'transmission-connected distribution facility' means a distribution system connection or the electrical plant and equipment used at the connection to the transmission system;

(4) 'demand unit' means an indivisible set of installations containing equipment which can be actively controlled by a demand facility owner or by a CDSO, either individually or commonly as part of demand aggregation through a third party;

(5) 'closed distribution system' means a distribution system classified pursuant to Article 28 of Directive 2009/72/EC as a closed distribution system by national regulatory authorities or by other competent authorities, where so provided by the **Contracting Party**, which distributes electricity within a geographically confined industrial, commercial or shared services site and does not supply household customers, without prejudice to incidental use by a small number of households located within the area served by the system and with employment or similar associations with the owner of the system;

(6) 'main demand equipment' means at least one of the following equipment: motors, transformers, high voltage equipment at the connection point and at the process production plant;

(7) 'transmission-connected distribution system' means a distribution system connected to a transmission system, including transmission-connected distribution facilities;

(8) 'maximum import capability' means the maximum continuous active power that a transmission-connected demand facility or a transmission-connected distribution facility can consume from the network at the connection point, as specified in the connection agreement or as agreed between the relevant system operator and the transmission-connected demand facility owner or transmission-connected distribution system operator respectively;

(9) 'maximum export capability' means the maximum continuous active power that a transmission-connected demand facility or a transmission-connected distribution facility, can feed into the network at the connection point, as specified in the connection agreement or as agreed between the relevant system operator and the transmission-connected demand facility owner or transmission-connected distribution system operator respectively;

(10) 'low frequency demand disconnection' means an action where demand is disconnected during a low frequency event in order to recover the balance between demand and generation and restore system frequency to acceptable limits;

(11) 'low voltage demand disconnection' means a restoration action where demand is disconnected during a low voltage event in order to recover voltage to acceptable limits;

(12) 'on load tap changer' means a device for changing the tap of a winding, suitable for operation while the transformer is energised or on load;

(13) 'on load tap changer blocking' means an action that blocks the on load tap changer during a low voltage event in order to stop transformers from further tapping and suppressing voltages in an area;

(14) 'control room' means a relevant system operator's operation centre;

(15) 'block loading' means the maximum step active power loading of reconnected demand during system restoration after black-out;

(16) 'demand response active power control' means demand within a demand facility or closed distribution system that is available for modulation by the relevant system operator or relevant TSO, which results in

an active power modification;

(17) 'demand response reactive power control' means reactive power or reactive power compensation devices in a demand facility or closed distribution system that are available for modulation by the relevant system operator or relevant TSO;

(18) 'demand response transmission constraint management' means demand within a demand facility or closed distribution system that is available for modulation by the relevant system operator or relevant TSO to manage transmission constraints within the system;

(19) 'demand aggregation' means a set of demand facilities or closed distribution systems which can operate as a single facility or closed distribution system for the purposes of offering one or more demand response services;

(20) 'demand response system frequency control' means demand within a demand facility or closed distribution system that is available for reduction or increase in response to frequency fluctuations, made by an autonomous response from the demand facility or closed distribution system to diminish these fluctuations;

(21) 'demand response very fast active power control' means demand within a demand facility or closed distribution system that can be modulated very fast in response to a frequency deviation, which results in a very fast active power modification;

(22) 'demand response unit document' (DRUD) means a document, issued either by the demand facility owner or the CDSO to the relevant system operator for demand units with demand response and connected at a voltage level above 1 000 V, which confirms the compliance of the demand unit with the technical requirements set out in this Regulation and provides the necessary data and statements, including a statement of compliance.

Article 3

Scope of application

1. The connection requirements set out in this Regulation shall apply to:

- (a) new transmission-connected demand facilities;
- (b) new transmission-connected distribution facilities;
- (c) new distribution systems, including new closed distribution systems;
- (d) new demand units used by a demand facility or a closed distribution system to provide demand response services to relevant system operators and relevant TSOs.

The relevant system operator shall refuse to allow the connection of a new transmission-connected demand facility, a new transmission-connected distribution facility, or a new distribution system, which does not comply with the requirements set out in this Regulation and which is not covered by a derogation granted by the regulatory authority, or other authority where applicable in a **Contracting Party** pursuant to Article 50. The relevant system operator shall communicate such refusal, by means of a reasoned statement in writing, to the demand facility owner, DSO, or CDSO and, unless specified otherwise by the regulatory authority, to the regulatory authority.

Based on compliance monitoring in accordance with Title III, the relevant TSO shall refuse demand response services subject to Articles 27 to 30 from new demand units not fulfilling the requirements set out in this

Regulation.

2. This Regulation shall not apply to:

(a) <...>

(b) storage devices except for pump-storage power generating modules in accordance with Article 5(2).

3. In case of demand facilities or closed distribution systems with more than one demand unit, these demand units shall together be considered as one demand unit if they cannot be operated independently from each other or can reasonably be considered in a combined manner.

Article 4

Application to existing transmission-connected demand facilities, existing transmission-connected distribution facilities, existing distribution systems and existing demand units used to provide demand response services

1. Existing transmission-connected demand facilities, existing transmission-connected distribution facilities, existing distribution systems and existing demand units that are or can be used by a demand facility or a closed distribution system to provide demand response services to a relevant system operator or relevant TSO, are not subject to the requirements of this Regulation, except where:

(a) an existing transmission-connected demand facility, an existing transmission-connected distribution facility, an existing distribution system, or an existing demand unit within a demand facility at a voltage level above 1 000 V or a closed distribution system connected at a voltage level above 1 000 V, has been modified to such an extent that its connection agreement must be substantially revised in accordance with the following procedure:

(i) demand facility owners, DSOs, or CDSOs who intend to undertake the modernisation of a plant or replacement of equipment impacting the technical capabilities of the transmission-connected demand facility, the transmission-connected distribution facility, the distribution system, or the demand unit shall notify their plans to the relevant system operator in advance;

(ii) if the relevant system operator considers that the extent of the modernisation or replacement of equipment is such that a new connection agreement is required, the system operator shall notify the relevant regulatory authority or, where applicable, the **Contracting Party**; and

(iii) the relevant regulatory authority or, where applicable, the **Contracting Party** shall decide if the existing connection agreement needs to be revised or a new connection agreement is required and which requirements of this Regulation shall apply; or

(b) a regulatory authority or, where applicable, a **Contracting Party** decides to make an existing transmission-connected demand facility, an existing transmission-connected distribution facility, an existing distribution system, or an existing demand unit subject to all or some of the requirements of this Regulation, following a proposal from the relevant TSO in accordance with paragraphs 3, 4 and 5.

2. For the purposes of this Regulation, a transmission-connected demand facility, a transmission-connected distribution facility, a distribution system, or a demand unit that is, or can be, used by a demand facility or a closed distribution system to provide demand response services to a relevant system operator or relevant TSO, shall be considered as existing if:

(a) it is already connected to the network on the date of **expiry of the deadline for transposition** of this Regulation; or

(b) the demand facility owner, DSO, or CDSO has concluded a final and binding contract for the purchase of the main demand equipment or the demand unit by two years after **expiry of the deadline for transposition of** the Regulation. The demand facility owner, DSO, or CDSO must notify the relevant system operator and relevant TSO of the conclusion of the contract within 30 months after **expiry of the deadline for transposition of** the Regulation.

The notification submitted by the demand facility owner, DSO, or CDSO to the relevant system operator and the relevant TSO shall at least indicate the contract title, its date of signature and date of entry into force, and the specifications of the main demand equipment or the demand unit to be constructed, assembled or purchased.

A **Contracting Party** may provide that in specified circumstances the regulatory authority may determine whether the transmission-connected demand facility, the transmission-connected distribution facility, the distribution system, or the demand unit is to be considered existing or new.

3. Following a public consultation in accordance with Article 9 and in order to address significant factual changes in circumstances, such as the evolution of system requirements including penetration of renewable energy sources, smart grids, distributed generation or demand response, the relevant TSO may propose to the regulatory authority concerned, or where applicable, to the **Contracting Party** to extend the application of this Regulation to existing transmission-connected demand facilities, existing transmission-connected distribution facilities, existing distribution systems, or existing demand units used by a demand facility or a closed distribution system to provide demand response services to a relevant system operator or relevant TSO.

For that purpose a sound and transparent quantitative cost-benefit analysis shall be carried out, in accordance with Articles 48 and 49. The analysis shall indicate:

(a) the costs, in regard to existing transmission-connected demand facilities, existing transmission-connected distribution facilities, existing distribution systems and existing demand units, of requiring compliance with this Regulation;

(b) the socioeconomic benefit resulting from applying the requirements set out in this Regulation; and

(c) the potential of alternative measures to achieve the required performance.

4. Before carrying out the quantitative cost-benefit analysis referred to in paragraph 3, the relevant TSO shall:

(a) carry out a preliminary qualitative comparison of costs and benefits;

(b) obtain approval from the relevant regulatory authority or, where applicable, the **Contracting Party**.

5. The relevant regulatory authority or, where applicable, the **Contracting Party** shall decide on the extension of the applicability of this Regulation to existing transmission-connected demand facilities, existing transmission-connected distribution facilities, existing distribution systems, or existing demand units, within six months of receipt of the report and the recommendation of the relevant TSO in accordance with paragraph 4 of Article 48. The decision of the regulatory authority or, where applicable, the **Contracting Party** shall be published.

6. The relevant TSO shall take account of the legitimate expectations of demand facility owners, DSOs and CDSOs as part of the assessment of the application of this Regulation to existing transmission-connected demand facilities, existing transmission-connected distribution facilities, existing distribution systems, or

existing demand units.

7. The relevant TSO may assess the application of some or all of the provisions of this Regulation to existing transmission-connected demand facilities, existing transmission-connected distribution facilities, existing distribution systems, or existing demand units, every three years in accordance with the requirements and process set out in paragraphs 3 to 5.

Article 5

Application to pump-storage power generating modules and industrial sites

1. This Regulation shall not apply to pump-storage power generating modules that have both generating and pumping operation mode.

2. Any pumping module within a pump-storage station that only provides pumping mode shall be subject to the requirements of this Regulation and shall be treated as a demand facility.

3. In the case of industrial sites with an embedded power generating module, the system operator of an industrial site, the demand facility owner, the power generating facility owner and the relevant system operator to whose system the industrial site is connected, may agree, in coordination with the relevant TSO, on conditions for disconnection of critical loads from the relevant system. The objective of the agreement shall be to secure production processes of the industrial site in case of disturbed conditions in the relevant system.

Article 6

Regulatory aspects

1. Requirements of general application to be established by relevant system operators or TSOs under this Regulation shall be subject to approval by the entity designated by the **Contracting Party** and be published. The designated entity shall be the regulatory authority unless otherwise provided by the **Contracting Party**.

2. For site specific requirements to be established by relevant system operators or TSOs under this Regulation, **Contracting Parties** may require approval by a designated entity.

3. When applying this Regulation, **Contracting Parties**, competent entities and system operators shall:

- (a) apply the principles of proportionality and non-discrimination;
- (b) ensure transparency;
- (c) apply the principle of optimisation between the highest overall efficiency and lowest total costs for all parties involved;
- (d) respect the responsibility assigned to the relevant TSO in order to ensure system security, including as required by national legislation;
- (e) consult with relevant DSOs and take account of potential impacts on their system;
- (f) take into consideration agreed European standards and technical specifications

4. The relevant system operator or TSO shall submit a proposal for requirements of general application, or the methodology used to calculate or establish them, for approval by the competent entity within two years of **expiry of the deadline for transposition** of this Regulation.
5. Where this Regulation requires the relevant system operator, relevant TSO, demand facility owner, power generating facility owner, DSO and/or CDSO to seek agreement, they shall endeavour to do so within six months after a first proposal has been submitted by one party to the other parties. If no agreement has been found within this time frame, each party may request the relevant regulatory authority to issue a decision within six months.
6. Competent entities shall take decisions on proposals for requirements or methodologies within six months following the receipt of such proposals.
7. If the relevant system operator or TSO deems an amendment to requirements or methodologies as provided for and approved under paragraph 1 and 2 to be necessary, the requirements provided for in paragraphs 3 to 8 shall apply to the proposed amendment. System operators and TSOs proposing an amendment shall take into account the legitimate expectations, if any, of demand facility owners, DSOs, CDSOs, equipment manufacturers and other stakeholders based on the initially specified or agreed requirements or methodologies.
8. Any party having a complaint against a relevant system operator or a TSO in relation to that relevant system operator's or TSO's obligations under this Regulation may refer the complaint to the regulatory authority which, acting as dispute settlement authority, shall issue a decision within two months after receipt of the complaint. That period may be extended by two months where additional information is sought by the regulatory authority. That extended period may be further extended with the agreement of the complainant. The regulatory authority's decision shall have binding effect unless and until overruled on appeal.
9. Where the requirements under this Regulation are to be established by a relevant system operator that is not a TSO, **Contracting Parties** may provide that instead the TSO be responsible for establishing the relevant requirements.

Article 7

Multiple TSOs

1. Where more than one TSO exists in a **Contracting Party**, this Regulation shall apply to all those TSOs.
2. **Contracting Parties** may, under the national regulatory regime, provide that the responsibility of a TSO to comply with one or some or all obligations under this Regulation is assigned to one or more specific TSOs.

Article 8

Recovery of costs

1. The costs borne by system operators subject to network tariff regulation and stemming from the obligations laid down in this Regulation shall be assessed by the relevant regulatory authorities. Costs assessed as reasonable, efficient and proportionate shall be recovered through network tariffs or other appropriate mechanisms.

2. If requested by the relevant regulatory authorities, system operators referred to in paragraph 1 shall, within three months of the request, provide the information necessary to facilitate assessment of the costs incurred.

Article 9

Public consultation

1. Relevant system operators and relevant TSOs shall carry out a consultation with stakeholders, including the competent authorities of each **Contracting Party** on:

(a) proposals to extend the applicability of this Regulation to existing transmission-connected demand facilities, existing transmission-connected distribution facilities, existing distribution systems and existing demand units in accordance with Article 4(3);

(b) the report prepared in accordance with Article 48(3);

(c) the cost-benefit analysis undertaken in accordance with Article 53(2);

(d) the requirements for demand units specified in accordance with Article 28(2)(c),(e),(f),(k) and (l) and Article 29(2)(c) to (e).

The consultation shall last at least for a period of one month.

2. The relevant system operators or relevant TSOs shall duly take into account the views of the stakeholders resulting from the consultations, prior to the submission of the draft proposal, the report, the cost-benefit analysis, or the requirements for demand units, for approval by the regulatory authority, competent entity or, if applicable, the **Contracting Party**. In all cases, a sound justification for including or not the view of the stakeholders shall be provided and published in a timely manner before, or simultaneously with, the publication of the proposal, the report, the cost-benefit analysis, or the requirements for demand units specified in accordance with Article 28 and Article 29.

Article 10

Stakeholder involvement

The **Energy Community Regulatory Board**, in close cooperation with the European Network of Transmission System Operators for Electricity (ENTSO for Electricity), shall organise stakeholder involvement, regarding the requirements for the grid connection of transmission-connected demand facilities, transmission-connected distribution facilities, distribution systems and demand units used by a demand facility or a closed distribution system to provide demand response services to relevant system operators and relevant TSOs, and other aspects of the implementation of this Regulation. This shall include regular meetings with stakeholders to identify problems and propose improvements notably related to the requirements for grid connection of transmission-connected demand facilities, transmission-connected distribution facilities, distribution systems and demand units used by a demand facility or a closed distribution system to provide demand response services to relevant system operators and relevant TSOs.

Article 11

Confidentiality obligations

1. Any confidential information received, exchanged or transmitted pursuant to this Regulation shall be subject to the conditions of professional secrecy laid down in paragraphs 2, 3 and 4.
2. The obligation of professional secrecy shall apply to any persons, regulatory authorities, or entities subject to the provisions of this Regulation.
3. Confidential information received by the persons, regulatory authorities, or entities referred to in paragraph 2 in the course of their duties may not be divulged to any other person or authority, without prejudice to cases covered by national law, the other provisions of this Regulation or other relevant **Energy Community** law.
4. Without prejudice to cases covered by national or **Energy Community** law, regulatory authorities, entities, or persons who receive confidential information pursuant to this Regulation may use it only for the purpose of carrying out their duties under this Regulation.

TITLE II

CONNECTION OF TRANSMISSION-CONNECTED DEMAND FACILITIES, TRANSMISSION-CONNECTED DISTRIBUTION FACILITIES AND DISTRIBUTION SYSTEMS

CHAPTER 1

General requirements

Article 12

General frequency requirements

1. Transmission-connected demand facilities, transmission-connected distribution facilities and distribution systems shall be capable of remaining connected to the network and operating at the frequency ranges and time periods specified in Annex I.
2. The transmission-connected demand facility owner or the DSO may agree with the relevant TSO on wider frequency ranges or longer minimum times for operation. If wider frequency ranges or longer minimum times for operation are technically feasible, the consent of the transmission-connected demand facility owner or DSO shall not be unreasonably withheld.

Article 13

General voltage requirements

1. Transmission-connected demand facilities, transmission-connected distribution facilities and transmission-connected distribution systems shall be capable of remaining connected to the network and operating at the voltage ranges and time periods specified in Annex II.
2. Equipment of distribution systems connected at the same voltage as the voltage of the connection point to the transmission system shall be capable of remaining connected to the network and operating at the voltage ranges and time periods specified in Annex II.
3. The voltage range at the connection point shall be expressed by the voltage at the connection point related to reference 1 per unit (pu) voltage. For the 400 kV grid voltage level (or alternatively commonly referred to as 380 kV level), the reference 1 pu value is 400 kV, for other grid voltage levels the reference 1 pu voltage may differ for each system operator in the same synchronous area.
- 4.<...>
- 5.<...>
6. If required by the relevant TSO, a transmission-connected demand facility, a transmission-connected distribution facility, or a transmission-connected distribution system shall be capable of automatic disconnection at specified voltages. The terms and settings for automatic disconnection shall be agreed between the relevant TSO and the transmission-connected demand facility owner or the DSO.
7. With regard to transmission-connected distribution systems with a voltage below 110 kV at the connection point, the relevant TSO shall specify the voltage range at the connection point that the distribution systems connected to that transmission system shall be designed to withstand. DSOs shall design the capability of their equipment, connected at the same voltage as the voltage of the connection point to the transmission system, to comply with this voltage range.

Article 14

Short-circuit requirements

1. Based on the rated short-circuit withstand capability of its transmission network elements, the relevant TSO shall specify the maximum short-circuit current at the connection point that the transmission-connected demand facility or the transmission-connected distribution system shall be capable of withstanding.
2. The relevant TSO shall deliver to the transmission-connected demand facility owner or the transmission-connected distribution system operator an estimate of the minimum and maximum short-circuit currents to be expected at the connection point as an equivalent of the network.
3. After an unplanned event, the relevant TSO shall inform the affected transmission-connected demand facility owner or the affected transmission-connected distribution system operator as soon as possible and no later than one week after the unplanned event, of the changes above a threshold for the maximum short-circuit current that the affected transmission-connected demand facility or the affected transmission-connected distribution system shall be able to withstand from the relevant TSO's network in accordance with paragraph 1.

4. The threshold set in paragraph 3 shall either be specified by the transmission-connected demand facility owner for its facility, or by the transmission-connected distribution system operator for its network.
5. Before a planned event, the relevant TSO shall inform the affected transmission-connected demand facility owner or the affected transmission-connected distribution system operator, as soon as possible and no later than one week before the planned event, of the changes above a threshold for the maximum short-circuit current that the affected transmission-connected demand facility or the affected transmission-connected distribution system shall be able to withstand from the relevant TSO's network, in accordance with paragraph 1.
6. The threshold set in paragraph 5 shall either be specified by the transmission-connected demand facility owner for its facility, or by the transmission-connected distribution system operator for its network.
7. The relevant TSO shall request information from a transmission-connected demand facility owner or a transmission-connected distribution system operator concerning the contribution in terms of short-circuit current from that facility or network. As a minimum, the equivalent modules of the network shall be delivered and demonstrated for zero, positive and negative sequences.
8. After an unplanned event, the transmission-connected demand facility owner or the transmission-connected distribution system operator shall inform the relevant TSO, as soon as possible and no later than one week after the unplanned event, of the changes in short-circuit contribution above the threshold set by the relevant TSO.
9. Before a planned event, the transmission-connected demand facility owner or the transmission-connected distribution system operator shall inform the relevant TSO, as soon as possible and no later than one week before the planned event, of the changes in short-circuit contribution above the threshold set by the relevant TSO.

Article 15

Reactive power requirements

1. Transmission-connected demand facilities and transmission-connected distribution systems shall be capable of maintaining their steady-state operation at their connection point within a reactive power range specified by the relevant TSO, according to the following conditions:
 - (a) for transmission-connected demand facilities, the actual reactive power range specified by the relevant TSO for importing and exporting reactive power shall not be wider than 48 percent of the larger of the maximum import capacity or maximum export capacity (0,9 power factor import or export of active power), except in situations where either technical or financial system benefits are demonstrated, for transmission-connected demand facilities, by the transmission-connected demand facility owner and accepted by the relevant TSO;
 - (b) for transmission-connected distribution systems, the actual reactive power range specified by the relevant TSO for importing and exporting reactive power shall not be wider than:
 - (i) 48 percent (i.e. 0,9 power factor) of the larger of the maximum import capability or maximum export capability during reactive power import (consumption); and
 - (ii) 48 percent (i.e. 0,9 power factor) of the larger of the maximum import capability or maximum export capability during reactive power export (production);

except in situations where either technical or financial system benefits are proved by the relevant TSO and the transmission-connected distribution system operator through joint analysis;

(c) the relevant TSO and the transmission-connected distribution system operator shall agree on the scope of the analysis, which shall address the possible solutions, and determine the optimal solution for reactive power exchange between their systems, taking adequately into consideration the specific system characteristics, variable structure of power exchange, bidirectional flows and the reactive power capabilities in the distribution system;

(d) the relevant TSO may establish the use of metrics other than power factor in order to set out equivalent reactive power capability ranges;

(e) the reactive power range requirement values shall be met at the connection point;

(f) by way of derogation from point (e), where a connection point is shared between a power generating module and a demand facility, equivalent requirements shall be met at the point defined in relevant agreements or national law.

2. The relevant TSO may require that transmission-connected distribution systems have the capability at the connection point to not export reactive power (at reference 1 pu voltage) at an active power flow of less than 25% of the maximum import capability. Where applicable, **Contracting Parties** may require the relevant TSO to justify its request through a joint analysis with the transmission-connected distribution system operator. If this requirement is not justified based on the joint analysis, the relevant TSO and the transmission-connected distribution system operator shall agree on necessary requirements according to the outcomes of a joint analysis.

3. Without prejudice to point (b) of paragraph 1, the relevant TSO may require the transmission-connected distribution system to actively control the exchange of reactive power at the connection point for the benefit of the entire system. The relevant TSO and the transmission-connected distribution system operator shall agree on a method to carry out this control, to ensure the justified level of security of supply for both parties. The justification shall include a roadmap in which the steps and the timeline for fulfilling the requirement are specified.

4. In accordance with paragraph 3, the transmission-connected distribution system operator may require the relevant TSO to consider its transmission-connected distribution system for reactive power management.

Article 16

Protection requirements

1. The relevant TSO shall specify the devices and settings required to protect the transmission network in accordance with the characteristics of the transmission-connected demand facility or the transmission-connected distribution system. The relevant TSO and the transmission-connected demand facility owner or the transmission-connected distribution system operator shall agree on protection schemes and settings relevant for the transmission-connected demand facility or the transmission-connected distribution system.

2. Electrical protection of the transmission-connected demand facility or the transmission-connected distribution system shall take precedence over operational controls while respecting system security, health and safety of staff and the public.

3. Protection scheme devices may cover the following elements:

- (a) external and internal short circuit;
- (b) over- and under-voltage at the connection point to the transmission system;
- (c) over- and under-frequency;
- (d) demand circuit protection;
- (e) unit transformer protection;
- (f) back-up against protection and switchgear malfunction.

4. The relevant TSO and the transmission-connected demand facility owner or the transmission-connected distribution system operator shall agree on any changes to the protection schemes relevant for the transmission-connected demand facility or the transmission-connected distribution system, and on the arrangements for the protection schemes of the transmission-connected demand facility or the transmission-connected distribution system.

Article 17

Control requirements

1. The relevant TSO and the transmission-connected demand facility owner or the transmission-connected distribution system operator shall agree on the schemes and settings of the different control devices of the transmission-connected demand facility or the transmission-connected distribution system relevant for system security.

2. The agreement shall cover at least the following elements:

- (a) isolated (network) operation;
- (b) damping of oscillations;
- (c) disturbances to the transmission network;
- (d) automatic switching to emergency supply and restoration to normal topology;
- (e) automatic circuit-breaker re-closure (on 1-phase faults).

3. The relevant TSO and the transmission-connected demand facility owner or the transmission-connected distribution system operator shall agree on any changes to the schemes and settings of the different control devices of the transmission-connected demand facility or the transmission-connected distribution system relevant for system security.

4. With regard to priority ranking of protection and control, the transmission-connected demand facility owner or the transmission-connected distribution system operator shall set the protection and control devices of its transmission-connected demand facility or its transmission-connected distribution system respectively, in compliance with the following priority ranking, organised in decreasing order of importance:

- (a) transmission network protection;
- (b) transmission-connected demand facility or transmission-connected distribution system protection;
- (c) frequency control (active power adjustment);
- (d) power restriction.

Article 18

Information exchange

1. Transmission-connected demand facilities shall be equipped according to the standards specified by the relevant TSO in order to exchange information between the relevant TSO and the transmission-connected demand facility with the specified time stamping. The relevant TSO shall make the specified standards publicly available.
2. Transmission-connected distribution system shall be equipped according to the standards specified by the relevant TSO in order to exchange information between the relevant TSO and the transmission-connected distribution system with the specified time stamping. The relevant TSO shall make the specified standards publicly available.
3. The relevant TSO shall specify the information exchange standards. The relevant TSO shall make publicly available the precise list of data required.

Article 19

Demand disconnection and demand reconnection

1. All transmission-connected demand facilities and transmission-connected distribution systems shall fulfil the following requirements related to low frequency demand disconnection functional capabilities:
 - (a) each transmission-connected distribution system operator and, where specified by the TSO, transmission-connected demand facility owner, shall provide capabilities that enable automatic 'low frequency' disconnection of a specified proportion of their demand. The relevant TSO may specify a disconnection trigger based on a combination of low frequency and rate-of-change-of-frequency;
 - (b) the low frequency demand disconnection functional capabilities shall allow for disconnecting demand in stages for a range of operational frequencies;
 - (c) the low frequency demand disconnection functional capabilities shall allow for operation from a nominal Alternating Current ('AC') input to be specified by the relevant system operator, and shall meet the following requirements:
 - (i) frequency range: at least between 47-50 Hz, adjustable in steps of 0,05 Hz;
 - (ii) operating time: no more than 150 ms after triggering the frequency set point **and no more than 450 ms after triggering the frequency set point in Georgia**;
 - (iii) voltage lock-out: blocking of the functional capability shall be possible when the voltage is within a range of 30 to 90% of reference 1 pu voltage;
 - (iv) provide the direction of active power flow at the point of disconnection;
 - (d) the AC voltage supply used in providing low frequency demand disconnection functional capabilities, shall be provided from the network at the frequency signal measuring point, as used in providing functional capabilities in accordance with paragraph 1(c), so that the frequency of the low frequency demand disconnection functional capabilities supply voltage is the same as the one of the network.
2. With regard to low voltage demand disconnection functional capabilities, the following requirements

shall apply:

- (a) the relevant TSO may specify, in coordination with the transmission-connected distribution system operators, low voltage demand disconnection functional capabilities for the transmission-connected distribution facilities;
- (b) the relevant TSO may specify, in coordination with the transmission-connected demand facility owners, low voltage demand disconnection functional capabilities for the transmission-connected demand facilities;
- (c) based on the TSO's assessment concerning system security, the implementation of on load tap changer blocking and low voltage demand disconnection shall be binding for the transmission-connected distribution system operators;
- (d) if the relevant TSO decides to implement a low voltage demand disconnection functional capability, the equipment for both on load tap changer blocking and low voltage demand disconnection shall be installed in coordination with the relevant TSO;
- (e) the method for low voltage demand disconnection shall be implemented by relay or control room initiation;
- (f) the low voltage demand disconnection functional capabilities shall have the following features:
 - (i) the low voltage demand disconnection functional capability shall monitor the voltage by measuring all three phases;
 - (ii) blocking of the relays' operation shall be based on direction of either active power or reactive power flow.

3. With regard to blocking of on load tap changers, the following requirements shall apply:

- (a) if required by the relevant TSO, the transformer at the transmission-connected distribution facility shall be capable of automatic or manual on load tap changer blocking;
- (b) the relevant TSO shall specify the automatic on load tap changer blocking functional capability.

4. All transmission-connected demand facilities and transmission-connected distribution systems shall fulfil the following requirements related to disconnection or reconnection of a transmission-connected demand facility or a transmission-connected distribution system:

- (a) with regard to the capability of reconnection after a disconnection, the relevant TSO shall specify the conditions under which a transmission-connected demand facility or a transmission-connected distribution system is entitled to reconnect to the transmission system. Installation of automatic reconnection systems shall be subject to prior authorisation by the relevant TSO;
- (b) with regard to reconnection of a transmission-connected demand facility or a transmission-connected distribution system, the transmission-connected demand facility or the transmission-connected distribution system shall be capable of synchronisation for frequencies within the ranges set out in Article 12. The relevant TSO and the transmission-connected demand facility owner or the transmission-connected distribution system operator shall agree on the settings of synchronisation devices prior to connection of the transmission-connected demand facility or the transmission-connected distribution system, including voltage, frequency, phase angle range and deviation of voltage and frequency;
- (c) a transmission-connected demand facility or a transmission-connected distribution facility shall be capable of being remotely disconnected from the transmission system when required by the relevant TSO. If required, the automated disconnection equipment for reconfiguration of the system in preparation for

block loading shall be specified by the relevant TSO. The relevant TSO shall specify the time required for remote disconnection.

Article 20

Power quality

Transmission-connected demand facility owners and transmission-connected distribution system operators shall ensure that their connection to the network does not result in a determined level of distortion or fluctuation of the supply voltage on the network, at the connection point. The level of distortion shall not exceed that allocated to them by the relevant TSO. TSOs shall coordinate their power quality requirements with the requirements of adjacent TSOs.

Article 21

Simulation models

1. Transmission-connected demand facilities and transmission-connected distribution systems shall fulfil the requirements set out in paragraphs 3 and 4 related to the simulation models or equivalent information.

2. Each TSO may require simulation models or equivalent information showing the behaviour of the transmission-connected demand facility, or the transmission-connected distribution system, or both, in steady and dynamic states.

3. Each TSO shall specify the content and format of those simulation models or equivalent information. The content and format shall include:

- (a) steady and dynamic states, including 50 Hz component;
- (b) electromagnetic transient simulations at the connection point;
- (c) structure and block diagrams.

4. For the purpose of dynamic simulations, the simulation model or equivalent information referred to in paragraph 3(a) shall contain the following sub-models or equivalent information:

- (a) power control;
- (b) voltage control;
- (c) transmission-connected demand facility and transmission-connected distribution system protection models;
- (d) the different types of demand, that is to say electro technical characteristics of the demand; and
- (e) converter models.

5. Each relevant system operator or relevant TSO shall specify the requirements of the performance of the recordings of transmission-connected demand facilities or transmission-connected distribution facilities, or both, in order to compare the response of the model with these recordings.

CHAPTER 2

Operational notification procedure

Article 22

General provisions

1. The operational notification procedure for the connection of each new transmission-connected demand facility, each new transmission-connected distribution facility and each new transmission-connected distribution system, shall comprise:

- (a) an energisation operational notification (EON);
- (b) an interim operational notification (ION);
- (c) a final operational notification (FON).

2. Each transmission-connected demand facility owner or transmission-connected distribution system operator to which one or more of the requirements in Title II apply shall demonstrate to the relevant TSO that it has complied with the requirements set out in Title II of this Regulation by completing successfully the operational notification procedure for connection of each transmission-connected demand facility, each transmission-connected distribution facility and each transmission-connected distribution system described in Articles 23 to 26.

3. The relevant TSO shall specify and make publicly available further details concerning the operational notification procedure.

Article 23

Energisation operational notification

1. An EON shall entitle the transmission-connected demand facility owner or transmission-connected distribution system operator to energise its internal network and auxiliaries by using the grid connection that is specified for the connection point.

2. An EON shall be issued by the relevant TSO, subject to completion of preparations including agreement on the protection and control settings relevant to the connection point between the relevant TSO and the transmission-connected demand facility owner or transmission-connected distribution system operator.

Article 24

Interim operational notification

1. An ION shall entitle the transmission-connected demand facility owner or transmission-connected distribution system operator to operate the transmission-connected demand facility, the transmission-connected distribution facility, or the transmission-connected distribution system by using the grid connection for a limited period of time.

2. An ION shall be issued by the relevant TSO, subject to completion of the data and study review process as required by this Article.

3. With regard to the data and study review, the relevant TSO shall have the right to request that the transmission-connected demand facility owner or transmission-connected distribution system operator provide the following:

(a) an itemised statement of compliance;

(b) detailed technical data of the transmission-connected demand facility, the transmission-connected distribution facility or the transmission-connected distribution system relevant to the grid connection as specified by the relevant TSO;

(c) equipment certificates issued by an authorised certifier in respect of transmission-connected demand facilities, transmission-connected distribution facilities and transmission-connected distribution systems, where these are relied upon as part of the evidence of compliance;

(d) simulation models, as specified in Article 21 and required by the TSO;

(e) studies demonstrating expected steady-state and dynamic performance as required in Articles 43, 46 and 47;

(f) details of intended practical method of completing compliance tests according to Chapter 2 of Title IV.

4. The maximum period during which the transmission-connected demand facility owner or transmission-connected distribution system operator may maintain ION status shall be 24 months. The relevant TSO is entitled to specify a shorter ION validity period. An extension of the ION shall be granted only if the transmission-connected demand facility owner or transmission-connected distribution system operator has made substantial progress towards full compliance. Outstanding issues shall be clearly identified at the time of requesting extension.

5. An extension of the period during which the transmission-connected demand facility owner or transmission-connected distribution system operator may maintain ION status, beyond the period established in paragraph 4, may be granted if a request for a derogation is made to the relevant TSO before the expiry of that period in accordance with the derogation procedure laid down in Article 50.

Article 25

Final operational notification

1. A FON shall entitle the transmission-connected demand facility owner or transmission-connected distribution system operator to operate the transmission-connected demand facility, the transmission-connected distribution facility or the transmission-connected distribution system by using the grid connection.

2. A FON shall be issued by the relevant TSO, upon prior removal of all incompatibilities identified for the purposes of the ION status and subject to the completion of the data and study review process as required by this Article.

3. For the purposes of the data and study review, the transmission-connected demand facility owner or transmission-connected distribution system operator must submit the following to the relevant TSO:

(a) an itemised statement of compliance; and

(b) an update of the applicable technical data, simulation models and studies as referred to in points (b), (d) and (e) of Article 24(3), including the use of actual measured values during testing.

4. If incompatibility is identified in connection with the issuing of the FON, a derogation may be granted upon a request made to the relevant TSO, in accordance with the derogation procedure described in Chapter 2 of Title V. A FON shall be issued by the relevant TSO if the transmission-connected demand facility, the transmission-connected distribution facility, or the transmission-connected distribution system complies with the provisions of the derogation.

Where a request for a derogation is rejected, the relevant TSO shall have the right to refuse to allow the operation of the transmission-connected demand facility, the transmission-connected distribution facility, or the transmission-connected distribution system until the transmission-connected demand facility owner or transmission-connected distribution system operator and the relevant TSO resolve the incompatibility and the relevant TSO considers that the transmission-connected demand facility, the transmission-connected distribution facility, or the transmission-connected distribution system complies with the provisions of this Regulation.

If the relevant TSO and the transmission-connected demand facility owner or transmission-connected distribution system operator do not resolve the incompatibility within a reasonable time frame, but in any case not later than six months after the notification of the rejection of the request for a derogation, each party may refer the issue for decision to the regulatory authority.

Article 26

Limited operational notification

1. Transmission-connected demand facility owners or transmission-connected distribution system operators to whom a FON has been granted, shall inform the relevant TSO, no later than 24 hours after the incident has occurred, of the following circumstances:

- (a) the facility is temporarily subject to either significant modification or loss of capability affecting its performance; or
- (b) equipment failure leading to non-compliance with some relevant requirements.

A longer time period to inform the relevant TSO can be agreed with the transmission-connected demand facility owner or transmission-connected distribution system operator depending on the nature of the changes.

2. The transmission-connected demand facility owner or transmission-connected distribution system operator shall apply to the relevant TSO for a limited operational notification (LON), if the transmission-connected demand facility owner or transmission-connected distribution system operator expects the circumstances described in paragraph 1 to persist for more than three months.

3. A LON shall be issued by the relevant TSO and shall contain the following information which shall be clearly identifiable:

- (a) the unresolved issues justifying the granting of the LON;
- (b) the responsibilities and timescales for expected solution; and
- (c) a maximum period of validity which shall not exceed 12 months. The initial period granted may be

shorter with the possibility of an extension if evidence is submitted to the satisfaction of the relevant TSO demonstrating that substantial progress has been made towards achieving full compliance.

4. The FON shall be suspended during the period of validity of the LON with regard to the items for which the LON has been issued.

5. A further extension of the period of validity of the LON may be granted upon a request for a derogation made to the relevant TSO before the expiry of that period, in accordance with the derogation procedure described in Chapter 2 of Title V.

6. The relevant TSO shall have the right to refuse to allow the operation of the transmission-connected demand facility, the transmission-connected distribution facility, or the transmission-connected distribution system once the LON is no longer valid. In such cases, the FON shall automatically become invalid.

7. If the relevant TSO does not grant an extension of the period of validity of the LON in accordance with paragraph 5 or if it refuses to allow the operation of the transmission-connected demand facility, the transmission-connected distribution facility, or the transmission-connected distribution system once the LON is no longer valid in accordance with paragraph 6, the transmission-connected demand facility owner or transmission-connected distribution system operator may refer the issue for decision to the regulatory authority within six months after the notification of the decision of the relevant TSO.

TITLE III

CONNECTION OF DEMAND UNITS USED BY A DEMAND FACILITY OR A CLOSED DISTRIBUTION SYSTEM TO PROVIDE DEMAND RESPONSE SERVICES TO SYSTEM OPERATORS

CHAPTER 1

General requirements

Article 27

General provisions

1. Demand response services provided to system operators shall be distinguished based on the following categories:

(a) remotely controlled:

- (i) demand response active power control;
- (ii) demand response reactive power control;
- (iii) demand response transmission constraint management.

(b) autonomously controlled:

- (i) demand response system frequency control;
 - (ii) demand response very fast active power control.
2. Demand facilities and closed distribution systems may provide demand response services to relevant system operators and relevant TSOs. Demand

response services can include, jointly or separately, upward or downward modification of demand.

3. The categories referred to in paragraph 1 are not exclusive and this Regulation does not prevent other categories from being developed. This Regulation does not apply to demand response services provided to other entities than relevant system operators or relevant TSOs.

Article 28

Specific provisions for demand units with demand response active power control, reactive power control and transmission constraint management

1. Demand facilities and closed distribution systems may offer demand response active power control, demand response reactive power control, or demand response transmission constraint management to relevant system operators and relevant TSOs.

2. Demand units with demand response active power control, demand response reactive power control, or demand response transmission constraint management shall comply with the following requirements, either individually or, where it is not part of a transmission-connected demand facility, collectively as part of demand aggregation through a third party:

(a) be capable of operating across the frequency ranges specified in Article 12(1) and the extended range specified in Article 12(2);

(b) be capable of operating across the voltage ranges specified in Article 13 if connected at a voltage level at or above 110 kV;

(c) be capable of operating across the normal operational voltage range of the system at the connection point, specified by the relevant system operator, if connected at a voltage level below 110 kV. This range shall take into account existing standards and shall, prior to approval in accordance with Article 6, be subject to consultation with the relevant stakeholders in accordance with Article 9(1);

(d) be capable of controlling power consumption from the network in a range equal to the range contracted, directly or indirectly through a third party, by the relevant TSO;

(e) be equipped to receive instructions, directly or indirectly through a third party, from the relevant system operator or the relevant TSO to modify their demand and to transfer the necessary information. The relevant system operator shall make publicly available the technical specifications approved to enable this transfer of information. For demand units connected at a voltage level below 110 kV, these specifications shall, prior to approval in accordance with Article 6, be subject to consultation with the relevant stakeholders in accordance with Article 9(1);

(f) be capable of adjusting its power consumption within a time period specified by the relevant system operator or the relevant TSO. For demand units connected at a voltage level below 110 kV, these specifications shall, prior to approval in accordance with Article 6, be subject to consultation with the relevant stakeholders in accordance with Article 9(1);

(g) be capable of full execution of an instruction issued by the relevant system operator or the relevant TSO to modify its power consumption to the limits of the electrical protection safeguards, unless a contractually agreed method is in place with the relevant system operator or relevant TSO for the replacement of their contribution (including aggregated demand facilities' contribution through a third party);

(h) once a modification to power consumption has taken place and for the duration of the requested modification, only modify the demand used to provide the service if required by the relevant system operator or relevant TSO to the limits of the electrical protection safeguards, unless a contractually agreed method is in place with the relevant system operator or relevant TSO for the replacement of their contribution (including aggregated demand facilities' contribution through a third party). Instructions to modify power consumption may have immediate or delayed effects;

(i) notify the relevant system operator or relevant TSO of the modification of demand response capacity. The relevant system operator or relevant TSO shall specify the modalities of the notification;

(j) where the relevant system operator or the relevant TSO, directly or indirectly through a third party, command the modification of the power consumption, enable the modification of a part of its demand in response to an instruction by the relevant system operator or the relevant TSO, within the limits agreed with the demand facility owner or the CDSO and according to the demand unit settings;

(k) have the withstand capability to not disconnect from the system due to the rate-of-change-of-frequency up to a value specified by the relevant TSO. With regard to this withstand capability, the value of rate-of-change-of-frequency shall be calculated over a 500 ms time frame. For demand units connected at a voltage level below 110 kV, these specifications shall, prior to approval in accordance with Article 6, be subject to consultation with the relevant stakeholders in accordance with Article 9(1);

(l) where modification to the power consumption is specified via frequency or voltage control, or both, and via pre-alert signal sent by the relevant system operator or the relevant TSO, be equipped to receive, directly or indirectly through a third party, the instructions from the relevant system operator or the relevant TSO, to measure the frequency or voltage value, or both, to command the demand trip and to transfer the information. The relevant system operator shall specify and publish the technical specifications approved to enable this transfer of information. For demand units connected at a voltage level below 110 kV, these specifications shall, prior to approval in accordance with Article 6, be subject to consultation with the relevant stakeholders in accordance with Article 9(1).

3. For voltage control with disconnection or reconnection of static compensation facilities, each transmission-connected demand facility or transmission-connected closed distribution system shall be able to connect or disconnect its static compensation facilities, directly or indirectly, either individually or commonly as part of demand aggregation through a third party, in response to an instruction transmitted by the relevant TSO, or in the conditions set forth in the contract between the relevant TSO and the demand facility owner or the CDSO.

Article 29

Specific provisions for demand units with demand response system frequency control

1. Demand facilities and closed distribution systems may offer demand response system frequency control to relevant system operators and relevant TSOs.

2. Demand units with demand response system frequency control shall comply with the following requirements, either individually or, where it is not part of a transmission-connected demand facility, collectively as part of demand aggregation through a third party:

(a) be capable of operating across the frequency ranges specified in Article 12(1) and the extended range specified in Article 12(2);

(b) be capable of operating across the voltage ranges specified in Article 13 if connected at a voltage level at or above 110 kV;

(c) be capable of operating across the normal operational voltage range of the system at the connection point, specified by the relevant system operator, if connected at a voltage level below 110 kV. This range shall take into account existing standards, and shall, prior to approval in accordance with Article 6, be subject to consultation with the relevant stakeholders in accordance with Article 9(1);

(d) be equipped with a control system that is insensitive within a dead band around the nominal system frequency of 50,00 Hz, of a width to be specified by the relevant TSO in consultation with the TSOs in the synchronous area. For demand units connected at a voltage level below 110 kV, these specifications shall, prior to approval in accordance with Article 6, be subject to consultation with the relevant stakeholders in accordance with Article 9(1);

(e) be capable of, upon return to frequency within the dead band specified in paragraph 2(d), initiating a random time delay of up to 5 minutes before resuming normal operation.

The maximum frequency deviation from nominal value of 50,00 Hz to respond to shall be specified by the relevant TSO in coordination with the TSOs in the synchronous area. For demand units connected at a voltage level below 110 kV, these specifications shall, prior to approval in accordance with Article 6, be subject to consultation with the relevant stakeholders in accordance with Article 9(1).

The demand shall be increased or decreased for a system frequency above or below the dead band of nominal (50,00 Hz) respectively;

(f) be equipped with a controller that measures the actual system frequency. Measurements shall be updated at least every 0,2 seconds;

(g) be able to detect a change in system frequency of 0,01 Hz, in order to give overall linear proportional system response, with regard to the demand response system frequency control's sensitivity and accuracy of the frequency measurement and the consequent modification of the demand. The demand unit shall be capable of a rapid detection and response to changes in system frequency, to be specified by the relevant TSO in coordination with the TSOs in the synchronous area. An offset in the steady-state measurement of frequency shall be acceptable up to 0,05 Hz.

Article 30

Specific provisions for demand units with demand response very fast active power control

1. The relevant TSO in coordination with the relevant system operator may agree with a demand facility owner or a CDSO (including, but not restricted to, through a third party) on a contract for the delivery of demand response very fast active power control.

2. If the agreement referred to in paragraph 1 takes place, the contract referred to in paragraph 1 shall specify:

(a) a change of active power related to a measure such as the rate-of-change-of-frequency for that portion of its demand;

(b) the operating principle of this control system and the associated performance parameters;

(c) the response time for very fast active power control, which shall not be longer than 2 seconds.

CHAPTER 2

Operational notification procedure

Article 31

General provisions

1. The operational notification procedure for demand units used by a demand facility or a closed distribution system to provide demand response to system operators shall be distinguished between:

(a) demand units within a demand facility or a closed distribution system connected at a voltage level of or below 1 000 V;

(b) demand units within a demand facility or a closed distribution system connected at a voltage level above 1 000 V.

2. Each demand facility owner or CDSO, providing demand response to a relevant system operator or a relevant TSO, shall confirm to the relevant system operator, or relevant TSO, directly or indirectly through a third party, its ability to satisfy the technical design and operational requirements as referred to in Chapter 1 of Title III of this Regulation.

3. The demand facility owner or the CDSO shall notify, directly or indirectly, through a third party, the relevant system operator or relevant TSO, in advance of any decision to cease offering demand response services and/or about the permanent removal of the demand unit with demand response. This information may be aggregated as specified by the relevant system operator or relevant TSO.

4. The relevant system operator shall specify and make publicly available further details concerning the operational notification procedure.

Article 32

Procedures for demand units within a demand facility or a closed distribution system connected at a voltage level of or below 1 000 V

1. The operational notification procedure for a demand unit within a demand facility or a closed distribution system connected at a voltage level of or below 1 000 V shall comprise an installation document.

2. The installation document template shall be provided by the relevant system operator, and the contents agreed with the relevant TSO, either directly or indirectly through a third party.

3. Based on an installation document, the demand facility owner or the CDSO shall submit information, directly or indirectly through a third party, to the relevant system operator or relevant TSO. The date of this submission shall be prior to the offer in the market of the capacity of the demand response by the demand unit. The requirements set in the installation document shall differentiate between different types of connections and between the different categories of demand response services.

4. For subsequent demand units with demand response, separate installation documents shall be provided.

5. The content of the installation document of individual demand units may be aggregated by the relevant system operator or relevant TSO.

6. The installation document shall contain the following items:

- (a) the location at which the demand unit with demand response is connected to the network;
- (b) the maximum capacity of the demand response installation in kW;
- (c) the type of demand response services;
- (d) the demand unit certificate and the equipment certificate as relevant for the demand response service, or if not available, equivalent information;
- (e) the contact details of the demand facility owner, the closed distribution system operator or the third party aggregating the demand units from the demand facility or the closed distribution system.

Article 33

Procedures for demand units within a demand facility or a closed distribution system connected at a voltage level above 1 000 V

1. The operational notification procedure for a demand unit within a demand facility or a closed distribution system connected at a voltage level above 1 000 V shall comprise a DRUD. The relevant system operator, in coordination with the relevant TSO, shall specify the content required for the DRUD. The content of the DRUD shall require a statement of compliance which contains the information in Articles 36 to 47 for demand facilities and closed distribution systems, but the compliance requirements in Articles 36 to 47 for demand facilities and closed distribution systems can be simplified to a single operational notification stage as well as be reduced. The demand facility owner or CDSO shall provide the information required and submit it to the relevant system operator. Subsequent demand units with demand response shall provide separate DRUDs.

2. Based on the DRUD, the relevant system operator shall issue a FON to the demand facility owner or CDSO.

TITLE IV COMPLIANCE

CHAPTER 1 General provisions

Article 34

Responsibility of the demand facility owner, the distribution system operator and the closed distribution system operator

1. Transmission-connected demand facility owners and DSOs shall ensure that their transmission-connected demand facilities, transmission-connected distribution facilities, or distribution systems comply with the requirements provided for in this Regulation. A demand facility owner or a CDSO providing demand response services to relevant system operators and relevant TSOs shall ensure that the demand unit complies

with the requirements provided for in this Regulation.

2. Where the requirements of this Regulation are applicable to demand units used by a demand facility or a closed distribution system to provide demand response services to relevant system operators and relevant TSOs, the demand facility owner or the CDSO may totally or partially delegate to third parties tasks such as communicating with the relevant system operator or relevant TSO and gathering the documentation from the demand facility owner, the DSO or the CDSO evidencing compliance.

Third parties shall be treated as single users with the right to compile relevant documentation and demonstrate compliance of their aggregated demand facilities or aggregated closed distribution systems with the provisions of this Regulation. Demand facilities and closed distribution systems providing demand response services to relevant system operators and relevant TSOs may act collectively through third parties.

3. Where obligations are fulfilled through third parties, third parties shall only be required to inform the relevant system operator of changes to the total services being offered, taking account of location specific services.

4. Where the requirements are specified by the relevant TSO, or are for the purpose of the operation of the relevant TSO's system, alternative tests or requirements for test result acceptance for these requirements may be agreed with the relevant TSO.

5. Any intention to modify the technical capabilities of the transmission-connected demand facility, the transmission-connected distribution facility, the distribution system, or the demand unit, which has impact on compliance with the requirements provided for in Chapters 2 to 4 of Title IV, shall be notified to the relevant system operator, directly or indirectly through a third party, prior to pursuing such modification, within the time frame provided by the relevant system operator.

6. Any operational incidents or failures of the transmission-connected demand facility, the transmission-connected distribution facility, the distribution system or the demand unit, which have an impact on compliance with the requirements provided for in Chapters 2 to 4 of Title IV, shall be notified to the relevant system operator, directly or indirectly through a third party, as soon as possible after the occurrence of such an incident.

7. Any planned test schedules and procedures to verify compliance of the transmission-connected demand facility, the transmission-connected distribution facility, the distribution system, or the demand unit, with the requirements of this Regulation, shall be notified to the relevant system operator within the time frame specified by the relevant system operator and approved by the relevant system operator prior to their commencement.

8. The relevant system operator may participate in such tests and may record the performance of the transmission-connected demand facility, the transmission-connected distribution facility, the distribution system, and the demand unit.

Article 35

Tasks of the relevant system operator

1. The relevant system operator shall assess the compliance of a transmission-connected demand facility, a transmission-connected distribution facility, a distribution system, or a demand unit, with the requirements of this Regulation throughout the lifetime of the transmission-connected demand facility, the transmission-connected distribution facility, the distribution system, or the demand unit. The demand facility owner,

the DSO or the CDSO shall be informed of the outcome of this assessment.

The compliance of a demand unit used by a demand facility or a closed distribution system to provide demand response services to relevant TSOs, shall be jointly assessed by the relevant TSO and the relevant system operator, and if applicable in coordination with the third party involved in demand aggregation.

2. The relevant system operator shall have the right to request that the demand facility owner, the DSO or the CDSO carries out compliance tests and simulations according to a repeat plan or general scheme or after any failure, modification or replacement of any equipment that may have an impact on the compliance of the transmission-connected demand facility, the transmission-connected distribution facility, the distribution system, or the demand unit with the requirements of this Regulation.

The demand facility owner, the DSO or the CDSO shall be informed of the outcome of those compliance tests and simulations.

3. The relevant system operator shall make publicly available the list of information and documents to be provided as well as the requirements to be fulfilled by the demand facility owner, the DSO or the CDSO in the frame of the compliance process. The list shall cover at least the following information, documents and requirements:

- (a) all documentation and certificates to be provided by the demand facility owner, the DSO or the CDSO;
- (b) details of the technical data required from the transmission-connected demand facility, the transmission-connected distribution facility, the distribution system, or the demand unit, with relevance to the grid connection or operation;
- (c) requirements for models for steady-state and dynamic system studies;
- (d) timeline for the provision of system data required to perform the studies;
- (e) studies by the demand facility owner, the DSO or the CDSO for demonstrating expected steady-state and dynamic performance referring to the requirements set forth in Articles 43, 44 and 45;
- (f) conditions and procedures including scope for registering equipment certificates;
- (g) conditions and procedures for the use of relevant equipment certificates issued by an authorised certifier by the demand facility owner, the DSO or the CDSO.

4. The relevant system operator shall make public the allocation of responsibilities to the demand facility owner, the DSO or the CDSO and to the system operator for compliance testing, simulation and monitoring.

5. The relevant system operator may totally or partially delegate the performance of its compliance monitoring to third parties. In such cases, the relevant system operator shall continue ensuring compliance with Article 11, including entering into confidentiality commitments with the assignee.

6. If compliance tests or simulations cannot be carried out as agreed between the relevant system operator and the demand facility owner, the DSO or the CDSO due to reasons attributable to the relevant system operator, then the relevant system operator shall not unreasonably withhold the operational notification referred to in Title II and Title III.

CHAPTER 2

Compliance testing

Article 36

Common provisions for compliance testing

1. Testing of the performance of a transmission-connected demand facility, a transmission-connected distribution facility, or a demand unit with demand response active power control, demand response reactive power control or demand response transmission constraint management, shall aim at demonstrating that the requirements of this Regulation have been complied with.
2. Notwithstanding the minimum requirements for compliance testing set out in this Regulation, the relevant system operator is entitled to:
 - (a) allow the demand facility owner, the DSO or the CDSO to carry out an alternative set of tests, provided that those tests are efficient and suffice to demonstrate that a demand facility or a distribution system complies with the requirements of this Regulation; and
 - (b) require the demand facility owner, the DSO or the CDSO to carry out additional or alternative sets of tests in those cases where the information supplied to the relevant system operator in relation to compliance testing under the provisions of Articles 37 to 41, is not sufficient to demonstrate compliance with the requirements of this Regulation.
3. The demand facility owner, the DSO or the CDSO is responsible for carrying out the tests in accordance with the conditions laid down in Chapter 2 of Title IV. The relevant system operator shall cooperate and not unduly delay the performance of the tests.
4. The relevant system operator may participate in the compliance testing either on site or remotely from the system operator's control room. For that purpose, the demand facility owner, the DSO or the CDSO shall provide the monitoring equipment necessary to record all relevant test signals and measurements as well as ensure that the necessary representatives of the demand facility owner, the DSO or the CDSO are available on site for the entire testing period. Signals specified by the relevant system operator shall be provided if, for selected tests, the system operator wishes to use its own equipment to record performance. The relevant system operator has sole discretion to decide about its participation.

Article 37

Compliance testing for disconnection and reconnection of transmission-connected distribution facilities

1. The transmission-connected distribution facilities shall comply with the requirements for disconnection and reconnection referred in Article 19 and shall be subject to the following compliance tests.
2. With regard to testing of the capability of reconnection after an incidental disconnection due to a network disturbance, reconnection shall be achieved through a reconnection procedure, preferably by automation, authorised by the relevant TSO.

3. With regard to the synchronisation test, the technical synchronisation capabilities of the transmission-connected distribution facility shall be demonstrated. This test shall verify the settings of the synchronisation devices. This test shall cover the following matters: voltage, frequency, phase angle range, deviation of voltage and frequency.
4. With regard to the remote disconnection test, the transmission-connected distribution facility's technical capability for remote disconnection at the connection point or points from the transmission system when required by the relevant TSO and within the time specified by the relevant TSO shall be demonstrated.
5. With regard to the low frequency demand disconnection test, the transmission-connected distribution facility's technical capability of low frequency demand disconnection of a percentage of demand to be specified by the relevant TSO, in coordination with adjacent TSOs, where equipped as provided for in Article 19, shall be demonstrated.
6. With regard to the low frequency demand disconnection relays test, the transmission-connected distribution facility's technical capability to operate from a nominal AC supply input shall be demonstrated in accordance with Article 19(1) and (2). This AC supply input shall be specified by the relevant TSO.
7. With regard to the low voltage demand disconnection test, the transmission-connected distribution facility's technical capability to operate in a single action with on load tap changer blocking in Article 19(3) shall be demonstrated in accordance with Article 19(2).
8. An equipment certificate may be used instead of part of the tests provided for in paragraph 1, on the condition that it is provided to the relevant TSO.

Article 38

Compliance testing for information exchange of transmission-connected distribution facilities

1. With regard to information exchange between the relevant TSO and the transmission-connected distribution system operator in real time or periodically, the transmission-connected distribution facility's technical capability to comply with the information exchange standard established pursuant to Article 18(3) shall be demonstrated.
2. An equipment certificate may be used instead of part of the tests provided for in paragraph 1, on the condition that it is provided to the relevant TSO.

Article 39

Compliance testing for disconnection and reconnection of transmission-connected demand facilities

1. The transmission-connected demand facilities shall comply with the requirements for disconnection and reconnection referred to in Article 19 and shall be subject to the following compliance tests.
2. With regard to testing of the capability of reconnection after an incidental disconnection due to a network disturbance, reconnection shall be achieved through a reconnection procedure, preferably by automation, authorised by the relevant TSO.

3. With regard to the synchronisation test, the technical synchronisation capabilities of the transmission-connected demand facility shall be demonstrated. This test shall verify the settings of the synchronisation devices. This test shall cover the following matters: voltage, frequency, phase angle range, deviation of voltage and frequency.
4. With regard to the remote disconnection test, the transmission-connected demand facility's technical capability for remote disconnection at the connection point or points from the transmission system when required by the relevant TSO and within the time specified by the relevant TSO shall be demonstrated.
5. With regard to the low frequency demand disconnection relays test, the transmission-connected demand facility's technical capability to operate from a nominal AC input shall be demonstrated in accordance with Article 19(1) and (2). This AC supply input shall be specified by the relevant TSO.
6. With regard to the low voltage demand disconnection test, the transmission-connected demand facility's technical capability to operate in a single action with on load tap changer blocking in Article 19(3) shall be demonstrated in accordance with Article 19(2).
7. An equipment certificate may be used instead of part of the tests provided for in paragraph 1, on the condition that it is provided to the relevant TSO.

Article 40

Compliance testing for information exchange of transmission-connected demand facilities

1. With regard to information exchange between the relevant TSO and the transmission-connected demand facility owner in real time or periodically, the transmission-connected demand facility's technical capability to comply with the information exchange standard established pursuant to Article 18(3) shall be demonstrated.
2. An equipment certificate may be used instead of part of the tests provided for in paragraph 1, on the condition that it is provided to the relevant TSO.

Article 41

Compliance testing for demand units with demand response active power control, reactive power control and transmission constraint management

1. With regard to the demand modification test:
 - (a) the technical capability of the demand unit used by a demand facility or a closed distribution system to provide demand response active power control, demand response reactive power control or demand response transmission constraint management to modify its power consumption, after receiving an instruction from the relevant system operator or relevant TSO, within the range, duration and time frame previously agreed and established in accordance with Article 28, shall be demonstrated, either individually or collectively as part of demand aggregation through a third party;
 - (b) the test shall be carried out either by an instruction or alternatively by simulating the receipt of an instruction from the relevant system operator or relevant TSO and adjusting the power demand of the

demand facility or the closed distribution system;

(c) the test shall be deemed passed, provided that the conditions specified by the relevant system operator or relevant TSO pursuant to Article 28(2)(d)(f)(g)(h)(k) and (l) are fulfilled;

(d) an equipment certificate may be used instead of part of the tests provided for in paragraph 1(b), on the condition that it is provided to the relevant system operator or relevant TSO.

2. With regard to the disconnection or reconnection of static compensation facilities test:

(a) the technical capability of the demand unit used by a demand facility owner or closed distribution system operator to provide demand response active power control, demand response reactive power control or demand response transmission constraint management to disconnect or reconnect, or both, its static compensation facility when receiving an instruction from the relevant system operator or relevant TSO, in the time frame expected in accordance with Article 28, shall be demonstrated, either individually or collectively as part of demand aggregation through a third party;

(b) the test shall be carried out by simulating the receipt of an instruction from the relevant system operator or relevant TSO and subsequently disconnecting the static compensation facility, and by simulating the receipt of an instruction from the relevant system operator or relevant TSO and subsequently reconnecting the facility;

(c) the test shall be deemed passed, provided that the conditions specified by the relevant system operator or relevant TSO pursuant to Article 28(2)(d)(f)(g)(h)(k) and (l) are fulfilled.

CHAPTER 3

Compliance simulation

Article 42

Common provisions on compliance simulations

1. Simulation of the performance of a transmission-connected demand facility, a transmission-connected distribution facility, or a demand unit with demand response very fast active power control within a demand facility or a closed distribution system shall result in demonstrating whether the requirements of this Regulation have been fulfilled or not.

2. Simulations shall be run in the following circumstances:

(a) a new connection to the transmission system is required;

(b) a new demand unit used by a demand facility or a closed distribution system to provide demand response very fast active power control to a relevant TSO has been contracted in accordance with Article 30;

(c) a further development, replacement or modernisation of equipment takes place;

(d) alleged non-compliance by the relevant system operator with the requirements of this Regulation.

3. Notwithstanding the minimum requirements for compliance simulation set out in this Regulation, the relevant system operator is entitled to:

(a) allow the demand facility owner, the DSO or the CDSO to carry out an alternative set of simulations, provided that those simulations are efficient and suffice to demonstrate that a demand facility or a distri-

bution system complies with the requirements of this Regulation or with national legislation; and

(b) require the demand facility owner, the DSO or the CDSO to carry out additional or alternative sets of simulations in those cases where the information supplied to the relevant system operator in relation to compliance simulation under the provisions of Articles 43, 44 and 45, is not sufficient to demonstrate compliance with the requirements of this Regulation.

4. The transmission-connected demand facility owner or the transmission-connected distribution system operator shall provide a report with the simulation results for each individual transmission-connected demand facility or transmission-connected distribution facility. The transmission-connected demand facility owner or the transmission-connected distribution system operator shall produce and provide a validated simulation model for a given transmission-connected demand facility or transmission-connected distribution facility. The scope of the simulation models is set out in Article 21(1) and (2).

5. The relevant system operator shall have the right to check that a demand facility or a distribution system complies with the requirements of this Regulation by carrying out its own compliance simulations based on the provided simulation reports, simulation models and compliance test measurements.

6. The relevant system operator shall provide the demand facility owner, the DSO or the CDSO with technical data and a simulation model of the network, to the extent necessary to carry out the requested simulations in accordance with Articles 43, 44 and 45.

Article 43

Compliance simulations for transmission-connected distribution facilities

1. With regard to the reactive power capability simulation of a transmission-connected distribution facility:

(a) a steady-state load flow simulation model of the network of the transmission-connected distribution system shall be used in order to calculate the reactive power exchange under different load and generation conditions;

(b) a combination of steady-state minimum and maximum load and generation conditions resulting in the lowest and highest reactive power exchange shall be part of the simulations;

(c) calculating the reactive power export at an active power flow of less than 25 % of the maximum import capability at the connection point shall be part of the simulations in accordance with Article 15.

2. The relevant TSO may specify the method for compliance simulation of the active control of reactive power set out in Article 15(3).

3. The simulation shall be deemed passed if the results demonstrate compliance with the requirements set out in Article 15.

Article 44

Compliance simulations for transmission-connected demand facilities

1. With regard to the reactive power capability simulation of a transmission-connected demand facility without onsite generation:

(a) the transmission-connected demand facility without onsite generation's reactive power capability at the connection point shall be demonstrated;

(b) a load flow simulation model of the transmission-connected demand facility shall be used to calculate the reactive power exchange under different load conditions. Minimum and maximum load conditions resulting in the lowest and highest reactive power exchange at the connection point shall be part of the simulations;

(c) the simulation shall be deemed passed if the results demonstrate compliance with the requirements set out in Article 15(1) and (2).

2. With regard to the reactive power capability simulation of a transmission-connected demand facility with onsite generation:

(a) a load flow simulation model of the transmission-connected demand facility shall be used to calculate the reactive power exchange under different load conditions and under different generation conditions;

(b) a combination of minimum and maximum load and generation conditions resulting in the lowest and highest reactive power capability at the connection point shall be part of the simulations;

(c) the simulation shall be deemed passed if the results demonstrate compliance with the requirements set out in Article 15(1) and (2).

Article 45

Compliance simulations for demand units with demand response very fast active power control

1. The model of the demand unit used by a demand facility owner or a closed distribution system operator to provide demand response very fast active power control shall demonstrate the technical capability of the demand unit to provide very fast active power control to a low frequency event in the conditions set out in Article 30.

2. The simulation shall be deemed passed provided that the model demonstrates compliance with the conditions set out in Article 30.

CHAPTER 4

Compliance monitoring

Article 46

Compliance monitoring for transmission-connected distribution facilities

With regard to compliance monitoring of the reactive power requirements applicable to transmission-connected distribution facilities:

(a) the transmission-connected distribution facility shall be equipped with necessary equipment to measure the active and reactive power, in accordance with Article 15; and

(b) the relevant system operator shall specify the time frame for compliance monitoring.

Article 47**Compliance monitoring for transmission-connected demand facilities**

With regard to compliance monitoring of the reactive power requirements applicable to transmission-connected demand facilities:

- (a) the transmission-connected demand facility shall be equipped with necessary equipment to measure the active and reactive power, in accordance with Article 15; and
- (b) the relevant system operator shall specify the time frame for compliance monitoring.

TITLE V**APPLICATIONS AND DEROGATIONS****CHAPTER 1****Cost-benefit analysis****Article 48**

Identification of costs and benefits of application of requirements to existing transmission-connected demand facilities, existing transmission-connected distribution facilities, existing distribution systems and existing demand units

1. Prior to the application of any requirement set out in this Regulation to existing transmission-connected demand facilities, existing transmission-connected distribution facilities, existing distribution systems and existing demand units in accordance with Article 4(3), the relevant TSO shall undertake a qualitative comparison of costs and benefits related to the requirement under consideration. This comparison shall take into account available network-based or market-based alternatives. The relevant TSO may only proceed to undertake a quantitative cost-benefit analysis in accordance with paragraphs 2 to 5, if the qualitative comparison indicates that the likely benefits exceed the likely costs. If, however, the cost is deemed high or the benefit is deemed low, then the relevant TSO shall not proceed further.

2. Following a preparatory stage undertaken in accordance with paragraph 1, the relevant TSO shall carry out a quantitative cost-benefit analysis of any requirement under consideration for application to existing transmission-connected demand facilities, existing transmission-connected distribution facilities, existing distribution systems and existing demand units that have demonstrated potential benefits as a result of the preparatory stage according to paragraph 1.

3. Within three months of concluding the cost-benefit analysis, the relevant TSO shall summarise the findings in a report which shall:

- (a) include the cost-benefit analysis and a recommendation on how to proceed;
- (b) include a proposal for a transitional period for applying the requirement to existing transmission-connected demand facilities, existing transmission-connected distribution facilities, existing distribution systems and existing demand units. That transitional period shall not be more than two years from the date of

the decision of the regulatory authority or where applicable the **Contracting Party** on the requirement's applicability;

(c) be subject to public consultation in accordance with Article 9.

4. No later than six months after the end of the public consultation, the relevant TSO shall prepare a report explaining the outcome of the consultation and making a proposal on the applicability of the requirement under consideration to existing transmission-connected demand facilities, existing transmission-connected distribution facilities, existing distribution systems and existing demand units. The report and proposal shall be notified to the regulatory authority or, where applicable, the **Contracting Party**, and the demand facility owner, DSO, CDSO or, where applicable, third party shall be informed on its content.

5. The proposal made by the relevant TSO to the regulatory authority or, where applicable, the **Contracting Party** pursuant to paragraph 4 shall include the following:

(a) an operational notification procedure for demonstrating the implementation of the requirements by the existing transmission-connected demand facilities, existing transmission-connected distribution facilities, existing distribution systems and existing demand units used by a demand facility or a closed distribution system to provide demand response services to relevant system operators and relevant TSOs;

(b) a transitional period for implementing the requirements which shall take into account the classes of transmission-connected demand facilities, transmission-connected distribution facilities, distribution systems and demand units used by a demand facility or a closed distribution system to provide demand response services to relevant system operators and relevant TSOs and any underlying obstacles to the efficient implementation of the equipment modification/refitting.

Article 49

Principles of cost-benefit analysis

1. Demand facility owners, DSOs and CDSOs shall assist and contribute to the cost-benefit analysis undertaken according to Articles 48 and 53 and provide the necessary data as requested by the relevant system operator or relevant TSO within three months of receiving a request, unless agreed otherwise by the relevant TSO. For the preparation of a cost-benefit-analysis by a demand facility owner or prospective owner, or by a DSO/CDSO or prospective operator, assessing a potential derogation pursuant to Article 52, the relevant TSO and DSO shall assist and contribute to the cost-benefit analysis and provide the necessary data as requested by the demand facility owner or prospective owner, or by the DSO/CDSO or prospective operator, within three months of receiving a request, unless agreed otherwise by the demand facility owner or prospective owner, or by the DSO/CDSO or prospective operator.

2. A cost-benefit analysis shall be in line with the following principles:

(a) the relevant TSO, demand facility owner or prospective owner, DSO/CDSO or prospective operator, shall base its cost-benefit analysis on one or more of the following calculating principles:

- (i) the net present value;
- (ii) the return on investment;
- (iii) the rate of return;
- (iv) the time needed to break even;

(b) the relevant TSO, demand facility owner or prospective owner, DSO/CDSO or prospective operator, shall also quantify socioeconomic benefits in terms of improvement in security of supply and shall include at least:

- (i) the associated reduction in probability of loss of supply over the lifetime of the modification;
- (ii) the probable extent and duration of such loss of supply;
- (iii) the societal cost per hour of such loss of supply;

(c) the relevant TSO, demand facility owner or prospective owner, DSO/CDSO or prospective operator, shall quantify the benefits to the internal market in electricity, cross-border trade and integration of renewable energies, including at least:

- (i) the active power frequency response;
- (ii) the balancing reserves;
- (iii) the reactive power provision;
- (iv) congestion management;
- (v) defence measures;

(d) the relevant TSO shall quantify the costs of applying the necessary rules to existing transmission-connected demand facilities, existing transmission-connected distribution facilities, existing distribution systems, or existing demand units, including at least:

- (i) the direct costs incurred in implementing a requirement;
- (ii) the costs associated with attributable loss of opportunity;
- (iii) the costs associated with resulting changes in maintenance and operation.

CHAPTER 2

Derogations

Article 50

Power to grant derogations

1. Regulatory authorities may, at the request of a demand facility owner or prospective owner, and a DSO/CDSO or prospective operator, relevant system operator or relevant TSO, grant demand facility owners or prospective owners, and DSOs/CDSOs or prospective operators, relevant system operators or relevant TSOs derogations from one or more provisions of this Regulation for new and existing transmission-connected demand facilities, transmission-connected distribution facilities, distribution systems and demand units in accordance with Articles 51 to 53.

2. Where applicable in a **Contracting Party**, derogations may be granted and revoked in accordance with Articles 51 to 53 by other authorities than the regulatory authority.

Article 51

General provisions

1. Each regulatory authority shall specify, after consulting relevant system operators, demand facility owners, DSOs, CDSOs, and other stakeholders whom it deems affected by this Regulation, the criteria for granting derogations pursuant to Articles 52 and 53. It shall publish those criteria on its website and notify them to the **Secretariat** within nine months of **expiry of the deadline for transposition** of this Regulation. The **Secretariat** may require a regulatory authority to amend the criteria if it considers that they are not in line with this Regulation. This possibility to review and amend the criteria for granting derogations shall not affect the derogations already granted which shall continue to apply until the scheduled expiry date as detailed in the decision granting the exemption.
2. If the regulatory authority deems that it is necessary due to a change in circumstances relating to the evolution of system requirements, it may review and amend at most once every year the criteria for granting derogations in accordance with paragraph 1. Any changes to the criteria shall not apply to derogations for which a request has already been made.
3. The regulatory authority may decide that transmission-connected demand facilities, transmission-connected distribution facilities, distribution systems and demand units for which a request for a derogation has been filed pursuant to Articles 52 or 53 do not need to comply with the requirements of this Regulation from which a derogation has been sought from the day of filing the request until the regulatory authority's decision is issued.

Article 52

Request for a derogation by a demand facility owner, a distribution system operator or a closed distribution system operator

1. Demand facility owners or prospective owners, and DSOs/CDSOs or prospective operators, may request a derogation to one or several requirements of this Regulation for transmission-connected demand facilities, transmission-connected distribution facilities, distribution systems, or demand units used by a demand facility or a closed distribution system to provide demand response services to a relevant system operator and a relevant TSO.
2. A request for a derogation shall be filed with the relevant system operator and include:
 - (a) an identification of the demand facility owner or prospective owner, the DSO/CDSO or prospective operator, and a contact person for any communications;
 - (b) a description of the transmission-connected demand facility, the transmission-connected distribution facility, the distribution system, or the demand unit for which a derogation is requested;
 - (c) a reference to the provisions of this Regulation from which a derogation is requested and a detailed description of the requested derogation;
 - (d) detailed reasoning, with relevant supporting documents and cost-benefit analysis pursuant to the requirements of Article 49;
 - (e) demonstration that the requested derogation would have no adverse effect on cross-border trade.
3. Within two weeks of receipt of a request for a derogation, the relevant system operator shall confirm to

the demand facility owner or prospective owner, or to the DSO/CDSO or prospective operator, whether the request is complete. If the relevant system operator considers that the request is incomplete, the demand facility owner or prospective owner, or the DSO/CDSO or prospective operator, shall submit the additional required information within one month from the receipt of the request for additional information. If the demand facility owner or prospective owner, or if the DSO/CDSO or prospective operator, does not supply the requested information within that time limit, the request for a derogation shall be deemed withdrawn.

4. The relevant system operator shall, in coordination with the relevant TSO and any affected adjacent DSO, assess the request for a derogation and the provided cost-benefit analysis, taking into account the criteria determined by the regulatory authority pursuant to Article 51.

5. Within six months of receipt of a request for a derogation, the relevant system operator shall forward the request to the regulatory authority and submit the assessment(s) prepared in accordance with paragraphs 4. That period may be extended by one month where the relevant system operator seeks further information from the demand facility owner or prospective owner, or from the DSO/CDSO or prospective operator, and by two months where the relevant system operator requests the relevant TSO to submit an assessment of the request for a derogation.

6. The regulatory authority shall adopt a decision concerning any request for a derogation within six months from the day after it receives the request. That time limit may be extended by three months before its expiry where the regulatory authority requires further information from the demand facility owner or prospective owner, or from the DSO/CDSO or prospective operator, or from any other interested parties. The additional period shall begin when the complete information has been received.

7. The demand facility owner or prospective owner, or the DSO/CDSO or prospective operator, shall submit any additional information requested by the regulatory authority within two months of such request. If the demand facility owner or prospective owner, or if the DSO/CDSO or prospective operator, does not supply the requested information within that time limit, the request for a derogation shall be deemed withdrawn unless, before its expiry:

(a) the regulatory authority decides to provide an extension; or

(b) the demand facility owner or prospective owner, or the DSO/CDSO or prospective operator, informs the regulatory authority by means of a reasoned submission that the request for a derogation is complete.

8. The regulatory authority shall issue a reasoned decision concerning a request for a derogation. Where the regulatory authority grants a derogation, it shall specify its duration.

9. The regulatory authority shall notify its decision to the relevant demand facility owner or prospective owner, the DSO/CDSO or prospective operator, the relevant system operator and the relevant TSO.

10. A regulatory authority may revoke a decision granting a derogation if the circumstances and underlying reasons no longer apply or upon a reasoned recommendation of the **Secretariat** or reasoned recommendation by the **Energy Community Regulatory Board** pursuant to Article 55(2).

11. For demand units within a demand facility or a closed distribution system connected at a voltage level of or below 1 000 V, a request for a derogation under this Article may be made by a third party on behalf of the demand facility owner or prospective owner, or on behalf of the CDSO or prospective operator. Such a request may be for a single demand unit or multiple demand units within the same demand facility or closed distribution system. In the case of the latter, and provided the cumulative maximum capacity is specified, the third party may substitute the details required by point (a) of paragraph 2 with their details.

Article 53**Request for a derogation by a relevant system operator or relevant TSO**

1. Relevant system operators or relevant TSOs may request derogations for transmission-connected demand facilities, transmission-connected distribution facilities, distribution systems, or demand units within a demand facility or a closed distribution system connected or to be connected to their network.

2. Relevant system operators or relevant TSOs shall submit their requests for a derogation to the regulatory authority. Each request for a derogation shall include:

- (a) identification of the relevant system operator or relevant TSO, and a contact person for any communications;
- (b) a description of the transmission-connected demand facility, the transmission-connected distribution facility, the distribution system, or the demand unit for which a derogation is requested and the total installed capacity and number of transmission-connected demand facilities, transmission-connected distribution facilities, distribution systems, or demand units;
- (c) the requirement or requirements of this Regulation for which a derogation is requested, with a detailed description of the requested derogation;
- (d) detailed reasoning, with all relevant supporting documents;
- (e) demonstration that the requested derogation would have no adverse effect on cross-border trade;
- (f) a cost-benefit analysis pursuant to the requirements of Article 49. If applicable, the cost-benefit analysis shall be carried out in coordination with the relevant TSO and any adjacent DSO.

3. Where the request for a derogation is submitted by a relevant DSO, the regulatory authority shall, within two weeks from the day after receipt of that request, ask the relevant TSO to assess the request for a derogation in the light of the criteria determined by the regulatory authority pursuant to Article 51.

4. Within two weeks from the day after the receipt of such request for assessment, the relevant TSO shall confirm to the relevant DSO whether the request for a derogation is complete. If the relevant TSO considers that it is incomplete, the relevant DSO shall submit the required additional information within one month from the receipt of the request for additional information.

5. Within six months of receipt of a request for a derogation, the relevant TSO shall submit to the regulatory authority its assessment, including any relevant documentation. The six-month time limit may be extended by one month where the relevant TSO seeks further information from the relevant DSO.

6. The regulatory authority shall adopt a decision concerning a request for a derogation within six months from the day after it receives the request. Where the request for a derogation is submitted by the relevant DSO, the six-month time limit runs from the day following receipt of the relevant TSO's assessment pursuant to paragraph 5.

7. The six-month time limit referred to in paragraph 6 may, before its expiry, be extended by an additional three months where the regulatory authority requests further information from the relevant system operator requesting the derogation or from any other interested parties. That additional period shall run from the day following the date of receipt of the complete information.

The relevant system operator shall provide any additional information requested by the regulatory authority within two months from the date of the request. If the relevant system operator does not provide the requested additional information within that time limit, the request for a derogation shall be deemed

withdrawn unless, before expiry of the time limit:

- (a) the regulatory authority decides to provide an extension; or
- (b) the relevant system operator informs the regulatory authority by means of a reasoned submission that the request for a derogation is complete.

8. The regulatory authority shall issue a reasoned decision concerning a request for a derogation. Where the regulatory authority grants derogation, it shall specify its duration.

9. The regulatory authority shall notify its decision to the relevant system operator requesting the derogation, the relevant TSO, **the Secretariat and the Energy Community Regulatory Board**.

10. Regulatory authorities may lay down further requirements concerning the preparation of requests for a derogation by relevant system operators. In doing so, regulatory authorities shall take into account the delineation between the transmission system and the distribution system at the national level and shall consult with system operators, demand facility owners and stakeholders, including manufacturers.

11. A regulatory authority may revoke a decision granting a derogation if the circumstances and underlying reasons no longer apply or upon a reasoned recommendation of the **Secretariat** or reasoned recommendation by the **Energy Community Regulatory Board** pursuant to Article 55(2).

Article 54

Register of derogations from the requirements of this Regulation

1. Regulatory authorities shall maintain a register of all derogations they have granted or refused and shall provide the **Secretariat and the Energy Community Regulatory Board** with an updated and consolidated register at least once every six months, a copy of which shall be given to ENTSO for Electricity.

2. The register shall contain, in particular:

- (a) the requirement or requirements for which the derogation is granted or refused;
- (b) the content of the derogation;
- (c) the reasons for granting or refusing the derogation;
- (d) the consequences resulting from granting the derogation.

Article 55

Monitoring of derogations

1. The **Secretariat and the Energy Community Regulatory Board** shall monitor the procedure of granting derogations with the cooperation of the regulatory authorities or relevant authorities of the **Contracting Party**. Those authorities or relevant authorities of the **Contracting Party** shall provide the **Secretariat and Energy Community Regulatory Board** with all the information necessary for that purpose.

2. The **Energy Community Regulatory Board** may issue a reasoned recommendation to a regulatory authority to revoke a derogation due to a lack of justification. The **Secretariat** may issue a reasoned

recommendation to a regulatory authority or relevant authority of the **Contracting Party** to revoke a derogation due to a lack of justification.

3. The **Secretariat** may request the **Energy Community Regulatory Board** to report on the application of paragraphs 1 and 2 and to provide reasons for requesting or not requesting derogations to be revoked.

TITLE VI NON-BINDING GUIDANCE AND MONITORING OF IMPLEMENTATION

Article 56

Non-binding guidance on implementation

1. <...>

2. <...>

3. The non-binding guidance **published by ENTSO for Electricity** explains the technical issues, conditions and interdependencies which need to be considered when complying with the requirements of this Regulation at national level.

Article 57

Monitoring

1. ENTSO for Electricity shall monitor the implementation of this Regulation **for the Contracting Parties whose TSOs are members of ENTSO for Electricity. The Secretariat and the Energy Community Regulatory Board shall monitor the implementation of this Regulation for the Contracting Parties whose TSOs are not members of ENTSO for Electricity...** Monitoring **shall take into account the list of relevant information developed by the Agency for the Cooperation of Energy Regulators and it** shall cover in particular the following matters:

(a) identification of any divergences in the national implementation of this Regulation;

(b) assessment of whether the choice of values and ranges in the requirements applicable to transmission-connected demand facilities, transmission-connected distribution facilities, distribution systems and demand units under this Regulation continues to be valid.

ENTSO for Electricity shall report its findings to the Secretariat and the Energy Community Regulatory Board. The Secretariat and the Energy Community Regulatory Board shall make available the findings stemming from the monitoring of the implementation of this Regulation.

2. <...>

3. Relevant TSOs shall submit to **the Secretariat, the Energy Community Regulatory Board and ENTSO for Electricity** the information required to perform the tasks referred to in paragraph 1....

Based on a request of the regulatory authority, DSOs shall provide TSOs with information under paragraph 1 unless the information is already obtained by regulatory authorities, the **Secretariat, the Energy Com-**

munity Regulatory Board or ENTSO-E in relation to their respective implementation monitoring tasks, with the objective of avoiding duplication of information.

4. <...>

TITLE VII FINAL PROVISIONS

Article 58

Amendment of contracts and general terms and conditions

1. Regulatory authorities shall ensure that all relevant clauses in contracts and general terms and conditions relating to the grid connection of new transmission-connected demand facilities, new transmission-connected distribution facilities, new distribution systems and new demand units are brought into compliance with the requirements of this Regulation.

2. All relevant clauses in contracts and relevant clauses of general terms and conditions relating to the grid connection of existing transmission-connected demand facilities, existing transmission-connected distribution facilities, existing distribution systems and existing demand units subject to all or some of the requirements of this Regulation in accordance with paragraph 1 of Article 4 shall be amended in order to comply with the requirements of this Regulation. The relevant clauses shall be amended within three years following the decision of the regulatory authority or **Contracting Party** as referred to in Article 4(1).

3. Regulatory authorities shall ensure that agreements between system operators and owners of new or existing demand facilities or operators of new or existing distribution systems subject to this Regulation and relating to grid connection requirements for transmission-connected demand facilities, transmission-connected distribution facilities, distribution systems and demand units used by a demand facility or a closed distribution system to provide demand response services to relevant system operators and relevant TSOs, in particular in national network codes, reflect the requirements set out in this Regulation.

Article 59

Entry into force¹

1. Each Contracting Party shall transpose Regulation (EU) 2016/1388 no later than by 12 June 2018.

2. Transposition shall be made without changes to the structure and text of Regulation (EU) 2016/1388 other than translation and the adaptations made by the present Decision [2018/05/PHLG-EnC]

3. Each Contracting Party shall notify the Energy Community Secretariat of completed transposition and of any subsequent changes made to the act transposing Regulation (EU) 2016/1388 within two weeks following the adoption of such measures.

¹ Adapted by Article 1 of Decision 2018/05/PHLG-EnC of the Permanent High Level Group

4. Articles 4(2) points (a) and (b), 6(4), 51(1), 56 and 57 of Regulation (EU) 2016/1388 shall be implemented as of the expiry of the transposition deadline.

5. Without prejudice to paragraph 4, Regulation (EU) 2016/1388 shall be implemented no later than by 12 June 2021.

6. In transposing this Decision, Contracting Parties shall task their national regulatory authorities with the monitoring of and enforcing compliance with this Decision [2018/05/PHLG-EnC].

ANNEX I

Frequency ranges and time periods referred to in Article 12(1)

Synchronous area	Frequency range	Time period for operation
Continental Europe, Ukraine	47,5 Hz–48,5 Hz	To be specified by each TSO, but not less than 30 minutes
	48,5 Hz–49,0 Hz	To be specified by each TSO, but not less than the period for 47,5 Hz-48,5 Hz
	49,0 Hz–51,0 Hz	Unlimited
	51,0 Hz–51,5 Hz	30 minutes
Nordic	47,5 Hz–48,5 Hz	30 minutes
	48,5 Hz–49,0 Hz	To be specified by each TSO, but not less than 30 minutes
	49,0 Hz–51,0 Hz	Unlimited
	51,0 Hz–51,5 Hz	30 minutes
Great Britain	47,0 Hz–47,5 Hz	20 seconds
	47,5 Hz–48,5 Hz	90 minutes
	48,5 Hz–49,0 Hz	To be specified by each TSO, but not less than 90 minutes
	49,0 Hz–51,0 Hz	Unlimited
	51,0 Hz–51,5 Hz	90 minutes
	51,5 Hz–52,0 Hz	15 minutes
Ireland and Northern Ireland	47,5 Hz–48,5 Hz	90 minutes
	48,5 Hz–49,0 Hz	To be specified by each TSO, but not less than 90 minutes
	49,0 Hz–51,0 Hz	Unlimited
	51,0 Hz–51,5 Hz	90 minutes
Baltic, Moldova	47,5 Hz–48,5 Hz	To be specified by each TSO, but not less than 30 minutes
	48,5 Hz–49,0 Hz	To be specified by each TSO, but not less than the period for 47,5 Hz–48,5 Hz
	49,0 Hz–51,0 Hz	Unlimited
	51,0 Hz–51,5 Hz	To be specified by each TSO, but not less than 30 minutes
Georgia	47,5 Hz–48,5 Hz	Not less than 30 minutes
	48,5 Hz–49,0 Hz	Not less than 60 minutes
	49,0 Hz–51,0 Hz	Unlimited
	51,0 Hz–51,5 Hz	Not less than 30 minutes

The table shows the minimum time periods for which a transmission-connected demand facility, a transmission-connected distribution facility or a distribution system has to be capable of operating on different frequencies, deviating from a nominal value, without disconnecting from the network.

ANNEX II

Voltage ranges and time periods referred to in Article 13(1)

Synchronous area	Voltage range	Time period for operation
Continental Europe, Ukraine	0,90 pu–1,118 pu	Unlimited
	1,118 pu–1,15 pu	To be specified by each TSO but not less than 20 minutes and not more than 60 minutes
Nordic	0,90 pu–1,05 pu	Unlimited
	1,05 pu–1,10 pu	60 minutes
Great Britain	0,90 pu–1,10 pu	Unlimited
Ireland and Northern Ireland	0,90 pu–1,118 pu	Unlimited
Baltic, Moldova	0,90 pu–1,118 pu	Unlimited
	1,118 pu–1,15 pu	20 minutes
Georgia	0,85 pu–0,90 pu	30 minutes
	0,90 pu–1,12 pu	Unlimited
	1,12 pu–1,15 pu	20 minutes

The table shows the minimum time periods during which a transmission-connected demand facility, a transmission-connected distribution facility or a transmission-connected distribution system has to be capable of operating for voltages deviating from the reference 1 pu value at the connection point without disconnecting from the network where the voltage base for pu values is at or above 110 kV and up to (not including) 300 kV.

Synchronous area	Voltage range	Time period for operation
Continental Europe, Ukraine	0,90 pu–1,05 pu	Unlimited
	1,05 pu–1,10 pu	To be specified by each TSO but not less than 20 minutes and not more than 60 minutes
Nordic	0,90 pu–1,05 pu	Unlimited
	1,05 pu–1,10 pu	To be specified by each TSO but not more than 60 minutes
Great Britain	0,90 pu–1,05 pu	Unlimited
	1,05 pu–1,10 pu	15 minutes
Ireland and Northern Ireland	0,90 pu–1,05 pu	Unlimited
Baltic, Moldova	0,90 pu–1,097 pu	Unlimited
	1,097 pu–1,15 pu	20 minutes

Georgia	0,85 pu–0,90 pu	20 minutes
	0,90 pu–1,10 pu	Unlimited
	1,10 pu–1,15 pu	20 minutes

The table shows the minimum time periods during which a transmission-connected demand facility, a transmission-connected distribution facility or a transmission-connected distribution system has to be capable of operating for voltages deviating from the reference 1 pu value at the connection point without disconnecting from the network, where the voltage base for pu values is from 300 kV to **500 kV** (including).



REGULATION (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators

Incorporated and adapted by Permanent High Level Group Decision 2018/03/PHLG-EnC of 12 January 2018

*The adaptations made by Permanent High Level Group Decision 2018/03/PHLG-EnC are highlighted in **bold and blue**.*

TITLE I GENERAL PROVISIONS

Article 1

Subject matter

This Regulation establishes a network code which lays down the requirements for grid connection of power-generating facilities, namely synchronous power-generating modules, power park modules and offshore power park modules, to the interconnected system. It, therefore, helps to ensure fair conditions of competition in the internal electricity market, to ensure system security and the integration of renewable electricity sources, and to facilitate **Energy Community wide** trade in electricity.

This regulation also lays down the obligations for ensuring that system operators make appropriate use of the power-generating facilities' capabilities in a transparent and non-discriminatory manner to provide a level playing field throughout the **Energy Community**.

Article 2

Definitions

For the purposes of this Regulation, the definitions in Article 2 of Directive 2012/27/EU of the European Parliament and of the Council, Article 2 of Regulation (EC) No 714/2009, <...>, Article 2 of Commission Regulation (EU) No 543/2013 and Article 2 of Directive 2009/72/EC shall apply.

In addition, the following definitions shall apply:

- (1) 'entity' means a regulatory authority, other national authority, system operator or other public or private body appointed under national law;
- (2) 'synchronous area' means an area covered by synchronously interconnected TSOs, such as the synchronous areas of Continental Europe, Great Britain, Ireland-Northern Ireland and Nordic and the power systems of Lithuania, Latvia and Estonia, together referred to as 'Baltic' which are part of a wider synchronous area **and the power systems of Georgia, Moldova and Ukraine**;
- (3) 'voltage' means the difference in electrical potential between two points measured as the root-mean-square value of the positive sequence phase-to-phase voltages at fundamental frequency;
- (4) 'apparent power' means the product of voltage and current at fundamental frequency, and the square

root of three in the case of three-phase systems, usually expressed in kilovolt-amperes ('kVA') or megavolt-amperes ('MVA');

(5) 'power-generating module' means either a synchronous power-generating module or a power park module;

(6) 'power-generating facility' means a facility that converts primary energy into electrical energy and which consists of one or more power-generating modules connected to a network at one or more connection points;

(7) 'power-generating facility owner' means a natural or legal entity owning a power-generating facility;

(8) 'main generating plant' means one or more of the principal items of equipment required to convert the primary source of energy into electricity;

(9) 'synchronous power-generating module' means an indivisible set of installations which can generate electrical energy such that the frequency of the generated voltage, the generator speed and the frequency of network voltage are in a constant ratio and thus in synchronism;

(10) 'power-generating module document' or 'PGMD' means a document provided by the power-generating facility owner to the relevant system operator for a type B or C power-generating module which confirms that the power-generating module's compliance with the technical criteria set out in this Regulation has been demonstrated and provides the necessary data and statements, including a statement of compliance;

(11) 'relevant TSO' means the TSO in whose control area a power-generating module, a demand facility, a distribution system or a HVDC system is or will be connected to the network at any voltage level;

(12) 'network' means a plant and apparatus connected together in order to transmit or distribute electricity;

(13) 'relevant system operator' means the transmission system operator or distribution system operator to whose system a power-generating module, demand facility, distribution system or HVDC system is or will be connected;

(14) 'connection agreement' means a contract between the relevant system operator and either the power-generating facility owner, demand facility owner, distribution system operator or HVDC system owner, which includes the relevant site and specific technical requirements for the power-generating facility, demand facility, distribution system, distribution system connection or HVDC system;

(15) 'connection point' means the interface at which the power-generating module, demand facility, distribution system or HVDC system is connected to a transmission system, offshore network, distribution system, including closed distribution systems, or HVDC system, as identified in the connection agreement;

(16) 'maximum capacity' or ' P_{max} ' means the maximum continuous active power which a power-generating module can produce, less any demand associated solely with facilitating the operation of that power-generating module and not fed into the network as specified in the connection agreement or as agreed between the relevant system operator and the power-generating facility owner;

(17) 'power park module' or 'PPM' means a unit or ensemble of units generating electricity, which is either non-synchronously connected to the network or connected through power electronics, and that also has a single connection point to a transmission system, distribution system including closed distribution system or HVDC system;

(18) 'offshore power park module' means a power park module located offshore with an offshore connection point;

- (19) 'synchronous compensation operation' means the operation of an alternator without prime mover to regulate voltage dynamically by production or absorption of reactive power;
- (20) 'active power' means the real component of the apparent power at fundamental frequency, expressed in watts or multiples thereof such as kilowatts ('kW') or megawatts ('MW');
- (21) 'pump-storage' means a hydro unit in which water can be raised by means of pumps and stored to be used for the generation of electrical energy;
- (22) 'frequency' means the electric frequency of the system expressed in hertz that can be measured in all parts of the synchronous area under the assumption of a consistent value for the system in the time frame of seconds, with only minor differences between different measurement locations. Its nominal value is 50Hz;
- (23) 'droop' means the ratio of a steady-state change of frequency to the resulting steady-state change in active power output, expressed in percentage terms. The change in frequency is expressed as a ratio to nominal frequency and the change in active power expressed as a ratio to maximum capacity or actual active power at the moment the relevant threshold is reached;
- (24) 'minimum regulating level' means the minimum active power, as specified in the connection agreement or as agreed between the relevant system operator and the power-generating facility owner, down to which the power-generating module can control active power;
- (25) 'setpoint' means the target value for any parameter typically used in control schemes;
- (26) 'instruction' means any command, within its authority, given by a system operator to a power-generating facility owner, demand facility owner, distribution system operator or HVDC system owner in order to perform an action;
- (27) 'secured fault' means a fault which is successfully cleared according to the system operator's planning criteria;
- (28) 'reactive power' means the imaginary component of the apparent power at fundamental frequency, usually expressed in kilovar ('kVAR') or megavar ('MVAR');
- (29) 'fault-ride-through' means the capability of electrical devices to be able to remain connected to the network and operate through periods of low voltage at the connection point caused by secured faults;
- (30) 'alternator' means a device that converts mechanical energy into electrical energy by means of a rotating magnetic field;
- (31) 'current' means the rate at which electric charge flows which is measured by the root-mean-square value of the positive sequence of the phase current at fundamental frequency;
- (32) 'stator' means the portion of a rotating machine which includes the stationary magnetic parts with their associated windings;
- (33) 'inertia' means the property of a rotating rigid body, such as the rotor of an alternator, such that it maintains its state of uniform rotational motion and angular momentum unless an external torque is applied;
- (34) 'synthetic inertia' means the facility provided by a power park module or HVDC system to replace the effect of inertia of a synchronous power-generating module to a prescribed level of performance;
- (35) 'frequency control' means the capability of a power-generating module or HVDC system to adjust its active power output in response to a measured deviation of system frequency from a setpoint, in order to maintain stable system frequency;
- (36) 'frequency sensitive mode' or 'FSM' means the operating mode of a power-generating module or

HVDC system in which the active power output changes in response to a change in system frequency, in such a way that it assists with the recovery to target frequency;

(37) 'limited frequency sensitive mode - overfrequency' or 'LFSM-O' means a power-generating module or HVDC system operating mode which will result in active power output reduction in response to a change in system frequency above a certain value;

(38) 'limited frequency sensitive mode - underfrequency' 'LFSM-U' means a power-generating module or HVDC system operating mode which will result in active power output increase in response to a change in system frequency below a certain value;

(39) 'frequency response deadband' means an interval used intentionally to make the frequency control unresponsive;

(40) 'frequency response insensitivity' means the inherent feature of the control system specified as the minimum magnitude of change in the frequency or input signal that results in a change of output power or output signal;

(41) 'P-Q-capability diagram' means a diagram describing the reactive power capability of a power-generating module in the context of varying active power at the connection point;

(42) 'steady-state stability' means the ability of a network or a synchronous power-generating module to revert and maintain stable operation following a minor disturbance;

(43) 'island operation' means the independent operation of a whole network or part of a network that is isolated after being disconnected from the interconnected system, having at least one power-generating module or HVDC system supplying power to this network and controlling the frequency and voltage;

(44) 'houseload operation' means the operation which ensures that power-generating facilities are able to continue to supply their in-house loads in the event of network failures resulting in power-generating modules being disconnected from the network and tripped onto their auxiliary supplies;

(45) 'black start capability' means the capability of recovery of a power-generating module from a total shutdown through a dedicated auxiliary power source without any electrical energy supply external to the power-generating facility;

(46) 'authorised certifier' means an entity that issues equipment certificates and power-generating module documents and whose accreditation is given by the national affiliate of the European cooperation for Accreditation ('EA') **or another competent national authority**;

(47) 'equipment certificate' means a document issued by an authorised certifier for equipment used by a power-generating module, demand unit, distribution system, demand facility or HVDC system. The equipment certificate defines the scope of its validity at a national or other level at which a specific value is selected from the range allowed at a European level. For the purpose of replacing specific parts of the compliance process, the equipment certificate may include models that have been verified against actual test results;

(48) 'excitation control system' means a feedback control system that includes the synchronous machine and its excitation system;

(49) 'U-Q/P_{max}-profile' means a profile representing the reactive power capability of a power-generating module or HVDC converter station in the context of varying voltage at the connection point;

(50) 'minimum stable operating level' means the minimum active power, as specified in the connection agreement or as agreed between the relevant system operator and the power-generating facility owner,

at which the power-generating module can be operated stably for an unlimited time;

(51) 'overexcitation limiter' means a control device within the AVR which prevents the rotor of an alternator from overloading by limiting the excitation current;

(52) 'underexcitation limiter' means a control device within the AVR, the purpose of which is to prevent the alternator from losing synchronism due to lack of excitation;

(53) 'automatic voltage regulator' or 'AVR' means the continuously acting automatic equipment controlling the terminal voltage of a synchronous power-generating module by comparing the actual terminal voltage with a reference value and controlling the output of an excitation control system;

(54) 'power system stabiliser' or 'PSS' means an additional functionality of the AVR of a synchronous power-generating module whose purpose is to damp power oscillations;

(55) 'fast fault current' means a current injected by a power park module or HVDC system during and after a voltage deviation caused by an electrical fault with the aim of identifying a fault by network protection systems at the initial stage of the fault, supporting system voltage retention at a later stage of the fault and system voltage restoration after fault clearance;

(56) 'power factor' means the ratio of the absolute value of active power to apparent power;

(57) 'slope' means the ratio of the change in voltage, based on reference 1 pu voltage, to a change in reactive power in-feed from zero to maximum reactive power, based on maximum reactive power;

(58) 'offshore grid connection system' means the complete interconnection between an offshore connection point and the onshore system at the onshore grid interconnection point;

(59) 'onshore grid interconnection point' means the point at which the offshore grid connection system is connected to the onshore network of the relevant system operator;

(60) 'installation document' means a simple structured document containing information about a type A power-generating module or a demand unit, with demand response connected below 1 000 V, and confirming its compliance with the relevant requirements;

(61) 'statement of compliance' means a document provided by the power-generating facility owner, demand facility owner, distribution system operator or HVDC system owner to the system operator stating the current status of compliance with the relevant specifications and requirements;

(62) 'final operational notification' or 'FON' means a notification issued by the relevant system operator to a power-generating facility owner, demand facility owner, distribution system operator or HVDC system owner who complies with the relevant specifications and requirements, allowing them to operate respectively a power-generating module, demand facility, distribution system or HVDC system by using the grid connection;

(63) 'energisation operational notification' or 'EON' means a notification issued by the relevant system operator to a power-generating facility owner, demand facility owner, distribution system operator or HVDC system owner prior to energisation of its internal network;

(64) 'interim operational notification' or 'ION' means a notification issued by the relevant system operator to a power-generating facility owner, demand facility owner, distribution system operator or HVDC system owner which allows them to operate respectively a power-generating module, demand facility, distribution system or HVDC system by using the grid connection for a limited period of time and to initiate compliance tests to ensure compliance with the relevant specifications and requirements;

(65) 'limited operational notification' or 'LON' means a notification issued by the relevant system operator to a power-generating facility owner, demand facility owner, distribution system operator or HVDC system owner who had previously attained FON status but is temporarily subject to either a significant modification or loss of capability resulting in non-compliance with the relevant specifications and requirements.

Article 3

Scope of application

1. The connection requirements set out in this Regulation shall apply to new power-generating modules which are considered significant in accordance with Article 5, unless otherwise provided.

The relevant system operator shall refuse to allow the connection of a power-generating module which does not comply with the requirements set out in this Regulation and which is not covered by a derogation granted by the regulatory authority, or other authority where applicable in a **Contracting Party** pursuant to Article 60. The relevant system operator shall communicate such refusal, by means of a reasoned statement in writing, to the power-generating facility owner and, unless specified otherwise by the regulatory authority, to the regulatory authority.

2. This Regulation shall not apply to:

- (b) power-generating modules that were installed to provide back-up power and operate in parallel with the system for less than five minutes per calendar month while the system is in normal system state. Parallel operation during maintenance or commissioning tests of that power-generating module shall not count towards the five-minute limit;
- (c) power-generating modules that do not have a permanent connection point and are used by the system operators to temporarily provide power when normal system capacity is partly or completely unavailable;
- (d) storage devices except for pump-storage power-generating modules in accordance with Article 6(2).

Article 4

Application to existing power-generating modules

1. Existing power-generating modules are not subject to the requirements of this Regulation, except where:

(a) a type C or type D power-generating module has been modified to such an extent that its connection agreement must be substantially revised in accordance with the following procedure:

(i) power-generating facility owners who intend to undertake the modernisation of a plant or replacement of equipment impacting the technical capabilities of the power-generating module shall notify their plans to the relevant system operator in advance;

(ii) if the relevant system operator considers that the extent of the modernisation or replacement of equipment is such that a new connection agreement is required, the system operator shall notify the relevant regulatory authority or, where applicable, the **Contracting Party**; and

(iii) the relevant regulatory authority or, where applicable, the **Contracting Party** shall decide if the existing connection agreement needs to be revised or a new connection agreement is required and

which requirements of this Regulation shall apply; or

(b) a regulatory authority or, where applicable, a **Contracting Party** decides to make an existing power-generating module subject to all or some of the requirements of this Regulation, following a proposal from the relevant TSO in accordance with paragraphs 3, 4 and 5.

2. For the purposes of this Regulation, a power-generating module shall be considered existing if:

(a) it is already connected to the network on the date of **expiry of the deadline for transposition** of this Regulation; or

(b) the power-generating facility owner has concluded a final and binding contract for the purchase of the main generating plant by two years after **the expiry of the deadline for transposition** of the Regulation. The power-generating facility owner must notify the relevant system operator and relevant TSO of conclusion of the contract within 30 months after the **expiry of the deadline for transposition**.

The notification submitted by the power-generating facility owner to the relevant system operator and to the relevant TSO shall at least indicate the contract title, its date of signature and date of entry into force and the specifications of the main generating plant to be constructed, assembled or purchased.

A **Contracting Party** may provide that in specified circumstances the regulatory authority may determine whether the power-generating module is to be considered an existing power-generating module or a new power-generating module.

3. Following a public consultation in accordance with Article 10 and in order to address significant factual changes in circumstances, such as the evolution of system requirements including penetration of renewable energy sources, smart grids, distributed generation or demand response, the relevant TSO may propose to the regulatory authority concerned, or where applicable, to the **Contracting Party** to extend the application of this Regulation to existing power-generating modules.

For that purpose a sound and transparent quantitative cost-benefit analysis shall be carried out, in accordance with Articles 38 and 39. The analysis shall indicate:

- (a) the costs, in regard to existing power-generating modules, of requiring compliance with this Regulation;
- (b) the socioeconomic benefit resulting from applying the requirements set out in this Regulation; and
- (c) the potential of alternative measures to achieve the required performance.

4. Before carrying out the quantitative cost-benefit analysis referred to in paragraph 3, the relevant TSO shall:

- (a) carry out a preliminary qualitative comparison of costs and benefits;
- (b) obtain approval from the relevant regulatory authority or, where applicable, the **Contracting Party**.

5. The relevant regulatory authority or, where applicable, the **Contracting Party** shall decide on the extension of the applicability of this Regulation to existing power-generating modules within six months of receipt of the report and the recommendation of the relevant TSO in accordance with Article 38(4). The decision of the regulatory authority or, where applicable, the **Contracting Party** shall be published.

6. The relevant TSO shall take account of the legitimate expectations of power-generating facility owners as part of the assessment of the application of this Regulation to existing power-generating modules.

7. The relevant TSO may assess the application of some or all of the provisions of this Regulation to existing power-generating modules every three years in accordance with the criteria and process set out in paragraphs 3 to 5.

Article 5

Determination of significance

1. The power-generating modules shall comply with the requirements on the basis of the voltage level of their connection point and their maximum capacity according to the categories set out in paragraph 2.
2. Power-generating modules within the following categories shall be considered as significant:
 - (a) connection point below 110 kV and maximum capacity of 0,8 kW or more (type A);
 - (b) connection point below 110 kV and maximum capacity at or above a threshold proposed by each relevant TSO in accordance with the procedure laid out in paragraph 3 (type B). This threshold shall not be above the limits for type B power-generating modules contained in Table 1;
 - (c) connection point below 110 kV and maximum capacity at or above a threshold specified by each relevant TSO in accordance with paragraph 3 (type C). This threshold shall not be above the limits for type C power-generating modules contained in Table 1; or
 - (d) connection point at 110 kV or above (type D). A power-generating module is also of type D if its connection point is below 110 kV and its maximum capacity is at or above a threshold specified in accordance with paragraph 3. This threshold shall not be above the limit for type D power-generating modules contained in Table 1.

Table 1

Limits for thresholds for type B, C and D power-generating modules

Synchronous areas	Limit for maximum capacity threshold from which a power-generating module is of type B	Limit for maximum capacity threshold from which a power-generating module is of type C	Limit for maximum capacity threshold from which a power-generating module is of type D
Continental Europe, Ukraine	1 MW	50 MW	75 MW
Great Britain	1 MW	50 MW	75 MW
Nordic, Georgia	1,5 MW	10 MW	30 MW
Ireland and Northern Ireland	0,1 MW	5 MW	10 MW
Baltic, Moldova	0,5 MW	10 MW	15 MW

3. Proposals for maximum capacity thresholds for types B, C and D power-generating modules shall be subject to approval by the relevant regulatory authority or, where applicable, the **Contracting Party**. In forming proposals the relevant TSO shall coordinate with adjacent TSOs and DSOs and shall conduct a public consultation in accordance with Article 10. A proposal by the relevant TSO to change the thresholds shall not be made sooner than three years after the previous proposal.

4. Power-generating facility owners shall assist this process and provide data as requested by the relevant TSO.

5. If, as a result of modification of the thresholds, a power-generating module qualifies under a different type, the procedure laid down in Article 4(3) concerning existing power-generating modules shall apply before compliance with the requirements for the new type is required.

Article 6

Application to power-generating modules, pump-storage power-generating modules, combined heat and power facilities, and industrial sites

1. Offshore power-generating modules connected to the interconnected system shall meet the requirements for onshore power-generating modules, unless the requirements are modified for this purpose by the relevant system operator or unless the connection of power park modules is via a high voltage direct current connection or via a network whose frequency is not synchronously coupled to that of the main interconnected system (such as via a back-to-back converter scheme).

2. Pump-storage power-generating modules shall fulfil all the relevant requirements in both generating and pumping operation mode. Synchronous compensation operation of pump-storage power-generating modules shall not be limited in time by the technical design of power-generating modules. Pump-storage variable speed power-generating modules shall fulfil the requirements applicable to synchronous power-generating modules as well as those set out in point (b) of Article 20(2), if they qualify as type B, C or D.

3. With respect to power-generating modules embedded in the networks of industrial sites, power-generating facility owners, system operators of industrial sites and relevant system operators whose network is connected to the network of an industrial site shall have the right to agree on conditions for disconnection of such power-generating modules together with critical loads, which secure production processes, from the relevant system operator's network. The exercise of this right shall be coordinated with the relevant TSO.

4. Except for requirements under paragraphs 2 and 4 of Article 13 or where otherwise stated in the national framework, requirements of this Regulation relating to the capability to maintain constant active power output or to modulate active power output shall not apply to power-generating modules of facilities for combined heat and power production embedded in the networks of industrial sites, where all of the following criteria are met:

(a) the primary purpose of those facilities is to produce heat for production processes of the industrial site concerned;

(b) heat and power-generating is inextricably interlinked, that is to say any change of heat generation results inadvertently in a change of active power-generating and *vice versa*;

(c) the power-generating modules are of type A, B, C or, in the case of the Nordic synchronous area, type D in accordance with points (a) to (c) of Article 5(2).

5. Combined heat and power-generating facilities shall be assessed on the basis of their electrical maximum capacity.

Article 7

Regulatory aspects

1. Requirements of general application to be established by relevant system operators or TSOs under this Regulation shall be subject to approval by the entity designated by the **Contracting Party** and be published. The designated entity shall be the regulatory authority unless otherwise provided by the **Contracting Party**.
2. For site specific requirements to be established by relevant system operators or TSOs under this Regulation, **Contracting Party** may require approval by a designated entity.
3. When applying this Regulation, **Contracting Parties**, competent entities and system operators shall:
 - (a) apply the principles of proportionality and non-discrimination;
 - (b) ensure transparency;
 - (c) apply the principle of optimisation between the highest overall efficiency and lowest total costs for all parties involved;
 - (d) respect the responsibility assigned to the relevant TSO in order to ensure system security, including as required by national legislation;
 - (e) consult with relevant DSOs and take account of potential impacts on their system;
 - (f) take into consideration agreed European standards and technical specifications.
4. The relevant system operator or TSO shall submit a proposal for requirements of general application, or the methodology used to calculate or establish them, for approval by the competent entity within two years of **expiry of the deadline for transposition** of this Regulation.
5. Where this Regulation requires the relevant system operator, relevant TSO, power-generating facility owner and/or the distribution system operator to seek agreement, they shall endeavour to do so within six months after a first proposal has been submitted by one party to the other parties. If no agreement has been found within this time frame, each party may request the relevant regulatory authority to issue a decision within six months.
6. Competent entities shall take decisions on proposals for requirements or methodologies within six months following the receipt of such proposals.
7. If the relevant system operator or TSO deems an amendment to requirements or methodologies as provided for and approved under paragraph 1 and 2 to be necessary, the requirements provided for in paragraphs 3 to 8 shall apply to the proposed amendment. System operators and TSOs proposing an amendment shall take into account the legitimate expectations, if any, of power-generating facility owners, equipment manufacturers and other stakeholders based on the initially specified or agreed requirements or methodologies.
8. Any party having a complaint against a relevant system operator or TSO in relation to that relevant system operator's or TSO's obligations under this Regulation may refer the complaint to the regulatory authority which, acting as dispute settlement authority, shall issue a decision within two months after receipt of the complaint. That period may be extended by two months where additional information is sought by the regulatory authority. That extended period may be further extended with the agreement of the complainant. The regulatory authority's decision shall have binding effect unless and until overruled on appeal.
9. Where the requirements under this Regulation are to be established by a relevant system operator that

is not a TSO, **Contracting Parties** may provide that instead the TSO be responsible for establishing the relevant requirements.

Article 8

Multiple TSOs

1. Where more than one TSO exists in a **Contracting Party**, this Regulation shall apply to all those TSOs.
2. **Contracting Parties** may, under the national regulatory regime, provide that the responsibility of a TSO to comply with one or some or all obligations under this Regulation is assigned to one or more specific TSOs.

Article 9

Recovery of costs

1. The costs borne by system operators subject to network tariff regulation and stemming from the obligations laid down in this Regulation shall be assessed by the relevant regulatory authorities. Costs assessed as reasonable, efficient and proportionate shall be recovered through network tariffs or other appropriate mechanisms.
2. If requested by the relevant regulatory authorities, system operators referred to in paragraph 1 shall, within three months of the request, provide the information necessary to facilitate assessment of the costs incurred.

Article 10

Public consultation

1. Relevant system operators and relevant TSOs shall carry out consultation with stakeholders, including the competent authorities of each **Contracting Party**, on proposals to extend the applicability of this Regulation to existing power-generating modules in accordance with Article 4(3), for the proposal for thresholds in accordance with Article 5(3), and on the report prepared in accordance with Article 38(3) and the cost-benefit analysis undertaken in accordance with Article 63(2). The consultation shall last at least for a period of one month.
2. The relevant system operators or relevant TSOs shall duly take into account the views of the stakeholders resulting from the consultations prior to the submission of the draft proposal for thresholds, the report or cost benefit analysis for approval by the regulatory authority or, if applicable, the **Contracting Party**. In all cases, a sound justification for including or not the views of the stakeholders shall be provided and published in a timely manner before, or simultaneously with, the publication of the proposal.

Article 11**Stakeholder involvement**

The **Energy Community Regulatory Board**, in close cooperation with the European Network of Transmission System Operators for Electricity (ENTSO for Electricity), shall organise stakeholder involvement regarding the requirements for grid connection of power-generating facilities, and other aspects of the implementation of this Regulation. This shall include regular meetings with stakeholders to identify problems and propose improvements notably related to the requirements for grid connection of power-generating facilities.

Article 12**Confidentiality obligations**

1. Any confidential information received, exchanged or transmitted pursuant to this Regulation shall be subject to the conditions of professional secrecy laid down in paragraphs 2, 3 and 4.
2. The obligation of professional secrecy shall apply to any persons, regulatory authorities or entities subject to the provisions of this Regulation.
3. Confidential information received by the persons, regulatory authorities or entities referred to in paragraph 2 in the course of their duties may not be divulged to any other person or authority, without prejudice to cases covered by national law, the other provisions of this Regulation or other relevant **Energy Community** law.
4. Without prejudice to cases covered by national or **Energy Community** law, regulatory authorities, entities or persons who receive confidential information pursuant to this Regulation may use it only for the purpose of carrying out their duties under this Regulation.

TITLE II REQUIREMENTS

CHAPTER 1 General requirements

Article 13**General requirements for type A power-generating modules**

1. Type A power-generating modules shall fulfil the following requirements relating to frequency stability:
 - (a) With regard to frequency ranges:
 - (i) a power-generating module shall be capable of remaining connected to the network and operate within the frequency ranges and time periods specified in Table 2;

(ii) the relevant system operator, in coordination with the relevant TSO, and the power-generating facility owner may agree on wider frequency ranges, longer minimum times for operation or specific requirements for combined frequency and voltage deviations to ensure the best use of the technical capabilities of a power-generating module, if it is required to preserve or to restore system security;

(iii) the power-generating facility owner shall not unreasonably withhold consent to apply wider frequency ranges or longer minimum times for operation, taking account of their economic and technical feasibility.

(b) With regard to the rate of change of frequency withstand capability, a power-generating module shall be capable of staying connected to the network and operate at rates of change of frequency up to a value specified by the relevant TSO, unless disconnection was triggered by rate-of-change-of-frequency-type loss of mains protection. The relevant system operator, in coordination with the relevant TSO, shall specify this rate-of-change-of-frequency-type loss of mains protection.

Table 2

Minimum time periods for which a power-generating module has to be capable of operating on different frequencies, deviating from a nominal value, without disconnecting from the network.

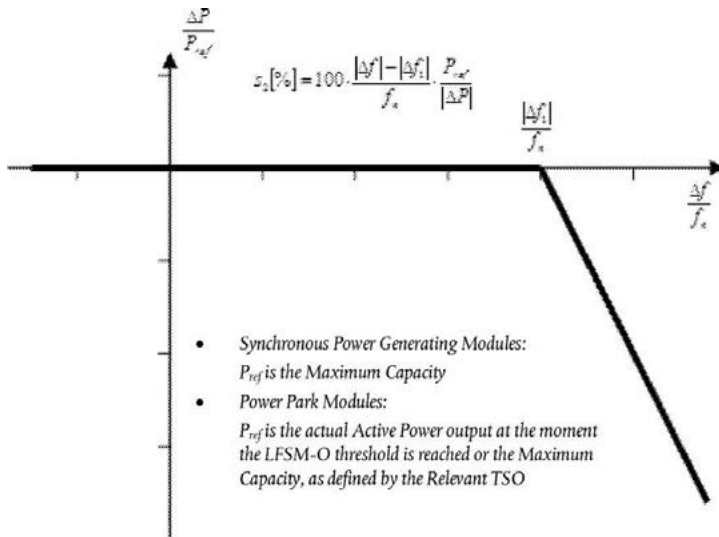
Synchronous area	Frequency range	Time period for operation
Continental Europe	47,5 Hz–48,5 Hz	To be specified by each TSO, but not less than 30 minutes
	48,5 Hz–49,0 Hz	To be specified by each TSO, but not less than the period for 47,5 Hz–48,5 Hz
	49,0 Hz–51,0 Hz	Unlimited
	51,0 Hz–51,5 Hz	30 minutes
Nordic	47,5 Hz–48,5 Hz	30 minutes
	48,5 Hz–49,0 Hz	To be specified by each TSO, but not less than 30 minutes
	49,0 Hz–51,0 Hz	Unlimited
	51,0 Hz–51,5 Hz	30 minutes
Great Britain	47,0 Hz–47,5 Hz	20 seconds
	47,5 Hz–48,5 Hz	90 minutes
	48,5 Hz–49,0 Hz	To be specified by each TSO, but not less than 90 minutes
	49,0 Hz–51,0 Hz	Unlimited
	51,0 Hz–51,5 Hz	90 minutes
	51,5 Hz–52,0 Hz	15 minutes
Ireland and Northern Ireland	47,5 Hz–48,5 Hz	90 minutes
	48,5 Hz–49,0 Hz	To be specified by each TSO, but not less than 90 minutes
	49,0 Hz–51,0 Hz	Unlimited
	51,0 Hz–51,5 Hz	90 minutes

Baltic	47,5 Hz–48,5 Hz	To be specified by each TSO, but not less than 30 minutes
	48,5 Hz–49,0 Hz	To be specified by each TSO, but not less than the period for 47,5 Hz–48,5 Hz
	49,0 Hz–51,0 Hz	Unlimited
	51,0 Hz–51,5 Hz	To be specified by each TSO, but not less than 30 minutes
Georgia	47,0 Hz–47,5 Hz	20 seconds
	47,5 Hz–48,5 Hz	30 minutes
	48,5 Hz–49,0 Hz	60 minutes
	49,0 Hz–51,0 Hz	Unlimited
	51,0 Hz–51,5 Hz	30 minutes

2. With regard to the limited frequency sensitive mode - overfrequency (LFSM-O), the following shall apply, as determined by the relevant TSO for its control area in coordination with the TSOs of the same synchronous area to ensure minimal impacts on neighbouring areas:

- (a) the power-generating module shall be capable of activating the provision of active power frequency response according to figure 1 at a frequency threshold and droop settings specified by the relevant TSO;
- (b) instead of the capability referred to in paragraph (a), the relevant TSO may choose to allow within its control area automatic disconnection and reconnection of power-generating modules of Type A at randomised frequencies, ideally uniformly distributed, above a frequency threshold, as determined by the relevant TSO where it is able to demonstrate to the relevant regulatory authority, and with the cooperation of power-generating facility owners, that this has a limited cross-border impact and maintains the same level of operational security in all system states;
- (c) the frequency threshold shall be between 50,2 Hz and 50,5 Hz inclusive;
- (d) the droop settings shall be between 2% and 12%;
- (e) the power-generating module shall be capable of activating a power frequency response with an initial delay that is as short as possible. If that delay is greater than two seconds, the power-generating facility owner shall justify the delay, providing technical evidence to the relevant TSO;
- (f) the relevant TSO may require that upon reaching minimum regulating level, the power-generating module be capable of either:
 - (i) continuing operation at this level; or
 - (ii) further decreasing active power output;
- (g) the power-generating module shall be capable of operating stably during LFSM-O operation. When LFSM-O is active, the LFSM-O setpoint will prevail over any other active power setpoints.

Figure 1

Active power frequency response capability of power-generating modules in LFSM-O

P_{ref} is the reference active power to which ΔP is related and may be specified differently for synchronous power-generating modules and power park modules. ΔP is the change in active power output from the power-generating module. f_n is the nominal frequency (50 Hz) in the network and Δf is the frequency deviation in the network. At overfrequencies where Δf is above Δf_1 , the power-generating module has to provide a negative active power output change according to the droop S2.

3. The power-generating module shall be capable of maintaining constant output at its target active power value regardless of changes in frequency, except where output follows the changes specified in the context of paragraphs 2 and 4 of this Article or points (c) and (d) of Article 15(2) as applicable.

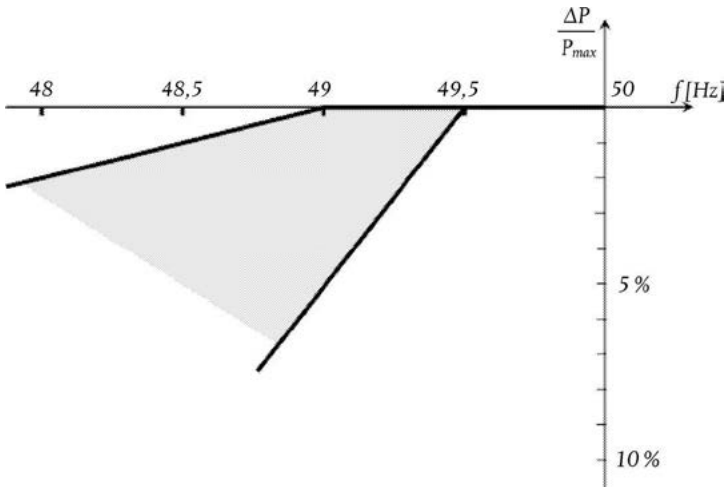
4. The relevant TSO shall specify admissible active power reduction from maximum output with falling frequency in its control area as a rate of reduction falling within the boundaries, illustrated by the full lines in Figure 2:

- (a) below 49 Hz falling by a reduction rate of 2% of the maximum capacity at 50 Hz per 1 Hz frequency drop;
- (b) below 49,5 Hz falling by a reduction rate of 10% of the maximum capacity at 50 Hz per 1 Hz frequency drop.

5. The admissible active power reduction from maximum output shall:

- (a) clearly specify the ambient conditions applicable;
- (b) take account of the technical capabilities of power-generating modules.

Figure 2



Maximum power capability reduction with falling frequency

The diagram represents the boundaries in which the capability can be specified by the relevant TSO.

6. The power-generating module shall be equipped with a logic interface (input port) in order to cease active power output within five seconds following an instruction being received at the input port. The relevant system operator shall have the right to specify requirements for equipment to make this facility operable remotely.

7. The relevant TSO shall specify the conditions under which a power-generating module is capable of connecting automatically to the network. Those conditions shall include:

- (a) frequency ranges within which an automatic connection is admissible, and a corresponding delay time; and
- (b) maximum admissible gradient of increase in active power output.

Automatic connection is allowed unless specified otherwise by the relevant system operator in coordination with the relevant TSO.

Article 14

General requirements for type B power-generating modules

1. Type B power-generating modules shall fulfil the requirements set out in Article 13, except for Article 13(2)(b).

2. Type B power-generating modules shall fulfil the following requirements in relation to frequency stability:

- (a) to control active power output, the power-generating module shall be equipped with an interface (input port) in order to be able to reduce active power output following an instruction at the input port; and

(b) the relevant system operator shall have the right to specify the requirements for further equipment to allow active power output to be remotely operated.

3. Type B power-generating modules shall fulfil the following requirements in relation to robustness:

(a) with regard to fault-ride-through capability of power-generating modules:

(i) each TSO shall specify a voltage-against-time-profile in line with Figure 3 at the connection point for fault conditions, which describes the conditions in which the power-generating module is capable of staying connected to the network and continuing to operate stably after the power system has been disturbed by secured faults on the transmission system;

(ii) the voltage-against-time-profile shall express a lower limit of the actual course of the phase-to-phase voltages on the network voltage level at the connection point during a symmetrical fault, as a function of time before, during and after the fault;

(iii) the lower limit referred to in point (ii) shall be specified by the relevant TSO using the parameters set out in Figure 3, and within the ranges set out in Tables 3.1 and 3.2;

(iv) each TSO shall specify and make publicly available the pre-fault and post-fault conditions for the fault-ride-through capability in terms of:

- the calculation of the pre-fault minimum short circuit capacity at the connection point,
- pre-fault active and reactive power operating point of the power-generating module at the connection point and voltage at the connection point, and

- calculation of the post-fault minimum short circuit capacity at the connection point;

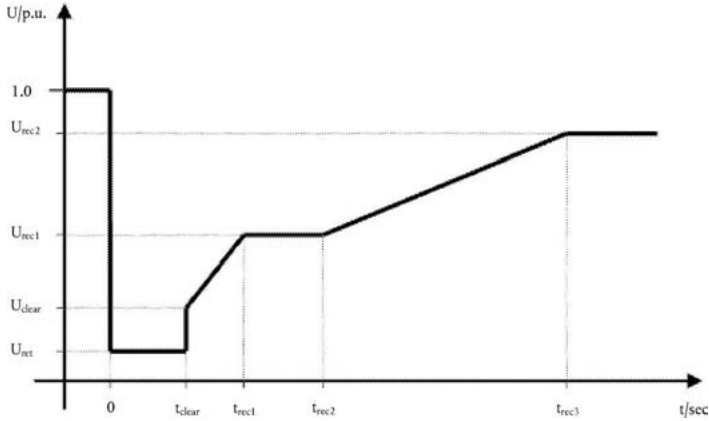
(v) at the request of a power-generating facility owner, the relevant system operator shall provide the pre-fault and post-fault conditions to be considered for fault-ride-through capability as an outcome of the calculations at the connection point as specified in point (iv) regarding:

- pre-fault minimum short circuit capacity at each connection point expressed in MVA,
- pre-fault operating point of the power-generating module expressed in active power output and reactive power output at the connection point and voltage at the connection point, and
- post-fault minimum short circuit capacity at each connection point expressed in MVA.

Alternatively, the relevant system operator may provide generic values derived from typical cases;

Figure 3

Fault-ride-through profile of a power-generating module



The diagram represents the lower limit of a voltage-against-time profile of the voltage at the connection point, expressed as the ratio of its actual value and its reference 1 pu value before, during and after a fault. U_{ret} is the retained voltage at the connection point during a fault, t_{clear} is the instant when the fault has been cleared. U_{rec1} , U_{rec2} , t_{rec1} , t_{rec2} and t_{rec3} specify certain points of lower limits of voltage recovery after fault clearance.

Table 3.1

Parameters for Figure 3 for fault-ride-through capability of synchronous power-generating modules

Voltage parameters (pu)		Time parameters (seconds)	
U_{ret} :	0,05–0,3	t_{clear} :	0,14–0,15 (or 0,14–0,25 if system protection and secure operation so require)
U_{clear} :	0,7–0,9	t_{rec1} :	t_{clear}
U_{rec1} :	U_{clear}	t_{rec2} :	$t_{rec1}-0,7$
U_{rec2} :	0,85-0,9 and $\geq U_{clear}$	t_{rec3} :	$t_{rec2}-1,5$

Table 3.2

Parameters for Figure 3 for fault-ride-through capability of power park modules

Voltage parameters (pu)		Time parameters (seconds)	
U_{ret} :	0,05–0,15	t_{clear} :	0,14–0,15 (or 0,14–0,25 if system protection and secure operation so require)
U_{clear} :	$U_{ret}-0,15$	t_{rec1} :	t_{clear}
U_{rec1} :	U_{clear}	t_{rec2} :	t_{rec1}
U_{rec2} :	0,85	t_{rec3} :	1,5–3,0

(vi) the power-generating module shall be capable of remaining connected to the network and continuing to operate stably when the actual course of the phase-to-phase voltages on the network voltage level at the connection point during a symmetrical fault, given the pre-fault and post-fault conditions in points (iv) and (v) of paragraph 3(a), remain above the lower limit specified in point (ii) of paragraph 3(a), unless the protection scheme for internal electrical faults requires the disconnection of the power-generating module from the network. The protection schemes and settings for internal electrical faults must not jeopardise fault-ride-through performance;

(vii) without prejudice to point (vi) of paragraph 3(a), undervoltage protection (either fault-ride-through capability or minimum voltage specified at the connection point voltage) shall be set by the power-generating facility owner according to the widest possible technical capability of the power-generating module, unless the relevant system operator requires narrower settings in accordance with point (b) of paragraph 5. The settings shall be justified by the power-generating facility owner in accordance with this principle;

(b) fault-ride-through capabilities in case of asymmetrical faults shall be specified by each TSO.

4. Type B power-generating modules shall fulfil the following requirements relating to system restoration:

(a) the relevant TSO shall specify the conditions under which a power-generating module is capable of reconnecting to the network after an incidental disconnection caused by a network disturbance; and

(b) installation of automatic reconnection systems shall be subject both to prior authorisation by the relevant system operator and to the reconnection conditions specified by the relevant TSO.

5. Type B power-generating modules shall fulfil the following general system management requirements:

(a) with regard to control schemes and settings:

(i) the schemes and settings of the different control devices of the power-generating module that are necessary for transmission system stability and for taking emergency action shall be coordinated and agreed between the relevant TSO, the relevant system operator and the power-generating facility owner;

(ii) any changes to the schemes and settings, mentioned in point (i), of the different control devices of the power-generating module shall be coordinated and agreed between the relevant TSO, the relevant system operator and the power-generating facility owner, in particular if they apply in the circumstances referred to in point (i) of paragraph 5(a);

(b) with regard to electrical protection schemes and settings:

(i) the relevant system operator shall specify the schemes and settings necessary to protect the network, taking into account the characteristics of the power-generating module. The protection schemes needed for the power-generating module and the network as well as the settings relevant to the power-generating module shall be coordinated and agreed between the relevant system operator and the power-generating facility owner. The protection schemes and settings for internal electrical faults must not jeopardise the performance of a power-generating module, in line with the requirements set out in this Regulation;

(ii) electrical protection of the power-generating module shall take precedence over operational controls, taking into account the security of the system and the health and safety of staff and of the public, as well as mitigating any damage to the power-generating module;

(iii) protection schemes may cover the following aspects:

- external and internal short circuit,
- asymmetric load (negative phase sequence),
- stator and rotor overload,
- over-/underexcitation,
- over-/undervoltage at the connection point,
- over-/undervoltage at the alternator terminals,
- inter-area oscillations,
- inrush current,
- asynchronous operation (pole slip),
- protection against inadmissible shaft torsions (for example, subsynchronous resonance),
- power-generating module line protection,
- unit transformer protection,
- back-up against protection and switchgear malfunction,
- overfluxing (U/f),
- inverse power,
- rate of change of frequency, and neutral voltage displacement.

(iv) changes to the protection schemes needed for the power-generating module and the network and to the settings relevant to the power-generating module shall be agreed between the system operator and the power-generating facility owner, and agreement shall be reached before any changes are made;

(c) the power-generating facility owner shall organise its protection and control devices in accordance with the following priority ranking (from highest to lowest):

- (i) network and power-generating module protection;
- (ii) synthetic inertia, if applicable;
- (iii) frequency control (active power adjustment);
- (iv) power restriction; and
- (v) power gradient constraint;

(d) with regard to information exchange:

- (i) power-generating facilities shall be capable of exchanging information with the relevant system operator or the relevant TSO in real time or periodically with time stamping, as specified by the relevant system operator or the relevant TSO;
- (ii) the relevant system operator, in coordination with the relevant TSO, shall specify the content of information exchanges including a precise list of data to be provided by the power-generating facility.

Article 15

General requirements for type C power-generating modules

1. Type C power-generating modules shall fulfil the requirements laid down in Articles 13 and 14, except

for Article 13(2)(b) and (6) and Article 14(2).

2. Type C power-generating modules shall fulfil the following requirements relating to frequency stability:

(a) with regard to active power controllability and control range, the power-generating module control system shall be capable of adjusting an active power setpoint in line with instructions given to the power-generating facility owner by the relevant system operator or the relevant TSO.

The relevant system operator or the relevant TSO shall establish the period within which the adjusted active power setpoint must be reached. The relevant TSO shall specify a tolerance (subject to the availability of the prime mover resource) applying to the new setpoint and the time within which it must be reached;

(b) manual local measures shall be allowed in cases where the automatic remote control devices are out of service.

The relevant system operator or the relevant TSO shall notify the regulatory authority of the time required to reach the setpoint together with the tolerance for the active power;

(c) In addition to Article 13(2), the following requirements shall apply to type C power-generating modules with regard to limited frequency sensitive mode - underfrequency (LFSM-U):

(i) the power-generating module shall be capable of activating the provision of active power frequency response at a frequency threshold and with a droop specified by the relevant TSO in coordination with the TSOs of the same synchronous area as follows:

- the frequency threshold specified by the TSO shall be between 49,8 Hz and 49,5 Hz inclusive,
- the droop settings specified by the TSO shall be in the range 2-12%.

This is represented graphically in Figure 4;

(ii) the actual delivery of active power frequency response in LFSM-U mode shall take into account:

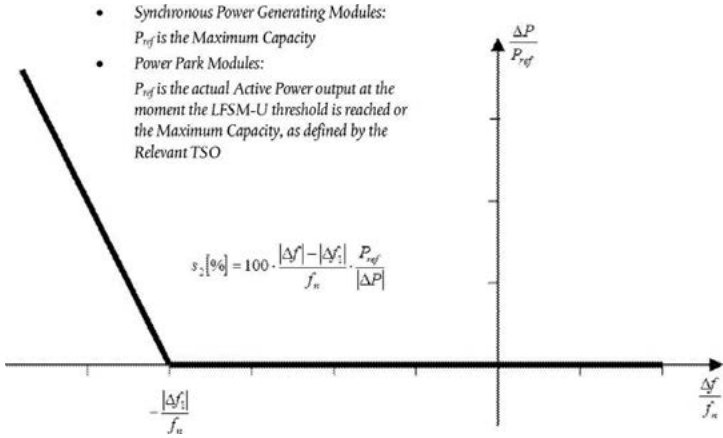
- ambient conditions when the response is to be triggered,
- the operating conditions of the power-generating module, in particular limitations on operation near maximum capacity at low frequencies and the respective impact of ambient conditions according to paragraphs 4 and 5 of Article 13, and
- the availability of the primary energy sources.

(iii) the activation of active power frequency response by the power-generating module shall not be unduly delayed. In the event of any delay greater than two seconds, the power-generating facility owner shall justify it to the relevant TSO;

(iv) in LFSM-U mode the power-generating module shall be capable of providing a power increase up to its maximum capacity;

(v) stable operation of the power-generating module during LFSM-U operation shall be ensured;

Figure 4

Active power frequency response capability of power-generating modules in LFSM-U

P_{ref} is the reference active power to which ΔP is related and may be specified differently for synchronous power-generating modules and power park modules. ΔP is the change in active power output from the power-generating module. f_n is the nominal frequency (50 Hz) in the network and Δf is the frequency deviation in the network. At underfrequencies where Δf is below Δf_1 the power-generating module has to provide a positive active power output change according to the droop S2.

(d) in addition to point (c) of paragraph 2, the following shall apply cumulatively when frequency sensitive mode ('FSM') is operating:

(i) the power-generating module shall be capable of providing active power frequency response in accordance with the parameters specified by each relevant TSO within the ranges shown in Table 4. In specifying those parameters, the relevant TSO shall take account of the following facts:

- in case of overfrequency, the active power frequency response is limited by the minimum regulating level,
- in case of underfrequency, the active power frequency response is limited by maximum capacity,
- the actual delivery of active power frequency response depends on the operating and ambient conditions of the power-generating module when this response is triggered, in particular limitations on operation near maximum capacity at low frequencies according to paragraphs 4 and 5 of Article 13 and available primary energy sources;

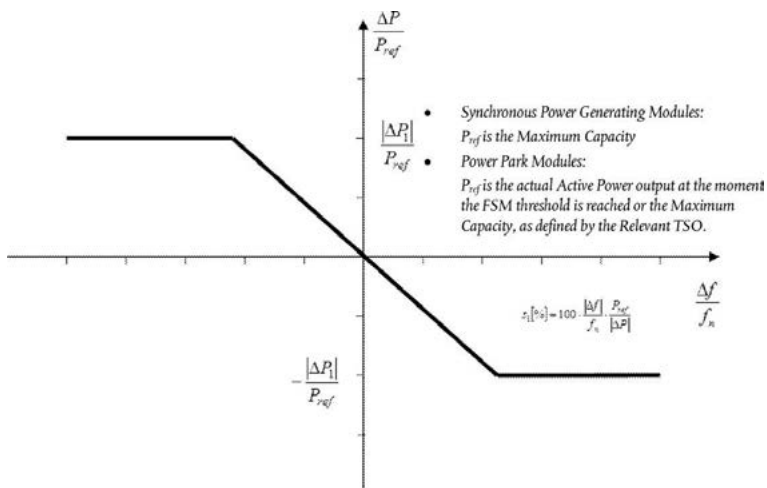
Table 4

Parameters for active power frequency response in FSM (explanation for Figure 5)

Parameters	Ranges	
Active power range related to maximum capacity $\frac{ \Delta P_1 }{P_{\max}}$	1,5–10%	
Frequency response insensitivity	$ \Delta f_i $	10–30 mHz
	$\frac{ \Delta f_i }{f_n}$	0,02–0,06%
Frequency response deadband	0–500 mHz	
Droop s_1	2–12%	

Figure 5

Active power frequency response capability of power-generating modules in FSM illustrating the case of zero deadband and insensitivity



P_{ref} is the reference active power to which ΔP is related. ΔP is the change in active power output from the power-generating module. f_n is the nominal frequency (50 Hz) in the network and Δf is the frequency deviation in the network.

(ii) the frequency response deadband of frequency deviation and droop must be able to be reselected repeatedly;

(iii) in the event of a frequency step change, the power-generating module shall be capable of activating full active power frequency response, at or above the full line shown in Figure 6 in accordance with the parameters specified by each TSO (which shall aim at avoiding active power oscillations for the power-generating module) within the ranges given in Table 5. The combination of choice of the parameters specified by the TSO shall take possible technology-dependent limitations into account;

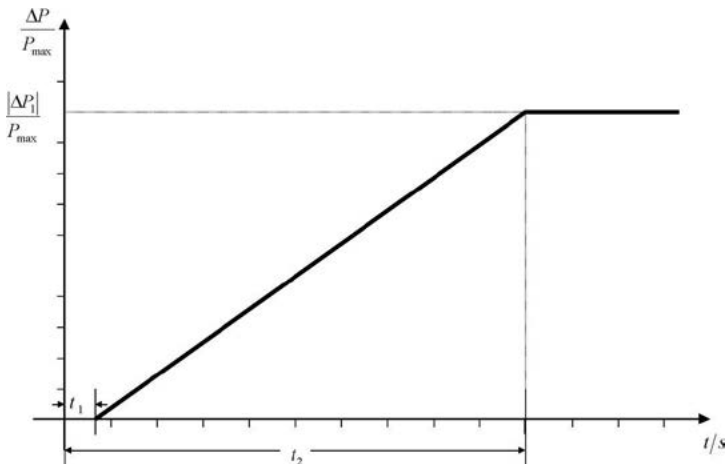
(iv) the initial activation of active power frequency response required shall not be unduly delayed.

If the delay in initial activation of active power frequency response is greater than two seconds, the power-generating facility owner shall provide technical evidence demonstrating why a longer time is needed.

For power-generating modules without inertia, the relevant TSO may specify a shorter time than two seconds. If the power-generating facility owner cannot meet this requirement they shall provide technical evidence demonstrating why a longer time is needed for the initial activation of active power frequency response;

Figure 6

Active power frequency response capability



P_{\max} is the maximum capacity to which ΔP relates. ΔP is the change in active power output from the power-generating module. The power-generating module has to provide active power output ΔP up to the point ΔP_1 in accordance with the times t_1 and t_2 with the values of ΔP_1 , t_1 and t_2 being specified by the relevant TSO according to Table 5. t_1 is the initial delay. t_2 is the time for full activation.

(v) the power-generating module shall be capable of providing full active power frequency response for a period of between 15 and 30 minutes as specified by the relevant TSO. In specifying the period, the TSO shall have regard to active power headroom and primary energy source of the power-generating module;

- (vi) within the time limits laid down in point (v) of paragraph 2(d), active power control must not have any adverse impact on the active power frequency response of power-generating modules;
- (vii) the parameters specified by the relevant TSO in accordance with points (i), (ii), (iii) and (v) shall be notified to the relevant regulatory authority. The modalities of that notification shall be specified in accordance with the applicable national regulatory framework;

Table 5

Parameters for full activation of active power frequency response resulting from frequency step change (explanation for Figure 6)

Parameters	Ranges or values
Active power range related to maximum capacity (frequency response range) $\frac{ \Delta P_1 }{P_{\max}}$	1,5–10%
For power-generating modules with inertia, the maximum admissible initial delay t_1 , unless justified otherwise in line with Article 15(2)(d)(iv)	2 seconds
For power-generating modules without inertia, the maximum admissible initial delay t_1 , unless justified otherwise in line with Article 15(2)(d)(iv)	as specified by the relevant TSO.
Maximum admissible choice of full activation time t_2 , unless longer activation times are allowed by the relevant TSO for reasons of system stability	30 seconds

(e) with regard to frequency restoration control, the power-generating module shall provide functionalities complying with specifications specified by the relevant TSO, aiming at restoring frequency to its nominal value or maintaining power exchange flows between control areas at their scheduled values;

(f) with regard to disconnection due to underfrequency, power-generating facilities capable of acting as a load, including hydro pump-storage power-generating facilities, shall be capable of disconnecting their load in case of underfrequency. The requirement referred to in this point does not extend to auxiliary supply;

(g) with regard to real-time monitoring of FSM:

(i) to monitor the operation of active power frequency response, the communication interface shall be equipped to transfer in real time and in a secured manner from the power-generating facility to the network control centre of the relevant system operator or the relevant TSO, at the request of the relevant system operator or the relevant TSO, at least the following signals:

- status signal of FSM (on/off),
- scheduled active power output,
- actual value of the active power output,
- actual parameter settings for active power frequency response,
- droop and deadband;

(ii) the relevant system operator and the relevant TSO shall specify additional signals to be provided by

the power-generating facility by monitoring and recording devices in order to verify the performance of the active power frequency response provision of participating power-generating modules.

3. With regard to voltage stability, type C power-generating modules shall be capable of automatic disconnection when voltage at the connection point reaches levels specified by the relevant system operator in coordination with the relevant TSO.

The terms and settings for actual automatic disconnection of power-generating modules shall be specified by the relevant system operator in coordination with the relevant TSO.

4. Type C power-generating modules shall fulfil the following requirements relating to robustness:

(a) in the event of power oscillations, power-generating modules shall retain steady-state stability when operating at any operating point of the P-Q-capability diagram;

(b) without prejudice to paragraph 4 and 5 of Article 13, power-generating modules shall be capable of remaining connected to the network and operating without power reduction, as long as voltage and frequency remain within the specified limits pursuant to this Regulation;

(c) power-generating modules shall be capable of remaining connected to the network during single-phase or three-phase auto-reclosures on meshed network lines, if applicable to the network to which they are connected. The details of that capability shall be subject to coordination and agreements on protection schemes and settings as referred to in point (b) of Article 14(5).

5. Type C power-generating modules shall fulfil the following requirements relating to system restoration:

(a) with regard to black start capability:

(i) black start capability is not mandatory without prejudice to the **Contracting Party's** rights to introduce obligatory rules in order to ensure system security;

(ii) power-generating facility owners shall, at the request of the relevant TSO, provide a quotation for providing black start capability. The relevant TSO may make such a request if it considers system security to be at risk due to a lack of black start capability in its control area;

(iii) a power-generating module with black start capability shall be capable of starting from shutdown without any external electrical energy supply within a time frame specified by the relevant system operator in coordination with the relevant TSO;

(iv) a power-generating module with black start capability shall be able to synchronise within the frequency limits laid down in point (a) of Article 13(1) and, where applicable, voltage limits specified by the relevant system operator or in Article 16(2);

(v) a power-generating module with black start capability shall be capable of automatically regulating dips in voltage caused by connection of demand;

(vi) a power-generating module with black start capability shall:

- be capable of regulating load connections in block load,

- be capable of operating in LFSM-O and LFSM-U, as specified in point (c) of paragraph 2 and Article 13(2),

- control frequency in case of overfrequency and underfrequency within the whole active power output range between minimum regulating level and maximum capacity as well as at houseload level,

- be capable of parallel operation of a few power-generating modules within one island, and

- control voltage automatically during the system restoration phase;

(b) with regard to the capability to take part in island operation:

(i) power-generating modules shall be capable of taking part in island operation if required by the relevant system operator in coordination with the relevant TSO and:

- the frequency limits for island operation shall be those established in accordance with point (a) of Article 13(1),

- the voltage limits for island operation shall be those established in accordance with Article 15(3) or Article 16(2), where applicable;

(ii) power-generating modules shall be able to operate in FSM during island operation, as specified in point (d) of paragraph 2.

In the event of a power surplus, power-generating modules shall be capable of reducing the active power output from a previous operating point to any new operating point within the P-Q-capability diagram. In that regard, the power-generating module shall be capable of reducing active power output as much as inherently technically feasible, but to at least 55% of its maximum capacity;

(iii) the method for detecting a change from interconnected system operation to island operation shall be agreed between the power-generating facility owner and the relevant system operator in coordination with the relevant TSO. The agreed method of detection must not rely solely on the system operator's switchgear position signals;

(iv) power-generating modules shall be able to operate in LFSM-O and LFSM-U during island operation, as specified in point (c) of paragraph 2 and Article 13(2);

(c) with regard to quick re-synchronisation capability:

(i) in case of disconnection of the power-generating module from the network, the power-generating module shall be capable of quick re-synchronisation in line with the protection strategy agreed between the relevant system operator in coordination with the relevant TSO and the power-generating facility;

(ii) a power-generating module with a minimum re-synchronisation time greater than 15 minutes after its disconnection from any external power supply must be designed to trip to houseload from any operating point in its P-Q-capability diagram. In this case, the identification of houseload operation must not be based solely on the system operator's switchgear position signals;

(iii) power-generating modules shall be capable of continuing operation following tripping to houseload, irrespective of any auxiliary connection to the external network. The minimum operation time shall be specified by the relevant system operator in coordination with the relevant TSO, taking into consideration the specific characteristics of prime mover technology.

6. Type C power-generating modules shall fulfil the following general system management requirements:

(a) with regard to loss of angular stability or loss of control, a power-generating module shall be capable of disconnecting automatically from the network in order to help preserve system security or to prevent damage to the power-generating module. The power-generating facility owner and the relevant system operator in coordination with the relevant TSO shall agree on the criteria for detecting loss of angular stability or loss of control;

(b) with regard to instrumentation:

(i) power-generating facilities shall be equipped with a facility to provide fault recording and monitoring

of dynamic system behaviour. This facility shall record the following parameters:

- voltage,
- active power,
- reactive power, and
- frequency.

The relevant system operator shall have the right to specify quality of supply parameters to be complied with on condition that reasonable prior notice is given;

(ii) the settings of the fault recording equipment, including triggering criteria and the sampling rates shall be agreed between the power-generating facility owner and the relevant system operator in coordination with the relevant TSO;

(iii) the dynamic system behaviour monitoring shall include an oscillation trigger specified by the relevant system operator in coordination with the relevant TSO, with the purpose of detecting poorly damped power oscillations;

(iv) the facilities for quality of supply and dynamic system behaviour monitoring shall include arrangements for the power-generating facility owner, and the relevant system operator and the relevant TSO to access the information. The communications protocols for recorded data shall be agreed between the power-generating facility owner, the relevant system operator and the relevant TSO;

(c) with regard to the simulation models:

(i) at the request of the relevant system operator or the relevant TSO, the power-generating facility owner shall provide simulation models which properly reflect the behaviour of the power-generating module in both steady-state and dynamic simulations (50 Hz component) or in electromagnetic transient simulations.

The power-generating facility owner shall ensure that the models provided have been verified against the results of compliance tests referred to in Chapters 2, 3 and 4 of Title IV, and shall notify the results of the verification to the relevant system operator or relevant TSO. **Contracting Parties** may require that such verification be carried out by an authorised certifier;

(ii) the models provided by the power-generating facility owner shall contain the following sub-models, depending on the existence of the individual components:

- alternator and prime mover,
- speed and power control,
- voltage control, including, if applicable, power system stabiliser ('PSS') function and excitation control system,
- power-generating module protection models, as agreed between the relevant system operator and the power-generating facility owner, and
- converter models for power park modules;

(iii) the request by the relevant system operator referred to in point (i) shall be coordinated with the relevant TSO. It shall include:

- the format in which models are to be provided,
- the provision of documentation on a model's structure and block diagrams,

- an estimate of the minimum and maximum short circuit capacity at the connection point, expressed in MVA, as an equivalent of the network;

(iv) the power-generating facility owner shall provide recordings of the power-generating module's performance to the relevant system operator or relevant TSO if requested. The relevant system operator or relevant TSO may make such a request, in order to compare the response of the models with those recordings;

(d) with regard to the installation of devices for system operation and devices for system security, if the relevant system operator or the relevant TSO considers that it is necessary to install additional devices in a power-generating facility in order to preserve or restore system operation or security, the relevant system operator or relevant TSO and the power-generating facility owner shall investigate that matter and agree on an appropriate solution;

(e) the relevant system operator shall specify, in coordination with the relevant TSO, minimum and maximum limits on rates of change of active power output (ramping limits) in both an up and down direction of change of active power output for a power-generating module, taking into consideration the specific characteristics of prime mover technology;

(f) earthing arrangement of the neutral-point at the network side of step-up transformers shall comply with the specifications of the relevant system operator.

Article 16

General requirements for type D power-generating modules

1. In addition to fulfilling the requirements listed in Article 13, except for Article 13(2)(b), (6) and (7), Article 14, except for Article 14(2), and Article 15, except for Article 15(3), type D power-generating modules shall fulfil the requirements set out in this Article.

2. Type D power-generating modules shall fulfil the following requirements relating to voltage stability:

(a) with regard to voltage ranges:

(i) without prejudice to point (a) of Article 14(3) and point (a) of paragraph 3 below, a power-generating module shall be capable of staying connected to the network and operating within the ranges of the network voltage at the connection point, expressed by the voltage at the connection point related to the reference 1 pu voltage, and for the time periods specified in Tables 6.1 and 6.2;

(ii) the relevant TSO may specify shorter periods of time during which power-generating modules shall be capable of remaining connected to the network in the event of simultaneous overvoltage and underfrequency or simultaneous undervoltage and overfrequency;

(iii) notwithstanding the provisions of point (i), the relevant TSO in Spain may require power-generating modules to be capable of remaining connected to the network in the voltage range between 1,05 pu and 1,0875 pu for an unlimited period;

(iv) for the 400 kV grid voltage level (or alternatively commonly referred to as 380 kV level), the reference 1 pu value is 400 kV; for other grid voltage levels, the reference 1 pu voltage may differ for each system operator in the same synchronous area;

(v) notwithstanding the provisions of point (i), the relevant TSOs in the Baltic synchronous area may

require power-generating modules to remain connected to the 400 kV network in the voltage range limits and for the time periods that apply in the Continental Europe synchronous area;

Table 6.1

Synchronous area	Voltage range	Time period for operation
Continental Europe	0,85 pu–0,90 pu	60 minutes
	0,90 pu–1,118 pu	Unlimited
	1,118 pu–1,15 pu	To be specified by each TSO, but not less than 20 minutes and not more than 60 minutes
Nordic	0,90 pu–1,05 pu	Unlimited
	1,05 pu–1,10 pu	60 minutes
Great Britain	0,90 pu–1,10 pu	Unlimited
Ireland and Northern Ireland	0,90 pu–1,118 pu	Unlimited
Baltic	0,85 pu–0,90 pu	30 minutes
	0,90 pu–1,118 pu	Unlimited
	1,118 pu–1,15 pu	20 minutes
Georgia	0,85 pu–0,90 pu	60 minutes
	0,90 pu–1,12 pu	Unlimited
	1,12 pu–1,15 pu	20 minutes

The table shows the minimum time periods during which a power-generating module must be capable of operating for voltages deviating from the reference 1 pu value at the connection point without disconnecting from the network, where the voltage base for pu values is from 110 kV to 300 kV.

Table 6.2

Synchronous area	Voltage range	Time period for operation
Continental Europe	0,85 pu–0,90 pu	60 minutes
	0,90 pu–1,05 pu	Unlimited
	1,05 pu–1,10 pu	To be specified by each TSO, but not less than 20 minutes and not more than 60 minutes
Nordic	0,90 pu–1,05 pu	Unlimited
	1,05 pu–1,10 pu	To be specified by each TSO, but not more than 60 minutes
Great Britain	0,90 pu–1,05 pu	Unlimited
	1,05 pu–1,10 pu	15 minutes
Ireland and Northern Ireland	0,90 pu–1,05 pu	Unlimited

Baltic	0,88 pu–0,90 pu	20 minutes
	0,90 pu–1,097 pu	Unlimited
	1,097 pu–1,15 pu	20 minutes
Georgia	0,85 pu–0,90 pu	60 minutes
	0,90 pu–1,10 pu	Unlimited
	1,10 pu–1,15 pu	20 minutes

The table shows the minimum time periods during which a power-generating module must be capable of operating for voltages deviating from the reference 1 pu value at the connection point without disconnecting from the network where the voltage base for pu values is from 300 kV to 500 kV.

(b) wider voltage ranges or longer minimum time periods for operation may be agreed between the relevant system operator and the power-generating facility owner in coordination with the relevant TSO. If wider voltage ranges or longer minimum times for operation are economically and technically feasible, the power-generating facility owner shall not unreasonably withhold an agreement;

(c) without prejudice to point (a), the relevant system operator in coordination with the relevant TSO shall have the right to specify voltages at the connection point at which a power-generating module is capable of automatic disconnection. The terms and settings for automatic disconnection shall be agreed between the relevant system operator and the power-generating facility owner.

3. Type D power-generating modules shall fulfil the following requirements in relation to robustness:

(a) with regard to fault-ride-through capability:

(i) power-generating modules shall be capable of staying connected to the network and continuing to operate stably after the power system has been disturbed by secured faults. That capability shall be in accordance with a voltage-against-time profile at the connection point for fault conditions specified by the relevant TSO.

The voltage-against-time-profile shall express a lower limit of the actual course of the phase-to-phase voltages on the network voltage level at the connection point during a symmetrical fault, as a function of time before, during and after the fault.

That lower limit shall be specified by the relevant TSO, using the parameters set out in Figure 3 and within the ranges set out in Tables 7.1 and 7.2 for type D power-generating modules connected at or above the 110 kV level.

That lower limit shall also be specified by the relevant TSO, using parameters set out in Figure 3 and within the ranges set out in Tables 3.1 and 3.2 for type D power-generating modules connected below the 110 kV level;

(ii) each TSO shall specify the pre-fault and post-fault conditions for the fault-ride-through capability referred to in point (iv) of Article 14(3)(a). The specified pre-fault and post-fault conditions for the fault-ride-through capability shall be made publicly available;

Table 7.1

**Parameters for Figure 3 for fault-ride-through capability
of synchronous power-generating modules**

Voltage parameters (pu)		Time parameters (seconds)	
U_{ret} :	0	t_{clear} :	0,14–0,15 (or 0,14–0,25 if system protection and secure operation so require)
U_{clear} :	0,25	t_{rec1} :	$t_{clear} - 0,45$
U_{rec1} :	0,5–0,7	t_{rec2} :	$t_{rec1} - 0,7$
U_{rec2} :	0,85–0,9	t_{rec3} :	$t_{rec2} - 1,5$

Table 7.2

Parameters for Figure 3 for fault-ride-through capability of power park modules

Voltage parameters (pu)		Time parameters (seconds)	
U_{ret} :	0	t_{clear} :	0,14–0,15 (or 0,14–0,25 if system protection and secure operation so require)
U_{clear} :	U_{ret}	t_{rec1} :	t_{clear}
U_{rec1} :	U_{clear}	t_{rec2} :	t_{rec1}
U_{rec2} :	0,85	t_{rec3} :	1,5–3,0

(b) at the request of a power-generating facility owner, the relevant system operator shall provide the pre-fault and post-fault conditions to be considered for fault-ride-through capability as an outcome of the calculations at the connection point as specified in point (iv) of Article 14(3)(a) regarding:

- (i) pre-fault minimum short circuit capacity at each connection point expressed in MVA;
- (ii) pre-fault operating point of the power-generating module expressed as active power output and reactive power output at the connection point and voltage at the connection point; and
- (iii) post-fault minimum short circuit capacity at each connection point expressed in MVA;

(c) fault-ride-through capabilities in case of asymmetrical faults shall be specified by each TSO.

4. Type D power-generating modules shall fulfil the following general system management requirements:

(a) with regard to synchronisation, when starting a power-generating module, synchronisation shall be performed by the power-generating facility owner only after authorisation by the relevant system operator;

(b) the power-generating module shall be equipped with the necessary synchronisation facilities;

(c) synchronisation of power-generating modules shall be possible at frequencies within the ranges set out in Table 2;

(d) the relevant system operator and the power-generating facility owner shall agree on the settings of synchronisation devices to be concluded prior to operation of the power-generating module. This agreement shall cover:

- (i) voltage;
- (ii) frequency;

- (iii) phase angle range;
- (iv) phase sequence;
- (v) deviation of voltage and frequency.

CHAPTER 2

Requirements for synchronous power-generating modules

Article 17

Requirements for type B synchronous power-generating modules

1. Type B synchronous power-generating modules shall fulfil the requirements listed in Articles 13, except for Article 13(2)(b), and 14.
2. Type B synchronous power-generating modules shall fulfil the following additional requirements relating to voltage stability:
 - (a) with regard to reactive power capability, the relevant system operator shall have the right to specify the capability of a synchronous power-generating module to provide reactive power;
 - (b) with regard to the voltage control system, a synchronous power-generating module shall be equipped with a permanent automatic excitation control system that can provide constant alternator terminal voltage at a selectable setpoint without instability over the entire operating range of the synchronous power-generating module.
3. With regard to robustness, type B synchronous power-generating modules shall be capable of providing post-fault active power recovery. The relevant TSO shall specify the magnitude and time for active power recovery.

Article 18

Requirements for type C synchronous power-generating modules

1. Type C synchronous power-generating modules shall fulfil the requirements laid down in Articles 13, 14, 15 and 17, except for Article 13(2)(b) and 13(6), Article 14(2) and Article 17(2)(a).
2. Type C synchronous power-generating modules shall fulfil the following additional requirements in relation to voltage stability:
 - (a) with regard to reactive power capability, the relevant system operator may specify supplementary reactive power to be provided if the connection point of a synchronous power-generating module is neither located at the high-voltage terminals of the step-up transformer to the voltage level of the connection point nor at the alternator terminals, if no step-up transformer exists. This supplementary reactive power shall compensate the reactive power demand of the high-voltage line or cable between the high-voltage terminals of the step-up transformer of the synchronous power-generating module or its alternator terminals, if no step-up transformer exists, and the connection point and shall be provided by the responsible owner of that line or cable;

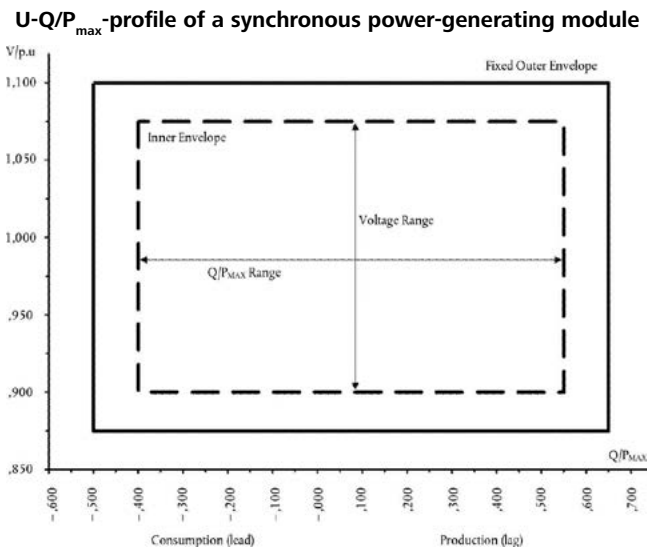
(b) with regard to reactive power capability at maximum capacity:

(i) the relevant system operator in coordination with the relevant TSO shall specify the reactive power provision capability requirements in the context of varying voltage. For that purpose the relevant system operator shall specify a $U-Q/P_{max}$ -profile within the boundaries of which the synchronous power-generating module shall be capable of providing reactive power at its maximum capacity. The specified $U-Q/P_{max}$ profile may take any shape, having regard to the potential costs of delivering the capability to provide reactive power production at high voltages and reactive power consumption at low voltages;

(ii) the $U-Q/P_{max}$ -profile shall be specified by the relevant system operator in coordination with the relevant TSO, in conformity with the following principles:

- the $U-Q/P_{max}$ -profile shall not exceed the $U-Q/P_{max}$ -profile envelope, represented by the inner envelope in Figure 7,
- the dimensions of the $U-Q/P_{max}$ -profile envelope (Q/P_{max} range and voltage range) shall be within the range specified for each synchronous area in Table 8, and
- the position of the $U-Q/P_{max}$ -profile envelope shall be within the limits of the fixed outer envelope in Figure 7;

Figure 7



The diagram represents boundaries of a $U-Q/P_{max}$ -profile by the voltage at the connection point, expressed by the ratio of its actual value and the reference 1 pu value, against the ratio of the reactive power (Q) and the maximum capacity (P_{max}). The position, size and shape of the inner envelope are indicative.

Table 8

Parameters for the inner envelope in Figure 7

Synchronous area	Maximum range of Q/P_{\max}	Maximum range of wsteady-state voltage level in PU
Continental Europe	0,95	0,225
Nordic	0,95	0,150
Great Britain	0,95	0,225
Ireland and Northern Ireland	1,08	0,218
Baltic, Georgia	1,0	0,220

(iii) the reactive power provision capability requirement applies at the connection point. For profile shapes other than rectangular, the voltage range represents the highest and lowest values. The full reactive power range is therefore not expected to be available across the range of steady-state voltages;

(iv) the synchronous power-generating module shall be capable of moving to any operating point within its $U-Q/P_{\max}$ profile in appropriate timescales to target values requested by the relevant system operator;

(c) with regard to reactive power capability below maximum capacity, when operating at an active power output below the maximum capacity ($P < P_{\max}$), the synchronous power-generating modules shall be capable of operating at every possible operating point in the P-Q-capability diagram of the alternator of that synchronous power-generating module, at least down to minimum stable operating level. Even at reduced active power output, reactive power supply at the connection point shall correspond fully to the P-Q-capability diagram of the alternator of that synchronous power-generating module, taking the auxiliary supply power and the active and reactive power losses of the step-up transformer, if applicable, into account.

Article 19**Requirements for type D synchronous power-generating modules**

1. Type D synchronous power-generating modules shall fulfil the requirements laid down in Article 13, except for Article 13(2)(b), (6) and (7), Article 14 except for Article 14(2), Article 15, except for Article 15(3), Article 16, Article 17, except for Article 17(2) and Article 18.

2. Type D synchronous power-generating modules shall fulfil the following additional requirements in relation to voltage stability:

(a) the parameters and settings of the components of the voltage control system shall be agreed between the power-generating facility owner and the relevant system operator, in coordination with the relevant TSO;

(b) the agreement referred to in subparagraph (a) shall cover the specifications and performance of an automatic voltage regulator ('AVR') with regard to steady-state voltage and transient voltage control and the specifications and performance of the excitation control system. The latter shall include:

(i) bandwidth limitation of the output signal to ensure that the highest frequency of response cannot excite torsional oscillations on other power-generating modules connected to the network;

- (ii) an underexcitation limiter to prevent the AVR from reducing the alternator excitation to a level which would endanger synchronous stability;
 - (iii) an overexcitation limiter to ensure that the alternator excitation is not limited to less than the maximum value that can be achieved whilst ensuring that the synchronous power-generating module is operating within its design limits;
 - (iv) a stator current limiter; and
 - (v) a PSS function to attenuate power oscillations, if the synchronous power-generating module size is above a value of maximum capacity specified by the relevant TSO.
3. The relevant TSO and the power-generating facility owner shall enter into an agreement regarding technical capabilities of the power-generating module to aid angular stability under fault conditions.

CHAPTER 3

Requirements for power park modules

Article 20

Requirements for type B power park modules

1. Type B power park modules shall fulfil the requirements laid down in Articles 13, except for Article 13(2)(b), and Article 14.
2. Type B power park modules shall fulfil the following additional requirements in relation to voltage stability:
 - (a) with regard to reactive power capability, the relevant system operator shall have the right to specify the capability of a power park module to provide reactive power;
 - (b) the relevant system operator in coordination with the relevant TSO shall have the right to specify that a power park module be capable of providing fast fault current at the connection point in case of symmetrical (3-phase) faults, under the following conditions:
 - (i) the power park module shall be capable of activating the supply of fast fault current either by:
 - ensuring the supply of the fast fault current at the connection point, or
 - measuring voltage deviations at the terminals of the individual units of the power park module and providing a fast fault current at the terminals of these units;
 - (ii) the relevant system operator in coordination with the relevant TSO shall specify:
 - how and when a voltage deviation is to be determined as well as the end of the voltage deviation,
 - the characteristics of the fast fault current, including the time domain for measuring the voltage deviation and fast fault current, for which current and voltage may be measured differently from the method specified in Article 2,
 - the timing and accuracy of the fast fault current, which may include several stages during a fault and after its clearance;
 - (c) with regard to the supply of fast fault current in case of asymmetrical (1-phase or 2-phase) faults, the relevant system operator in coordination with the relevant TSO shall have the right to specify a requirement

for asymmetrical current injection.

3. Type B power park modules shall fulfil the following additional requirements in relation to robustness:

(a) the relevant TSO shall specify the post-fault active power recovery that the power park module is capable of providing and shall specify:

- (i) when the post-fault active power recovery begins, based on a voltage criterion;
- (ii) a maximum allowed time for active power recovery; and
- (iii) a magnitude and accuracy for active power recovery;

(b) the specifications shall be in accordance with the following principles:

- (i) interdependency between fast fault current requirements according to points (b) and (c) of paragraph 2 and active power recovery;
- (ii) dependence between active power recovery times and duration of voltage deviations;
- (iii) a specified limit of the maximum allowed time for active power recovery;
- (iv) adequacy between the level of voltage recovery and the minimum magnitude for active power recovery; and
- (v) adequate damping of active power oscillations.

Article 21

Requirements for type C power park modules

1. Type C power park modules shall fulfil the requirements listed in Articles 13, except for Article 13(2)(b) and (6), Article 14, except for Article 14(2), Article 15 and Article 20, except for Article 20(2)(a), unless referred to otherwise in point (v) of paragraph 3(d).

2. Type C power park modules shall fulfil the following additional requirements in relation to frequency stability:

- (a) the relevant TSO shall have the right to specify that power park modules be capable of providing synthetic inertia during very fast frequency deviations;
- (b) the operating principle of control systems installed to provide synthetic inertia and the associated performance parameters shall be specified by the relevant TSO.

3. Type C power park modules shall fulfil the following additional requirements in relation to voltage stability:

(a) with regard to reactive power capability, the relevant system operator may specify supplementary reactive power to be provided if the connection point of a power park module is neither located at the high-voltage terminals of the step-up transformer to the voltage level of the connection point nor at the convertor terminals, if no step-up transformer exists. This supplementary reactive power shall compensate the reactive power demand of the high-voltage line or cable between the high-voltage terminals of the step-up transformer of the power park module or its convertor terminals, if no step-up transformer exists, and the connection point and shall be provided by the responsible owner of that line or cable.

(b) with regard to reactive power capability at maximum capacity:

- (i) the relevant system operator in coordination with the relevant TSO shall specify the reactive power

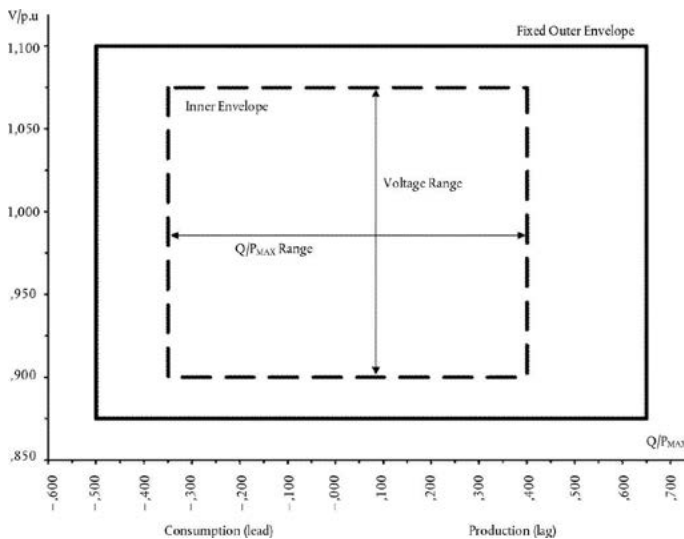
provision capability requirements in the context of varying voltage. To that end, it shall specify a $U-Q/P_{\max}$ -profile that may take any shape within the boundaries of which the power park module shall be capable of providing reactive power at its maximum capacity;

(ii) the $U-Q/P_{\max}$ -profile shall be specified by each relevant system operator in coordination with the relevant TSO in conformity with the following principles:

- the $U-Q/P_{\max}$ -profile shall not exceed the $U-Q/P_{\max}$ -profile envelope, represented by the inner envelope in Figure 8,
- the dimensions of the $U-Q/P_{\max}$ -profile envelope (Q/P_{\max} range and voltage range) shall be within the values specified for each synchronous area in Table 9,
- the position of the $U-Q/P_{\max}$ -profile envelope shall be within the limits of the fixed outer envelope set out in Figure 8, and
- the specified $U-Q/P_{\max}$ profile may take any shape, having regard to the potential costs of delivering the capability to provide reactive power production at high voltages and reactive power consumption at low voltages;

Figure 8

$U-Q/P_{\max}$ -profile of a power park module



The diagram represents boundaries of a $U-Q/P_{\max}$ -profile by the voltage at the connection point, expressed by the ratio of its actual value and its reference 1 pu value, against the ratio of the reactive power (Q) and the maximum capacity (P_{\max}). The position, size and shape of the inner envelope are indicative.

Table 9

Parameters for the inner envelope in Figure 8

Synchronous area	Maximum range of Q/P_{\max}	Maximum range of steady-state voltage level in PU
Continental Europe	0,75	0,225
Nordic	0,95	0,150
Great Britain	0,66	0,225
Ireland and Northern Ireland	0,66	0,218
Baltic, Georgia	0,80	0,220

(iii) the reactive power provision capability requirement applies at the connection point. For profile shapes other than rectangular, the voltage range represents the highest and lowest values. The full reactive power range is therefore not expected to be available across the range of steady-state voltages;

(c) with regard to reactive power capability below maximum capacity:

(i) the relevant system operator in coordination with the relevant TSO shall specify the reactive power provision capability requirements and shall specify a $P-Q/P_{\max}$ -profile that may take any shape within the boundaries of which the power park module shall be capable of providing reactive power below maximum capacity;

(ii) the $P-Q/P_{\max}$ -profile shall be specified by each relevant system operator in coordination with the relevant TSO, in conformity with the following principles:

- the $P-Q/P_{\max}$ -profile shall not exceed the $P-Q/P_{\max}$ -profile envelope, represented by the inner envelope in Figure 9,

- the Q/P_{\max} range of the $P-Q/P_{\max}$ -profile envelope is specified for each synchronous area in Table 9,

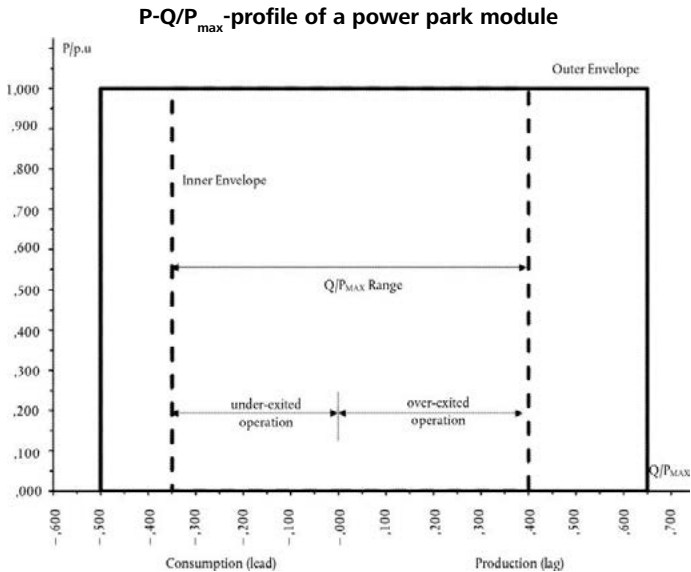
- the active power range of the $P-Q/P_{\max}$ -profile envelope at zero reactive power shall be 1 pu,

- the $P-Q/P_{\max}$ -profile can be of any shape and shall include conditions for reactive power capability at zero active power, and

- the position of the $P-Q/P_{\max}$ -profile envelope shall be within the limits of the fixed outer envelope set out in Figure 9;

(iii) when operating at an active power output below maximum capacity ($P < P_{\max}$), the power park module shall be capable of providing reactive power at any operating point inside its $P-Q/P_{\max}$ -profile, if all units of that power park module which generate power are technically available that is to say they are not out of service due to maintenance or failure, otherwise there may be less reactive power capability, taking into consideration the technical availabilities;

Figure 9



The diagram represents boundaries of a P-Q/P_{max}-profile at the connection point by the active power, expressed by the ratio of its actual value and the maximum capacity pu, against the ratio of the reactive power (Q) and the maximum capacity (P_{max}). The position, size and shape of the inner envelope are indicative.

- (iv) the power park module shall be capable of moving to any operating point within its P-Q/P_{max} profile in appropriate timescales to target values requested by the relevant system operator;
- (d) with regard to reactive power control modes:

(i) the power park module shall be capable of providing reactive power automatically by either voltage control mode, reactive power control mode or power factor control mode;

(ii) for the purposes of voltage control mode, the power park module shall be capable of contributing to voltage control at the connection point by provision of reactive power exchange with the network with a setpoint voltage covering 0,95 to 1,05 pu in steps no greater than 0,01 pu, with a slope having a range of at least 2 to 7% in steps no greater than 0,5%. The reactive power output shall be zero when the grid voltage value at the connection point equals the voltage setpoint;

(iii) the setpoint may be operated with or without a deadband selectable in a range from zero to $\pm 5\%$ of reference 1 pu network voltage in steps no greater than 0,5%;

(iv) following a step change in voltage, the power park module shall be capable of achieving 90% of the change in reactive power output within a time t1 to be specified by the relevant system operator in the range of 1 to 5 seconds, and must settle at the value specified by the slope within a time t2 to be specified by the relevant system operator in the range of 5 to 60 seconds, with a steady-state reactive tolerance no greater than 5% of the maximum reactive power. The relevant system operator shall specify the time specifications;

(v) for the purpose of reactive power control mode, the power park module shall be capable of setting the reactive power setpoint anywhere in the reactive power range, specified by point (a) of Article 20(2)

and by points (a) and (b) of Article 21(3), with setting steps no greater than 5 MVar or 5% (whichever is smaller) of full reactive power, controlling the reactive power at the connection point to an accuracy within plus or minus 5 MVar or plus or minus 5% (whichever is smaller) of the full reactive power;

(vi) for the purpose of power factor control mode, the power park module shall be capable of controlling the power factor at the connection point within the required reactive power range, specified by the relevant system operator according to point (a) of Article 20(2) or specified by points (a) and (b) of Article 21(3), with a target power factor in steps no greater than 0,01. The relevant system operator shall specify the target power factor value, its tolerance and the period of time to achieve the target power factor following a sudden change of active power output. The tolerance of the target power factor shall be expressed through the tolerance of its corresponding reactive power. This reactive power tolerance shall be expressed by either an absolute value or by a percentage of the maximum reactive power of the power park module;

(vii) the relevant system operator, in coordination with the relevant TSO and with the power park module owner, shall specify which of the above three reactive power control mode options and associated setpoints is to apply, and what further equipment is needed to make the adjustment of the relevant setpoint operable remotely;

(e) with regard to prioritising active or reactive power contribution, the relevant TSO shall specify whether active power contribution or reactive power contribution has priority during faults for which fault-ride-through capability is required. If priority is given to active power contribution, this provision has to be established no later than 150 ms from the fault inception;

(f) with regard to power oscillations damping control, if specified by the relevant TSO a power park module shall be capable of contributing to damping power oscillations. The voltage and reactive power control characteristics of power park modules must not adversely affect the damping of power oscillations.

Article 22

Requirements for type D power park modules

Type D power park modules shall fulfil the requirements listed in Articles 13, except for Article 13(2)(b), (6) and (7), Article 14, except for Article 14(2), Article 15, except for Article 15(3), Article 16, Article 20 except for Article 20(2)(a) and Article 21.

CHAPTER 4

Requirements for offshore power park modules

Article 23

General provisions

1. The requirements set out in this Chapter apply to the connection to the network of AC-connected power park modules located offshore. An AC-connected power park module located offshore which does not have an offshore connection point shall be considered as an onshore power park module and thus shall

comply with the requirements governing power park modules situated onshore.

2. The offshore connection point of an AC-connected offshore power park module shall be specified by the relevant system operator.

3. AC-connected offshore power park modules within the scope of this Regulation shall be categorised in accordance with the following offshore grid connection system configurations:

(a) configuration 1: AC connection to a single onshore grid interconnection point whereby one or more offshore power park modules that are interconnected offshore to form an offshore AC system are connected to the onshore system;

(b) configuration 2: meshed AC connections whereby a number of offshore power park modules are interconnected offshore to form an offshore AC system and the offshore AC system is connected to the onshore system at two or more onshore grid interconnection points.

Article 24

Frequency stability requirements applicable to AC-connected offshore power park modules

The frequency stability requirements laid down respectively in Article 13(1) to (5), except for Article 13(2) (b), Article 15(2) and Article 21(2) shall apply to any AC-connected offshore power park module.

Article 25

Voltage stability requirements applicable to AC-connected offshore power park modules

1. Without prejudice to point (a) of Article 14(3) and point (a) of Article 16(3), an AC-connected offshore power park module shall be capable of staying connected to the network and operating within the ranges of the network voltage at the connection point, expressed by the voltage at the connection point related to reference 1 pu voltage, and for the time periods specified in Table 10.

2. Notwithstanding the provisions of paragraph 1, the relevant TSO in Spain may require AC-connected offshore power park modules to remain connected to the network in the voltage range between 1,05 pu and 1,0875 pu for an unlimited period.

3. Notwithstanding the provisions of paragraph 1, the relevant TSOs in the Baltic synchronous area may require AC-connected offshore power park modules to remain connected to the 400 kV network in the voltage range and for the time periods that apply to the Continental Europe synchronous area.

Table 10

Synchronous area	Voltage range	Time period for operation
Continental Europe	0,85 pu–0,90 pu	60 minutes
	0,9 pu–1,118 pu	Unlimited
	1,118 pu–1,15 pu	To be specified by each TSO, but not less than 20 minutes and not more than 60 minutes
	0,90 pu–1,05 pu	Unlimited
	1,05 pu–1,10 pu	To be specified by each TSO, but not less than 20 minutes and not more than 60 minutes
Nordic	0,90 pu–1,05 pu	Unlimited
	1,05 pu–1,10 pu	60 minutes
	1,05 pu–1,10 pu	To be specified by each TSO, but not more than 60 minutes
Great Britain	0,90 pu–1,10 pu (‘)	Unlimited
	0,90 pu–1,05 pu	Unlimited
	1,05 pu–1,10 pu	15 minutes
Ireland and Northern Ireland	0,90 pu–1,10 pu	Unlimited
Baltic	0,85 pu–0,90 pu	30 minutes
	0,90 pu–1,118 pu_	Unlimited
	1,118 pu–1,15 pu	20 minutes
	0,88 pu–0,90 pu_	20 minutes
	0,90 pu–1,097 pu	Unlimited
	1,097 pu–1,15 pu	20 minutes

The table shows the minimum period during which an AC-connected offshore power park module must be capable of operating over different voltage ranges deviating from the reference 1 pu value without disconnecting.

4. The voltage stability requirements specified respectively in points (b) and (c) of Article 20(2) as well as in Article 21(3) shall apply to any AC-connected offshore power park module.
5. The reactive power capability at maximum capacity specified in point (b) of Article 21(3) shall apply to AC-connected offshore power park modules, except for Table 9. Instead, the requirements of Table 11 shall apply.

Table 11

Parameters for Figure 8

Synchronous area	Maximum range of Q/P_{\max}	Maximum range of steady-state voltage level in PU
Continental Europe	0,75	0,225
Nordic	0,95	0,150
Great Britain	0_ 0,33_	0,225
Ireland and Northern Ireland	0,66	0,218
Baltic	0,8	0,22

Article 26**Robustness requirements applicable to AC-connected offshore power park modules**

1. The robustness requirements of power-generating modules laid down in Article 15(4) and Article 20(3) shall apply to AC-connected offshore power park modules.
2. The fault-ride-through capability requirements laid down in point (a) of Article 14(3) and point (a) of Article 16(3) shall apply to AC-connected offshore power park modules.

Article 27**System restoration requirements applicable to AC-connected offshore power park modules**

The system restoration requirements laid down respectively in Article 14(4) and Article 15(5) shall apply to AC-connected offshore power park modules.

Article 28**General system management requirements applicable to AC-connected offshore power park modules**

The general system management requirements laid down in Article 14(5), Article 15(6) and Article 16(4) shall apply to AC-connected offshore power park modules.

TITLE III

OPERATIONAL NOTIFICATION PROCEDURE FOR CONNECTION

CHAPTER 1

Connection of new power-generating modules

Article 29

General provisions

1. The power-generating facility owner shall demonstrate to the relevant system operator that it has complied with the requirements set out in Title II of this Regulation by completing successfully the operational notification procedure for connection of each power-generating module described in Articles 30 to 37.
2. The relevant system operator shall clarify and make publicly available the details of the operational notification procedure.

Article 30

Operational notification of type A power-generating modules

1. The operational notification procedure for connection of each new type A power-generating module shall consist of submitting an installation document. The power-generating facility owner shall ensure that the required information is filled in on an installation document obtained from the relevant system operator and is submitted to the system operator. Separate installation documents shall be provided for each power-generating module within the power-generating facility.

The relevant system operator shall ensure that the required information can be submitted by third parties on behalf of the power-generating facility owner.

2. The relevant system operator shall specify the content of the installation document, which shall have at least the following information:
 - (a) the location at which the connection is made;
 - (b) the date of the connection;
 - (c) the maximum capacity of the installation in kW;
 - (d) the type of primary energy source;
 - (e) the classification of the power-generating module as an emerging technology according to Title VI of this Regulation;
 - (f) reference to equipment certificates issued by an authorised certifier used for equipment that is in the site installation;
 - (g) as regards equipment used, for which an equipment certificate has not been received, information shall be provided as directed by the relevant system operator; and
 - (h) the contact details of the power-generating facility owner and the installer and their signatures.

3. The power-generating facility owner shall ensure that the relevant system operator or the competent authority of the **Contracting Party** is notified about the permanent decommissioning of a power-generating module in accordance with national legislation.

The relevant system operator shall ensure that such notification can be made by third parties, including aggregators.

Article 31

Operational notification of type B, C and D power-generating modules

The operational notification procedure for connection of each new type B, C and D power-generating module shall allow the use of equipment certificates issued by an authorised certifier.

Article 32

Procedure for type B and C power-generating modules

1. For the purpose of operational notification for connection of each new type B and C power-generating module, a power-generating module document ('PGMD') shall be provided by the power-generating facility owner to the relevant system operator and shall include a statement of compliance.

For each power-generating module within the power-generating facility, separate independent PGMDs shall be provided.

2. The format of the PGMD and the information to be given therein shall be specified by the relevant system operator. The relevant system operator shall have the right to request that the power-generating facility owner include the following in the PGMD:

(a) evidence of an agreement on the protection and control settings relevant to the connection point between the relevant system operator and the power-generating facility owner;

(b) itemised statement of compliance;

(c) detailed technical data of the power-generating module with relevance to the grid connection as specified by the relevant system operator;

(d) equipment certificates issued by an authorised certifier in respect of power-generating modules, where these are relied upon as part of the evidence of compliance;

(e) for Type C power-generating modules, simulation models pursuant to point (c) of Article 15(6);

(f) compliance test reports demonstrating steady-state and dynamic performance as required by Chapters 2, 3 and 4 of Title IV, including use of actual measured values during testing, to the level of detail required by the relevant system operator; and

(g) studies demonstrating steady-state and dynamic performance as required by Chapters 5, 6 or 7 of Title IV, to the level of detail required by the relevant system operator.

3. The relevant system operator, on acceptance of a complete and adequate PGMD, shall issue a final operational notification to the power-generating facility owner.

4. The power-generating facility owner shall notify the relevant system operator or the competent authority of the **Contracting Party** about the permanent decommissioning of a power-generating module in accordance with national legislation.
5. Where applicable, the relevant system operator shall ensure that the commissioning and decommissioning of Type B and Type C power-generating modules can be notified electronically.
6. **Contracting Parties** may provide that the PGMD shall be issued by an authorised certifier.

Article 33

Procedure for type D power-generating modules

The operational notification procedure for connection of each new type D power-generating module shall comprise:

- (a) energisation operational notification ('EON');
- (b) interim operational notification ('ION'); and
- (c) final operational notification ('FON').

Article 34

Energisation operational notification for type D power-generating modules

1. An EON shall entitle the power-generating facility owner to energise its internal network and auxiliaries for the power-generating modules by using the grid connection that is specified for the connection point.
2. An EON shall be issued by the relevant system operator, subject to completion of preparations including agreement on the protection and control settings relevant to the connection point between the relevant system operator and the power-generating facility owner.

Article 35

Interim operational notification for type D power-generating modules

1. An ION shall entitle the power-generating facility owner to operate the power-generating module and generate power by using the grid connection for a limited period of time.
2. An ION shall be issued by the relevant system operator, subject to completion of the data and study review process as required by this Article.
3. With regard to the data and study review, the relevant system operator shall have the right to request that the power-generating facility owner provide the following:
 - (a) itemised statement of compliance;
 - (b) detailed technical data on the power-generating module of relevance to the grid connection as specified by the relevant system operator;
 - (c) equipment certificates issued by an authorised certifier in respect of power-generating modules, where

they are relied upon as part of the evidence of compliance;

(d) simulation models, as specified by point (c) of Article 15(6) and required by the relevant system operator;

(e) studies demonstrating the expected steady-state and dynamic performance as required by Chapter 5, 6 or 7 of Title IV; and

(f) details of intended compliance tests in accordance with Chapters 2, 3 and 4 of Title IV.

4. The maximum period during which the power-generating facility owner may maintain ION status shall be 24 months. The relevant system operator is entitled to specify a shorter ION validity period. An extension of the ION shall be granted only if the power-generating facility owner has made substantial progress towards full compliance. Outstanding issues shall be clearly identified at the time of requesting extension.

5. An extension of the period during which the power-generating facility owner may maintain ION status, beyond the period established in paragraph 4, may be granted if a request for a derogation is made to the relevant system operator before the expiry of that period in accordance with the derogation procedure laid down in Article 60.

Article 36

Final operational notification for type D power-generating modules

1. A FON shall entitle the power-generating facility owner to operate a power-generating module by using the grid connection.

2. A FON shall be issued by the relevant system operator, upon prior removal of all incompatibilities identified for the purpose of ION status and subject to completion of the data and study review process as required by this Article.

3. For the purposes of the data and study review, the power-generating facility owner must submit the following to the relevant system operator:

(a) an itemised statement of compliance; and

(b) an update of applicable technical data, simulation models and studies as referred to in points (b), (d) and (e) of Article 35(3), including the use of actual measured values during testing.

4. If incompatibility is identified in connection with the issuing of the FON, a derogation may be granted upon a request made to the relevant system operator, in accordance with the derogation procedure described in Title V. A FON shall be issued by the relevant system operator if the power-generating module complies with the provisions of the derogation.

Where a request for a derogation is rejected, the relevant system operator shall have the right to refuse to allow the operation of the power-generating module until the power-generating facility owner and the relevant system operator resolve the incompatibility and the relevant system operator considers that the power-generating module complies with the provisions of this Regulation.

If the relevant system operator and the power-generating facility owner do not resolve the incompatibility within a reasonable time frame, but in any case not later than six months after the notification of the rejection of the request for a derogation, each party may refer the issue for decision to the regulatory authority.

Article 37**Limited operational notification for type D power-generating modules**

1. Power-generating facility owners to whom a FON has been granted shall inform the relevant system operator immediately in the following circumstances:
 - (a) the facility is temporarily subject to either significant modification or loss of capability affecting its performance; or
 - (b) equipment failure leading to non-compliance with some relevant requirements.
2. The power-generating facility owner shall apply to the relevant system operator for a LON, if the power-generating facility owner reasonably expects the circumstances described in paragraph 1 to persist for more than three months.
3. A LON shall be issued by the relevant system operator and shall contain the following information which shall be clearly identifiable:
 - (a) the unresolved issues justifying the granting of the LON;
 - (b) the responsibilities and timescales for the expected solution; and
 - (c) a maximum period of validity which shall not exceed 12 months. The initial period granted may be shorter with the possibility of an extension if evidence is submitted to the satisfaction of the relevant system operator demonstrating that substantial progress has been made towards achieving full compliance.
4. The FON shall be suspended during the period of validity of the LON with regard to the items for which the LON has been issued.
5. A further extension of the period of validity of the LON may be granted upon a request for a derogation made to the relevant system operator before the expiry of that period, in accordance with the derogation procedure described in Title V.
6. The relevant system operator shall have the right to refuse to allow the operation of the power-generating module, once the LON is no longer valid. In such cases, the FON shall automatically become invalid.
7. If the relevant system operator does not grant an extension of the period of validity of the LON in accordance with paragraph 5 or if it refuses to allow the operation of the power-generating module once the LON is no longer valid in accordance with paragraph 6, the power-generating facility owner may refer the issue for decision to the regulatory authority within six months after the notification of the decision of the relevant system operator.

CHAPTER 2

Cost-benefit analysis

Article 38

Identification of costs and benefits of application of requirements to existing power-generating modules

1. Prior to the application of any requirement set out in this Regulation to existing power-generating modules in accordance with Article 4(3), the relevant TSO shall undertake a qualitative comparison of costs and benefits related to the requirement under consideration. This comparison shall take into account available network-based or market-based alternatives. The relevant TSO may only proceed to undertake a quantitative cost-benefit analysis in accordance with paragraphs 2 to 5, if the qualitative comparison indicates that the likely benefits exceed the likely costs. If, however, the cost is deemed high or the benefit is deemed low, then the relevant TSO shall not proceed further.
2. Following a preparatory stage undertaken in accordance with paragraph 1, the relevant TSO shall carry out a quantitative cost-benefit analysis of any requirement under consideration for application to existing power-generating modules that have demonstrated potential benefits as a result of the preparatory stage according to paragraph 1.
3. Within three months of concluding the cost-benefit analysis, the relevant TSO shall summarise the findings in a report which shall:
 - (a) include the cost-benefit analysis and a recommendation on how to proceed;
 - (b) include a proposal for a transitional period for applying the requirement to existing power-generating modules. That transitional period shall not be more than two years from the date of the decision of the regulatory authority or where applicable the **Contracting Party** on the requirement's applicability;
 - (c) be subject to public consultation in accordance with Article 10.
4. No later than six months after the end of the public consultation, the relevant TSO shall prepare a report explaining the outcome of the consultation and making a proposal on the applicability of the requirement under consideration to existing power-generating modules. The report and proposal shall be notified to the regulatory authority or, where applicable, the **Contracting Party**, and the power-generating facility owner or, where applicable, third party shall be informed on its content.
5. The proposal made by the relevant TSO to the regulatory authority or, where applicable, the **Contracting Party** pursuant to paragraph 4 shall include the following:
 - (a) an operational notification procedure for demonstrating the implementation of the requirements by the existing power-generating facility owner;
 - (b) a transitional period for implementing the requirements which shall take into account the category of the power-generating module as specified in Article 5(2) and Article 23(3) and any underlying obstacles to the efficient implementation of the equipment modification/refitting.

Article 39**Principles of cost-benefit analysis**

1. Power-generating facility owners and DSOs including CDSOs shall assist and contribute to the cost-benefit analysis undertaken according to Articles 38 and 63 and provide the necessary data as requested by the relevant system operator or relevant TSO within three months of receiving a request, unless agreed otherwise by the relevant TSO. For the preparation of a cost-benefit-analysis by a power-generating facility owner, or prospective owner, assessing a potential derogation pursuant to Article 62, the relevant TSO and DSO, including CDSO, shall assist and contribute to the cost-benefit analysis and provide the necessary data as requested by the power-generating facility owner, or the prospective owner, within three months of receiving a request, unless agreed otherwise by the power-generating facility owner or the prospective owner.

2. A cost-benefit analysis shall be in line with the following principles:

(a) the relevant TSO, relevant system operator, power-generating facility owner or prospective owner shall base its cost-benefit analysis on one or more of the following calculating principles:

- (i) the net present value;
- (ii) the return on investment;
- (iii) the rate of return;
- (iv) the time needed to break even;

(b) the relevant TSO, relevant system operator, power-generating facility owner or prospective owner shall also quantify socioeconomic benefits in terms of improvement in security of supply and shall include at least:

- (i) the associated reduction in probability of loss of supply over the lifetime of the modification;
- (ii) the probable extent and duration of such loss of supply;
- (iii) the societal cost per hour of such loss of supply;

(c) the relevant TSO, relevant system operator, power-generating facility owner or prospective owner shall quantify the benefits to the internal market in electricity, cross-border trade and integration of renewable energies, including at least:

- (i) the active power frequency response;
- (ii) the balancing reserves;
- (iii) the reactive power provision;
- (iv) congestion management;
- (v) defence measures;

(d) the relevant TSO shall quantify the costs of applying the necessary rules to existing power-generating modules, including at least:

- (i) the direct costs incurred in implementing a requirement;
- (ii) the costs associated with attributable loss of opportunity;
- (iii) the costs associated with resulting changes in maintenance and operation.

TITLE IV COMPLIANCE

CHAPTER 1 Compliance monitoring

Article 40

Responsibility of the power-generating facility owner

1. The power-generating facility owner shall ensure that each power-generating module complies with the requirements applicable under this Regulation throughout the lifetime of the facility. For type A power-generating modules, the power-generating facility owner may rely upon equipment certificates <...>
2. The power-generating facility owner shall notify to the relevant system operator any planned modification of the technical capabilities of a power-generating module which may affect its compliance with the requirements applicable under this Regulation, before initiating that modification.
3. The power-generating facility owner shall notify the relevant system operator of any operational incidents or failures of a power-generating module that affect its compliance with the requirements of this Regulation, without undue delay, after the occurrence of those incidents.
4. The power-generating facility owner shall notify the relevant system operator of the planned test schedules and procedures to be followed for verifying the compliance of a power-generating module with the requirements of this Regulation, in due time and prior to their launch. The relevant system operator shall approve in advance the planned test schedules and procedures. Such approval by the relevant system operator shall be provided in a timely manner and shall not be unreasonably withheld.
5. The relevant system operator may participate in such tests and record the performance of the power-generating modules.

Article 41

Tasks of the relevant system operator

1. The relevant system operator shall assess the compliance of a power-generating module with the requirements applicable under this Regulation, throughout the lifetime of the power-generating facility. The power-generating facility owner shall be informed of the outcome of this assessment.
For type A power-generating modules, the relevant system operator may rely upon equipment certificates issued by an authorised certifier for this assessment.
2. The relevant system operator shall have the right to request that the power-generating facility owner carry out compliance tests and simulations according to a repeat plan or general scheme or after any failure, modification or replacement of any equipment that may have an impact on the power-generating module's compliance with the requirements of this Regulation.

The power-generating facility owner shall be informed of the outcome of those compliance tests and

simulations.

3. The relevant system operator shall make publicly available a list of information and documents to be provided as well as the requirements to be fulfilled by the power-generating facility owner within the framework of the compliance process. The list shall cover at least the following information, documents and requirements:

- (a) all the documentation and certificates to be provided by the power-generating facility owner;
- (b) details of the technical data on the power-generating module of relevance to the grid connection;
- (c) requirements for models for steady-state and dynamic system studies;
- (d) timeline for the provision of system data required to perform the studies;
- (e) studies by the power-generating facility owner to demonstrate the expected steady-state and dynamic performance in accordance with the requirements set out in Chapters 5 and 6 of Title IV;
- (f) conditions and procedures, including the scope, for registering equipment certificates; and
- (g) conditions and procedures for the use of relevant equipment certificates issued by an authorised certifier by the power-generating facility owner.

4. The relevant system operator shall make public the allocation of responsibilities between the power-generating facility owner and the system operator for compliance testing, simulation and monitoring.

5. The relevant system operator may totally or partially delegate the performance of its compliance monitoring to third parties. In such cases, the relevant system operator shall continue ensuring compliance with Article 12, including entering into confidentiality commitments with the assignee.

6. If compliance tests or simulations cannot be carried out as agreed between the relevant system operator and the power-generating facility owner due to reasons attributable to the relevant system operator, then the relevant system operator shall not unreasonably withhold the operational notification referred to in Title III.

Article 42

Common provisions for compliance testing

1. Testing of the performance of individual power-generating modules within a power-generating facility shall aim at demonstrating that the requirements of this Regulation have been complied with.

2. Notwithstanding the minimum requirements for compliance testing set out in this Regulation, the relevant system operator is entitled to:

- (a) allow the power-generating facility owner to carry out an alternative set of tests, provided that those tests are efficient and suffice to demonstrate that a power-generating module complies with the requirements of this Regulation;
- (b) require the power-generating facility owner to carry out additional or alternative sets of tests in those cases where the information supplied to the relevant system operator in relation to compliance testing under the provisions of Chapter 2, 3 or 4 of Title IV, is not sufficient to demonstrate compliance with the requirements of this Regulation; and
- (c) require the power-generating facility owner to carry out appropriate tests in order to demonstrate a

power-generating module's performance when operating on alternative fuels or fuel mixes. The relevant system operator and the power-generating facility owner shall agree on which types of fuel are to be tested.

3. The power-generating facility owner is responsible for carrying out the tests in accordance with the conditions laid down in Chapters 2, 3 and 4 of Title IV. The relevant system operator shall cooperate and not unduly delay the performance of the tests.

4. The relevant system operator may participate in the compliance testing either on site or remotely from the system operator's control centre. For that purpose, the power-generating facility owner shall provide the monitoring equipment necessary to record all relevant test signals and measurements as well as ensure that the necessary representatives of the power-generating facility owner are available on site for the entire testing period. Signals specified by the relevant system operator shall be provided if, for selected tests, the system operator wishes to use its own equipment to record performance. The relevant system operator has sole discretion to decide about its participation.

Article 43

Common provisions on compliance simulation

1. Simulation of the performance of individual power-generating modules within a power-generating facility shall aim at demonstrating that the requirements of this Regulation have been fulfilled.

2. Notwithstanding the minimum requirements set out in this Regulation for compliance simulation, the relevant system operator may:

(a) allow the power-generating facility owner to carry out an alternative set of simulations, provided that those simulations are efficient and suffice to demonstrate that a power-generating module complies with the requirements of this Regulation or with national legislation; and

(b) require the power-generating facility owner to carry out additional or alternative sets of simulations in those cases where the information supplied to the relevant system operator in relation to compliance simulation under the provisions of Chapter 5, 6 or 7 of Title IV, is not sufficient to demonstrate compliance with the requirements of this Regulation.

3. To demonstrate compliance with the requirements of this Regulation, the power-generating facility owner shall provide a report with the simulation results for each individual power-generating module within the power-generating facility. The power-generating facility owner shall produce and provide a validated simulation model for a given power-generating module. The scope of the simulation models is set out in point (c) of Article 15(6).

4. The relevant system operator shall have the right to check that a power-generating module complies with the requirements of this Regulation by carrying out its own compliance simulations based on the provided simulation reports, simulation models and compliance test measurements.

5. The relevant system operator shall provide the power-generating facility owner with technical data and a simulation model of the network, to the extent necessary to carry out the requested simulations in accordance with Chapter 5, 6 or 7 of Title IV.

CHAPTER 2

Compliance testing for synchronous power-generating modules

Article 44

Compliance tests for type B synchronous power-generating modules

1. Power-generating facility owners shall undertake LFSM-O response compliance tests in relation to type B synchronous power-generating modules.

Instead of carrying out the relevant test, power-generating facility owners may rely upon equipment certificates issued by an authorised certifier to demonstrate compliance with the relevant requirement. In such a case, the equipment certificates shall be provided to the relevant system operator.

2. The following requirements with regard to the LFSM-O response test shall apply:

(a) the power-generating module's technical capability to continuously modulate active power to contribute to frequency control in case of any large increase of frequency in the system shall be demonstrated. The steady-state parameters of regulations, such as droop and deadband, and dynamic parameters, including frequency step change response shall be verified;

(b) the test shall be carried out by simulating frequency steps and ramps big enough to trigger at least 10% of maximum capacity change in active power, taking into account the droop settings and the deadband. If required, simulated frequency deviation signals shall be injected simultaneously at both the speed governor and load controller of the control systems, taking into account the scheme of those control systems;

(c) the test shall be deemed successful if the following conditions are fulfilled:

- (i) the test results, for both dynamic and static parameters, meet the requirements set out in Article 13(2); and
- (ii) undamped oscillations do not occur after the step change response.

Article 45

Compliance tests for type C synchronous power-generating modules

1. In addition to the compliance tests for type B synchronous power-generating modules described in Article 44, power-generating facility owners shall undertake the compliance tests set out in paragraphs 2, 3, 4 and 6 of this Article in relation to type C synchronous power-generating modules. Where a power-generating module provides black start capability, power-generating facility owners shall also undertake the tests referred to in paragraph 5. Instead of the relevant test, the power-generating facility owner may use equipment certificates issued by an authorised certifier to demonstrate compliance with the relevant requirement. In that case, the equipment certificates shall be provided to the relevant system operator.

2. The following requirements with regard to the LFSM-U response test shall apply:

(a) it shall demonstrate that the power-generating module is technically capable of continuously modulating active power at operating points below maximum capacity to contribute to frequency control in case of a large frequency drop in the system;

(b) the test shall be carried out by simulating appropriate active power load points, with low frequency steps and ramps big enough to trigger active power change of at least 10 % of maximum capacity, taking into account the droop settings and the deadband. If required, simulated frequency deviation signals shall be injected simultaneously into both the speed governor and the load controller references;

(c) the test shall be deemed successful if the following conditions are fulfilled:

- (i) the test results, for both dynamic and static parameters, comply with point (c) of Article 15(2); and
- (ii) undamped oscillations do not occur after the step change response.

3. The following requirements with regard to the FSM response test shall apply:

(a) it shall demonstrate that the power-generating module is technically capable of continuously modulating active power over the full operating range between maximum capacity and minimum regulating level to contribute to frequency control. The steady-state parameters of regulations, such as droop and deadband and dynamic parameters, including robustness through frequency step change response and large, fast frequency deviations shall be verified;

(b) the test shall be carried out by simulating frequency steps and ramps big enough to trigger the whole active power frequency response range, taking into account the settings of droop and deadband, as well as the capability to actually increase or decrease active power output from the respective operating point. If required, simulated frequency deviation signals shall be injected simultaneously into the references of both the speed governor and the load controller of the unit or plant control system;

(c) the test shall be deemed successful if the following conditions are fulfilled:

- (i) the activation time of full active power frequency response range as a result of a frequency step change is no longer than required by point (d) of Article 15(2);
- (ii) undamped oscillations do not occur after the step change response;
- (iii) the initial delay time complies with point (d) of Article 15(2);
- (iv) the droop settings are available within the range specified in point (d) of Article 15(2) and the deadband (threshold) is not higher than the value specified in that Article; and
- (v) the insensitivity of active power frequency response at any relevant operating point does not exceed the requirements set out in point (d) of Article 15(2).

4. With regard to the frequency restoration control test the following requirements shall apply:

(a) the power-generating module's technical capability to participate in frequency restoration control shall be demonstrated and the cooperation of FSM and frequency restoration control shall be checked;

(b) the test shall be deemed successful if the results, for both dynamic and static parameters, comply with the requirements of point (e) of Article 15(2).

5. With regard to the black start capability test the following requirements shall apply:

(a) for power-generating modules with black start capability, this technical capability to start from shut down without any external electrical energy supply shall be demonstrated;

(b) the test shall be deemed successful if the start-up time is kept within the time frame set out in point (iii) of Article 15(5)(a).

6. With regard to the tripping to houseload test the following requirements shall apply:

(a) the power-generating modules' technical capability to trip to and stably operate on house load shall

be demonstrated;

(b) the test shall be carried out at the maximum capacity and nominal reactive power of the power-generating module before load shedding;

(c) the relevant system operator shall have the right to set additional conditions, taking into account point (c) of Article 15(5);

(d) the test shall be deemed successful if tripping to house load is successful, stable houseload operation has been demonstrated in the time period set out in point (c) of Article 15(5) and re-synchronisation to the network has been performed successfully.

7. With regard to the reactive power capability test the following requirements shall apply:

(a) the power-generating module's technical capability to provide leading and lagging reactive power capability in accordance with points (b) and (c) of Article 18(2) shall be demonstrated;

(b) the test shall be deemed successful if the following conditions are fulfilled:

(i) the power-generating module operates at maximum reactive power for at least one hour, both leading and lagging, at:

- minimum stable operating level,
- maximum capacity, and
- an active power operating point between those maximum and minimum levels;

(ii) the power-generating module's capability to change to any reactive power target value within the agreed or decided reactive power range shall be demonstrated.

Article 46

Compliance tests for type D synchronous power-generating modules

1. Type D synchronous power-generating modules are subject to the compliance tests for type B and C synchronous power-generating modules described in Articles 44 and 45.

2. Instead of the relevant test, the power-generating facility owner may use equipment certificates issued by an authorised certifier to demonstrate compliance with the relevant requirement. In such a case, the equipment certificates shall be provided to the relevant system operator.

CHAPTER 3

Compliance testing for power park modules

Article 47

Compliance tests for type B power park modules

1. Power-generating facility owners shall undertake LFSM-O response compliance tests in relation to type B power park modules.

Instead of the relevant test, the power-generating facility owner may use equipment certificates issued by an

authorised certifier to demonstrate compliance with the relevant requirement. In that case, the equipment certificates shall be provided to the relevant system operator.

2. With regard to type B power park modules, the LFSM-O response tests shall reflect the choice of control scheme selected by the relevant system operator.

3. With regard to the LFSM-O response tests the following requirements shall apply:

(a) the power park module's technical capability to continuously modulate active power to contribute to frequency control in case of increase of frequency in the system shall be demonstrated. The steady-state parameters of regulations, such as droop and deadband, and dynamic parameters shall be verified;

(b) the test shall be carried out by simulating frequency steps and ramps big enough to trigger at least 10% of maximum capacity change in active power, taking into account the droop settings and the deadband. To perform this test simulated frequency deviation signals shall be injected simultaneously into the control system references;

(c) the test shall be deemed successful in the event that the test results, for both dynamic and static parameters, comply with the requirements set out in Article 13(2).

Article 48

Compliance tests for type C power park modules

1. In addition to the compliance tests for type B power park modules described in Article 47, power-generating facility owners shall undertake the compliance tests set out in paragraphs 2 to 9 in relation to type C power park modules. Instead of the relevant test, the power-generating facility owner may use equipment certificates issued by an authorised certifier to demonstrate compliance with the relevant requirement. In such a case, the equipment certificate shall be provided to the relevant system operator.

2. With regard to the active power controllability and control range test the following requirements shall apply:

(a) the power park module's technical capability to operate at a load level below the setpoint set by the relevant system operator or the relevant TSO shall be demonstrated;

(b) the test shall be deemed successful if the following conditions are fulfilled:

(i) the load level of the power park module is kept below the setpoint;

(ii) the setpoint is implemented according to the requirements laid down in Article 15(2)(a); and

(iii) the accuracy of the regulation complies with the value specified in point (a) of Article 15(2).

3. With regard to the LFSM-U response test the following requirements shall apply:

(a) the power park module's technical capability to continuously modulate active power to contribute to frequency control in case of a large frequency drop in the system shall be demonstrated;

(b) the test shall be carried out by simulating the frequency steps and ramps big enough to trigger at least 10% of maximum capacity active power change with a starting point of no more than 80% of maximum capacity, taking into account the droop settings and the deadband;

(c) the test shall be deemed successful if the following conditions are fulfilled:

(i) the test results, for both dynamic and static parameters, comply with the requirements laid down in Article 15(2)(c); and

(ii) undamped oscillations do not occur after the step change response.

4. With regard to the FSM response test the following requirements shall apply:

(a) the power park module's technical capability to continuously modulate active power over the full operating range between maximum capacity and minimum regulating level to contribute to frequency control shall be demonstrated. The steady-state parameters of regulations, such as insensitivity, droop, deadband and range of regulation, as well as dynamic parameters, including frequency step change response shall be verified;

(b) the test shall be carried out by simulating frequency steps and ramps big enough to trigger the whole active power frequency response range, taking into account the droop settings and the deadband. Simulated frequency deviation signals shall be injected to perform the test;

(c) the test shall be deemed successful if the following conditions are fulfilled:

(i) the activation time of the full active power frequency response range as a result of a frequency step change is no longer than that required by point (d) of Article 15(2);

(ii) undamped oscillations do not occur after the step change response;

(iii) the initial delay is in line with point (d) of Article 15(2);

(iv) the droop settings are available within the ranges specified in point (d) of Article 15(2) and the deadband (threshold) is not higher than the value chosen by the relevant TSO; and

(v) the insensitivity of active power frequency response does not exceed the requirement set out in point (d) of Article 15(2).

5. With regard to the frequency restoration control test the following requirements shall apply:

(a) the power park module's technical capability to participate in frequency restoration control shall be demonstrated. The cooperation of both FSM and frequency restoration control shall be checked;

(b) the test shall be deemed successful if the results for both dynamic and static parameters comply with the requirements of point (e) of Article 15(2).

6. With regard to the reactive power capability test the following requirements shall apply:

(a) the power park module's technical capability to provide leading and lagging reactive power capability in accordance with points (b) and (c) of Article 21(3) shall be demonstrated;

(b) it shall be carried out at maximum reactive power, both leading and lagging, and shall verify the following parameters:

(i) operation in excess of 60% of maximum capacity for 30 min;

(ii) operation within the range of 30-50% of maximum capacity for 30 min; and

(iii) operation within the range of 10-20% of maximum capacity for 60 min;

(c) the test shall be deemed successful if the following criteria are fulfilled:

(i) the power park module operates for a duration no shorter than the requested duration at maximum reactive power, both leading and lagging, in each parameter specified in paragraph 6(b);

(ii) the power park module's capability to change to any reactive power target value within the agreed or decided reactive power range is demonstrated; and

(iii) no protection action takes place within the operation limits specified by the reactive power capacity diagram.

7. With regard to the voltage control mode test the following requirements shall apply:

(a) the power park module's capability to operate in voltage control mode referred to in the conditions set out in points (ii) to (iv) of Article 21(3)(d) shall be demonstrated;

(b) The voltage control mode test shall verify the following parameters:

(i) the implemented slope and deadband according to Article 21(3)(d)(iii);

(ii) the accuracy of the regulation;

(iii) the insensitivity of the regulation; and

(iv) the time of reactive power activation;

(c) The test shall be deemed successful if the following conditions are fulfilled:

(i) the range of regulation and adjustable droop and deadband complies with the agreed or decided characteristic parameters set out in point (d) of Article 21(3);

(ii) the insensitivity of voltage control is not higher than 0,01 pu, in accordance with point (d) of Article 21(3); and

(iii) following a step change in voltage, 90% of the change in reactive power output has been achieved within the times and tolerances specified in point (d) of Article 21(3).

8. With regard to the reactive power control mode test the following requirements shall apply:

(a) the power park module's capability to operate in reactive power control mode, in accordance with point (v) of Article 21(3)(d), shall be demonstrated;

(b) the reactive power control mode test shall be complementary to the reactive power capability test;

(c) the reactive power control mode test shall verify the following parameters:

(i) the reactive power setpoint range and increment;

(ii) the accuracy of the regulation; and

(iii) the time of reactive power activation.

(d) the test shall be deemed successful if the following conditions are fulfilled:

(i) the reactive power setpoint range and increment are ensured in accordance with point (d) of Article 21(3); and

(ii) the accuracy of the regulation complies with the conditions set out in point (d) of Article 21(3).

9. With regard to the power factor control mode test the following requirements shall apply:

(a) the power park module's capability to operate in power factor control mode in accordance with point (vi) of Article 21(3)(d) shall be demonstrated;

(b) the power factor control mode test shall verify the following parameters:

(i) the power factor setpoint range;

(ii) the accuracy of the regulation; and

(iii) the response of reactive power due to step change of active power;

(c) the test shall be deemed successful if the following conditions are cumulatively fulfilled:

(i) the power factor setpoint range and increment are ensured in accordance with point (d) of Article 21(3);

(ii) the time of reactive power activation as a result of step active power change does not exceed the requirement laid down in point (d) of Article 21(3); and

(iii) the accuracy of the regulation complies with the value specified in point (d) of Article 21(3).

10. With regard to the tests referred to in paragraphs 7, 8 and 9, the relevant system operator may select only one of the three control options for testing.

Article 49

Compliance tests for type D power park modules

1. Type D power park modules are subject to the compliance tests for type B and C power park modules in accordance with the conditions set out in Articles 47 and 48.

2. Instead of the relevant test, the power-generating facility owner may use equipment certificates issued by an authorised certifier to demonstrate compliance with the relevant requirement. In that case, the equipment certificates shall be provided to the relevant system operator.

CHAPTER 4

Compliance testing for offshore power park modules

Article 50

Compliance tests for offshore power park modules

The compliance tests established in Article 44(2), as well as in paragraphs 2, 3, 4, 5, 7, 8 and 9 of Article 48 shall apply to offshore power park modules.

CHAPTER 5

Compliance simulations for synchronous power-generating modules

Article 51

Compliance simulations for type B synchronous power-generating modules

1. Power-generating facility owners shall undertake LFSM-O response simulations in relation to type B synchronous power-generating modules. Instead of the relevant simulations, the power-generating facility owner may use equipment certificates issued by an authorised certifier to demonstrate compliance with the relevant requirement. In that case, the equipment certificates shall be provided to the relevant system operator.

2. With regard to the LFSM-O response simulation the following requirements shall apply:

(a) the power-generating module's capability to modulate active power at high frequency in accordance with Article 13(2) shall be demonstrated by simulation;

- (b) the simulation shall be carried out by means of high frequency steps and ramps reaching minimum regulating level, taking into account the droop settings and the deadband;
- (c) the simulation shall be deemed successful in the event that:
- (i) the simulation model of the power-generating module is validated against the compliance test for LFSM-O response described in Article 44(2); and
 - (ii) compliance with the requirement set out in Article 13(2) is demonstrated.
3. With regard to the simulation of fault-ride-through capability of type B synchronous power-generating modules, the following requirements shall apply:
- (a) the power-generating module's capability to ride through faults in accordance with the conditions set out in subparagraph (a) of Article 14(3) shall be demonstrated by simulation;
- (b) the simulation shall be deemed successful if compliance with the requirement set out in point (a) of Article 14(3) is demonstrated.
4. With regard to the post fault active power recovery simulation the following requirements shall apply:
- (a) the power-generating module's capability to provide post fault active power recovery referred to in the conditions set out in Article 17(3) shall be demonstrated;
- (b) the simulation shall be deemed successful if compliance with the requirement set out in Article 17(3) is demonstrated.

Article 52

Compliance simulations for type C synchronous power-generating modules

1. In addition to the compliance simulations for type B synchronous power-generating modules set out in Article 51, type C synchronous power-generating modules shall be subject to the compliance simulations detailed in paragraphs 2 to 5. Instead of all or part of those simulations, the power-generating facility owner may use equipment certificates issued by an authorised certifier, which must be provided to the relevant system operator.
2. With regard to the LFSM-U response simulation the following requirements shall apply:
- (a) the power-generating module's capability to modulate active power at low frequencies in accordance with point (c) of Article 15(2) shall be demonstrated;
- (b) the simulation shall be carried out by means of low frequency steps and ramps reaching maximum capacity, taking into account the droop settings and the deadband;
- (c) the simulation shall be deemed successful in the event that:
- (i) the simulation model of the power-generating module is validated against the compliance test for LFSM-U response described in of Article 45(2); and
 - (ii) compliance with the requirement of point (c) of Article 15(2) is demonstrated.
3. With regard to the FSM response simulation the following requirements shall apply:
- (a) the power-generating module's capability to modulate active power over the full frequency range in accordance with point (d) of Article 15(2) shall be demonstrated;

- (b) the simulation shall be carried out by simulating frequency steps and ramps big enough to trigger the whole active power frequency response range, taking into account the droop settings and the deadband;
- (c) the simulation shall be deemed successful in the event that:
- (i) the simulation model of the power-generating module is validated against the compliance test for FSM response described in Article 45(3); and
 - (ii) compliance with the requirement of point (d) of Article 15(2) is demonstrated.
4. With regard to the island operation simulation the following requirements shall apply:
- (a) the power-generating module's performance during island operation referred to in the conditions set out in point (b) of Article 15(5) shall be demonstrated;
- (b) the simulation shall be deemed successful if the power-generating module reduces or increases the active power output from its previous operating point to any new operating point within the P-Q-capability diagram within the limits of point (b) of Article 15(5), without disconnection of the power-generating module from the island due to over- or underfrequency.
5. With regard to the reactive power capability simulation the following requirements shall apply:
- (a) the power-generating module's capability to provide leading and lagging reactive power capability in accordance with the conditions set out in points (b) and (c) of Article 18(2) shall be demonstrated;
- (b) the simulation shall be deemed successful if the following conditions are fulfilled:
- (i) the simulation model of the power-generating module is validated against the compliance tests for reactive power capability described in Article 45(7); and
 - (ii) compliance with the requirements of points (b) and (c) of Article 18(2) is demonstrated.

Article 53

Compliance simulations for type D synchronous power-generating modules

1. In addition to the compliance simulations for type B and C synchronous power-generating modules set out in Articles 51 and 52, except for the simulation of fault-ride-through capability of type B synchronous power-generating modules referred to in Article 51(3), type D synchronous power-generating modules are subject to the compliance simulations set out in paragraphs 2 and 3. Instead of all or part of those simulations, the power-generating facility owner may use equipment certificates issued by an authorised certifier, which must be provided to the relevant system operator.
2. With regard to the power oscillations damping control simulation the following requirements shall apply:
- (a) it shall be demonstrated that the power-generating module's performance in terms of its control system ('PSS function') is capable of damping active power oscillations in accordance with the conditions set out in paragraph 2 of Article 19;
- (b) the tuning must result in improved damping of corresponding active power response of the AVR in combination with the PSS function, compared to the active power response of the AVR alone;
- (c) the simulation shall be deemed successful if the following conditions are cumulatively fulfilled:
- (i) the PSS function damps the existing active power oscillations of the power-generating module within a frequency range specified by the relevant TSO. That frequency range shall include the local mode

frequencies of the power-generating module and the expected network oscillations; and

(ii) a sudden load reduction of the power-generating module from 1 pu to 0,6 pu of the maximum capacity does not lead to undamped oscillations in active or reactive power of the power-generating module.

3. With regard to the simulation of fault-ride-through capability of type D synchronous power-generating modules, the following requirements shall apply:

(a) the power-generating module's capability to provide fault-ride-through in accordance with the conditions set out in point (a) of Article 16(3) shall be demonstrated;

(b) the simulation shall be deemed successful if compliance with the requirement laid down in point (a) of Article 16(3) is demonstrated.

CHAPTER 6

Compliance simulations for power park modules

Article 54

Compliance simulations for type B power park modules

1. Type B power park modules are subject to the compliance simulations in paragraphs 2 to 5. Instead of all or part of those simulations, the power-generating facility owner may use equipment certificates issued by an authorised certifier, which must be provided to the relevant system operator.

2. With regard to the LFSM-O response simulation the following requirements shall apply:

(a) the power park module's capability to modulate active power at high frequency in accordance with Article 13(2) shall be demonstrated;

(b) the simulation shall be carried out by means of high frequency steps and ramps reaching minimum regulating level, taking into account the droop settings and the deadband;

(c) the simulation shall be deemed successful in the event that:

(i) the simulation model of the power park module is validated against the compliance test for LFSM-O response set out in Article 47(3); and

(ii) compliance with the requirement laid down in Article 13(2) is demonstrated.

3. With regard to the fast fault current injection simulation the following requirements shall apply:

(a) the power park module's capability to provide fast fault current injection in accordance with the conditions set out in point (b) of Article 20(2) shall be demonstrated;

(b) the simulation shall be deemed successful if compliance with the requirement laid down in point (b) of Article 20(2) is demonstrated.

4. With regard to the fault-ride-through simulation capability of type B power park modules, the following requirements shall apply:

(a) the power park module's capability to ride through faults in accordance with the conditions set out in point (a) of Article 14(3) shall be demonstrated by simulation;

(b) the simulation shall be deemed successful if compliance with the requirement laid down in point (a) of Article 14(3) is demonstrated.

5. The following requirements with regard to the post fault active power recovery simulation shall apply:

(a) the power park module's capability to provide post fault active power recovery in accordance with the conditions set out in Article 20(3) shall be demonstrated;

(b) the simulation shall be deemed successful if compliance with the requirement laid down in Article 20(3) is demonstrated.

Article 55

Compliance simulations for type C power park modules

1. In addition to the compliance simulations for type B power park modules set out in Article 54, type C power park modules are subject to the compliance simulations set out in paragraphs 2 to 7. Instead of all or part of those simulations, the power-generating facility owner may use equipment certificates issued by an authorised certifier, which must be provided to the relevant system operator.

2. With regard to the LFSM-U response simulation the following requirements shall apply:

(a) the power park module's capability to modulate active power at low frequencies in accordance with point (c) of Article 15(2) shall be demonstrated;

(b) the simulation shall be carried out by simulating low frequency steps and ramps reaching maximum capacity, taking into account the droop settings and the deadband;

(c) the simulation shall be deemed successful in the event that:

(i) the simulation model of the power park module is validated against the compliance test for LFSM-U response set out in Article 48(3); and

(ii) compliance with the requirement laid down in point (c) of Article 15(2) is demonstrated.

3. With regard to the FSM response simulation the following requirements shall apply:

(a) the power park module's capability to modulate active power over the full frequency range as referred to in point (d) of Article 15(2) shall be demonstrated;

(b) the simulation shall be carried out by simulating frequency steps and ramps big enough to trigger the whole active power frequency response range, taking into account the droop settings and the deadband;

(c) the simulation shall be deemed successful in the event that:

(i) the simulation model of the power park module is validated against the compliance test for FSM response set out in Article 48(4); and

(ii) compliance with the requirement laid down in point (d) of Article 15(2) is demonstrated.

4. With regard to the island operation simulation, the following requirements shall apply:

(a) the power park module's performance during island operation in accordance with the conditions set out in point (b) of Article 15(5) shall be demonstrated;

(b) the simulation shall be deemed successful in the event that the power park module reduces or increases the active power output from its previous operating point to any new operating point, within the P-Q-ca-

pability diagram and within the limits set out in point (b) of Article 15(5), without disconnection of the power park module from the island due to over- or underfrequency.

5. With regard to the simulation of the capability of providing synthetic inertia, the following requirements shall apply:

(a) the model of the power park module's capability of providing synthetic inertia to a low frequency event as set out in point (a) of Article 21(2) shall be demonstrated;

(b) the simulation shall be deemed successful if the model demonstrates that it complies with the conditions set out in Article 21(2).

6. With regard to the reactive power capability simulation, the following requirements shall apply:

(a) the power park module shall demonstrate that it can provide leading and lagging reactive power capability as set out in points (b) and (c) of Article 21(3);

(b) the simulation shall be deemed successful if the following conditions are cumulatively fulfilled:

(i) the simulation model of the power park module is validated against the compliance tests for reactive power capability set out in paragraph 6 of Article 48; and

(ii) compliance with the requirements laid down in points (b) and (c) of Article 21(3) is demonstrated.

7. With regard to the power oscillations damping control simulation, the following requirements shall apply:

(a) the model of the power park module shall demonstrate that it can provide active power oscillations damping capability accordance with point (f) of Article 21(3);

(b) the simulation shall be deemed successful in the event that the model demonstrates compliance with the conditions described in point (f) of Article 21(3).

Article 56

Compliance simulations for type D power park modules

1. In addition to the compliance simulations for type B and C power park modules set out in Articles 54 and 55, except for the fault-ride-through capability of type B power park modules referred to in Article 54(4), type D power park modules are subject to the fault-ride-through capability of power park modules compliance simulation.

2. Instead of all or part of the simulations mentioned in paragraph 1, the power-generating facility owner may use equipment certificates issued by an authorised certifier, which must be provided to the relevant system operator.

3. The model of the power park module shall demonstrate that it is suitable for simulating the fault-ride-through capability in accordance with point (a) of Article 16(3).

4. The simulation shall be deemed successful if the model demonstrates compliance with the conditions set out in point (a) of Article 16(3).

CHAPTER 7

Compliance simulations for offshore power park modules

Article 57

Compliance simulations applicable to offshore power park modules

The compliance simulations specified in paragraphs 3 and 5 of Article 54 as well as in paragraphs 4, 5 and 7 of Article 55 shall apply to any offshore power park module.

CHAPTER 8

Non-binding guidance and monitoring of implementation

Article 58

Non-binding guidance on implementation

1. <...>

2. <...>

3. The non-binding guidance **published by ENTSO for Electricity** explains the technical issues, conditions and interdependencies which need to be considered when complying with the requirements of this Regulation at national level.

Article 59

Monitoring

1. ENTSO for Electricity shall monitor the implementation of this Regulation <...> **for the Contracting Parties whose TSOs are members of ENTSO for Electricity. The Secretariat and the Energy Community Regulatory Board shall monitor the implementation of this Regulation for the Contracting Parties whose TSOs are not members of ENTSO for Electricity**'. Monitoring **shall take into account the list of relevant information developed by the Agency for the Cooperation of Energy Regulators and it** shall cover in particular the following matters:

(a) identification of any divergences in the national implementation of this Regulation;

(b) assessment of whether the choice of values and ranges in the requirements applicable to power-generating modules under this Regulation continues to be valid.

ENTSO for Electricity shall report its findings to the Secretariat and the Energy Community Regulatory Board. The Secretariat and the Energy Community Regulatory Board shall make available the findings stemming from the monitoring of the implementation of this Regulation.

2. <...>

3. Relevant TSOs shall submit to the **Secretariat, the Energy Community Regulatory Board and ENTSO** for Electricity the information required to perform the tasks referred to in paragraph 1.

Based on a request of the regulatory authority, DSOs shall provide TSOs with information under paragraph 1 unless the information is already obtained by regulatory authorities, **the Secretariat, Energy Community Regulatory Board** or ENTSO-E in relation to their respective implementation monitoring tasks, with the objective of avoiding duplication of information.

4. <...>

TITLE V DEROGATIONS

Article 60

Power to grant derogations

1. Regulatory authorities may, at the request of a power-generating facility owner or prospective owner, relevant system operator or relevant TSO, grant power-generating facility owners or prospective owners, relevant system operators or relevant TSOs derogations from one or more provisions of this Regulation for new and existing power-generating modules in accordance with Articles 61 to 63.

2. Where applicable in a **Contracting Party**, derogations may be granted and revoked in accordance with Articles 61 to 63 by other authorities than the regulatory authority.

Article 61

General provisions

1. Each regulatory authority shall specify, after consulting relevant system operators and power-generating facility owners and other stakeholders whom it deems affected by this Regulation, the criteria for granting derogations pursuant to Articles 62 and 63. It shall publish those criteria on its website and notify them to the **Secretariat** within nine months of the **expiry of the deadline for transposition** of this Regulation. The **Secretariat** may require a regulatory authority to amend the criteria if it considers that they are not in line with this Regulation. This possibility to review and amend the criteria for granting derogations shall not affect the derogations already granted which shall continue to apply until the scheduled expiry date as detailed in the decision granting the exemption.

2. If the regulatory authority deems that it is necessary due to a change in circumstances relating to the evolution of system requirements, it may review and amend at most once every year the criteria for granting derogations in accordance with paragraph 1. Any changes to the criteria shall not apply to derogations for which a request has already been made.

3. The regulatory authority may decide that power-generating modules for which a request for a derogation has been filed pursuant to Articles 62 or 63 do not need to comply with the requirements of this Regulation from which a derogation has been sought from the day of filing the request until the regulatory authority's decision is issued.

Article 62**Request for a derogation by a power-generating facility owner**

1. Power-generating facility owners, or prospective owners, may request a derogation to one or several requirements of this Regulation for power-generating modules within their facilities.
2. A request for a derogation shall be filed with the relevant system operator and include:
 - (a) an identification of the power-generating facility owner, or prospective owner, and a contact person for any communications;
 - (b) a description of the power-generating module or modules for which a derogation is requested;
 - (c) a reference to the provisions of this Regulation from which a derogation is requested and a detailed description of the requested derogation;
 - (d) detailed reasoning, with relevant supporting documents and cost-benefit analysis pursuant to the requirements of Article 39;
 - (e) demonstration that the requested derogation would have no adverse effect on cross-border trade.
3. Within two weeks of receipt of a request for a derogation, the relevant system operator shall confirm to the power-generating facility owner, or prospective owner, whether the request is complete. If the relevant system operator considers that the request is incomplete, the power-generating facility owner, or prospective owner, shall submit the additional required information within one month from the receipt of the request for additional information. If the power-generating facility owner, or prospective owner, does not supply the requested information within that time limit, the request for a derogation shall be deemed withdrawn.
4. The relevant system operator shall, in coordination with the relevant TSO and any affected adjacent DSO or DSOs, assess the request for a derogation and the provided cost-benefit analysis, taking into account the criteria determined by the regulatory authority pursuant to Article 61.
5. If a request for a derogation concerns a type C or D power-generating module connected to a distribution system, including a closed distribution system, the relevant system operator's assessment must be accompanied by an assessment of the request for a derogation by the relevant TSO. The relevant TSO shall provide its assessment within two months of being requested to do so by the relevant system operator.
6. Within six months of receipt of a request for a derogation, the relevant system operator shall forward the request to the regulatory authority and submit the assessment(s) prepared in accordance with paragraphs 4 and 5. That period may be extended by one month where the relevant system operator seeks further information from the power-generating facility owner, or prospective owner and by two months where the relevant system operator requests the relevant TSO to submit an assessment of the request for a derogation.
7. The regulatory authority shall adopt a decision concerning any request for a derogation within six months from the day after it receives the request. That time limit may be extended by three months before its expiry where the regulatory authority requires further information from the power-generating facility owner, or prospective owner, or from any other interested parties. The additional period shall begin when the complete information has been received.
8. The power-generating facility owner, or prospective owner, shall submit any additional information requested by the regulatory authority within two months of such request. If the power-generating facility

owner, or prospective owner, does not supply the requested information within that time limit, the request for a derogation shall be deemed withdrawn unless, before its expiry:

- (a) the regulatory authority decides to provide an extension; or
- (b) the power-generating facility owner, or prospective owner, informs the regulatory authority by means of a reasoned submission that the request for a derogation is complete.

9. The regulatory authority shall issue a reasoned decision concerning a request for a derogation. Where the regulatory authority grants a derogation, it shall specify its duration.

10. The regulatory authority shall notify its decision to the relevant power-generating facility owner, or prospective owner, the relevant system operator and the relevant TSO.

11. A regulatory authority may revoke a decision granting a derogation if the circumstances and underlying reasons no longer apply or upon a reasoned recommendation of the **Secretariat** or reasoned recommendation by the **Energy Community Regulatory Board** pursuant to Article 65(2).

12. For Type A power-generating modules, a request for a derogation under this Article may be made by a third party on behalf of the power-generating facility owner, or prospective owner. Such a request may be for a single power-generating module or multiple, identical power-generating modules. In the case of the latter, and provided the cumulative maximum capacity is specified, the third party may substitute the details required by point (a) of paragraph 2 with their details.

Article 63

Request for a derogation by a relevant system operator or relevant TSO

1. Relevant system operators or relevant TSOs may request derogations for classes of power-generating modules connected or to be connected to their network.

2. Relevant system operators or relevant TSOs shall submit their requests for derogations to the regulatory authority. Each request for a derogation shall include:

- (a) identification of the relevant system operator or relevant TSO, and a contact person for any communications;
- (b) a description of the power-generating modules for which a derogation is requested and the total installed capacity and number of power-generating modules;
- (c) the requirement or requirements of this Regulation for which a derogation is requested, with a detailed description of the requested derogation;
- (d) detailed reasoning, with all relevant supporting documents;
- (e) demonstration that the requested derogation would have no adverse effect on cross-border trade;
- (f) a cost-benefit analysis pursuant to the requirements of Article 39. If applicable, the cost-benefit analysis shall be carried out in coordination with the relevant TSO and any adjacent DSO or DSOs.

3. Where the request for a derogation is submitted by a relevant DSO or CDSO, the regulatory authority shall, within two weeks from the day after receipt of that request, ask the relevant TSO to assess the request for a derogation in the light of the criteria determined by the regulatory authority pursuant to Article 61.

4. Within two weeks from the day after the receipt of such request for assessment, the relevant TSO shall

confirm to the relevant DSO or CDSO whether the request for a derogation is complete. If the relevant TSO considers that it is incomplete, the relevant DSO or CDSO shall submit the required additional information within one month from the receipt of the request for additional information.

5. Within six months of receipt of a request for a derogation, the relevant TSO shall submit to the regulatory authority its assessment, including any relevant documentation. The six-month time limit may be extended by one month where the relevant TSO seeks further information from the relevant DSO or from the relevant CDSO.

6. The regulatory authority shall adopt a decision concerning a request for a derogation within six months from the day after it receives the request. Where the request for a derogation is submitted by the relevant DSO or CDSO, the six-month time limit runs from the day following receipt of the relevant TSO's assessment pursuant to paragraph 5.

7. The six-month time limit referred to in paragraph 6 may, before its expiry, be extended by an additional three months where the regulatory authority requests further information from the relevant system operator requesting the derogation or from any other interested parties. That additional period shall run from the day following the date of receipt of the complete information.

The relevant system operator shall provide any additional information requested by the regulatory authority within two months from the date of the request. If the relevant system operator does not provide the requested additional information within that time limit, the request for a derogation shall be deemed withdrawn unless, before expiry of the time limit:

- (a) the regulatory authority decides to provide an extension; or
- (b) the relevant system operator informs the regulatory authority by means of a reasoned submission that the request for a derogation is complete.

8. The regulatory authority shall issue a reasoned decision concerning a request for a derogation. Where the regulatory authority grants derogation, it shall specify its duration.

9. The regulatory authority shall notify its decision to the relevant system operator requesting the derogation, the relevant TSO, **the Energy Community Regulatory Board and the Secretariat**.

10. Regulatory authorities may lay down further requirements concerning the preparation of requests for derogation by relevant system operators. In doing so, regulatory authorities shall take into account the delineation between the transmission system and the distribution system at the national level and shall consult with system operators, power-generating facility owners and stakeholders, including manufacturers.

11. A regulatory authority may revoke a decision granting a derogation if the circumstances and underlying reasons no longer apply or upon a reasoned recommendation of the **Secretariat** or reasoned recommendation by the **Energy Community Regulatory Board** pursuant to Article 65(2).

Article 64

Register of derogations from the requirements of this Regulation

1. Regulatory authorities shall maintain a register of all derogations they have granted or refused and shall provide the **Energy Community Regulatory Board and the Secretariat** with an updated and consolidated register at least once every six months, a copy of which shall be given to ENTSO for Electricity.

2. The register shall contain, in particular:

- (a) the requirement or requirements for which the derogation is granted or refused;
- (b) the content of the derogation;
- (c) the reasons for granting or refusing the derogation;
- (d) the consequences resulting from granting the derogation.

Article 65

Monitoring of derogations

1. The **Energy Community Regulatory Board and the Secretariat** shall monitor the procedure of granting derogations with the cooperation of the regulatory authorities or relevant authorities of the **Contracting Party**. Those authorities or relevant authorities of the **Contracting Party** shall provide the **Energy Community Regulatory Board and the Secretariat** with all the information necessary for that purpose.

2. The **Energy Community Regulatory Board** may issue a reasoned recommendation to a regulatory authority to revoke a derogation due to a lack of justification. The **Secretariat** may issue a reasoned recommendation to a regulatory authority or relevant authority of the **Contracting Party** to revoke derogation due to a lack of justification.

3. The **Secretariat** may request the **Energy Community Regulatory Board** to report on the application of paragraphs 1 and 2 and to provide reasons for requesting or not requesting derogations to be revoked.

TITLE VI

TRANSITIONAL ARRANGEMENTS FOR EMERGING TECHNOLOGIES

Article 66

Emerging technologies

1. With the exception of Article 30, the requirements of this Regulation shall not apply to power-generating modules classified as an emerging technology, in accordance with the procedures set out in this Title.

2. A power-generating module shall be eligible to be classified as an emerging technology pursuant to Article 69, provided that:

- (a) it is of type A;
- (b) it is a commercially available power-generating module technology; and
- (c) the accumulated sales of the power-generating module technology within a synchronous area at the time of application for classification as an emerging technology do not exceed 25 % of the maximum level of cumulative maximum capacity established pursuant to Article 67(1).

Article 67**Establishment of thresholds for classification as emerging technologies**

1. The maximum level of cumulative maximum capacity of power-generating modules classified as emerging technologies in a synchronous area shall be 0.1% of the annual maximum load in 2014 in that synchronous area.
2. **Contracting Parties** shall ensure that their maximum level of cumulative maximum capacity of power-generating modules classified as emerging technologies is calculated by multiplying the maximum level of cumulative maximum capacity of power-generating modules classified as emerging technologies of a synchronous area with the ratio of annual electrical energy generated in 2014 in the **Contracting Party** to the total annual electrical energy generated in 2014 in the respective synchronous area to which the **Contracting Party** belongs.
For **Contracting Parties** belonging to parts of different synchronous areas, the calculation shall be carried out on a pro rata basis for each of those parts and combined to give the total allocation to that **Contracting Party**.
3. The source of the data for applying this Article shall be the ENTSO for Electricity's Statistical factsheet published in 2015.

Article 68**Application for classification as an emerging technology**

1. Within six months of the **expiry of the deadline for transposition** of this Regulation manufacturers of Type A power-generating modules may submit to the relevant regulatory authority a request for classification of their power-generating module technology as an emerging technology.
2. In connection with a request pursuant to paragraph 1, the manufacturer shall inform the relevant regulatory authority of the accumulated sales of the respective power-generating module technology within each synchronous area at the time of application for classification as an emerging technology.
3. Proof that a request submitted pursuant to paragraph 1 complies with the eligibility criteria laid down in Articles 66 and 67 shall be provided by the manufacturer.
4. Where applicable in a **Contracting Party**, assessment of requests and approval and withdrawal of classification as an emerging technology may be undertaken by authorities other than the regulatory authority.

Article 69**Assessment and approval of requests for classification as an emerging technology**

1. By 12 months of the **expiry of the deadline for transposition** of this Regulation, the relevant regulatory authority shall decide, in coordination with all the other regulatory authorities of a synchronous area, which power-generating modules, if any, should be classified as an emerging technology. Any regulatory authority of the relevant synchronous area may request a prior opinion from the **Energy Community**

Regulatory Board, which shall be issued within three months of receipt of the request. The decision of the relevant regulatory authority shall take into account the opinion of the **Energy Community Regulatory Board**.

2. A list of power-generating modules approved as emerging technologies shall be published by each regulatory authority of a synchronous area.

Article 70

Withdrawal of classification as an emerging technology

1. From the date of the decision of the regulatory authorities pursuant to Article 69(1), the manufacturer of any power-generating module classified as an emerging technology shall submit to the regulatory authority every two months an update of the sales of the module per **Contracting Party** for the past two months. The regulatory authority shall make publicly available the cumulative maximum capacity of power-generating modules classified as emerging technologies.

2. In the event that the cumulative maximum capacity of all power-generating modules classified as emerging technologies connected to networks exceeds the threshold established in Article 67, the classification as an emerging technology shall be withdrawn by the relevant regulatory authority. The withdrawal decision shall be published.

3. Without prejudice to the provisions of paragraphs 1 and 2, all regulatory authorities of a synchronous area may decide in a coordinated manner to withdraw a classification as an emerging technology. The regulatory authorities of the synchronous area concerned may request a prior opinion from the **Energy Community Regulatory Board** which shall be issued within three months of receipt of the request. Where applicable, the coordinated decision of the regulatory authorities shall take into account the opinion of the **Energy Community Regulatory Board**. The withdrawal decision shall be published by each regulatory authority of a synchronous area.

Power-generating modules classified as emerging technologies and connected to the network prior to the date of withdrawal of that classification as an emerging technology shall be considered as existing power-generating modules and shall therefore only be subject to the requirements of this Regulation pursuant to the provisions of Article 4(2) and Articles 38 and 39.

TITLE VII FINAL PROVISIONS

Article 71

Amendment of contracts and general terms and conditions

1. Regulatory authorities shall ensure that all relevant clauses in contracts and general terms and conditions relating to the grid connection of new power-generating modules are brought into compliance with the requirements of this Regulation.

2. All relevant clauses in contracts and relevant clauses of general terms and conditions relating to the grid connection of existing power-generating modules subject to all or some of the requirements of this Regulation in accordance with Article 4(1) shall be amended in order to comply with the requirements of this Regulation. The relevant clauses shall be amended within three years following the decision of the regulatory authority or **Contracting Party** as referred to in Article 4(1).

3. Regulatory authorities shall ensure that national agreements between system operators and owners of new or existing power-generating facilities subject to this Regulation and relating to grid connection requirements for power-generating facilities, in particular in national network codes, reflect the requirements set out in this Regulation.

Article 72

Entry into force¹

1. Each Contracting Party shall transpose Regulation (EU) 2016/631 by no later than by 12 June 2018.

2. Transposition shall be made without changes to the structure and text of Regulation (EU) 2016/1447 other than translation and the adaptations made by the present Decision [2018/03/PHLG-EnC].

3. Each Contracting Party shall notify the Energy Community Secretariat of completed transposition and of any subsequent changes made to the act transposing Regulation (EU) 2016/1447 within two weeks following the adoption of such measures.

4. Articles 4(2) points (a) and (b), 7(4), 58, 59, 61(1), 68(1) and Article 69(1) of Regulation (EU) 2016/631 shall apply as of the expiry of the transposition deadline.

5. Without prejudice to paragraph 4, Regulation (EU) 2016/631 shall be implemented no later than by 12 June 2021.

6. In transposing this Decision [2018/03/PHLG-EnC], Contracting Parties shall task national regulatory authorities with the monitoring of and enforcing compliance with this Decision [2018/03/PHLG-EnC].

¹ Adapted by Article 1 of Permanent High Level Group Decision 2018/03/PHLG-EnC.

REGULATION (EU) 2016/1447 of 26 August 2016 establishing a network code on requirements for grid connection of high voltage direct current systems and direct current-connected power park modules

Incorporated and adapted by Permanent High Level Group Decision 2018/04/PHLG-EnC of 12 January 2018

*The adaptations made by Permanent High Level Group Decision 2018/04/PHLG-EnC are highlighted in **bold and blue**.*

TITLE I GENERAL PROVISIONS

Article 1

Subject matter

This Regulation establishes a network code which lays down the requirements for grid connections of high-voltage direct current (HVDC) systems and DC-connected power park modules. It, therefore, helps to ensure fair conditions of competition in the internal electricity market, to ensure system security and the integration of renewable electricity sources, and to facilitate **Energy Community**-wide trade in electricity. This regulation also lays down the obligations for ensuring that system operators make appropriate use of HVDC systems and DC-connected power park modules capabilities in a transparent and non-discriminatory manner to provide a level playing field throughout the **Energy Community**.

Article 2

Definitions

For the purposes of this Regulation, the definitions in Article 2 of Regulation (EC) No 714/2009, <...>, Article 2 of Commission Regulation (EU) No 543/2013, Article 2 of Commission Regulation (EU) 2016/631, Article 2 of Commission Regulation (EU) 2016/1388 and Article 2 of Directive 2009/72/EC shall apply. In addition, the following definitions shall apply:

- (1) 'HVDC system' means an electrical power system which transfers energy in the form of high-voltage direct current between two or more alternating current (AC) buses and comprises at least two HVDC converter stations with DC transmission lines or cables between the HVDC converter stations;
- (2) 'DC-connected power park module' means a power park module that is connected via one or more HVDC interface points to one or more HVDC systems;
- (3) 'embedded HVDC system' means an HVDC system connected within a control area that is not installed for the purpose of connecting a DC-connected power park module at the time of installation, nor installed for the purpose of connecting a demand facility;
- (4) 'HVDC converter station' means part of an HVDC system which consists of one or more HVDC converter

units installed in a single location together with buildings, reactors, filters, reactive power devices, control, monitoring, protective, measuring and auxiliary equipment;

(5) 'HVDC interface point' means a point at which HVDC equipment is connected to an AC network, at which technical specifications affecting the performance of the equipment can be prescribed;

(6) 'DC-connected power park module owner' means a natural or legal entity owning a DC-connected power park module;

(7) 'maximum HVDC active power transmission capacity' (P_{\max}) means the maximum continuous active power which an HVDC system can exchange with the network at each connection point as specified in the connection agreement or as agreed between the relevant system operator and the HVDC system owner;

(8) 'minimum HVDC active power transmission capacity' (P_{\min}) means the minimum continuous active power which an HVDC system can exchange with the network at each connection point as specified in the connection agreement or as agreed between the relevant system operator and the HVDC system owner;

(9) 'HVDC system maximum current' means the highest phase current, associated with an operating point inside the U-Q/ P_{\max} -profile of the HVDC converter station at maximum HVDC active power transmission capacity;

(10) 'HVDC converter unit' means a unit comprising one or more converter bridges, together with one or more converter transformers, reactors, converter unit control equipment, essential protective and switching devices and auxiliaries, if any, used for the conversion.

Article 3

Scope of application

1. The requirements of this Regulation shall apply to:

- (a) HVDC systems connecting synchronous areas or control areas, including back-to-back schemes;
- (b) HVDC systems connecting power park modules to a transmission network or a distribution network, pursuant to paragraph 2;
- (c) embedded HVDC systems within one control area and connected to the transmission network; and
- (d) embedded HVDC systems within one control area and connected to the distribution network when a cross-border impact is demonstrated by the relevant transmission system operator (TSO). The relevant TSO shall consider the long-term development of the network in this assessment.

2. Relevant system operators, in coordination with relevant TSOs, shall propose to competent regulatory authorities the application of this Regulation for DC-connected power park modules with a single connection point to a transmission network or distribution network which is not part of a synchronous area for approval in accordance with Article 5. All other power park modules which are AC-collected but are DC-connected to a synchronous area are considered DC-connected power park modules and fall within the scope of this Regulation.

3. Articles 55 to 59, 69 to 74 and 84 shall not apply to HVDC systems within one control area referred to in points (c) and (d) of paragraph 1 where:

- (a) the HVDC system has at least one HVDC converter station owned by the relevant TSO;

- (b) the HVDC system is owned by an entity which exercises control over the relevant TSO;
- (c) the HVDC system is owned by an entity directly or indirectly controlled by an entity which also exercises control over the relevant TSO.
4. The connection requirements for HVDC systems provided for in Title II shall apply at the AC connection points of such systems, except the requirements provided for in Article 29(4) and (5) and Article 31(5), which can apply at other connection points, and Article 19(1) which may apply at the terminals of the HVDC converter station.
5. The connection requirements for DC-connected power park modules and remote-end HVDC converter stations provided for in Title III shall apply at the HVDC interface point of such systems, except the requirements provided for in Article 39(1)(a) and Article 47(2), which apply at the connection point in the synchronous area to which frequency response is being provided.
6. The relevant system operator shall refuse to allow the connection of a new HVDC system or DC-connected power park module which does not comply with the requirements set out in this Regulation and which is not covered by a derogation granted by the regulatory authority, or other authority where applicable in a **Contracting Party** pursuant to Title VII. The relevant system operator shall communicate such refusal, by means of a reasoned statement in writing, to the HVDC system owner or DC-connected power park module owner and, unless specified otherwise by the regulatory authority, to the regulatory authority.
7. This Regulation shall not apply to:
- (a) HVDC systems whose connection point is below 110 kV unless a cross-border impact is demonstrated by the relevant TSO. The relevant TSO shall consider the long-term development of the network in this assessment;
- (b) <...>

Article 4

Application to existing HVDC systems and DC-connected power park modules

1. Except for Articles 26, 31, 33 and 50, existing HVDC systems and existing DC-connected power park modules are not subject to the requirements of this Regulation, unless:
- (a) the HVDC system or DC-connected power park module has been modified to such an extent that its connection agreement must be substantially revised in accordance with the following procedure:
- (i) the HVDC system or DC-connected power park module owners who intend to undertake the modernisation of a plant or replacement of equipment impacting the technical capabilities of the HVDC system or DC-connected power park module shall notify their plans to the relevant system operator in advance;
 - (ii) if the relevant system operator considers that the extent of the modernisation or replacement of equipment is such that a new connection agreement is required, the system operator shall notify the relevant regulatory authority or, where applicable, the **Contracting Party**; and
 - (iii) the relevant regulatory authority or, where applicable, the **Contracting Party** shall decide if the existing connection agreement needs to be revised or a new connection agreement is required and

which requirements of this Regulation shall apply; or

(b) a regulatory authority or, where applicable, a **Contracting Party** decides to make an existing HVDC system or existing DC-connected power park module subject to all or some of the requirements of this Regulation, following a proposal from the relevant TSO in accordance with paragraphs 3, 4 and 5.

2. For the purposes of this Regulation, an HVDC system or DC-connected power park module shall be considered existing if:

(a) it is already connected to the network on the date of **expiry of the deadline for transposition** of this Regulation; or

(b) the HVDC system owner or DC-connected power park module owner has concluded a final and binding contract for the purchase of the main generating plant or HVDC equipment by two years after the **expiry of the deadline for transposition** of the Regulation. The HVDC system owner or DC-connected power park module owner must notify the relevant system operator and relevant TSO of conclusion of the contract within 30 months after the **expiry of the deadline for transposition** of the Regulation.

The notification submitted by the HVDC system owner or DC-connected power park module owner to the relevant system operator and to the relevant TSO shall at least indicate the contract title, its date of signature and date of entry into force and the specifications of the main generating plant or HVDC equipment to be constructed, assembled or purchased.

A **Contracting Party** may provide that in specified circumstances the regulatory authority may determine whether the HVDC system or DC-connected power park module is to be considered an existing or new HVDC system or DC-connected power park module.

3. Following a public consultation in accordance to Article 8 and in order to address significant factual changes in circumstances, such as the evolution of system requirements including penetration of renewable energy sources, smart grids, distributed generation or demand response, the relevant TSO may propose to the regulatory authority concerned, or where applicable, to the **Contracting Party** to extend the application of this Regulation to existing HVDC systems and/or DC-connected power park modules.

For that purpose a sound and transparent quantitative cost-benefit analysis shall be carried out, in accordance with Articles 65 and 66. The analysis shall indicate:

(a) the costs, in regard to existing HVDC systems and DC-connected power park modules, of requiring compliance with this Regulation;

(b) the socioeconomic benefit resulting from applying the requirements set out in this Regulation; and

(c) the potential of alternative measures to achieve the required performance.

4. Before carrying out the quantitative cost-benefit analysis referred to in paragraph 3, the relevant TSO shall:

(a) carry out a preliminary qualitative comparison of costs and benefits;

(b) obtain approval from the relevant regulatory authority or, where applicable, the **Contracting Party**.

5. The relevant regulatory authority or, where applicable, the **Contracting Party** shall decide on the extension of the applicability of this Regulation to existing HVDC systems or DC-connected power park modules within six months of receipt of the report and the recommendation of the relevant TSO in accordance with paragraph 4 of Article 65. The decision of the regulatory authority or, where applicable, the **Contracting Party** shall be published.

6. The relevant TSO shall take account of the legitimate expectations of HVDC system owners and DC-con-

nected power park modules owners as part of the assessment of the application of this Regulation to existing HVDC systems or DC-connected power park modules.

7. The relevant TSO may assess the application of some or all of the provisions of this Regulation to existing HVDC systems or DC-connected power park modules every three years in accordance with the criteria and process set out in paragraphs 3 to 5.

Article 5

Regulatory aspects

1. Requirements of general application to be established by relevant system operators or TSOs under this Regulation shall be subject to approval by the entity designated by the **Contracting Party** and be published. The designated entity shall be the regulatory authority unless otherwise provided by the **Contracting Party**.

2. For site specific requirements to be established by relevant system operators or TSOs under this Regulation, **Contracting Parties** may require approval by a designated entity.

3. When applying this Regulation, **Contracting Parties**, competent entities and system operators shall:

- (a) apply the principles of proportionality and non-discrimination;
- (b) ensure transparency;
- (c) apply the principle of optimisation between the highest overall efficiency and lowest total costs for all parties involved;
- (d) respect the responsibility assigned to the relevant TSO in order to ensure system security, including as required by national legislation;
- (e) consult with relevant DSOs and take account of potential impacts on their system;
- (f) take into consideration agreed European standards and technical specifications.

4. The relevant system operator or TSO shall submit a proposal for requirements of general application, or the methodology used to calculate or establish them, for approval by the competent entity within two years of **expiry of the deadline for transposition** of this Regulation.

5. Where this Regulation requires the relevant system operator, relevant TSO, HVDC system owner, DC-connected power park module owner and/or the distribution system operator to seek agreement, they shall endeavour to do so within six months after a first proposal has been submitted by one party to the other parties. If no agreement has been found within this timeframe, each party may request the relevant regulatory authority to issue a decision within six months.

6. Competent entities shall take decisions on proposals for requirements or methodologies within six months following the receipt of such proposals.

7. If the relevant system operator or TSO deems an amendment to requirements or methodologies as provided for and approved under paragraph 1 and 2 to be necessary, the requirements provided for in paragraphs 3 to 8 shall apply to the proposed amendment. System operators and TSOs proposing an amendment shall take into account the legitimate expectations, if any, of HVDC system owners, DC-connected power park module owners, equipment manufacturers and other stakeholders based on the initially specified or

agreed requirements or methodologies.

8. Any party having a complaint against a relevant system operator or TSO in relation to that relevant system operator's or TSO's obligations under this Regulation may refer the complaint to the regulatory authority which, acting as dispute settlement authority, shall issue a decision within two months after receipt of the complaint. That period may be extended by two months where additional information is sought by the regulatory authority. That extended period may be further extended with the agreement of the complainant. The regulatory authority's decision shall have binding effect unless and until overruled on appeal.

9. Where the requirements under this Regulation are to be established by a relevant system operator that is not a TSO, **Contracting Parties** may provide that instead the TSO be responsible for establishing the relevant requirements.

Article 6

Multiple TSOs

1. Where more than one TSO exists in a **Contracting Party**, this Regulation shall apply to all those TSOs.
2. **Contracting Parties** may, under the national regulatory regime, provide that the responsibility of a TSO to comply with one or some or all obligations under this Regulation is assigned to one or more specific TSOs.

Article 7

Recovery of costs

1. The costs borne by system operators subject to network tariff regulation and stemming from the obligations laid down in this Regulation shall be assessed by the relevant regulatory authorities. Costs assessed as reasonable, efficient and proportionate shall be recovered through network tariffs or other appropriate mechanisms.
2. If requested by the relevant regulatory authorities, system operators referred to in paragraph 1 shall, within three months of the request, provide the information necessary to facilitate assessment of the costs incurred.

Article 8

Public consultation

1. Relevant system operators and relevant TSOs shall carry out consultation with stakeholders, including the competent authorities of each **Contracting Party**, on proposals to extend the applicability of this Regulation to existing HVDC systems and DC-connected power park modules, in accordance with Article 4(3), on the report prepared in accordance with Article 65(3), and the cost-benefit analysis undertaken in accordance with Article 80(2). The consultation shall last at least for a period of one month.
2. The relevant system operators or relevant TSOs shall duly take into account the views of the stakeholders resulting from the consultations prior to the submission of the draft proposal or the report or cost benefit

analysis for approval by the regulatory authority or, if applicable, the **Contracting Party**. In all cases, a sound justification for including or not the views of the stakeholders shall be provided and published in a timely manner before, or simultaneously with, the publication of the proposal.

Article 9

Stakeholder involvement

The **Energy Community Regulatory Board**, in close cooperation with the European Network of Transmission System Operators for Electricity (ENTSO for Electricity), shall organise stakeholder involvement regarding the requirements for grid connection of HVDC systems and DC-connected power park modules, and other aspects of the implementation of this Regulation. This shall include regular meetings with stakeholders to identify problems and propose improvements notably related to the requirements for grid connection of HVDC systems and DC-connected power park modules.

Article 10

Confidentiality obligations

1. Any confidential information received, exchanged or transmitted pursuant to this Regulation shall be subject to the conditions of professional secrecy laid down in paragraphs 2, 3 and 4.
2. The obligation of professional secrecy shall apply to any persons, regulatory authorities or entities subject to the provisions of this Regulation.
3. Confidential information received by the persons, regulatory authorities or entities referred to in paragraph 2 in the course of their duties may not be divulged to any other person or authority, without prejudice to cases covered by national law, the other provisions of this Regulation or other relevant **Energy Community** law.
4. Without prejudice to cases covered by national or **Energy Community** law, regulatory authorities, entities or persons who receive confidential information pursuant to this Regulation may use it only for the purpose of carrying out their duties under this Regulation.

TITLE II

GENERAL REQUIREMENTS FOR HVDC CONNECTIONS

CHAPTER 1

Requirements for active power control and frequency support

Article 11

Frequency ranges

1. An HVDC system shall be capable of staying connected to the network and remaining operable within the frequency ranges and time periods specified in Table 1, Annex I for the short circuit power range as specified in Article 32(2).
2. The relevant TSO and HVDC system owner may agree on wider frequency ranges or longer minimum times for operation if needed to preserve or to restore system security. If wider frequency ranges or longer minimum times for operation are economically and technically feasible, the HVDC system owner shall not unreasonably withhold consent.
3. Without prejudice to paragraph 1, an HVDC system shall be capable of automatic disconnection at frequencies specified by the relevant TSO.
4. The relevant TSO may specify a maximum admissible active power output reduction from its operating point if the system frequency falls below 49 Hz.

Article 12

Rate-of-change-of-frequency withstand capability

An HVDC system shall be capable of staying connected to the network and operable if the network frequency changes at a rate between $-2,5$ and $+2,5$ Hz/s (measured at any point in time as an average of the rate of change of frequency for the previous 1 s).

Article 13

Active power controllability, control range and ramping rate

1. With regard to the capability of controlling the transmitted active power:
 - (a) an HVDC system shall be capable of adjusting the transmitted active power up to its maximum HVDC active power transmission capacity in each direction following an instruction from the relevant TSO.

The relevant TSO:

- (i) may specify a maximum and minimum power step size for adjusting the transmitted active power;
- (ii) may specify a minimum HVDC active power transmission capacity for each direction, below which

active power transmission capability is not requested; and

(iii) shall specify the maximum delay within which the HVDC system shall be capable of adjusting the transmitted active power upon receipt of request from the relevant TSO.

(b) the relevant TSO shall specify how an HVDC system shall be capable of modifying the transmitted active power in case of disturbances into one or more of the AC networks to which it is connected. If the initial delay prior to the start of the change is greater than 10 milliseconds from receiving the triggering signal sent by the relevant TSO, it shall be reasonably justified by the HVDC system owner to the relevant TSO.

(c) the relevant TSO may specify that an HVDC system be capable of fast active power reversal. The power reversal shall be possible from the maximum active power transmission capacity in one direction to the maximum active power transmission capacity in the other direction as fast as technically feasible and reasonably justified by the HVDC system owner to the relevant TSOs if greater than 2 seconds.

(d) for HVDC systems linking various control areas or synchronous areas, the HVDC system shall be equipped with control functions enabling the relevant TSOs to modify the transmitted active power for the purpose of cross-border balancing.

2. An HVDC system shall be capable of adjusting the ramping rate of active power variations within its technical capabilities in accordance with instructions sent by relevant TSOs. In case of modification of active power according to points (b) and (c) of paragraph 1, there shall be no adjustment of ramping rate.

3. If specified by a relevant TSO, in coordination with adjacent TSOs, the control functions of an HVDC system shall be capable of taking automatic remedial actions including, but not limited to, stopping the ramping and blocking FSM, LFSM-O, LFSM-U and frequency control. The triggering and blocking criteria shall be specified by relevant TSO and subject to notification to the regulatory authority. The modalities of that notification shall be determined in accordance with the applicable national regulatory framework.

Article 14

Synthetic inertia

1. If specified by a relevant TSO, an HVDC system shall be capable of providing synthetic inertia in response to frequency changes, activated in low and/or high frequency regimes by rapidly adjusting the active power injected to or withdrawn from the AC network in order to limit the rate of change of frequency. The requirement shall at least take account of the results of the studies undertaken by TSOs to identify if there is a need to set out minimum inertia.

2. The principle of this control system and the associated performance parameters shall be agreed between the relevant TSO and the HVDC system owner.

Article 15

Requirements relating to frequency sensitive mode, limited frequency sensitive mode overfrequency and limited frequency sensitive mode underfrequency

Requirements applying to frequency sensitive mode, limited frequency sensitive mode overfrequency and limited frequency sensitive mode underfrequency shall be as set out in Annex II.

Article 16

Frequency control

1. If specified by the relevant TSO, an HVDC system shall be equipped with an independent control mode to modulate the active power output of the HVDC converter station depending on the frequencies at all connection points of the HVDC system in order to maintain stable system frequencies.
2. The relevant TSO shall specify the operating principle, the associated performance parameters and the activation criteria of the frequency control referred to in paragraph 1.

Article 17

Maximum loss of active power

1. An HVDC system shall be configured in such a way that its loss of active power injection in a synchronous area shall be limited to a value specified by the relevant TSOs for their respective load frequency control area, based on the HVDC system's impact on the power system.
2. Where an HVDC system connects two or more control areas, the relevant TSOs shall consult each other in order to set a coordinated value of the maximum loss of active power injection as referred to in paragraph 1, taking into account common mode failures.

CHAPTER 2

Requirements for reactive power control and voltage support

Article 18

Voltage ranges

1. Without prejudice to Article 25, an HVDC converter station shall be capable of staying connected to the network and capable of operating at HVDC system maximum current, within the ranges of the network voltage at the connection point, expressed by the voltage at the connection point related to reference 1 pu voltage, and the time periods specified in Tables 4 and 5, Annex III. The establishment of the reference 1 pu voltage shall be subject to coordination between the adjacent relevant system operators.
2. The HVDC system owner and the relevant system operator, in coordination with the relevant TSO, may agree on wider voltage ranges or longer minimum times for operation than those specified in paragraph 1 in order to ensure the best use of the technical capabilities of an HVDC system if needed to preserve or to restore system security. If wider voltage ranges or longer minimum times for operation are economically and technically feasible, the HVDC system owner shall not unreasonably withhold consent.
3. An HVDC converter station shall be capable of automatic disconnection at connection point voltages specified by the relevant system operator, in coordination with the relevant TSO. The terms and settings for automatic disconnection shall be agreed between the relevant system operator, in coordination with the relevant TSO, and the HVDC system owner.

4. For connection points at reference 1 pu AC voltages not included in the scope set out in Annex III, the relevant system operator, in coordination with relevant TSOs, shall specify applicable requirements at the connection points.

5. Notwithstanding the provisions of paragraph 1, the relevant TSOs in **Moldova and Ukraine shall**, following consultation with relevant neighbouring TSOs, require HVDC converter stations to **operate** in the voltage ranges and for time periods that apply in the Continental Europe synchronous area.

Article 19

Short circuit contribution during faults

1. If specified by the relevant system operator, in coordination with the relevant TSO, an HVDC system shall have the capability to provide fast fault current at a connection point in case of symmetrical (3-phase) faults.

2. Where an HVDC system is required to have the capability referred to in paragraph 1, the relevant system operator, in coordination with the relevant TSO, shall specify the following:

- (a) how and when a voltage deviation is to be determined as well as the end of the voltage deviation;
- (b) the characteristics of the fast fault current;
- (c) the timing and accuracy of the fast fault current, which may include several stages.

3. The relevant system operator, in coordination the relevant TSO, may specify a requirement for asymmetrical current injection in the case of asymmetrical (1-phase or 2-phase) faults.

Article 20

Reactive power capability

1. The relevant system operator, in coordination with the relevant TSO, shall specify the reactive power capability requirements at the connection points, in the context of varying voltage. The proposal for those requirements shall include a $U-Q/P_{\max}$ -profile, within the boundary of which the HVDC converter station shall be capable of providing reactive power at its maximum HVDC active power transmission capacity.

2. The $U-Q/P_{\max}$ -profile referred to in paragraph 1 shall comply with the following principles:

(a) the $U-Q/P_{\max}$ -profile shall not exceed the $U-Q/P_{\max}$ -profile envelope represented by the inner envelope in the figure set out in Annex IV, and does not need to be rectangular;

(b) the dimensions of the $U-Q/P_{\max}$ -profile envelope shall respect the values established for each synchronous area in the table set out in Annex IV. **The dimensions of the profile envelope applied in Moldova and Ukraine shall correspond to the values that apply in the Continental Europe synchronous area;** and

(c) the position of the $U-Q/P_{\max}$ -profile envelope shall lie within the limits of the fixed outer envelope in the figure set out in Annex IV.

3. An HVDC system shall be capable of moving to any operating point within its $U-Q/P_{\max}$ profile in timescales specified by the relevant system operator in coordination with the relevant TSO.

4. When operating at an active power output below the maximum HVDC active power transmission capacity ($P < P_{\max}$), the HVDC converter station shall be capable of operating in every possible operating point, as specified by the relevant system operator in coordination with the relevant TSO and in accordance with the reactive power capability set out by the U-Q/ P_{\max} profile specified in paragraphs 1 to 3.

Article 21

Reactive power exchanged with the network

1. The HVDC system owner shall ensure that the reactive power of its HVDC converter station exchanged with the network at the connection point is limited to values specified by the relevant system operator in coordination with the relevant TSO.

2. The reactive power variation caused by the reactive power control mode operation of the HVDC converter Station, referred to in Article 22(1), shall not result in a voltage step exceeding the allowed value at the connection point. The relevant system operator, in coordination with the relevant TSO, shall specify this maximum tolerable voltage step value.

Article 22

Reactive power control mode

1. An HVDC converter station shall be capable of operating in one or more of the three following control modes, as specified by the relevant system operator in coordination with the relevant TSO:

- (a) voltage control mode;
- (b) reactive power control mode;
- (c) power factor control mode.

2. An HVDC converter station shall be capable of operating in additional control modes specified by the relevant system operator in coordination with the relevant TSO.

3. For the purposes of voltage control mode, each HVDC converter station shall be capable of contributing to voltage control at the connection point utilising its capabilities, while respecting Articles 20 and 21, in accordance with the following control characteristics:

- (a) a setpoint voltage at the connection point shall be specified to cover a specific operation range, either continuously or in steps, by the relevant system operator, in coordination with the relevant TSO;
- (b) the voltage control may be operated with or without a deadband around the setpoint selectable in a range from zero to $\pm 5\%$ of reference 1 pu network voltage. The deadband shall be adjustable in steps as specified by the relevant system operator in coordination with the relevant TSO;
- (c) following a step change in voltage, the HVDC converter station shall be capable of:
 - (i) achieving 90% of the change in reactive power output within a time t_1 specified by the relevant system operator in coordination with the relevant TSO. The time t_1 shall be in the range of 0,1-10 seconds; and
 - (ii) settling at the value specified by the operating slope within a time t_2 specified by the relevant system

operator in coordination with the relevant TSO. The time t_2 shall be in the range of 1-60 seconds, with a specified steady-state tolerance given in % of the maximum reactive power.

(d) voltage control mode shall include the capability to change reactive power output based on a combination of a modified setpoint voltage and an additional instructed reactive power component. The slope shall be specified by a range and step specified by the relevant system operator in coordination with the relevant TSO.

4. With regard to reactive power control mode, the relevant system operator shall specify a reactive power range in MVar or in % of maximum reactive power, as well as its associated accuracy at the connection point, using the capabilities of the HVDC system, while respecting Articles 20 and 21.

5. For the purposes of power factor control mode, the HVDC converter station shall be capable of controlling the power factor to a target at the connection point, while respecting Articles 20 and 21. The available setpoints shall be available in steps no greater than a maximum allowed step specified by the relevant system operator.

6. The relevant system operator in coordination with the relevant TSO shall specify any equipment needed to enable the remote selection of control modes and relevant setpoints.

Article 23

Priority to active or reactive power contribution

Taking into account the capabilities of the HVDC system specified in accordance with this Regulation, the relevant TSO shall determine whether active power contribution or reactive power contribution shall have priority during low or high voltage operation and during faults for which fault-ride-through capability is required. If priority is given to active power contribution, its provision shall be established within a time from the fault inception as specified by relevant TSO.

Article 24

Power quality

An HVDC system owner shall ensure that its HVDC system connection to the network does not result in a level of distortion or fluctuation of the supply voltage on the network, at the connection point, exceeding the level specified by the relevant system operator in coordination with the relevant TSO. The process for necessary studies to be conducted and relevant data to be provided by all grid users involved, as well as mitigating actions identified and implemented, shall be in accordance with the process in Article 29.

CHAPTER 3

Requirements for fault ride through capability

Article 25

Fault ride through capability

1. The relevant TSO shall specify, while respecting Article 18, a voltage-against time profile as set out in Annex V and having regard to the voltage-against-time-profile specified for power park modules according to Regulation (EU) 2016/631. This profile shall apply at connection points for fault conditions, under which the HVDC converter station shall be capable of staying connected to the network and continuing stable operation after the power system has recovered following fault clearance. The voltage-against-time-profile shall express a lower limit of the actual course of the phase-to-phase voltages on the network voltage level at the connection point during a symmetrical fault, as a function of time before, during and after the fault. Any ride through period beyond t_{rec2} shall be specified by the relevant TSO consistent with Article 18.

2. On request by the HVDC system owner, the relevant system operator shall provide the pre-fault and post-fault conditions as provided for in Article 32 regarding:

- (a) pre-fault minimum short circuit capacity at each connection point expressed in MVA;
- (b) pre-fault operating point of the HVDC converter station expressed as active power output and reactive power output at the connection point and voltage at the connection point; and
- (c) post-fault minimum short circuit capacity at each connection point expressed in MVA.

Alternatively, generic values for the above conditions derived from typical cases may be provided by the relevant system operator.

3. The HVDC converter station shall be capable of staying connected to the network and continue stable operation when the actual course of the phase-to-phase voltages on the network voltage level at the connection point during a symmetrical fault, given the pre-fault and post-fault conditions provided for in Article 32, remain above the lower limit set out in the figure in Annex V, unless the protection scheme for internal faults requires the disconnection of the HVDC converter station from the network. The protection schemes and settings for internal faults shall be designed not to jeopardise fault-ride-through performance.

4. The relevant TSO may specify voltages (Ublock) at the connection points under specific network conditions whereby the HVDC system is allowed to block. Blocking means remaining connected to the network with no active and reactive power contribution for a time frame that shall be as short as technically feasible and which shall be agreed between the relevant TSOs and the HVDC system owner.

5. In accordance Article 34, undervoltage protection shall be set by the HVDC system owner to the widest possible technical capability of the HVDC converter station. The relevant system operator, in coordination with the relevant TSO, may specify narrower settings pursuant to Article 34.

6. The relevant TSO shall specify fault-ride-through capabilities in case of asymmetrical faults.

Article 26**Post fault active power recovery**

The relevant TSO shall specify the magnitude and time profile of active power recovery that the HVDC system shall be capable of providing, in accordance with Article 25.

Article 27**Fast recovery from DC faults**

HVDC systems, including DC overhead lines, shall be capable of fast recovery from transient faults within the HVDC system. Details of this capability shall be subject to coordination and agreements on protection schemes and settings pursuant to Article 34.

CHAPTER 4**Requirements for control****Article 28****Energisation and synchronisation of HVDC converter stations**

Unless otherwise instructed by the relevant system operator, during the energisation or synchronisation of an HVDC converter station to the AC network or during the connection of an energised HVDC converter station to an HVDC system, the HVDC converter station shall have the capability to limit any voltage changes to a steady-state level specified by the relevant system operator in coordination with the relevant TSO. The level specified shall not exceed 5 per cent of the pre-synchronisation voltage. The relevant system operator, in coordination with the relevant TSO, shall specify the maximum magnitude, duration and measurement window of the voltage transients.

Article 29**Interaction between HVDC systems or other plants and equipment**

1. When several HVDC converter stations or other plants and equipment are within close electrical proximity, the relevant TSO may specify that a study is required, and the scope and extent of that study, to demonstrate that no adverse interaction will occur. If adverse interaction is identified, the studies shall identify possible mitigating actions to be implemented to ensure compliance with the requirements of this Regulation.
2. The studies shall be carried out by the connecting HVDC system owner with the participation of all other parties identified by the TSOs as relevant to each connection point. **Contracting Parties** may provide that the responsibility for undertaking the studies in accordance with this Article lies with the TSO. All parties shall be informed of the results of the studies.

3. All parties identified by the relevant TSO as relevant to each connection point, including the relevant TSO, shall contribute to the studies and shall provide all relevant data and models as reasonably required to meet the purposes of the studies. The relevant TSO shall collect this input and, where applicable, pass it on to the party responsible for the studies in accordance with Article 10.
4. The relevant TSO shall assess the result of the studies based on their scope and extent as specified in accordance with paragraph 1. If necessary for the assessment, the relevant TSO may request the HVDC system owner to perform further studies in line with the scope and extent specified in accordance with paragraph 1.
5. The relevant TSO may review or replicate some or all of the studies. The HVDC system owner shall provide the relevant TSO all relevant data and models that allow such study to be performed.
6. Any necessary mitigating actions identified by the studies carried out in accordance with paragraphs 2 to 5 and reviewed by the relevant TSO shall be undertaken by the HVDC system owner as part of the connection of the new HVDC converter station.
7. The relevant TSO may specify transient levels of performance associated with events for the individual HVDC system or collectively across commonly impacted HVDC systems. This specification may be provided to protect the integrity of both TSO equipment and that of grid users in a manner consistent with its national code.

Article 30

Power oscillation damping capability

The HVDC system shall be capable of contributing to the damping of power oscillations in connected AC networks. The control system of the HVDC system shall not reduce the damping of power oscillations. The relevant TSO shall specify a frequency range of oscillations that the control scheme shall positively damp and the network conditions when this occurs, at least accounting for any dynamic stability assessment studies undertaken by TSOs to identify the stability limits and potential stability problems in their transmission systems. The selection of the control parameter settings shall be agreed between the relevant TSO and the HVDC system owner.

Article 31

Subsynchronous torsional interaction damping capability

1. With regard to subsynchronous torsional interaction (SSTI) damping control, the HVDC system shall be capable of contributing to electrical damping of torsional frequencies.
2. The relevant TSO shall specify the necessary extent of SSTI studies and provide input parameters, to the extent available, related to the equipment and relevant system conditions in its network. The SSTI studies shall be provided by the HVDC system owner. The studies shall identify the conditions, if any, where SSTI exists and propose any necessary mitigation procedure. **Contracting Parties** may provide that the responsibility for undertaking the studies in accordance with this Article lies with the TSO. All parties shall be informed of the results of the studies.

3. All parties identified by the relevant TSO as relevant to each connection point, including the relevant TSO, shall contribute to the studies and shall provide all relevant data and models as reasonably required to meet the purposes of the studies. The relevant TSO shall collect this input and, where applicable, pass it on to the party responsible for the studies in accordance with Article 10.
4. The relevant TSO shall assess the result of the SSTI studies. If necessary for the assessment, the relevant TSO may request that the HVDC system owner perform further SSTI studies in line with this same scope and extent.
5. The relevant TSO may review or replicate the study. The HVDC system owner shall provide the relevant TSO all relevant data and models that allow such study to be performed.
6. Any necessary mitigating actions identified by the studies carried out in accordance with paragraphs 2 or 4, and reviewed by the relevant TSOs, shall be undertaken by the HVDC system owner as part of the connection of the new HVDC converter station.

Article 32

Network characteristics

1. The relevant system operator shall specify and make publicly available the method and the pre-fault and post-fault conditions for the calculation of at least the minimum and maximum short circuit power at the connection points.
2. The HVDC system shall be capable of operating within the range of short circuit power and network characteristics specified by the relevant system operator.
3. Each relevant system operator shall provide the HVDC system owner with network equivalents describing the behaviour of the network at the connection point, enabling the HVDC system owners to design their system with regard to at least, but not limited to, harmonics and dynamic stability over the lifetime of the HVDC system.

Article 33

HVDC system robustness

1. The HVDC system shall be capable of finding stable operation points with a minimum change in active power flow and voltage level, during and after any planned or unplanned change in the HVDC system or AC network to which it is connected. The relevant TSO shall specify the changes in the system conditions for which the HVDC systems shall remain in stable operation.
2. The HVDC system owner shall ensure that the tripping or disconnection of an HVDC converter station, as part of any multi-terminal or embedded HVDC system, does not result in transients at the connection point beyond the limit specified by the relevant TSO.
3. The HVDC system shall withstand transient faults on HVAC lines in the network adjacent or close to the HVDC system, and shall not cause any of the equipment in the HVDC system to disconnect from the network due to auto-reclosure of lines in the network.

4. The HVDC system owner shall provide information to the relevant system operator on the resilience of the HVDC system to AC system disturbances.

CHAPTER 5

Requirements for protection devices and settings

Article 34

Electrical protection schemes and settings

1. The relevant system operator shall specify, in coordination with the relevant TSO, the schemes and settings necessary to protect the network taking into account the characteristics of the HVDC system. Protection schemes relevant for the HVDC system and the network, and settings relevant for the HVDC system, shall be coordinated and agreed between the relevant system operator, the relevant TSO and the HVDC system owner. The protection schemes and settings for internal electrical faults shall be designed so as not to jeopardise the performance of the HVDC system in accordance with this Regulation.
2. Electrical protection of the HVDC system shall take precedence over operational controls taking into account system security, health and safety of staff and the public and mitigation of the damage to the HVDC system.
3. Any change to the protection schemes or their settings relevant to the HVDC system and the network shall be agreed between the relevant system operator, the relevant TSO and the HVDC system owner before being implemented by the HVDC system owner.

Article 35

Priority ranking of protection and control

1. A control scheme, specified by the HVDC system owner consisting of different control modes, including the settings of the specific parameters, shall be coordinated and agreed between the relevant TSO, the relevant system operator and the HVDC system owner.
2. With regard to priority ranking of protection and control, the HVDC system owner shall organise its protections and control devices in compliance with the following priority ranking, listed in decreasing order of importance, unless otherwise specified by the relevant TSOs, in coordination with the relevant system operator:
 - (a) network system and HVDC system protection;
 - (b) active power control for emergency assistance;
 - (c) synthetic inertia, if applicable;
 - (d) automatic remedial actions as specified in Article 13(3);
 - (e) LFSM;
 - (f) FSM and frequency control; and
 - (g) power gradient constraint.

Article 36**Changes to protection and control schemes and settings**

1. The parameters of the different control modes and the protection settings of the HVDC system shall be able to be changed in the HVDC converter station, if required by the relevant system operator or the relevant TSO, and in accordance with paragraph 3.
2. Any change to the schemes or settings of parameters of the different control modes and protection of the HVDC system, including the procedure, shall be coordinated and agreed between the relevant system operator, the relevant TSO and the HVDC system owner.
3. The control modes and associated setpoints of the HVDC system shall be capable of being changed remotely, as specified by the relevant system operator, in coordination with the relevant TSO.

CHAPTER 6**Requirements for power system restoration****Article 37****Black start**

1. The relevant TSO may obtain a quote for black start capability from an HVDC system owner.
2. An HVDC system with black start capability shall be able, in case one converter station is energised, to energise the busbar of the AC-substation to which another converter station is connected, within a time-frame after shut down of the HVDC system determined by the relevant TSOs. The HVDC system shall be able to synchronise within the frequency limits set out in Article 11 and within the voltage limits specified by the relevant TSO or as provided for in Article 18, where applicable. Wider frequency and voltage ranges can be specified by the relevant TSO where needed in order to restore system security.
3. The relevant TSO and the HVDC system owner shall agree on the capacity and availability of the black start capability and the operational procedure.

TITLE III

REQUIREMENTS FOR DC-CONNECTED POWER PARK MODULES AND REMOTE-END HVDC CONVERTER STATIONS

CHAPTER 1

Requirements for DC-connected power park modules

Article 38

Scope

The requirements applicable to offshore power park modules under Articles 13 to 22 of Regulation (EU) 2016/631 shall apply to DC-connected power park modules subject to specific requirements provided for in Articles 41 to 45 of this Regulation. These requirements shall apply at the HVDC interface points of the DC-connected power park module and the HVDC systems. The categorisation in Article 5 of Regulation (EU) 2016/631 shall apply to DC-connected power park modules.

Article 39

Frequency stability requirements

1. With regards to frequency response:

(a) a DC-connected power park module shall be capable of receiving a fast signal from a connection point in the synchronous area to which frequency response is being provided, and be able to process this signal within 0,1 second from sending to completion of processing the signal for activation of the response. Frequency shall be measured at the connection point in the synchronous area to which frequency response is being provided;

(b) DC-connected power park modules connected via HVDC systems which connect with more than one control area shall be capable of delivering coordinated frequency control as specified by the relevant TSO.

2. With regard to frequency ranges and response:

(a) a DC-connected power park module shall be capable of staying connected to the remote-end HVDC converter station network and operating within the frequency ranges and time periods specified in Annex VI for the 50 Hz nominal system. Where a nominal frequency other than 50 Hz, or a frequency variable by design is used, subject to agreement with the relevant TSO, the applicable frequency ranges and time periods shall be specified by the relevant TSO taking into account specificities of the system and the requirements set out in Annex VI;

(b) wider frequency ranges or longer minimum times for operation can be agreed between the relevant TSO and the DC-connected power park module owner to ensure the best use of the technical capabilities of a DC-connected power park module if needed to preserve or to restore system security. If wider frequency ranges or longer minimum times for operation are economically and technically feasible, the DC-connected power park module owner shall not unreasonably withhold consent;

(c) while respecting the provisions of point (a) of paragraph 2, a DC-connected power park module shall be capable of automatic disconnection at specified frequencies, if specified by the relevant TSO. Terms and settings for automatic disconnection shall be agreed between the relevant TSO and the DC-connected power park module owner.

3. With regards to rate-of-change-of-frequency withstand capability, a DC-connected power park module shall be capable of staying connected to the remote-end HVDC converter station network and operable if the system frequency changes at a rate up to ± 2 Hz/s (measured at any point in time as an average of the rate of change of frequency for the previous 1 second) at the HVDC interface point of the DC-connected power park module at the remote end HVDC converter station for the 50 Hz nominal system.

4. DC-connected power park modules shall have limited frequency sensitive mode-overfrequency (LFSM-O) capability in accordance with Article 13(2) of Regulation (EU) 2016/631, subject to fast signal response as specified in paragraph 1 for the 50 Hz nominal system.

5. A capability for DC-connected power park modules to maintain constant power shall be determined in accordance with Article 13(3) of Regulation (EU) 2016/631 for the 50 Hz nominal system.

6. A capability for active power controllability of DC-connected power park modules shall be determined in accordance with Article 15(2)(a) of Regulation (EU) 2016/631 for the 50 Hz nominal system. Manual control shall be possible in the case that remote automatic control devices are out of service.

7. A capability for limited frequency sensitive mode-underfrequency (LFSM-U) for a DC-connected power park module shall be determined in accordance with Article 15(2)(c) of Regulation (EU) 2016/631, subject to fast signal response as specified in paragraph 1 for the 50 Hz nominal system.

8. A capability for frequency sensitive mode for a DC-connected power park module shall be determined in accordance with Article 15(2)(d) of Regulation (EU) 2016/631, subject to a fast signal response as specified in paragraph 1 for the 50 Hz nominal system.

9. A capability for frequency restoration for a DC-connected power park module shall be determined in accordance with Article 15(2)(e) of Regulation (EU) 2016/631 for the 50 Hz nominal system.

10. Where a constant nominal frequency other than 50 Hz, a frequency variable by design or a DC system voltage is used, subject to the agreement of the relevant TSO, the capabilities listed in paragraphs 3 to 9 and the parameters associated with such capabilities shall be specified by the relevant TSO.

Article 40

Reactive power and voltage requirements

1. With respect to voltage ranges:

(a) a DC-connected power park module shall be capable of staying connected to the remote-end HVDC converter station network and operating within the voltage ranges (per unit), for the time periods specified in Tables 9 and 10, Annex VII. The applicable voltage range and time periods specified are selected based on the reference 1 pu voltage;

(b) wider voltage ranges or longer minimum times for operation can be agreed between the relevant system operator, the relevant TSO and the DC-connected power park module owner to ensure the best use of the technical capabilities of a DC-connected power park module if needed to preserve or to restore system

security. If wider voltage ranges or longer minimum times for operation are economically and technically feasible, the DC-connected power park module owner shall not unreasonably withhold consent;

(c) for DC-connected power park modules which have an HVDC interface point to the remote-end HVDC converter station network, the relevant system operator, in coordination with the relevant TSO may specify voltages at the HVDC interface point at which a DC-connected power park module shall be capable of automatic disconnection. The terms and settings for automatic disconnection shall be agreed between the relevant system operator, the relevant TSO and the DC-connected power park module owner;

(d) for HVDC interface points at AC voltages that are not included in the scope of Annex VII, the relevant system operator, in coordination with the relevant TSO shall specify applicable requirements at the connection point;

(e) where frequencies other than nominal 50 Hz are used, subject to relevant TSO agreement, the voltage ranges and time periods specified by the relevant system operator, in coordination with the relevant TSO, shall be proportional to those in Tables 9 and 10, Annex VII.

2. With respect to reactive power capability for DC-connected power park modules:

(a) if the DC-connected power park module owner can obtain a bilateral agreement with the owners of the HVDC systems connecting the DC-connected power park module to a single connection point on a AC network, it shall fulfil all of the following requirements:

(i) it shall have the ability with additional plant or equipment and/or software, to meet the reactive power capabilities prescribed by the relevant system operator, in coordination with the relevant TSO, according to point (b), and it shall either:

- have the reactive power capabilities for some or all of its equipment in accordance with point (b) already installed as part of the connection of the DC-connected power park module to the AC network at the time of initial connection and commissioning; or

- demonstrate to, and then reach agreement with, the relevant system operator and the relevant TSO on how the reactive power capability will be provided when the DC-connected power park module is connected to more than a single connection point in the AC network, or the AC network at the remote-end HVDC converter station network has either another DC-connected power park module or HVDC system with a different owner connected to it. This agreement shall include a contract by the DC-connected power park module owner (or any subsequent owner), that it will finance and install reactive power capabilities required by this Article for its power park modules at a point in time specified by the relevant system operator, in coordination with the relevant TSO. The relevant system operator, in coordination with the relevant TSO shall inform the DC-connected power park module owner of the proposed completion date of any committed development which will require the DC-connected power park module owner to install the full reactive power capability.

(ii) the relevant system operator, in coordination with the relevant TSO shall account for the development time schedule of retrofitting the reactive power capability to the DC-connected power park module in specifying the point in time by which this reactive power capability retrofitting is to take place. The development time schedule shall be provided by the DC-connected power park module owner at the time of connection to the AC network.

(b) DC-connected power park modules shall fulfil the following requirements relating to voltage stability either at the time of connection or subsequently, according to the agreement as referred to in point (a):

(i) with regard to reactive power capability at maximum HVDC active power transmission capacity, DC-connected power park modules shall meet the reactive power provision capability requirements specified by the relevant system operator, in coordination with the relevant TSO, in the context of varying voltage. The relevant system operator shall specify a $U-Q/P_{\max}$ -profile that may take any shape with ranges in accordance with Table 11, Annex VII, within which the DC-connected power park module shall be capable of providing reactive power at its maximum HVDC active power transmission capacity. The relevant system operator, in coordination with the relevant TSO, shall consider the long term development of the network when determining these ranges, as well as the potential costs for power park modules of delivering the capability of providing reactive power production at high voltages and reactive power consumption at low voltages.

If the Ten-Year Network Development Plan, where applicable, or a national plan developed and approved in accordance with Article 22 of Directive 2009/72/EC specifies that a DC-connected power park module will become AC-connected to the synchronous area, the relevant TSO may specify that either:

- the DC-connected power park module shall have the capabilities prescribed in Article 25(4) of Regulation (EU) 2016/631 for that synchronous area installed at the time of initial connection and commissioning of the DC-connected power park module to the AC-network; or
- the DC-connected power park module owner shall demonstrate to, and then reach agreement with, the relevant system operator and the relevant TSO on how the reactive power capability prescribed in Article 25(4) of Regulation (EU) 2016/631 for that synchronous area will be provided in the event that the DC-connected power park module becomes AC-connected to the synchronous area.

(ii) With regard to reactive power capability, the relevant system operator may specify supplementary reactive power to be provided if the connection point of a DC-connected power park module is neither located at the high-voltage terminals of the step-up transformer to the voltage level of the connection point nor at the alternator terminals, if no step-up transformer exists. This supplementary reactive power shall compensate the reactive power exchange of the high-voltage line or cable between the high-voltage terminals of the step-up transformer of the DC-connected power park module or its alternator terminals, if no step-up transformer exists, and the connection point and shall be provided by the responsible owner of that line or cable.

3. With regard to priority to active or reactive power contribution for DC-connected power park modules, the relevant system operator, in coordination with the relevant TSO shall specify whether active power contribution or reactive power contribution has priority during faults for which fault-ride-through capability is required. If priority is given to active power contribution, its provision shall be established within a time from the fault inception as specified by the relevant system operator, in coordination with the relevant TSO.

Article 41

Control requirements

1. During the synchronisation of a DC-connected power park module to the AC collection network, the DC-connected power park module shall have the capability to limit any voltage changes to a steady-state level specified by the relevant system operator, in coordination with the relevant TSO. The level specified shall not exceed 5 per cent of the pre-synchronisation voltage. The relevant system operator, in coordi-

nation with the relevant TSO, shall specify the maximum magnitude, duration and measurement window of the voltage transients.

2. The DC-connected power park module owner shall provide output signals as specified by the relevant system operator, in coordination with the relevant TSO.

Article 42

Network characteristics

With regard to the network characteristics, the following shall apply for the DC-connected power park modules:

(a) each relevant system operator shall specify and make publicly available the method and the pre-fault and post-fault conditions for the calculation of minimum and maximum short circuit power at the HVDC interface point;

(b) the DC-connected power park module shall be capable of stable operation within the minimum to maximum range of short circuit power and network characteristics of the HVDC interface point specified by the relevant system operator, in coordination with the relevant TSO;

(c) each relevant system operator and HVDC system owner shall provide the DC-connected power park module owner with network equivalents representing the system, enabling the DC-connected power park module owners to design their system with regard to harmonics;

Article 43

Protection requirements

1. Electrical protection schemes and settings of DC-connected power park modules shall be determined in accordance with Article 14(5)(b) of Regulation (EU) 2016/631, where the network refers to the synchronous area network. The protection schemes have to be designed taking into account the system performance, grid specificities as well as technical specificities of the power park module technology and agreed with the relevant system operator, in coordination with the relevant TSO.

2. Priority ranking of protection and control of DC-connected power park modules shall be determined in accordance with Article 14(5)(c) of Regulation (EU) 2016/631, where the network refers to the synchronous area network, and agreed with the relevant system operator, in coordination with the relevant TSO.

Article 44

Power quality

DC-connected power park modules owners shall ensure that their connection to the network does not result in a level of distortion or fluctuation of the supply voltage on the network, at the connection point, exceeding the level specified by the relevant system operator, in coordination with the relevant TSO. The necessary contribution from grid users to associated studies, including, but not limited to, existing DC-con-

nected power park modules and existing HVDC systems, shall not be unreasonably withheld. The process for necessary studies to be conducted and relevant data to be provided by all grid users involved, as well as mitigating actions identified and implemented, shall be in accordance with the process in Article 29.

Article 45

General system management requirements applicable to DC-connected power park modules

With regard to general system management requirements, Articles 14(5), 15(6) and 16(4) of Regulation (EU) 2016/631 shall apply to any DC-connected power park module.

CHAPTER 2

Requirements for remote-end HVDC converter stations

Article 46

Scope

The requirements of Articles 11 to 39 apply to remote-end HVDC converter stations, subject to specific requirements provided for in Articles 47 to 50.

Article 47

Frequency stability requirements

1. Where a nominal frequency other than 50 Hz, or a frequency variable by design is used in the network connecting the DC-connected power park modules, subject to relevant TSO agreement, Article 11 shall apply to the remote-end HVDC converter station with the applicable frequency ranges and time periods specified by the relevant TSO, taking into account specificities of the system and the requirements laid down in Annex I.

2. With regards to frequency response, the remote-end HVDC converter station owner and the DC-connected power park module owner shall agree on the technical modalities of the fast signal communication in accordance with Article 39(1). Where the relevant TSO requires, the HVDC system shall be capable of providing the network frequency at the connection point as a signal. For an HVDC system connecting a power park module the adjustment of active power frequency response shall be limited by the capability of the DC-connected power park modules.

Article 48

Reactive power and voltage requirements

1. With respect to voltage ranges:

(a) a remote-end HVDC converter station shall be capable of staying connected to the remote-end HVDC converter station network and operating within the voltage ranges (per unit) and time periods specified in Tables 12 and 13, Annex VIII. The applicable voltage range and time periods specified are selected based on the reference 1 pu voltage;

(b) wider voltage ranges or longer minimum times for operation may be agreed between the relevant system operator, in coordination with the relevant TSO, and the DC-connected power park module owner in accordance with Article 40;

(c) for HVDC interface points at AC voltages that are not included in the scope of Table 12 and Table 13, Annex VIII, the relevant system operator, in coordination with the relevant TSO shall specify applicable requirements at the connection points;

(d) where frequencies other than nominal 50 Hz are used, subject to agreement by the relevant TSO, the voltage ranges and time periods specified by the relevant system operator, in coordination with the relevant TSO, shall be proportional to those in Annex VIII.

2. A remote-end HVDC converter station shall fulfil the following requirements referring to voltage stability, at the connection points with regard to reactive power capability:

(a) the relevant system operator, in coordination with the relevant TSO shall specify the reactive power provision capability requirements for various voltage levels. In doing so, the relevant system operator, in coordination with the relevant TSO shall specify a $U-Q/P_{\max}$ -profile of any shape and within the boundaries of which the remote-end HVDC converter station shall be capable of providing reactive power at its maximum HVDC active power transmission capacity;

(b) the $U-Q/P_{\max}$ -profile shall be specified by each relevant system operator, in coordination with the relevant TSO. The $U-Q/P_{\max}$ -profile shall be within the range of Q/P_{\max} and steady-state voltage specified in Table 14, Annex VIII, and the position of the $U-Q/P_{\max}$ -profile envelope shall lie within the limits of the fixed outer envelope specified in Annex IV. The relevant system operator, in coordination with the relevant TSO, shall consider the long term development of the network when determining these ranges.

Article 49

Network characteristics

With regard to the network characteristics, the remote-end HVDC converter station owner shall provide relevant data to any DC-connected power park module owner in accordance with Article 42.

Article 50
Power quality

Remote-end HVDC converter station owners shall ensure that their connection to the network does not result in a level of distortion or fluctuation of the supply voltage on the network, at the connection point, exceeding the level allocated to them by the relevant system operator, in coordination with the relevant TSO. The necessary contribution from grid users to the associated studies shall not be unreasonably withheld, including from, but not limited to, existing DC-connected power park modules and existing HVDC systems. The process for necessary studies to be conducted and relevant data to be provided by all grid users involved, as well as mitigating actions identified and implemented shall be in accordance with the process provided for in Article 29.

TITLE IV
INFORMATION EXCHANGE AND COORDINATION

Article 51
Operation of HVDC systems

1. With regard to instrumentation for the operation, each HVDC converter unit of an HVDC system shall be equipped with an automatic controller capable of receiving instructions from the relevant system operator and from the relevant TSO. This automatic controller shall be capable of operating the HVDC converter units of the HVDC system in a coordinated way. The relevant system operator shall specify the automatic controller hierarchy per HVDC converter unit.

2. The automatic controller of the HVDC system referred to in paragraph 1 shall be capable of sending the following signal types to the relevant system operator:

- (a) operational signals, providing at least the following:
 - (i) start-up signals;
 - (ii) AC and DC voltage measurements;
 - (iii) AC and DC current measurements;
 - (iv) active and reactive power measurements on the AC side;
 - (v) DC power measurements;
 - (vi) HVDC converter unit level operation in a multi-pole type HVDC converter;
 - (vii) elements and topology status; and
 - (viii) FSM, LFSM-O and LFSM-U active power ranges.
- (b) alarm signals, providing at least the following:
 - (i) emergency blocking;
 - (ii) ramp blocking;
 - (iii) fast active power reversal.

3. The automatic controller referred to in paragraph 1 shall be capable of receiving the following signal types from the relevant system operator:

(a) operational signals, receiving at least the following:

- (i) start-up command;
- (ii) active power setpoints;
- (iii) frequency sensitive mode settings;
- (iv) reactive power, voltage or similar setpoints;
- (v) reactive power control modes;
- (vi) power oscillation damping control; and
- (vii) synthetic inertia.

(b) alarm signals, receiving at least the following:

- (i) emergency blocking command;
- (ii) ramp blocking command;
- (iii) active power flow direction; and
- (iv) fast active power reversal command.

4. With regards to each signal, the relevant system operator may specify the quality of the supplied signal.

Article 52

Parameters and settings

The parameters and settings of the main control functions of an HVDC system shall be agreed between the HVDC system owner and the relevant system operator, in coordination with the relevant TSO. The parameters and settings shall be implemented within such a control hierarchy that makes their modification possible if necessary. Those main control functions are at least:

- (a) synthetic inertia, if applicable as referred to in Articles 14 and 41;
- (b) frequency sensitive modes (FSM, LFSM-O, LFSM-U) referred to in Articles 15, 16 and 17;
- (c) frequency control, if applicable, referred to in Article 16;
- (d) reactive power control mode, if applicable as referred to in Article 22;
- (e) power oscillation damping capability, referred to Article 30;
- (f) subsynchronous torsional interaction damping capability, referred to Article 31.

Article 53

Fault recording and monitoring

1. An HVDC system shall be equipped with a facility to provide fault recording and dynamic system behaviour monitoring of the following parameters for each of its HVDC converter stations:

- (a) AC and DC voltage;
- (b) AC and DC current;

- (c) active power;
 - (d) reactive power; and
 - (e) frequency.
2. The relevant system operator may specify quality of supply parameters to be complied with by the HVDC system, provided a reasonable prior notice is given.
 3. The particulars of the fault recording equipment referred to in paragraph 1, including analogue and digital channels, the settings, including triggering criteria and the sampling rates, shall be agreed between the HVDC system owner, the relevant system operator and the relevant TSO.
 4. All dynamic system behaviour monitoring equipment shall include an oscillation trigger, specified by the relevant system operator, in coordination with the relevant TSO, with the purpose of detecting poorly damped power oscillations.
 5. The facilities for quality of supply and dynamic system behaviour monitoring shall include arrangements for the HVDC system owner and the relevant system operator to access the information electronically. The communications protocols for recorded data shall be agreed between the HVDC system owner, the relevant system operator and the relevant TSO.

Article 54

Simulation models

1. The relevant system operator in coordination with the relevant TSO may specify that an HVDC system owner deliver simulation models which properly reflect the behaviour of the HVDC system in both steady-state, dynamic simulations (fundamental frequency component) and in electromagnetic transient simulations.

The format in which models shall be provided and the provision of documentation of models structure and block diagrams shall be specified by the relevant system operator in coordination with the relevant TSO.

2. For the purpose of dynamic simulations, the models provided shall contain at least, but not limited to the following sub-models, depending on the existence of the mentioned components:

- (a) HVDC converter unit models;
- (b) AC component models;
- (c) DC grid models;
- (d) Voltage and power controller;
- (e) Special control features if applicable e.g. power oscillation damping (POD) function, subsynchronous torsional interaction (SSTI) control;
- (f) Multi terminal control, if applicable;
- (g) HVDC system protection models as agreed between the relevant TSO and the HVDC system owner.

3. The HVDC system owner shall verify the models against the results of compliance tests carried out according to Title VI and a report of this verification shall be submitted to the relevant TSO. The models shall then be used for the purpose of verifying compliance with the requirements of this Regulation including, but not limited to, compliance simulations as provided for in Title VI and used in studies for continuous

evaluation in system planning and operation.

4. An HVDC system owner shall submit HVDC system recordings to the relevant system operator or relevant TSO if requested in order to compare the response of the models with these recordings.

5. An HVDC system owner shall deliver an equivalent model of the control system when adverse control interactions may result with HVDC converter stations and other connections in close electrical proximity if requested by the relevant system operator or relevant TSO. The equivalent model shall contain all necessary data for the realistic simulation of the adverse control interactions.

TITLE V

OPERATIONAL NOTIFICATION PROCEDURE FOR CONNECTION

CHAPTER 1

Connection of new HVDC systems

Article 55

General provisions

1. The HVDC system owner shall demonstrate to the relevant system operator that it has complied with the requirements set out in Title II to Title IV at the respective connection point by successfully completing the operational notification procedure for connection of the HVDC system as described in Articles 56 to 59.
2. The relevant system operator shall specify any detailed provisions of the operational notification procedure and make the details publicly available.
3. The operational notification procedure for connection for each new HVDC system shall comprise:
 - (a) energisation operational notification (EON);
 - (b) interim operational notification (ION); and
 - (c) final operational notification (FON).

Article 56

EON for HVDC systems

1. An EON shall entitle the HVDC system owner to energise its internal network and auxiliaries and connect it to the network at its specified connection points.
2. An EON shall be issued by the relevant system operator, subject to completion of preparation and the fulfilment of the requirements specified by the relevant system operator in the relevant operational procedures. This preparation will include agreement on the protection and control settings relevant to the connection points between the relevant system operator and the HVDC system owner.

Article 57**ION for HVDC systems**

1. An ION shall entitle a HVDC system owner or HVDC converter unit owner to operate the HVDC system or HVDC converter unit by using the network connections specified for the connection points for a limited period of time.
2. An ION shall be issued by the relevant system operator subject to the completion of the data and study review process.
3. For the purpose of the completion of data and study review, the HVDC system owner or HVDC converter unit owner shall provide the following upon request from the relevant system operator:
 - (a) itemised statement of compliance;
 - (b) detailed technical data of the HVDC system with relevance to the network connection, that is specified with respect to the connection points, as specified by the relevant system operator, in coordination with the relevant TSOs;
 - (c) equipment certificates of HVDC systems or HVDC converter units where these are relied upon as part of the evidence of compliance;
 - (d) simulation models or a replica of the exact control system as specified by Article 54 and by the relevant system operator in coordination with the relevant TSOs;
 - (e) studies demonstrating expected steady-state and dynamic performance as required by Titles II, III and IV;
 - (f) details of intended compliance tests according to Article 72;
 - (g) details of intended practical method of completing compliance tests pursuant to Title VI.
4. Except where paragraph 5 applies, the maximum period for the HVDC system owner or HVDC converter unit owner to remain in the ION status shall not exceed twenty four months. The relevant system operator may specify a shorter ION validity period. The ION validity period shall be notified to the regulatory authority in accordance with the applicable national regulatory framework. ION extension shall be granted only if the HVDC system owner demonstrates substantial progress towards full compliance. At the time of ION extension, the outstanding issues shall be explicitly identified.
5. The maximum period for an HVDC system owner or HVDC converter unit owner to remain in the ION status may be extended beyond 24 months upon request for a derogation made to the relevant system operator in accordance with the procedure in Title VII. The request shall be made before the expiry of the twenty four month period.

Article 58**FON for HVDC systems**

1. A FON shall entitle an HVDC system owner to operate the HVDC system or HVDC converter units by using the grid connection points.
2. A FON shall be issued by the relevant system operator upon prior removal of all incompatibilities identified for the purpose of the ION status and subject to the completion of the data and study review process.

3. For the purpose of the completion of data and study review, the HVDC system owner shall provide the following upon request from the relevant system operator in coordination with the relevant TSO:

(a) itemised statement of compliance; and

(b) update of applicable technical data, simulation models, a replica of the exact control system and studies as referred to in Article 57, including use of actual measured values during testing.

4. In case of incompatibility identified for the purpose of the granting of the FON, a derogation may be granted upon a request to the relevant system operator, in accordance with Articles 79 and 80. A FON shall be issued by the relevant system operator, if the HVDC system is compliant with the provisions of the derogation.

Where a request for a derogation is rejected, the relevant system operator shall have the right to refuse the operation of the HVDC system or HVDC converter units, whose owner's request for a derogation was rejected, until the HVDC system owner and the relevant system operator have resolved the incompatibility and the relevant system operator considers that the HVDC system complies with the provisions of this Regulation.

If the relevant system operator and the HVDC system owner do not resolve the incompatibility within a reasonable timeframe, but in any case not later than six months after the notification of the rejection of the request for a derogation, each party may refer the issue for decision to the regulatory authority.

Article 59

Limited operational notification for HVDC systems/derogations

1. HVDC system owners to whom a FON has been granted shall inform the relevant system operator immediately in the following circumstances:

(a) the HVDC system is temporarily subject to either a significant modification or loss of capability, due to implementation of one or more modifications of significance to its performance; or

(b) in case of equipment failures leading to non-compliance with some relevant requirements.

2. The HVDC system owner shall apply to the relevant system operator for a limited operational notification (LON) if the HVDC system owner reasonably expects the circumstances detailed in paragraph 1 to persist for more than three months.

3. A LON shall be issued by the relevant system operator with a clear identification of:

(a) the unresolved issues justifying the granting of the LON;

(b) the responsibilities and timescales for expected solution; and

(c) a maximum period of validity which shall not exceed 12 months. The initial period granted may be shorter with the possibility for extension if evidence to the satisfaction of the relevant system operator demonstrates that substantial progress has been made towards achieving full compliance.

4. The FON shall be suspended during the period of validity of the LON with regard to the subjects for which the LON has been issued.

5. A further prolongation of the period of validity of the LON may be granted upon request for a derogation made to the relevant system operator before the expiry of that period, in accordance with Articles 79 and 80.

6. The relevant system operator may refuse the operation of the HVDC system if the LON terminates and the circumstance which caused it to be issued remains. In such a case the FON shall automatically be invalid.
7. If the relevant system operator does not grant an extension of the period of validity of the LON in accordance with paragraph 5 or if it refuses to allow the operation of the HVDC system once the LON is no longer valid in accordance with paragraph 6, the HVDC system owner may refer the issue for decision to the regulatory authority within six months after the notification of the decision of the relevant system operator.

CHAPTER 2

Connection of new DC-connected power park modules

Article 60

General provisions

1. The provisions of this Chapter shall apply to new DC-connected power park modules only.
2. The DC-connected power park module owner shall demonstrate to the relevant system operator its compliance with the requirements referred to in Title III at the respective connection points by successfully completing the operational notification procedure for connection of the DC-connected power park module in accordance with Articles 61 through to 66.
3. The relevant system operator shall specify further details of the operational notification procedure and make those details publically available.
4. The operational notification procedure for connection for each new DC-connected power park module shall comprise:
 - (a) energisation operational notification (EON);
 - (b) interim operational notification (ION); and
 - (c) final operational notification (FON).

Article 61

EON for DC-connected power park modules

1. An EON shall entitle the owner of a DC-connected power park module to energise its internal network and auxiliaries by using the grid connection that is specified by the connection points.
2. An EON shall be issued by the relevant system operator, subject to completion of preparation including agreement on the protection and control settings relevant to the connection points between the relevant system operator and the DC-connected power park module.

Article 62

ION for DC-connected power park modules

1. An ION shall entitle the DC-connected power park module owner to operate the DC-connected power park module and generate power by using the grid connection for a limited period of time.
2. An ION shall be issued by the relevant system operator, subject to the completion of the data and study review process.
3. With respect to data and study review, the DC-connected power park module owner shall provide the following upon request from the relevant system operator:
 - (a) itemised statement of compliance;
 - (b) detailed technical data of the DC-connected power park module with relevance to the grid connection, that is specified by the connection points, as specified by the relevant system operator in coordination with the relevant TSO;
 - (c) equipment certificates of DC-connected power park module, where these are relied upon as part of the evidence of compliance;
 - (d) simulation models as specified in Article 54 and as required by the relevant system operator in coordination with the relevant TSO;
 - (e) studies demonstrating expected steady-state and dynamic performance as required by Title III; and
 - (f) details of intended compliance tests in accordance with Article 73.
4. Except where paragraph 5 applies, the maximum period for the DC-connected power park module owner to remain in the ION status shall not exceed twenty-four months. The relevant system operator may specify shorter ION validity. The ION validity period shall be notified to the regulatory authority in accordance with the applicable national regulatory framework. ION extensions shall be granted only if the DC-connected power park module owner demonstrates substantial progress towards full compliance. At the time of ION extension, any outstanding issues shall be explicitly identified.
5. The maximum period for a DC-connected power park module owner to remain in the ION status may be extended beyond 24 months upon request for a derogation made to the relevant system operator in accordance with the procedure in Title VII.

Article 63

FON for DC-connected power park modules

1. A FON shall entitle the DC-connected power park module owner to operate the DC-connected power park module by using the grid connection that is specified by the connection point.
2. A FON shall be issued by the relevant system operator, upon prior removal of all incompatibilities identified for the purpose of the ION status and subject to the completion of the data and study review process as required by this Regulation.
3. For the purpose of the completion of data and study review, the DC-connected power park module owner shall provide the following upon request from the relevant system operator:

- (a) itemised statement of compliance; and
- (b) update of applicable technical data, simulation models and studies as referred to in Article 62(3), including use of actual measured values during testing.

4. In case of incompatibility identified for the purpose of the granting of the FON, a derogation may be granted upon request made to the relevant system operator, in accordance with the derogation procedure according to Title VII. A FON shall be issued by the relevant system operator, if the DC-connected power park module is compliant with the provisions of the derogation. The relevant system operator shall have the right to refuse the operation of the DC-connected power park module, whose owner's request for a derogation was rejected, until the DC-connected power park module owner and the relevant system operator have resolved the incompatibility and the DC-connected power park module is considered to be compliant by the relevant system operator.

Article 64

Limited operational notification for DC-connected power park modules

1. DC-connected power park module owners to whom a FON has been granted shall inform the relevant system operator immediately in the following circumstances:

- (a) the DC-connected power park module is temporarily subject to either a significant modification or loss of capability, due to implementation of one or more modifications of significance to its performance; or
- (b) in case of equipment failures leading to non-compliance with some relevant requirements.

2. The DC-connected power park module owner shall apply to the relevant system operator for a limited operational notification (LON), if the DC-connected power park module owner reasonably expects the circumstances detailed in paragraph 1 to persist for more than three months.

3. A LON shall be issued by the relevant TSO with a clear identification of:

- (a) the unresolved issues justifying the granting of the LON;
- (b) the responsibilities and timescales for expected solution; and
- (c) a maximum period of validity which shall not exceed 12 months. The initial period granted may be shorter with the possibility for extension if evidence to the satisfaction of the relevant system operator demonstrating that substantial progress has been made towards achieving full compliance.

4. The FON shall be suspended during the period of validity of the LON with regard to the subjects for which the LON has been issued.

5. A further prolongation of the period of validity of the LON may be granted upon request for a derogation made to the relevant system operator, before the expiry of that period, in accordance with the derogation procedure described in Title VII.

6. The relevant system operator may refuse the operation of the DC-connected power park module if the LON terminates and the circumstance which caused it to be issued remains. In such a case the FON shall automatically be invalid.

CHAPTER 3

Cost benefit analysis

Article 65

Identification of costs and benefits of application of requirements to existing HVDC systems or DC-connected power park modules

1. Prior to the application of any requirement set out in this Regulation to existing HVDC systems or DC-connected power park modules in accordance with paragraph 3 of Article 4, the relevant TSO shall undertake a qualitative comparison of costs and benefits related to the requirement under consideration. This comparison shall take into account available network-based or market-based alternatives. The relevant TSO may only proceed to undertake a quantitative cost-benefit analysis in accordance with paragraphs 2 to 5, if the qualitative comparison indicates that the likely benefits exceed the likely costs. If, however, the cost is deemed high or the benefit is deemed low, then the relevant TSO shall not proceed further.

2. Following a preparatory stage undertaken in accordance with paragraph 1, the relevant TSO shall carry out a quantitative cost-benefit analysis of any requirement under consideration for application to existing HVDC systems or DC-connected power park modules that have demonstrated potential benefits as a result of the preparatory stage according to paragraph 1.

3. Within three months of concluding the cost-benefit analysis, the relevant TSO shall summarise the findings in a report which shall:

- (a) include the cost-benefit analysis and a recommendation on how to proceed;
- (b) include a proposal for a transitional period for applying the requirement to existing HVDC systems or DC-connected power park modules. That transitional period shall not be more than two years from the date of the decision of the regulatory authority or where applicable the **Contracting Party** on the requirement's applicability;
- (c) be subject to public consultation in accordance with Article 8.

4. No later than six months after the end of the public consultation, the relevant TSO shall prepare a report explaining the outcome of the consultation and making a proposal on the applicability of the requirement under consideration to existing HVDC systems or DC-connected power park modules. The report and proposal shall be notified to the regulatory authority or, where applicable, the **Contracting Party**, and the HVDC system owner, DC-connected power park module owner or, where applicable, third party shall be informed on its content.

5. The proposal made by the relevant TSO to the regulatory authority or, where applicable, the **Contracting Party** pursuant to paragraph 4 shall include the following:

- (a) an operational notification procedure for demonstrating the implementation of the requirements by the owner of the existing HVDC system or DC-connected power park module;
- (b) a transitional period for implementing the requirements which shall take into account the category of HVDC system or DC-connected power park module and any underlying obstacles to the efficient implementation of the equipment modification/refitting.

Article 66**Principles of cost-benefit analysis**

1. HVDC system owners, DC-connected power park module owners and DSOs, including CDSOs, shall assist and contribute to the cost-benefit analysis undertaken according to Article 65 and 80 and provide the necessary data as requested by the relevant system operator or relevant TSO within three months of receiving a request, unless agreed otherwise by the relevant TSO. For the preparation of a cost-benefit-analysis by a HVDC system owner or DC-connected power park module owner, or their prospective owner, assessing a potential derogation pursuant to Article 79, the relevant TSO and DSO, including CDSO, shall assist and contribute to the cost-benefit analysis and provide the necessary data as requested by the HVDC system owner or DC-connected power park module owner, or their prospective owner, within three months of receiving a request, unless agreed otherwise by the HVDC system owner or DC-connected power park module owner, or their prospective owner.

2. A cost-benefit analysis shall be in line with the following principles:

(a) the relevant TSO, or HVDC system owner or DC-connected power park module owner, or their prospective owner, shall base its cost-benefit analysis on one or more of the following calculating principles:

- (i) the net present value;
- (ii) the return on investment;
- (iii) the rate of return;
- (iv) the time needed to break even.

(b) the relevant TSO, or HVDC system owner or DC-connected power park module owner, or their prospective owner, shall also quantify socioeconomic benefits in terms of improvement in security of supply and shall include at least:

- (i) the associated reduction in probability of loss of supply over the lifetime of the modification;
- (ii) the probable extent and duration of such loss of supply;
- (iii) the societal cost per hour of such loss of supply.

(c) the relevant TSO, or HVDC system owner or DC-connected power park module owner, or their prospective owner, shall quantify the benefits to the internal market in electricity, cross-border trade and integration of renewable energies, including at least:

- (i) the active power frequency response;
- (ii) the balancing reserves;
- (iii) the reactive power provision;
- (iv) congestion management;
- (v) defence measures.

(d) the relevant TSO shall quantify the costs of applying the necessary rules to existing HVDC systems or DC-connected power park modules, including at least:

- (i) the direct costs incurred in implementing a requirement;
- (ii) the costs associated with attributable loss of opportunity;
- (iii) the costs associated with resulting changes in maintenance and operation.

TITLE VI

COMPLIANCE

CHAPTER 1

Compliance monitoring

Article 67

Common provisions for compliance testing

1. Testing of the performance of HVDC systems and DC-connected power park modules shall aim at demonstrating that the requirements of this Regulation have been complied with.
2. Notwithstanding the minimum requirements for compliance testing set out in this Regulation, the relevant system operator is entitled to:
 - (a) allow the HVDC system owner or DC-connected power park module owner to carry out an alternative set of tests, provided that those tests are efficient and suffice to demonstrate that a HVDC system or DC-connected power park module complies with the requirements of this Regulation; and
 - (b) require the HVDC system owner or DC-connected power park module owner to carry out additional or alternative sets of tests in those cases where the information supplied to the relevant system operator in relation to compliance testing under the provisions of Chapter 2 of Title VI, is not sufficient to demonstrate compliance with the requirements of this Regulation.
3. The HVDC system owner or DC-connected power park module owner is responsible for carrying out the tests in accordance with the conditions laid down in Chapter 2 of Title VI. The relevant system operator shall cooperate and not unduly delay the performance of the tests.
4. The relevant system operator may participate in the compliance testing either on site or remotely from the system operator's control centre. For that purpose, the HVDC system owner or DC-connected power park module owner shall provide the monitoring equipment necessary to record all relevant test signals and measurements as well as ensure that the necessary representatives of the HVDC system owner or DC-connected power park module owner available on site for the entire testing period. Signals specified by the relevant system operator shall be provided if, for selected tests, the system operator wishes to use its own equipment to record performance. The relevant system operator has sole discretion to decide about its participation.

Article 68

Common provisions on compliance simulation

1. Simulation of the performance of HVDC systems and DC-connected power park modules shall aim at demonstrating that the requirements of this Regulation have been fulfilled.
2. Notwithstanding the minimum requirements set out in this Regulation for compliance simulation, the relevant system operator may:

(a) allow the HVDC system owner or DC-connected power park module owner to carry out an alternative set of simulations, provided that those simulations are efficient and suffice to demonstrate that a HVDC system or DC-connected power park module complies with the requirements of this Regulation or with national legislation; and

(b) require the HVDC system owner or DC-connected power park module owner to carry out additional or alternative sets of simulations in those cases where the information supplied to the relevant system operator in relation to compliance simulation under the provisions of Chapter 3 of Title VI, is not sufficient to demonstrate compliance with the requirements of this Regulation.

3. To demonstrate compliance with the requirements of this Regulation, the HVDC system owner and DC-connected power park module owner shall provide a report with the simulation results. The HVDC system owner and DC-connected power park module owner shall produce and provide a validated simulation model for a given HVDC system or DC-connected power park module. The scope of the simulation models is set out in Articles 38 and 54.

4. The relevant system operator shall have the right to check that a HVDC system and DC-connected power park module complies with the requirements of this Regulation by carrying out its own compliance simulations based on the provided simulation reports, simulation models and compliance test measurements.

5. The relevant system operator shall provide the HVDC system owner or DC-connected power park module owner with technical data and a simulation model of the network, to the extent necessary to carry out the requested simulations in accordance with Chapter 3 of Title VI.

Article 69

Responsibility of the HVDC system owner and DC-connected power park module owner

1. The HVDC system owner shall ensure that the HVDC system and HVDC converter stations are compliant with the requirements provided for by this Regulation. This compliance shall be maintained throughout the lifetime of the facility.

2. The DC-connected power park module owner shall ensure that the DC-connected power park module is compliant with the requirements under this Regulation. This compliance shall be maintained throughout the lifetime of the facility.

3. Planned modifications of the technical capabilities of the HVDC system, HVDC converter station or DC-connected power park module with possible impact on its compliance to the requirements under this Regulation shall be notified to the relevant system operator by the HVDC system owner or DC-connected power park module owner before initiating such modification.

4. Any operational incidents or failures of an HVDC system, HVDC converter station or DC-connected power park module that have impact on its compliance to the requirements of this Regulation shall be notified to the relevant system operator by the HVDC system owner or DC-connected power park module owner as soon as possible without any delay after the occurrence of such an incident.

5. Any foreseen test schedules and procedures to verify compliance of an HVDC system, HVDC converter station or DC-connected power park module with the requirements of this Regulation shall be notified to the relevant system operator by the HVDC system owner or DC-connected power park module owner in due time and prior to their launch and shall be approved by the relevant system operator.

6. The relevant system operator shall be facilitated to participate in such tests and may record the performance of the HVDC systems, HVDC converter stations or DC-connected power park modules.

Article 70

Tasks of the relevant system operator

1. The relevant system operator shall assess the compliance of an HVDC system, HVDC converter station and DC-connected power park module with the requirements under this Regulation throughout the lifetime of the HVDC system, HVDC converter station or DC-connected power park module. The HVDC system owner or DC-connected power park module owner shall be informed of the outcome of this assessment.

2. Where requested by the relevant system operator, the HVDC system owner or DC-connected power park module owner shall carry out compliance tests and simulations, not only during the operational notification procedures according to Title V, but repeatedly throughout the lifetime of the HVDC system, HVDC converter station or DC-connected power park module according to a plan or general scheme for repeated tests and specified simulations or after any failure, modification or replacement of any equipment that may have impact on the compliance with the requirements under this Regulation. The HVDC system owner or DC-connected power park module owner shall be informed of the outcome of these compliance tests and simulations.

3. The relevant system operator shall make publicly available the list of information and documents to be provided as well as the requirements to be fulfilled by the HVDC system owner or DC-connected power park module owner in the frame of the compliance process. Such list shall cover at least the following information, documents and requirements:

(a) all documentation and certificates to be provided by the HVDC system owner or DC-connected power park module owner;

(b) details of the technical data of the HVDC system, HVDC converter station or DC-connected power park module with relevance to the grid connection;

(c) requirements for models for steady-state and dynamic system studies;

(d) timeline for the provision of system data required to perform the studies;

(e) studies by the HVDC system owner or DC-connected power park module owner to demonstrate the expected steady-state and dynamic performance in accordance with the requirements set out in Titles II, III and IV;

(f) conditions and procedures including the scope for registering equipment certificates; and

(g) conditions and procedures for use of relevant equipment certificates, issued by an authorised certifier, by the DC-connected power park module owner.

4. The relevant system operator shall make publicly available the allocation of responsibilities to the HVDC system owner or DC-connected power park module owner and to the system operator for compliance testing, simulation and monitoring.

5. The relevant system operator may partially or totally assign the performance of its compliance monitoring to third parties. In this case, the relevant system operator shall ensure compliance with Article 10 by appropriate confidentiality commitments with the assignee.

6. The relevant system operator shall not unreasonably withhold any operational notification in accordance with Title V, if compliance tests or simulations cannot be performed as agreed between the relevant system operator and the HVDC system owner or DC-connected power park module owner due to reasons which are in the sole control of the relevant system operator.

7. The relevant system operator shall provide the relevant TSO when requested the compliance test and simulation results referred to in this Chapter.

CHAPTER 2

Compliance testing

Article 71

Compliance testing for HVDC systems

1. Equipment certificates may be used instead of part of the tests below, on the condition that they are provided to the relevant system operator.

2. With regard to the reactive power capability test:

(a) the HVDC converter unit or the HVDC converter station shall demonstrate its technical capability to provide leading and lagging reactive power capability according to Article 20;

(b) the reactive power capability test shall be carried out at maximum reactive power, both leading and lagging, and concerning the verification of the following parameters:

(i) Operation at minimum HVDC active power transmission capacity;

(ii) Operation at maximum HVDC active power transmission capacity;

(iii) Operation at active power setpoint between those minimum and maximum HVDC active power transmission capacity.

(c) the test shall be deemed passed, provided that the following conditions are cumulatively fulfilled:

(i) the HVDC converter unit or the HVDC converter station has been operating no shorter than 1 hour at maximum reactive power, both leading and lagging, for each parameter as referred to in point (b);

(ii) the HVDC converter unit or the HVDC converter station demonstrates its capability to change to any reactive power setpoint within the applicable reactive power range within the specified performance targets of the relevant reactive power control scheme; and

(iii) no action of any protection within the operation limits specified by reactive power capacity diagram occurs.

3. With regard to the voltage control mode test:

(a) the HVDC converter unit or the HVDC converter station shall demonstrate its capability to operate in voltage control mode in the conditions set forth in Article 22(3);

(b) the voltage control mode test shall apply concerning the verification of the following parameters:

(i) the implemented slope and deadband of the static characteristic;

(ii) the accuracy of the regulation;

- (iii) the insensitivity of the regulation;
 - (iv) the time of reactive power activation.
- (c) the test shall be deemed passed, provided that the following conditions are cumulatively fulfilled:
 - (i) the range of regulation and adjustable droop and deadband is compliant with agreed or decided characteristic parameters, according to Article 22(3);
 - (ii) the insensitivity of voltage control is not higher than 0,01 pu;
 - (iii) following a step change in voltage, 90% of the change in reactive power output has been achieved within the times and tolerances according to Article 22(3).
- 4. With regard to the reactive power control mode test:
 - (a) the HVDC converter unit or the HVDC converter station shall demonstrate its capability to operate in reactive power control mode, according to the conditions referred to in Article 22(4);
 - (b) the reactive power control mode test shall be complementary to the reactive power capability test;
 - (c) the reactive power control mode test shall apply concerning the verification of the following parameters:
 - (i) the reactive power setpoint range and step;
 - (ii) the accuracy of the regulation; and
 - (iii) the time of reactive power activation.
 - (d) the test shall be deemed passed, provided that the following conditions are cumulatively fulfilled:
 - (i) the reactive power setpoint range and step is ensured according to Article 22(4);
 - (ii) the accuracy of the regulation is compliant with the conditions as referred to in Article 22(3).
- 5. With regard to the power factor control mode test:
 - (a) the HVDC converter unit or the HVDC converter station shall demonstrate its capability to operate in power factor control mode according to the conditions referred to in Article 22(5);
 - (b) the power factor control mode test shall apply concerning the verification of the following parameters:
 - (i) the power factor setpoint range;
 - (ii) the accuracy of the regulation;
 - (iii) the response of reactive power due to step change of active power.
 - (c) the test shall be deemed passed, provided that the following conditions are cumulatively fulfilled:
 - (i) the power factor setpoint range and step is ensured according to Article 22(5);
 - (ii) the time of reactive power activation as result of step active power change does not exceed the requirements specified in accordance with Article 22(5);
 - (iii) the accuracy of the regulation is compliant with the value, as referred to in Article 22(5).
- 6. With regard to the FSM response test:
 - (a) the HVDC system shall demonstrate its technical capability to continuously modulate active power over the full operating range between maximum HVDC active power transmission capacity and minimum HVDC active power transmission capacity to contribute to frequency control and shall verify the steady-state parameters of regulations, such as droop and deadband and dynamic parameters, including robustness during frequency step change response and large, fast frequency changes;

(b) the test shall be carried out by simulating frequency steps and ramps big enough to activate at least 10% of the full active power frequency response range in each direction, taking into account the droop settings and the deadband. Simulated frequency deviation signals shall be injected into the controller of the HVDC converter unit or the HVDC converter station;

(c) the test shall be deemed to be passed, provided that the following conditions are all fulfilled:

- (i) activation time of full active power frequency response range as result of a step frequency change has been no longer than required by Annex II;
- (ii) undamped oscillations do not occur after the step change response;
- (iii) the initial delay time has been according to Annex II;
- (iv) the droop settings are available within the range provided for in Annex II and deadband (thresholds) is not more than the value in Annex II;
- (v) insensitivity of active power frequency response at any relevant operating point does not exceed the requirements set forth in Annex II.

7. With regard to the LFSM-O response test:

(a) the HVDC system shall demonstrate its technical capability to continuously modulate active power to contribute to frequency control in case of large increase of frequency in the system and shall verify the steady-state parameters of regulations, such as droop and deadband, and dynamic parameters, including frequency step change response;

(b) the test shall be carried out by simulating frequency steps and ramps big enough to activate at least 10% of the full operating range for active power, taking into account the droop settings and the deadband. Simulated frequency deviation signals shall be injected into the controller of the HVDC converter unit or the HVDC converter station;

(c) the test shall be deemed passed, provided that the following conditions are both fulfilled:

- (i) the test results, for both dynamic and static parameters, are in line with the requirements as referred to in Annex II;
- (ii) undamped oscillations do not occur after the step change response.

8. With regard to the LFSM-U response test:

(a) the HVDC system shall demonstrate its technical capability to continuously modulate active power at operating points below maximum HVDC active power transmission capacity to contribute to frequency control in case of large drop of frequency in the system;

(b) the test shall be carried out by simulating at appropriate active power load points with low frequency steps and ramps big enough to activate at least 10% of the full operating range for active power, taking into account the droop settings and the deadband. Simulated frequency deviation signals shall be injected into the controller of the HVDC converter unit or the HVDC converter station;

(c) the test shall be deemed passed, provided that the following conditions are both fulfilled:

- (i) the test results, for both dynamic and static parameters, are in line with the requirements as referred to in Annex II;
- (ii) undamped oscillations do not occur after the step change response.

9. With regard to the active power controllability test:

- (a) the HVDC system shall demonstrate its technical capability to continuously modulate active power over the full operating range according to Article 13(1)(a) and (d);
- (b) the test shall be carried out by sending manual and automatic instructions by the relevant TSO;
- (c) the test shall be deemed passed, provided that the following conditions are cumulatively fulfilled:
 - (i) the HVDC system has demonstrated stable operation;
 - (ii) the time of adjustment of the active power is shorter than the delay specified pursuant to Article 13(1)(a);
 - (iii) the dynamic response of the HVDC system when receiving instructions for the purposes of exchange or sharing of reserves, or for participating in imbalance netting processes, if capable of fulfilling the requirements for these products, as specified by the relevant TSO, has been demonstrated.

10. With regard to the ramping rate modification test:

- (a) the HVDC system shall demonstrate its technical capability to adjust the ramping rate according to Article 13(2);
- (b) the test shall be carried out by relevant TSO sending instructions of ramping modifications;
- (c) the test shall be deemed passed, provided that the following conditions are cumulatively fulfilled:
 - (i) ramping rate is adjustable;
 - (ii) the HVDC system has demonstrated stable operation during ramping periods.

11. With regard to the black start test, if applicable:

- (a) the HVDC system shall demonstrate its technical capability to energise the busbar of the remote AC substation to which it is connected, within a time frame specified by the relevant TSO, according to Article 37(2);
- (b) the test shall be carried out while the HVDC system starts from shut down;
- (c) the test shall be deemed passed, provided that the following conditions are cumulatively fulfilled:
 - (i) the HVDC system has demonstrated being able to energise the busbar of the remote AC-substation to which it is connected;
 - (ii) the HVDC system operates from a stable operating point at agreed capacity, according to the procedure of Article 37(3).

Article 72

Compliance testing for DC-connected power park modules and remote-end HVDC converter units

- 1. Equipment certificates may be used instead of part of the tests below, on the condition that they are provided to the relevant system operator.
- 2. With regard to the reactive power capability test of DC-connected power park modules:
 - (a) the DC-connected power park module shall demonstrate its technical capability to provide leading and lagging reactive power capability according to Article 40(2);
 - (b) the reactive power capability test shall be carried out at maximum reactive power, both leading and lagging, and concerning the verification of the following parameters:
 - (i) operation in excess of 60% of maximum capacity for 30 minutes;

- (ii) operation within the range of 30-50% of maximum capacity for 30 minutes; and
 - (iii) operation within the range of 10-20% of maximum capacity for 60 minutes.
- (c) the test shall be deemed passed, provided that the following conditions are cumulatively fulfilled:
- (i) the DC-connected power park module has been operating no shorter than requested duration at maximum reactive power, both leading and lagging, in each parameter as referred to in point (b);
 - (ii) the DC-connected power park module has demonstrated its capability to change to any reactive power setpoint within the agreed or decided reactive power range within the specified performance targets of the relevant reactive power control scheme; and
 - (iii) no action of any protection within the operation limits specified by reactive power capacity diagram occurs.
3. With regard to the reactive power capability test of remote-end HVDC converter units:
- (a) the HVDC converter unit or the HVDC converter station shall demonstrate its technical capability to provide leading and lagging reactive power capability according to Article 48(2);
- (b) the test shall be deemed passed, provided that the following conditions are cumulatively fulfilled:
- (i) the HVDC converter unit or the HVDC converter station has been operating no shorter than 1 hour at maximum reactive power, both leading and lagging, at:
 - minimum HVDC active power transmission capacity;
 - maximum HVDC active power transmission capacity; and
 - an active power operating point between those maximum and minimum ranges.
 - (ii) the HVDC converter unit or the HVDC converter station demonstrates its capability to change to any reactive power setpoint within the agreed or decided reactive power range within the specified performance targets of the relevant reactive power control scheme; and
 - (iii) no action of any protection within the operation limits specified by reactive power capacity diagram occurs.
4. With regard to the voltage control mode test:
- (a) the DC-connected power park module shall demonstrate its capability to operate in voltage control mode in the conditions set forth in Article 21 of Regulation (EU) 2016/631;
- (b) the voltage control mode test shall apply concerning the verification of the following parameters:
- (i) the implemented slope and deadband of the static characteristic;
 - (ii) the accuracy of the regulation;
 - (iii) the insensitivity of the regulation;
 - (iv) the time of reactive power activation.
- (c) the test shall be deemed passed, provided that the following conditions are cumulatively fulfilled:
- (i) the range of regulation and adjustable the droop and deadband is compliant with agreed or decided characteristic parameters, according to Article 21(3)(d) of Regulation (EU) 2016/631;
 - (ii) the insensitivity of voltage control is not higher than 0,01 pu, according to Article 21(3)(d) of Regulation (EU) 2016/631;
 - (iii) following a step change in voltage, 90% of the change in reactive power output has been achieved

within the times and tolerances according to Article 21(3)(d) of Regulation (EU) 2016/631.

5. With regard to the reactive power control mode test:

- (a) the DC-connected power park module shall demonstrate its capability to operate in reactive power control mode, according to the conditions referred to in Article 21(3)(d)(iii) of Regulation (EU) 2016/631;
- (b) the reactive power control mode test shall be complementary to the reactive power capability test;
- (c) the reactive power control mode test shall apply concerning the verification of the following parameters:
 - (i) the reactive power setpoint range and step;
 - (ii) the accuracy of the regulation;
 - (iii) the time of reactive power activation.
- (d) the test shall be deemed passed, provided that the following conditions are cumulatively fulfilled:
 - (i) the reactive power setpoint range and step is ensured according to Article 21(3)(d) of Regulation (EU) 2016/631;
 - (ii) the accuracy of the regulation is compliant with the conditions as referred to in Article 21(3)(d) of Regulation (EU) 2016/631.

6. With regard to the power factor control mode test:

- (a) the DC-connected power park module shall demonstrate its capability to operate in power factor control mode according to the conditions referred to in Article 21(3)(d)(iv) of Regulation (EU) 2016/631;
- (b) the power factor control mode test shall apply concerning the verification of the following parameters:
 - (i) the power factor setpoint range;
 - (ii) the accuracy of the regulation;
 - (iii) the response of reactive power due to step change of active power.
- (c) the test shall be deemed passed, provided that the following conditions are cumulatively fulfilled:
 - (i) the power factor setpoint range and step is ensured according to Article 21(3)(d) of Regulation (EU) 2016/631;
 - (ii) the time of reactive power activation as result of step active power change does not exceed the requirement according to Article 21(3)(d) of Regulation (EU) 2016/631;
 - (iii) the accuracy of the regulation is compliant with the value, as referred to in Article 21(3)(d) of Regulation (EU) 2016/631.

7. With regard to the tests identified in paragraphs 4, 5 and 6 the relevant TSO may select only two of the three control options for testing.

8. With regard to LFSM-O response of DC-connected power park module, the tests shall be carried out in accordance with Article 47(3) of Regulation (EU) 2016/631.

9. With regard to LFSM-U response of DC-connected power park module, the tests shall be carried out in accordance with Article 48(3) of Regulation (EU) 2016/631.

10. With regard to active power controllability of DC-connected power park module, the tests shall be carried out in accordance with 48(2) of Regulation (EU) 2016/631.

11. With regard to FSM response of DC-connected power park module, the tests shall be carried out in accordance with Article 48(4) of Regulation (EU) 2016/631.

12. With regard to frequency restoration control of DC-connected power park module, the tests shall be carried out in accordance with Article 45(5) of Regulation (EU) 2016/631.

13. With regard to fast signal response of DC-connected power park module, the test shall be deemed passed if the DC-connected power park module can demonstrate its response within the time specified in Article 39(1)(a).

14. With regard to tests for DC-connected power park modules where the AC collection network is not at nominal 50 Hz frequency, the relevant system operator, in coordination with the relevant TSO, shall agree with the DC-connected power park module owner the compliance tests required.

CHAPTER 3

Compliance simulations

Article 73

Compliance simulations for HVDC systems

1. Equipment certificates may be used instead of part of the simulations below, on the condition that they are provided to the relevant system operator.

2. With regard to the fast fault current injection simulation:

(a) the HVDC converter unit owner or the HVDC converter station owner shall simulate fast fault current injection in the conditions set forth in Article 19;

(b) the simulation is deemed passed, provided that compliance with the requirements specified in accordance with Article 19 is demonstrated.

3. With regard to the fault-ride-through capability simulation:

(a) the HVDC system owner shall simulate the capability for fault-ride-through in the conditions set forth in Article 25; and

(b) the simulation is deemed passed, provided that compliance with the requirements specified in accordance with Article 25 is demonstrated.

4. With regard to the post fault active power recovery simulation:

(a) the HVDC system owner shall simulate the capability for post fault active power recovery in the conditions set forth in Article 26;

(b) the simulation is deemed passed, provided that compliance with the requirements specified in accordance with Article 26 is demonstrated.

5. With regard to the reactive power capability simulation:

(a) the HVDC converter unit owner or the HVDC converter station owner shall simulate the capability for leading and lagging reactive power capability in the conditions referred to in Article 20(2) to (4);

(b) the simulation shall be deemed passed, provided that the following conditions are cumulatively fulfilled:

(i) the simulation model of the HVDC converter unit or the HVDC converter station is validated against the compliance tests for reactive power capability as referred to in Article 71;

(ii) compliance with the requirements as referred to in Article 20(2) to (4) is demonstrated.

6. With regard to the power oscillations damping control simulation:

(a) the HVDC system owner shall demonstrate the performance of its control system (POD function) to damp power oscillations in the conditions set forth in Article 30;

(b) the tuning shall result in improved damping of corresponding active power response of the HVDC system in combination with the POD function compared to the active power response of the HVDC system without POD;

(c) the simulation shall be deemed passed, provided that the following conditions are cumulatively fulfilled:

(i) the POD function damps the existing power oscillations of the HVDC system within a frequency range specified by the relevant TSO. This frequency range shall include the local mode frequency of the HVDC system and the expected network oscillations; and

(ii) a change of active power transfer of the HVDC system as specified by the relevant TSO does not lead to undamped oscillations in active or reactive power of the HVDC system.

7. With regard to the simulation of active power modification in case of disturbance:

(a) the HVDC system owner shall simulate the capability to quickly modify active power according to Article 13(1)(b); and

(b) the simulation shall be deemed passed, provided that the following conditions are cumulatively fulfilled:

(i) the HVDC system has demonstrated stable operation when following the pre-specified sequence of active power variation;

(ii) the initial delay of the adjustment of the active power is shorter than the value specified in Article 13(1)(b) or reasonably justified if greater.

8. With regard to the fast active power reversal simulation, as applicable:

(a) the HVDC system owner shall simulate the capability to quickly reverse active power according to Article 13(1)(c);

(b) the simulation shall be deemed passed, provided that the following conditions are cumulatively fulfilled:

(i) the HVDC system has demonstrated stable operation;

(ii) the time of adjustment of the active power is shorter than the value specified in Article 13(1)(c) or reasonably justified if greater.

Article 74

Compliance simulations for DC-connected power park modules and remote-end HVDC converter units

1. DC-connected power park modules are subject to the compliance simulations detailed in this Article. Equipment certificates may be used instead of part of the simulations described below, on the condition that they are provided to the relevant system operator.

2. With regard to the fast fault current injection simulation:

(a) the DC-connected power park module owner shall simulate the capability for fast fault current injection

in the conditions set forth in Article 20(2)(b) of Regulation (EU) 2016/631; and

(b) the simulation shall be deemed passed, provided that compliance with the requirement according to Article 20(2)(b) of Regulation (EU) 2016/631 is demonstrated.

3. With regard to the post fault active power recovery simulation:

(a) the DC-connected power park module owner shall simulate the capability for post fault active power recovery in the conditions set forth in Article 20(3)(a) of Regulation (EU) 2016/631; and

(b) the simulation shall be deemed passed, provided that compliance with the requirement according to Article 20(3)(a) of Regulation (EU) 2016/631 is demonstrated.

4. With regard to the reactive power capability simulation of DC-connected power park modules:

(a) the DC-connected power park module owner shall simulate the capability for leading and lagging reactive power capability in the conditions referred to in Article 40(2); and

(b) the simulation shall be deemed passed, provided that the following conditions are cumulatively fulfilled:

(i) the simulation model of the DC-connected power park module is validated against the compliance tests for reactive power capability as referred to in Article 72(2);

(ii) compliance with the requirements as referred to in Article 40(2) is demonstrated.

5. With regard to the reactive power capability simulation of remote-end HVDC converter units:

(a) the remote-end HVDC converter unit owner or the remote-end HVDC converter station owner shall simulate the capability for leading and lagging reactive power capability in the conditions referred to in Article 48(2); and

(b) the simulation shall be deemed passed, provided that the following conditions are cumulatively fulfilled:

(i) the simulation model of the remote-end HVDC converter unit or the remote-end HVDC converter station is validated against the compliance tests for reactive power capability at the as referred to in Article 72(3);

(ii) compliance with the requirements as referred to in Article 48(2) is demonstrated.

6. With regard to the power oscillations damping control simulation:

(a) the DC-connected power park module owner shall simulate the capability for power oscillations damping under the conditions as referred to in Article 21(3)(f) of Regulation (EU) 2016/631; and

(b) the simulation shall be deemed passed, provided that the model demonstrates compliance with the conditions of Article 21(3)(f) of Regulation (EU) 2016/631.

7. With regard to fault-ride-through capability simulation:

(a) the DC-connected power park module owner shall simulate the capability for fault-ride-through under the conditions as referred to in Article 16(3)(a) of Regulation (EU) 2016/631;

(b) the simulation shall be deemed passed, provided that the model demonstrates compliance with the conditions of Article 16(3)(a) of Regulation (EU) 2016/631.

CHAPTER 4

Non-binding guidance and monitoring of implementation

Article 75

Non-binding guidance on implementation

1 <...>

2 <...>

3. The non-binding guidance **published by ENTSO for Electricity** explains the technical issues, conditions and interdependencies which need to be considered when complying with the requirements of this Regulation at national level.

Article 76

Monitoring

1. ENTSO for Electricity shall monitor the implementation of this Regulation **for the Contracting Parties whose TSOs are members of ENTSO for Electricity. The Secretariat and the Energy Community Regulatory Board shall monitor the implementation of this Regulation for the Contracting Parties whose TSOs are not members of ENTSO for Electricity** <...>. Monitoring **shall take into account the list of relevant information developed by the Agency for the Cooperation of Energy Regulators and** it shall cover in particular the following matters:

(a) identification of any divergences in the national implementation of this Regulation;

(b) assessment of whether the choice of values and ranges in the requirements applicable to HVDC systems and DC-connected power park modules under this Regulation continues to be valid.

ENTSO for Electricity shall report its findings to the Secretariat and the Energy Community Regulatory Board. The Secretariat and the Energy Community Regulatory Board shall make available the findings stemming from the monitoring of the implementation of this Regulation.

2. <...>

3. Relevant TSOs shall submit to **the Secretariat, the Energy Community Regulatory Board and ENTSO for Electricity** the information required to perform the tasks referred to in paragraph 1 <...>.

Based on a request of the regulatory authority, DSOs shall provide TSOs with information under paragraph 1 unless the information is already obtained by regulatory authorities, the **Secretariat, Energy Community Regulatory Board** or ENTSO-E in relation to their respective implementation monitoring tasks, with the objective of avoiding duplication of information.

4. <...>

TITLE VII

DEROGATIONS

Article 77

Power to grant derogations

1. Regulatory authorities may, at the request of a HVDC system owner or DC-connected power park module owner, or their prospective owner, relevant system operator or relevant TSO, grant HVDC system owners or DC-connected power park module owners, or their prospective owner, relevant system operators or relevant TSOs derogations from one or more provisions of this Regulation for new and existing HVDC system and/or DC-connected power park modules in accordance with Articles 78 to 82.
2. Where applicable in a **Contracting Party**, derogations may be granted and revoked in accordance with Articles 78 to 81 by other authorities than the regulatory authority.

Article 78

General provisions

1. Each regulatory authority shall specify, after consulting relevant system operators, HVDC system owners and DC-connected power park module owners and other stakeholders whom it deems affected by this Regulation, the criteria for granting derogations pursuant to Articles 79 to 81. It shall publish those criteria on its website and notify them to the **Secretariat** within nine months of the **expiry of the deadline for transposition** of this Regulation. The **Secretariat** may require a regulatory authority to amend the criteria if it considers that they are not in line with this Regulation. This possibility to review and amend the criteria for granting derogations shall not affect the derogations already granted which shall continue to apply until the scheduled expiry date as detailed in the decision granting the exemption.
2. If the regulatory authority deems that it is necessary due to a change in circumstances relating to the evolution of system requirements, it may review and amend at most once every year the criteria for granting derogations in accordance with paragraph 1. Any changes to the criteria shall not apply to derogations for which a request has already been made.
3. The regulatory authority may decide that HVDC systems or DC-connected power park modules for which a request for a derogation has been filed pursuant to Articles 79 to 81 do not need to comply with the requirements of this Regulation from which a derogation has been sought from the day of filing the request until the regulatory authority's decision is issued.

Article 79**Request for derogations by an HVDC system owner or DC-connected power park module owner**

1. HVDC system owners and DC-connected power park module owners, or their prospective owner, may request a derogation to one or several requirements of this Regulation.
2. A request for a derogation shall be filed with the relevant system operator and include:
 - (a) an identification of the HVDC system owner or DC-connected power park module owner, or their prospective owner, and a contact person for any communications;
 - (b) a description of the HVDC system or DC-connected power park module for which a derogation is requested;
 - (c) a reference to the provisions of this Regulation from which a derogation is requested and a detailed description of the requested derogation;
 - (d) detailed reasoning, with relevant supporting documents, and cost-benefit analysis pursuant to the requirements of Article 66;
 - (e) demonstration that the requested derogation would have no adverse effect on cross-border trade;
 - (f) in the case of a DC-connected power park module connected to one or more remote-end HVDC converter stations, evidence that the converter station will not be affected by the derogation or, alternatively, agreement from the converter station owner to the proposed derogation.
3. Within two weeks of receipt of a request for a derogation, the relevant system operator shall confirm to the HVDC system owner or DC-connected power park module owner, or their prospective owner, whether the request is complete. If the relevant system operator considers that the request is incomplete, the HVDC system owner or DC-connected power park module owner, or their prospective owner, shall submit the additional required information within one month from the receipt of the request for additional information. If the HVDC system owner or DC-connected power park module owner, or their prospective owner, does not supply the requested information within that time limit, the request for a derogation shall be deemed withdrawn.
4. The relevant system operator shall, in coordination with the relevant TSO and any affected adjacent DSO or DSOs, assess the request for a derogation and the provided cost-benefit analysis, taking into account the criteria determined by the regulatory authority pursuant to Article 78.
5. If a request for a derogation concerns a HVDC system or DC-connected power park module connected to a distribution system, including a closed distribution system, the relevant system operator's assessment must be accompanied by an assessment of the request for a derogation by the relevant TSO. The relevant TSO shall provide its assessment within two months of being requested to do so by the relevant system operator.
6. Within six months of receipt of a request for a derogation, the relevant system operator shall forward the request to the regulatory authority and submit the assessment(s) prepared in accordance with paragraphs 4 and 5. That period may be extended by one month where the relevant system operator seeks further information from the HVDC system owner or DC-connected power park module owner, or their prospective owner, and by two months where the relevant system operator requests the relevant TSO to submit an assessment of the request for a derogation.

7. The regulatory authority shall adopt a decision concerning any request for a derogation within six months from the day after it receives the request. That time limit may be extended by three months before its expiry where the regulatory authority requires further information from the HVDC system owner or DC-connected power park module owner, or their prospective owner, or from any other interested parties. The additional period shall begin when the complete information has been received.

8. The HVDC system owner or DC-connected power park module owner, or their prospective owner, shall submit any additional information requested by the regulatory authority within two months of such request. If the HVDC system owner or DC-connected power park module owner, or the prospective owner, does not supply the requested information within that time limit, the request for a derogation shall be deemed withdrawn unless, before its expiry:

- (a) the regulatory authority decides to provide an extension; or
- (b) the HVDC system owner or DC-connected power park module owner, or their prospective owner, informs the regulatory authority by means of a reasoned submission that the request for a derogation is complete.

9. The regulatory authority shall issue a reasoned decision concerning a request for a derogation. Where the regulatory authority grants a derogation, it shall specify its duration.

10. The regulatory authority shall notify its decision to the HVDC system owner or DC-connected power park module owner, or their prospective owner, the relevant system operator and the relevant TSO.

11. A regulatory authority may revoke a decision granting a derogation if the circumstances and underlying reasons no longer apply or upon a reasoned recommendation of the **Secretariat** or reasoned recommendation by the **Energy Community Regulatory Board** pursuant to Article 83(2).

Article 80

Request for a derogation by a relevant system operator or relevant TSO

1. Relevant system operators or relevant TSOs may request a derogation for classes of HVDC systems or DC-connected power park modules connected or to be connected to their network.

2. Relevant system operators or relevant TSOs shall submit their requests for a derogation to the regulatory authority. Each request for a derogation shall include:

- (a) identification of the relevant system operator or relevant TSO, and a contact person for any communications;
- (b) a description of the HVDC systems or DC-connected power park modules for which a derogation is requested and the total installed capacity and number of HVDC systems or DC-connected power park modules;
- (c) the requirement or requirements of this Regulation for which a derogation is requested, with a detailed description of the requested derogation;
- (d) detailed reasoning, with all relevant supporting documents;
- (e) demonstration that the requested derogation would have no adverse effect on cross-border trade;
- (f) a cost-benefit analysis pursuant to the requirements of Article 66. If applicable, the cost-benefit analysis

shall be carried out in coordination with the relevant TSO and any adjacent DSOs.

3. Where the request for a derogation is submitted by a relevant DSO or CDSO, the regulatory authority shall, within two weeks from the day after receipt of that request, ask the relevant TSO to assess the request for a derogation in the light of the criteria determined by the regulatory authority pursuant to Article 78.

4. Within two weeks from the day after the receipt of such request for assessment, the relevant TSO shall confirm to the relevant DSO or CDSO whether the request for a derogation is complete. If the relevant TSO considers that it is incomplete, the relevant DSO or CDSO shall submit the required additional information within one month from the receipt of the request for additional information.

5. Within six months of receipt of a request for a derogation, the relevant TSO shall submit to the regulatory authority its assessment, including any relevant documentation. The six-month time limit may be extended by one month where the relevant TSO seeks further information from the relevant DSO or from the relevant CDSO.

6. The regulatory authority shall adopt a decision concerning a request for a derogation within six months from the day after it receives the request. Where the request for a derogation is submitted by the relevant DSO or CDSO, the six-month time limit runs from the day following receipt of the relevant TSO's assessment pursuant to paragraph 5.

7. The six-month time limit referred to in paragraph 6 may, before its expiry, be extended by an additional three months where the regulatory authority requests further information from the relevant system operator requesting the derogation or from any other interested parties. That additional period shall run from the day following the date of receipt of the complete information.

The relevant system operator shall provide any additional information requested by the regulatory authority within two months from the date of the request. If the relevant system operator does not provide the requested additional information within that time limit, the request for a derogation shall be deemed withdrawn unless, before expiry of the time limit:

(a) the regulatory authority decides to provide an extension; or

(b) the relevant system operator informs the regulatory authority by means of a reasoned submission that the request for a derogation is complete.

8. The regulatory authority shall issue a reasoned decision concerning a request for a derogation. Where the regulatory authority grants a derogation, it shall specify its duration.

9. The regulatory authority shall notify its decision to the relevant system operator requesting the derogation, the relevant TSO and the **Secretariat and Energy Community Regulatory Board**.

10. Regulatory authorities may lay down further requirements concerning the preparation of requests for derogations by relevant system operators. In doing so, regulatory authorities shall take into account the delineation between the transmission system and the distribution system at the national level and shall consult with system operators, HVDC system owners, DC-connected power park module owners and stakeholders, including manufacturers.

11. A regulatory authority may revoke a decision granting a derogation if the circumstances and underlying reasons no longer apply or upon a reasoned recommendation of the **Secretariat** or reasoned recommendation by the **Energy Community Regulatory Board** pursuant to Article 83(2).

Article 81**Request for derogations from the provisions of Title III by a DC-connected power park module owner**

1. A request for a derogation to the provisions of Article 40(1)(b) and (c), Article 40(2)(a) and (b), and Articles 41 to 45 shall not be subject to Article 79(2)(d) and (e) where it relates to a DC-connected power park module that has, or will have, a single connection to a single synchronous area.
2. The regulatory authority may attach any conditions to a decision concerning request for a derogation referred to in paragraph 1. This may include a condition that the development of the connection into a multi-terminal network, or that connection of a further power park module at the same point, will cause the derogation to be evaluated by the regulatory authority or to expire. The regulatory authority shall take into account the need to optimise the configuration between the DC-connected power park module and the remote-end HVDC converter station, as well as the legitimate expectations of the DC-connected power park module owner when adopting a decision concerning a request for a derogation.

Article 82**Register of derogations from the requirements of this Regulation**

1. Regulatory authorities shall maintain a register of all derogations they have granted or refused and shall provide the **Energy Community Regulatory Board and the Secretariat** with an updated and consolidated register at least once every six months, a copy of which shall be given to ENTSO for Electricity.
2. The register shall contain, in particular:
 - (a) the requirement or requirements for which the derogation is granted or refused;
 - (b) the content of the derogation;
 - (c) the reasons for granting or refusing the derogation;
 - (d) the consequences resulting from granting the derogation.

Article 83**Monitoring of derogations**

1. The **Energy Community Regulatory Board** and the **Secretariat** shall monitor the procedure of granting derogations with the cooperation of the regulatory authorities or relevant authorities of the **Contracting Party**. Those authorities or relevant authorities of the **Contracting Party** shall provide the **Energy Community Regulatory Board** and the **Secretariat** with all the information necessary for that purpose.
2. The **Energy Community Regulatory Board** may issue a reasoned recommendation to a regulatory authority to revoke a derogation due to a lack of justification. The **Secretariat** may issue a reasoned recommendation to a regulatory authority or relevant authority of the **Contracting Party** to revoke a derogation due to a lack of justification.

3. The **Secretariat** may request the **Energy Community Regulatory Board** to report on the application of paragraphs 1 and 2 and to provide reasons for requesting or not requesting derogations to be revoked.

TITLE VIII FINAL PROVISIONS

Article 84

Amendment of contracts and general terms and conditions

1. Regulatory authorities shall ensure that all relevant clauses in contracts and general terms and conditions relating to the grid connection of new HVDC systems or new DC-connected power park modules are brought into compliance with the requirements of this Regulation.
2. All relevant clauses in contracts and relevant clauses of general terms and conditions relating to the grid connection of existing HVDC systems or existing DC-connected power park modules subject to all or some of the requirements of this Regulation in accordance with paragraph 1 of Article 4 shall be amended in order to comply with the requirements of this Regulation. The relevant clauses shall be amended within three years following the decision of the regulatory authority or **Contracting Party** as referred to in Article 4(1).
3. Regulatory authorities shall ensure that national agreements between system operators and owners of new or existing HVDC systems and DC-connected power park modules subject to this Regulation and relating to grid connection requirements for HVDC systems and DC-connected power park modules, in particular in national network codes, reflect the requirements set out in this Regulation.

Article 85

HVDC System or DC-connected power park modules connecting with synchronous areas or control areas not bound by EU legislation

1. Where an HVDC system to which the requirements of this Regulation apply is connecting synchronous areas or control areas, with at least one synchronous area or one control area not falling under the scope of application of **Energy Community** legislation, the relevant TSO or, where applicable, the HVDC system owner shall endeavour to implement an agreement to ensure that the owners of HVDC systems with no legal obligation to comply with this Regulation also cooperate to fulfil the requirements.
2. If an agreement as referred to in paragraph 1 cannot be implemented, the relevant TSO or, as the case may be, the HVDC system owner concerned shall use all available means to comply with the requirements of this Regulation.

Article 86¹**Entry into force**

1. Each Contracting Party shall transpose Regulation (EU) 2016/1447 by no later than by 12 June 2018.
2. Transposition shall be made without changes to the structure and text of Regulation (EU) 2016/1447 other than translation and the adaptations made by the present Decision [2018/04/PHLG-EnC].
3. Each Contracting Party shall notify the Energy Community Secretariat of completed transposition and of any subsequent changes made to the act transposing Regulation (EU) 2016/1447 within two weeks following the adoption of such measures.
4. Articles 4(2) points (a) and (b), 5(4), 75, 76 and 78(1) of Regulation (EU) 2016/1447 shall apply as of the expiry of the transposition deadline.
5. Without prejudice to paragraph 4, Regulation (EU) 2016/1447 shall be implemented no later than 12 June 2021.
6. In transposing this Decision [2018/04/PHLG-EnC], Contracting Parties shall task national regulatory authorities with the monitoring of and enforcing compliance with this Decision [2018/04/PHLG-EnC].

¹ Adapted by Article 1 of Permanent High Level Group Decision 2018/04/PHLG-EnC.

ANNEX I

Frequency ranges referred to in Article 11

Frequency range	Time period for operation
47,0 Hz–47,5 Hz	60 seconds Georgia: 20 seconds
47,5 Hz–48,5 Hz	To be specified by each relevant TSO, but longer than established times for generation and demand according to Regulation (EU) 2016/631 and Regulation (EU) 2016/1388 respectively, and longer than for DC-connected PPMs according to Article 39
48,5 Hz–49,0 Hz	To be specified by each relevant TSO, but longer than established times for generation and demand according to Regulation (EU) 2016/631 and Regulation (EU) 2016/1388 respectively, and longer than for DC-connected PPMs according to Article 39
49,0 Hz–51,0 Hz	Unlimited
51,0 Hz–51,5 Hz	To be specified by each relevant TSO, but longer than established times for generation and demand according to Regulation (EU) 2016/631 and Regulation (EU) 2016/1388 respectively, and longer than for DC-connected PPMs according to Article 39
51,5 Hz–52,0 Hz	To be specified by each relevant TSO, but longer than for DC-connected PPMs according to Article 39

Table 1: Minimum time periods an HVDC system shall be able to operate for different frequencies deviating from a nominal value without disconnecting from the network.

ANNEX II

Requirements applying to frequency sensitive mode, limited frequency sensitive mode overfrequency and limited frequency sensitive mode underfrequency

A. Frequency sensitive mode

1. When operating in frequency sensitive mode (FSM):

(a) the HVDC system shall be capable of responding to frequency deviations in each connected AC network by adjusting the active power transmission as indicated in Figure 1 and in accordance with the parameters specified by each TSO within the ranges shown in Table 2. This specification shall be subject to notification to the regulatory authority. The modalities of that notification shall be determined in accordance with the applicable national regulatory framework;

(b) the adjustment of active power frequency response shall be limited by the minimum HVDC active power transmission capacity and maximum HVDC active power transmission capacity of the HVDC system (in each direction);

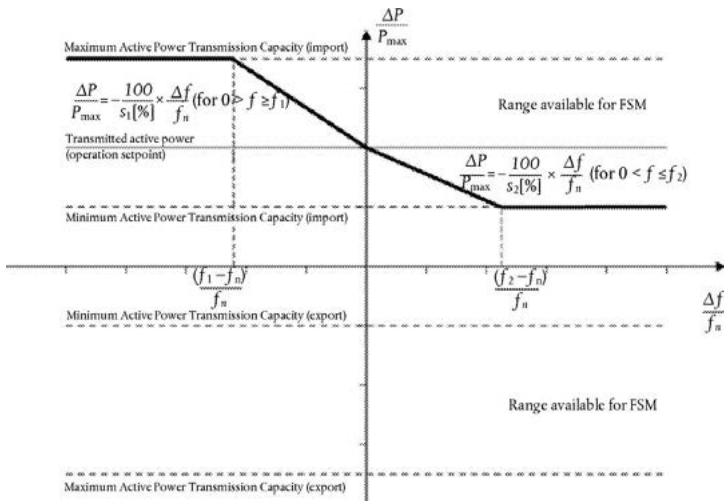


Figure 1: Active power frequency response capability of an HVDC system in FSM illustrating the case of zero deadband and insensitivity with a positive active power setpoint (import mode). ΔP is the change in active power output from the HVDC system. f_n is the target frequency in the AC network where the FSM service is provided and Δf is the frequency deviation in the AC network where the FSM service is provided.

Parameters	Ranges
Frequency response deadband	0-±500 mHz
Droop s 1 (upward regulation)	Minimum 0,1%
Droop s 2 (downward regulation)	Minimum 0,1%
Frequency response insensitivity	Maximum 30 mHz

Table 2: Parameters for active power frequency response in FSM

(c) the HVDC system shall be capable, following an instruction from the relevant TSO, of adjusting the droops for upward and downward regulation, the frequency response deadband and the operational range of variation within the active power range available for FSM, set out in Figure 1 and more generally within the limits set by points (a) and (b). These values shall be subject to notification to the regulatory authority. The modalities of that notification shall be determined in accordance with the applicable national regulatory framework;

(d) as a result of a frequency step change, the HVDC system shall be capable of adjusting active power to the active power frequency response defined in Figure 1, in such a way that the response is:

(i) as fast as inherently technically feasible; and

(ii) at or above the solid line according to Figure 2 in accordance with the parameters specified by each relevant TSO within the ranges according to Table 3:

- the HVDC system shall be able to adjust active power output ΔP up to the limit of the active power range requested by the relevant TSO in accordance with the times t_1 and t_2 according to the ranges in Table 3, where t_1 is the initial delay and t_2 is the time for full activation. The values of t_1 and t_2 shall be specified by the relevant TSO, subject to notification to the regulatory authority. The modalities of that notification shall be determined in accordance with the applicable national regulatory framework;

- if the initial delay of activation is greater than 0,5 second, the HVDC system owner shall reasonably justify it to the relevant TSO.

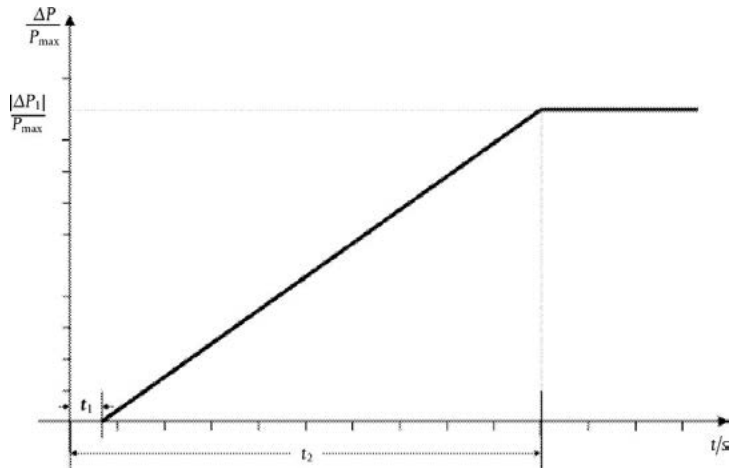


Figure 2: Active power frequency response capability of an HVDC system. ΔP is the change in active power triggered by the step change in frequency.

Parameters	Time
Maximum admissible initial delay t_1	0,5 seconds
Maximum admissible time for full activation t_2 , unless longer activation times are specified by the relevant TSO	30 seconds

Table 3: Parameters for full activation of active power frequency response resulting from frequency step change.

(e) for HVDC systems linking various control areas or synchronous areas, in frequency sensitive mode operation the HVDC system shall be capable of adjusting full active power frequency response at any time and for a continuous time period;

(f) as long as a frequency deviation continues active power control shall not have any adverse impact on the active power frequency response.

B. Limited frequency sensitive mode overfrequency

1. In addition to the requirements of Article 11 the following shall apply with regard to limited frequency sensitive mode - overfrequency (LFSM-O):

(a) the HVDC system shall be capable of adjusting active power frequency response to the AC network or networks, during both import and export, according to Figure 3 at a frequency threshold f_1 between and including 50,2 Hz and 50,5 Hz with a droop S_3 adjustable from 0,1% upwards;

(b) the HVDC system shall be capable of adjusting active power down to its minimum HVDC active power transmission capacity;

(c) the HVDC system shall be capable of adjusting active power frequency response as fast as inherently technically feasible, with an initial delay and time for full activation determined by the relevant TSO and notified to the regulatory authority in accordance with the applicable national regulatory framework;

(d) the HVDC system shall be capable of stable operation during LFSM-O operation. When LFSM-O is active, hierarchy of control functions shall be organised in accordance with Article 35.

2. The frequency threshold and droop settings referred to in point (a) of paragraph 1 shall be determined by the relevant TSO and be notified to the regulatory authority in accordance with the applicable national regulatory framework.

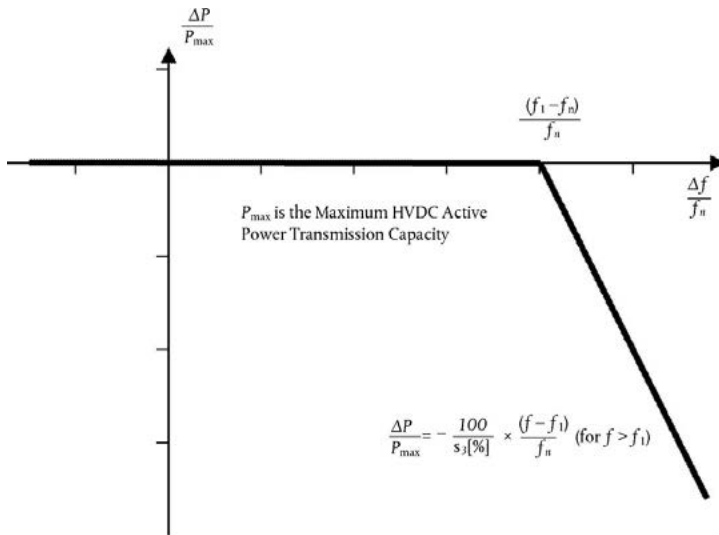


Figure 3: Active power frequency response capability of HVDC systems in LFSM-O. ΔP is the change in active power output from the HVDC system and, depending on the operational conditions, either a decrease of import power or an increase of export power. f_n is the nominal frequency of the AC network or networks the HVDC system is connected to and Δf is the frequency change in the AC network or networks the HVDC is connected to. At overfrequencies where f is above f_1 the HVDC system shall reduce active power according to the droop setting.

C. Limited frequency sensitive mode underfrequency

1. In addition to the requirements of Article 11, the following shall apply with regard to limited frequency sensitive mode - underfrequency (LFSM-U):

(a) the HVDC system shall be capable of adjusting active power frequency response to the AC network or networks, during both import and export, according to Figure 4 at a frequency threshold f_2 between and including 49,8 Hz and 49,5 Hz with a droop s_4 adjustable from 0,1% upwards;

(b) in the LFSM-U mode the HVDC system shall be capable of adjusting active power up to its maximum HVDC active power transmission capacity;

(c) the active power frequency response shall be activated as fast as inherently technically feasible, with an initial delay and time for full activation determined by the relevant TSO and notified to regulatory authority in accordance with the applicable national regulatory framework;

(d) the HVDC system shall be capable of stable operation during LFSM-U operation. When LFSM-U is active, hierarchy of control functions shall be organised in accordance with Article 35.

2. The frequency threshold and droop settings referred to in point (a) of paragraph 1 shall be determined by the relevant TSO and be notified to the regulatory authority in accordance with the applicable national regulatory framework.

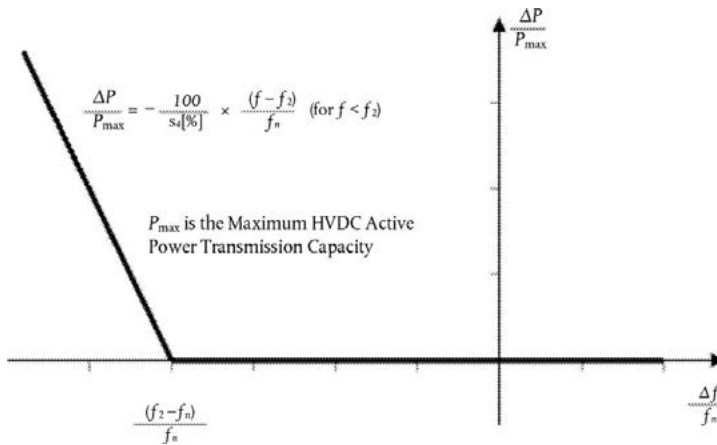


Figure 4: Active power frequency response capability of HVDC systems in LFSM-U. ΔP is the change in active power output from the HVDC system, depending on the operation condition a decrease of import power or an increase of export power. f_n is the nominal frequency in the AC network or networks the HVDC system is connected and Δf is the frequency change in the AC network or networks the HVDC is connected. At underfrequencies where f is below f_2 , the HVDC system has to increase active power output according to the droop s_4 .

ANNEX III

Voltage ranges referred to in Article 18

Synchronous Area	Voltage Range	Time period for operation
Continental Europe	0,85 pu–1,118 pu	Unlimited
	1,118 pu–1,15 pu	To be established by each relevant system operator, in coordination with the relevant TSO but not less than 20 minutes
Nordic	0,90 pu–1,05 pu	Unlimited
	1,05 pu–1,10 pu	60 minutes
Great Britain	0,90 pu–1,10 pu	Unlimited
Ireland and Northern Ireland	0,90 pu–1,118 pu	Unlimited
Baltic, Georgia	0,85 pu–1,118 pu	Unlimited
	1,118 pu–1,15 pu	20 minutes

Table 4: Minimum time periods an HVDC system shall be capable of operating for voltages deviating from the reference 1 pu value at the connection points without disconnecting from the network. This table applies in case of pu voltage base values at or above 110 kV and up to (not including) 300 kV.

Synchronous Area	Voltage Range	Time period for operation
Continental Europe	0,85 pu–1,05 pu	Unlimited
	1,05 pu–1,0875 pu	To be specified by each TSO, but not less than 60 minutes
	1,0875 pu–1,10 pu	60 minutes
Nordic	0,90 pu–1,05 pu	Unlimited
	1,05 pu–1,10 pu	To be specified by each TSO, but not more than 60 minutes
Great Britain	0,90 pu–1,05 pu	Unlimited
	1,05 pu–1,10 pu	15 minutes
Ireland and Northern Ireland	0,90 pu–1,05 pu	Unlimited
Baltic, Georgia	0,88 pu–1,097 pu	Unlimited
	1,097 pu–1,15 pu	20 minutes

Table 5: Minimum time periods an HVDC system shall be capable of operating for voltages deviating from the reference 1 pu value at the connection points without disconnecting from the network. This table applies in case of pu voltage base values from 300 kV to 400 kV (included).

ANNEX IV

Requirements for U-Q/P_{max}-profile referred to in Article 20

Figure 5: The diagram represents boundaries of a U-Q/P_{max}-profile with U being the voltage at the connection points expressed by the ratio of its actual value to its reference 1 pu value in per unit, and Q/P_{max} the ratio of the reactive power to the maximum HVDC active power transmission capacity. The position, size and shape of the inner envelope are indicative and shapes other than rectangular may be used within the inner envelope. For profile shapes other than rectangular, the voltage range represents the highest and lowest voltage points in this shape. Such a profile would not give rise to the full reactive power range being available across the range of steady-state voltages.

Synchronous Area	Maximum range of Q/P _{max}	Maximum range of steady-state Voltage level in PU
Continental Europe	0,95	0,225
Nordic	0,95	0,15
Great Britain	0,95	0,225
Ireland and Northern Ireland	1,08	0,218
Baltic States, Georgia	1,0	0,220

Table 6: Parameters for the Inner Envelope in the Figure.

ANNEX V

Voltage-against-time-profile referred to in Article 25

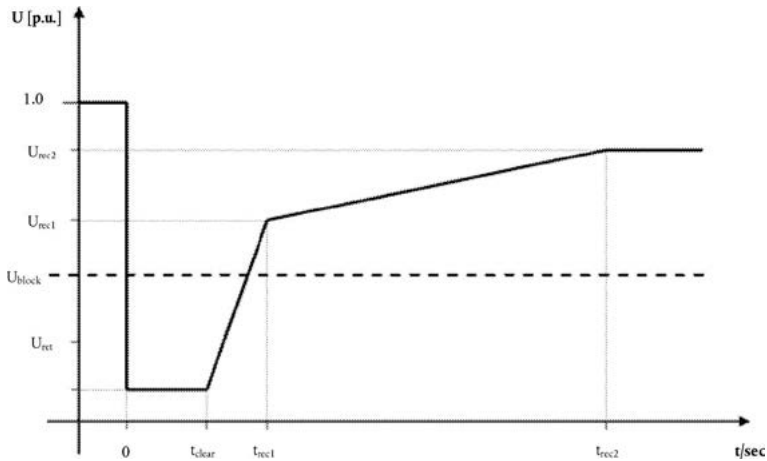


Figure 6: Fault-ride-through profile of an HVDC converter station. The diagram represents the lower limit of a voltage-against-time profile at the connection point, expressed by the ratio of its actual value and its reference 1 pu value in per unit before, during and after a fault. U_{ret} is the retained voltage at the connection point during a fault, t_{clear} is the instant when the fault has been cleared, U_{rec1} and t_{rec1} specify a point of lower limits of voltage recovery following fault clearance. U_{block} is the blocking voltage at the connection point. The time values referred to are measured from t_{fault} .

Voltage parameters [pu]		Time parameters [seconds]	
U_{ret}	0,00–0,30	t_{clear}	0,14–0,25
U_{rec1}	0,25–0,85	t_{rec1}	1,5–2,5
U_{rec2}	0,85–0,90	t_{rec2}	$T_{rec1} - 10,0$

Table 7: Parameters for Figure 6 for the fault-ride-through capability of an HVDC converter station.

ANNEX VI**Frequency ranges and time periods referred to in Article 39(2)(a)**

Frequency range	Time period for operation
47,0 Hz–47,5 Hz	20 seconds
47,5 Hz–49,0 Hz	90 minutes
49,0 Hz–51,0 Hz	Unlimited
51,0 Hz–51,5 Hz	90 minutes
51,5 Hz–52,0 Hz	15 minutes

Table 8: Minimum time periods for the 50 Hz nominal system for which a PPM shall be capable of operating for different frequencies deviating from a nominal value without disconnecting from the network.

ANNEX VII

Voltage ranges and time periods referred to in Article 40

Voltage Range	Time period for operation
0,85 pu–0,90 pu	60 minutes
0,90 pu–1,10 pu	Unlimited
1,10 pu–1,118 pu	Unlimited, unless specified otherwise by the relevant system operator, in coordination with the relevant TSO.
1,118 pu–1,15 pu	To be specified by the relevant system operator, in coordination with the relevant TSO.

Table 9: Minimum time periods for which a DC-connected power park module shall be capable of operating for different voltages deviating from a reference 1 pu value without disconnecting from the network where the voltage base for pu values is from 110 kV to (not including) 300 kV.

Voltage Range	Time period for operation
0,85 pu–0,90 pu	60 minutes
0,90 pu–1,05 pu	Unlimited
1,05 pu–1,15 pu	To be specified by the relevant system operator, in coordination with the relevant TSO. Various sub-ranges of voltage withstand capability can be specified.

Table 10: Minimum time periods for which a DC-connected power park module shall be capable of operating for different voltages deviating from a reference 1 pu value without disconnecting from the network where the voltage base for pu values is from 300 kV to 400 kV (included).

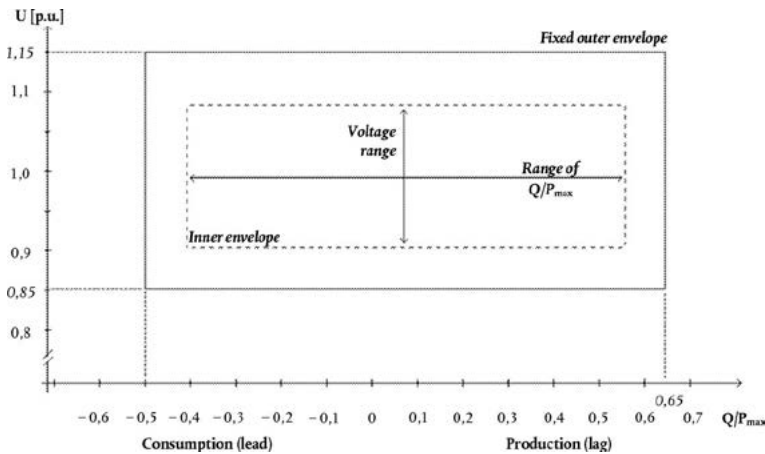


Figure 7: $U-Q/P_{max}$ -profile of a DC-connected power park module at the connection point. The diagram represents boundaries of a $U-Q/P_{max}$ -profile of the voltage at the connection point[s], expressed by the ratio of its actual value to its reference 1 pu value in per unit, against the ratio of the reactive power (Q) to the maximum capacity (P_{max}). The position, size and shape of the inner envelope are indicative and other than rectangular may be used within the inner envelope. For profile shapes other than rectangular, the voltage range represents the highest and lowest voltage points. Such a profile would not give rise to the full

reactive power range being available across the range of steady-state voltages.

Range of width of Q/P_{\max} profile	Range of steady-state Voltage level in pu
0–0,95	0,1–0,225

Table 11: Maximum and minimum range of both Q/P_{\max} and steady-state voltage for a DC-connected PPM

ANNEX VIII

Reactive power and voltage requirements referred to in Article 48

Voltage range	Time period for operation
0,85 pu–0,90 pu	60 minutes
0,90 pu–1,10 pu	Unlimited
1,10 pu–1,12 pu	Unlimited, unless specified otherwise by the relevant system operator, in coordination with the relevant TSO.
1,12 pu–1,15 pu	To be specified by the relevant system operator, in coordination with the relevant TSO.

Table 12: Minimum time periods for which a remote-end HVDC converter station shall be capable of operating for different voltages deviating from a reference 1 pu value without disconnecting from the network where the voltage base for pu values is from 110 kV to (not including) 300 kV.

Voltage range	Time period for operation
0,85 pu–0,90 pu	60 minutes
0,90 pu–1,05 pu	Unlimited
1,05 pu–1,15 pu	To be specified by the relevant system operator, in coordination with the relevant TSO. Various sub-ranges of voltage withstand capability may be specified.

Table 13: Minimum time periods for which a remote-end HVDC converter station shall be capable of operating for different voltages deviating from a reference 1 pu value without disconnecting from the network where the voltage base for pu values is from 300 kV to 400 kV (included).

Maximum range of Q/P_{\max}	Maximum range of steady-state voltage level in PU
0,95	0,225

Table 14: Maximum range of both Q/P_{\max} and steady-state voltage for a remote-end HVDC converter station.





PART II

ACQUIS COMMUNAUTAIRE

GAS



DIRECTIVE 2009/73/EC of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC

Incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011 on the implementation of Directive 2009/72/EC, Directive 2009/73/EC, Regulation (EC) 714/2009 and Regulation (EC) 715/2009 and amending Articles 11 and 59 of the Energy Community Treaty.

*The adaptations made by Ministerial Council Decisions 2021/14/MC-EnC and 2011/02/MC-EnC are highlighted in **bold and blue**.*

CHAPTER I

SUBJECT MATTER, SCOPE AND DEFINITIONS

Article 1

Subject matter and scope

1. This Directive establishes common rules for the transmission, distribution, supply and storage of natural gas. It lays down the rules relating to the organisation and functioning of the natural gas sector, access to the market, the criteria and procedures applicable to the granting of authorisations for transmission, distribution, supply and storage of natural gas and the operation of systems.

2. The rules established by this Directive for natural gas, including LNG, shall also apply in a non-discriminatory way to biogas and gas from biomass or other types of gas in so far as such gases can technically and safely be injected into, and transported through, the natural gas system.

Article 2

Definitions

For the purposes of this Directive, the following definitions apply:

(1) “natural gas undertaking” means a natural or legal person carrying out at least one of the following functions: production, transmission, distribution, supply, purchase or storage of natural gas, including LNG, which is responsible for the commercial, technical and/or maintenance tasks related to those functions, but shall not include final customers;

(2) “upstream pipeline network” means any pipeline or network of pipelines operated and/or constructed as part of an oil or gas production project, or used to convey natural gas from one or more such projects to a processing plant or terminal or final coastal landing terminal;

(3) “transmission” means the transport of natural gas through a network, which mainly contains high-pressure pipelines, other than an upstream pipeline network and other than the part of high-pressure pipelines primarily used in the context of local distribution of natural gas, with a view to its delivery to customers, but not including supply;

(4) “transmission system operator” means a natural or legal person who carries out the function of trans-

mission and is responsible for operating, ensuring the maintenance of, and, if necessary, developing the transmission system in a given area and, where applicable, its interconnections with other systems, and for ensuring the long-term ability of the system to meet reasonable demands for the transport of gas;

(5) “distribution” means the transport of natural gas through local or regional pipeline networks with a view to its delivery to customers, but not including supply;

(6) “distribution system operator” means a natural or legal person who carries out the function of distribution and is responsible for operating, ensuring the maintenance of, and, if necessary, developing the distribution system in a given area and, where applicable, its interconnections with other systems, and for ensuring the long-term ability of the system to meet reasonable demands for the distribution of gas;

(7) “supply” means the sale, including resale, of natural gas, including LNG, to customers;

(8) “supply undertaking” means any natural or legal person who carries out the function of supply;

(9) “storage facility” means a facility used for the stocking of natural gas and owned and/or operated by a natural gas undertaking, including the part of LNG facilities used for storage but excluding the portion used for production operations, and excluding facilities reserved exclusively for transmission system operators in carrying out their functions;

(10) “storage system operator” means a natural or legal person who carries out the function of storage and is responsible for operating a storage facility;

(11) “LNG facility” means a terminal which is used for the liquefaction of natural gas or the importation, offloading, and re-gasification of LNG, and includes ancillary services and temporary storage necessary for the re-gasification process and subsequent delivery to the transmission system, but does not include any part of LNG terminals used for storage;

(12) “LNG system operator” means a natural or legal person who carries out the function of liquefaction of natural gas, or the importation, offloading, and re-gasification of LNG and is responsible for operating a LNG facility;

(13) “system” means any transmission networks, distribution networks, LNG facilities and/or storage facilities owned and/or operated by a natural gas undertaking, including linepack and its facilities supplying ancillary services and those of related undertakings necessary for providing access to transmission, distribution and LNG;

(14) “ancillary services” means all services necessary for access to and the operation of transmission networks, distribution networks, LNG facilities, and/or storage facilities, including load balancing, blending and injection of inert gases, but not including facilities reserved exclusively for transmission system operators carrying out their functions;

(15) “linepack” means the storage of gas by compression in gas transmission and distribution systems, but not including facilities reserved for transmission system operators carrying out their functions;

(16) “interconnected system” means a number of systems which are linked with each other;

(17) “interconnector” means a transmission line which crosses or spans a border between **Contracting Parties** for the sole purpose of connecting the national transmission systems of those **Contracting Parties**;

(18) “direct line” means a natural gas pipeline complementary to the interconnected system;

(19) “integrated natural gas undertaking” means a vertically or horizontally integrated undertaking;

(20) “vertically integrated undertaking” means a natural gas undertaking or a group of natural gas under-

takings where the same person or the same persons are entitled, directly or indirectly, to exercise control, and where the undertaking or group of undertakings perform at least one of the functions of transmission, distribution, LNG or storage, and at least one of the functions of production or supply of natural gas;

(21) "horizontally integrated undertaking" means an undertaking performing at least one of the functions of production, transmission, distribution, supply or storage of natural gas, and a non-gas activity;

(22) "related undertaking" means an affiliated undertaking, within the meaning of Article 41 of Seventh Council Directive 83/349/EEC of 13 June 1983 based on the Article 44(2)(g) of the Treaty on consolidated accounts and/or an associated undertaking, within the meaning of Article 33(1) of that Directive, and/or an undertaking which belong to the same shareholders;

(23) "system user" means a natural or legal person supplying to, or being supplied by, the system;

(24) "customer" means a wholesale or final customer of natural gas or a natural gas undertaking which purchases natural gas;

(25) "household customer" means a customer purchasing natural gas for his own household consumption;

(26) "non-household customer" means a customer purchasing natural gas which is not for his own household use;

(27) "final customer" means a customer purchasing natural gas for his own use;

(28) "eligible customer" means a customer who is free to purchase gas from the supplier of his choice, within the meaning of Article 37;

(29) "wholesale customer" means a natural or legal person other than a transmission system operator or distribution system operator who purchases natural gas for the purpose of resale inside or outside the system where he is established;

(30) "long-term planning" means the planning of supply and transport capacity of natural gas undertakings on a long-term basis with a view to meeting the demand for natural gas of the system, diversification of sources and securing supplies to customers;

(31) "emergent market" means a **Contracting Party** in which the first commercial supply of its first long-term natural gas supply contract was made not more than 10 years earlier;

(32) "security" means both security of supply of natural gas and technical safety;

(33) "new infrastructure" means an infrastructure not completed by **1 July 2007**;

(34) "gas supply contract" means a contract for the supply of natural gas, but does not include a gas derivative;

(35) "gas derivative" means a financial instrument specified in points 5, 6 or 7 of Section C of Annex I to Directive 2004/39/EC of the European Parliament and of the Council of 21 April 2004 on markets in financial instruments, where that instrument relates to natural gas;

(36) "control" means any rights, contracts or any other means which, either separately or in combination and having regard to the considerations of fact or law involved, confer the possibility of exercising decisive influence on an undertaking, in particular by:

(a) ownership or the right to use all or part of the assets of an undertaking;

(b) rights or contracts which confer decisive influence on the composition, voting or decisions of the organs of an undertaking.

CHAPTER II

GENERAL RULES FOR THE ORGANISATION OF THE SECTOR

Article 3

Public service obligations and customer protection

1. **Contracting Parties** shall ensure, on the basis of their institutional organisation and with due regard to the principle of subsidiarity, that, without prejudice to paragraph 2, natural gas undertakings are operated in accordance with the principles of this Directive with a view to achieving a competitive, secure and environmentally sustainable market in natural gas, and shall not discriminate between those undertakings as regards their rights or obligations.

2. Having full regard to the relevant provisions of the **Energy Community Treaty, in particular Article 19 thereof, Contracting Parties** may impose on undertakings operating in the gas sector, in the general economic interest, public service obligations which may relate to security, including security of supply, regularity, quality and price of supplies, and environmental protection, including energy efficiency, energy from renewable sources and climate protection. Such obligations shall be clearly defined, transparent, non-discriminatory, verifiable and shall guarantee equality of access for natural gas undertakings of the **Energy Community** to national consumers. In relation to security of supply, energy efficiency/demand-side management and for the fulfilment of environmental goals and goals for energy from renewable sources, as referred to in this paragraph, **Contracting Parties** may introduce the implementation of long-term planning, taking into account the possibility of third parties seeking access to the system.

3. **Contracting Parties** shall take appropriate measures to protect final customers, and shall, in particular, ensure that there are adequate safeguards to protect vulnerable customers. In this context, each **Contracting Party** shall define the concept of vulnerable customers which may refer to energy poverty and, *inter alia*, to the prohibition of disconnection of gas to such customers in critical times. **Contracting Parties** shall ensure that rights and obligations linked to vulnerable customers are applied. In particular, they shall take appropriate measures to protect final customers in remote areas who are connected to the gas system. **Contracting Parties** may appoint a supplier of last resort for customers connected to the gas system. They shall ensure high levels of consumer protection, particularly with respect to transparency regarding contractual terms and conditions, general information and dispute settlement mechanisms. **Contracting Parties** shall ensure that the eligible customer is in fact able easily to switch to a new supplier. As regards at least household customers those measures shall include those set out in Annex I.

4. **Contracting Parties** shall take appropriate measures, such as formulating national energy action plans, providing social security benefits to ensure the necessary gas supply to vulnerable customers, or providing for support for energy efficiency improvements, to address energy poverty where identified, including in the broader context of poverty. Such measures shall not impede the effective opening of the market set out in Article 37 and market functioning and shall be notified to the **Energy Community Secretariat**, where relevant, in accordance with paragraph 11 of this Article. Such notification shall not include measures taken within the general social security system.

5. **Contracting Parties** shall ensure that all customers connected to the gas network are entitled to have their gas provided by a supplier, subject to the supplier's agreement, regardless of the **Contracting Party**

in which the supplier is registered, as long as the supplier follows the applicable trading and balancing rules and subject to security of supply requirements. In this regard, **Contracting Parties** shall take all measures necessary to ensure that administrative procedures do not constitute a barrier for supply undertakings already registered in another **Contracting Party**.

6. **Contracting Parties** shall ensure that:

- (a) where a customer, while respecting the contractual conditions, wishes to change supplier, the change is effected by the operator(s) concerned within three weeks; and
- (b) customers are entitled to receive all relevant consumption data.

Contracting Parties shall ensure that the rights referred to in points (a) and (b) of the first subparagraph are granted to customers in a non-discriminatory manner as regards cost, effort or time.

7. **Contracting Parties** shall implement appropriate measures to achieve the objectives of social and economic cohesion and environmental protection, which may include means to combat climate change, and security of supply. Such measures may include, in particular, the provision of adequate economic incentives, using, where appropriate, all existing national tools, as well as financing from the international donors, for the maintenance and construction of necessary network infrastructure, including interconnection capacity.

8. In order to promote energy efficiency, **Contracting Parties** or, where a **Contracting Party** has so provided, the regulatory authority shall strongly recommend that natural gas undertakings optimise the use of gas, for example by providing energy management services, developing innovative pricing formulas or introducing intelligent metering systems or smart grids where appropriate

9. **Contracting Parties** shall ensure the provision of single points of contact to provide consumers with all necessary information concerning their rights, current legislation and the means of dispute settlement available to them in the event of a dispute. Such contact points may be part of general consumer information points.

Contracting Parties shall ensure that an independent mechanism such as an energy ombudsman or a consumer body is in place in order to ensure efficient treatment of complaints and out-of-court dispute settlements.

10. **Contracting Parties** may decide not to apply the provisions of Article 4 with respect to distribution insofar as their application would obstruct, in law or in fact, the performance of the obligations imposed on natural gas undertakings in the general economic interest and insofar as the development of trade would not be affected to such an extent as would be contrary to the interests of the **Energy Community**. The interests of the **Energy Community** include, *inter alia*, competition with regard to eligible customers in accordance with this Directive and **Annex III of the Energy Community Treaty**.

11. **Contracting Parties** shall, upon implementation of this Directive, inform the **Energy Community Secretariat** of all measures adopted to fulfill public service obligations, including consumer and environmental protection, and their possible effect on national and international competition, whether or not such measures require a derogation from the provisions of this Directive. They shall notify the **Energy Community Secretariat** subsequently every two years of any changes to such measures, whether or not they require a derogation from this Directive.

12.¹ **Contracting Parties shall ensure that <...> gas suppliers or distribution system operators, in cooperation with the regulatory authority, take the necessary steps to provide their consumers with a copy of the energy consumer checklists established by the European Commission <...>.**

¹ The text displayed here corresponds to Article 6 of Decision 2011/02/MC-EnC.

2. The checklists shall be adopted by the Permanent High Level Group, following the procedure laid down in Article 79 of the Treaty.

Article 4

Authorisation procedure

1. In circumstances where an authorisation (for example, licence, permission, concession, consent or approval) is required for the construction or operation of natural gas facilities, the **Contracting Parties** or any competent authority they designate shall grant authorisations to build and/or operate such facilities, pipelines and associated equipment on their territory, in accordance with paragraphs 2 to 4. **Contracting Parties** or any competent authority they designate may also grant authorisations on the same basis for the supply of natural gas and for wholesale customers.

2. Where **Contracting Parties** have a system of authorisation, they shall lay down objective and non-discriminatory criteria which shall be met by an undertaking applying for an authorisation to build and/or operate natural gas facilities or applying for an authorisation to supply natural gas. The non-discriminatory criteria and procedures for the granting of authorisations shall be made public. **Contracting Parties** shall ensure that authorisation procedures for facilities, pipelines and associated equipment take into account the importance of the project for the internal market in natural gas where appropriate.

3. **Contracting Parties** shall ensure that the reasons for any refusal to grant an authorisation are objective and non-discriminatory and that they are given to the applicant. Reasons for such refusals shall be notified to the **Energy Community Secretariat** for information. **Contracting Parties** shall establish a procedure enabling the applicant to appeal against such refusals.

4. For the development of newly supplied areas and efficient operation generally, and without prejudice to Article 38, **Contracting Parties** may decline to grant a further authorisation to build and operate distribution pipeline systems in any particular area once such pipeline systems have been or are proposed to be built in that area and if existing or proposed capacity is not saturated.

Article 5

Monitoring of security of supply

<...>²

Article 6

Regional solidarity

1. In order to safeguard a secure supply on the internal market in natural gas, **Contracting Parties** shall cooperate in order to promote regional and bilateral solidarity.

2. Such cooperation shall cover situations resulting or likely to result in the short term in a severe disruption of supply affecting a **Contracting Party**. It shall include:

² Not applicable according to Article 6 of Ministerial Council Decision 2021/14/MC-EnC

- (a) coordination of national emergency measures referred to in Article 8 of Council Directive 2004/67/ EC of 26 April 2004 concerning measures to safeguard security of natural gas supply, **as adapted under Article 24 of the Energy Community Treaty**;
- (b) identification and, where necessary, development or upgrading of electricity and natural gas interconnections; and
- (c) conditions and practical modalities for mutual assistance.
3. The **Energy Community Secretariat** and the other **Contracting Parties** shall be kept informed of such cooperation.
4. <...>

Article 7

Promotion of regional cooperation³

1. **Contracting Parties** as well as the regulatory authorities shall cooperate with each other for the purpose of integrating their national markets at regional level, as a first step towards the creation of a fully liberalised internal market. In particular, the regulatory authorities where **Contracting Parties** have so provided or **Contracting Parties** shall promote and facilitate the cooperation of transmission system operators at a regional level, including on cross-border issues with the aim of creating a competitive internal market in natural gas, foster the consistency of their legal, regulatory and technical framework and facilitate integration of the isolated systems forming gas islands that persist in the **Energy Community**. <...>
2. The **Energy Community Regulatory Board** shall cooperate with national regulatory authorities and transmission system operators to ensure the compatibility of regulatory frameworks with other European regions with the aim of creating a competitive internal market in natural gas. <...>
3. **Contracting Parties** shall ensure, through the implementation of this Directive, that transmission system operators have one or more integrated system(s) at regional level covering two or more Contracting Parties for capacity allocation and for checking the security of the network.
4. Where vertically integrated transmission system operators participate in a joint undertaking established for implementing such cooperation, the joint undertaking shall establish and implement a compliance programme which sets out the measures to be taken to ensure that discriminatory and anticompetitive conduct is excluded. That compliance programme shall set out the specific obligations of employees to meet the objective of excluding discriminatory and anticompetitive conduct. It shall be notified to the **Energy Community Regulatory Board**. Compliance with the programme shall be independently monitored by the compliance officers of the vertically integrated transmission system operators.

³ In addition, Article 25 of Decision 2011/02/MC-EnC reads: 'Transmission system operators shall promote operational arrangements in order to ensure the optimum management of the Energy Community network and shall promote the development of energy exchanges, the coordinated allocation of cross-border capacity through non-discriminatory market-based solutions, paying due attention to the specific merits of implicit auctions for short-term allocations, and the integration of balancing and reserve power mechanisms.'

Article 8

Technical rules

The regulatory authorities where **Contracting Parties** have so provided or **Contracting Parties** shall ensure that technical safety criteria are defined and that technical rules establishing the minimum technical design and operational requirements for the connection to the system of LNG facilities, storage facilities, other transmission or distribution systems, and direct lines, are developed and made public. Those technical rules shall ensure the interoperability of systems and shall be objective and non-discriminatory. <...>

CHAPTER III

TRANSMISSION, STORAGE AND LNG

Article 9

Unbundling of transmission systems and transmission system operators

1. **Contracting Parties** shall ensure that from **1 June 2016**⁴:

- (a) each undertaking which owns a transmission system acts as a transmission system operator;
 - (b) the same person or persons are entitled neither:
 - (i) directly or indirectly to exercise control over an undertaking performing any of the functions of production or supply, and directly or indirectly to exercise control or exercise any right over a transmission system operator or over a transmission system; nor
 - (ii) directly or indirectly to exercise control over a transmission system operator or over a transmission system, and directly or indirectly to exercise control or exercise any right over an undertaking performing any of the functions of production or supply;
 - (c) the same person or persons are not entitled to appoint members of the supervisory board, the administrative board or bodies legally representing the undertaking, of a transmission system operator or a transmission system, and directly or indirectly to exercise control or exercise any right over an undertaking performing any of the functions of production or supply; and
 - (d) the same person is not entitled to be a member of the supervisory board, the administrative board or bodies legally representing the undertaking, of both an undertaking performing any of the functions of production or supply and a transmission system operator or a transmission system.
2. The rights referred to in points (b) and (c) of paragraph 1 shall include, in particular:
- (a) the power to exercise voting rights;
 - (b) the power to appoint members of the supervisory board, the administrative board or bodies legally representing the undertaking; or
 - (c) the holding of a majority share.
3. For the purpose of paragraph 1(b), the notion "undertaking performing any of the functions of pro-

⁴ According to Ministerial Council Decision 2012/05/MC-EnC of 5 December 2012, this date is replaced by 1 January 2020 for the Republic of Moldova.

duction or supply” shall include “undertaking performing any of the functions of generation and supply” within the meaning of Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity, **as adapted under Article 24 of the Energy Community Treaty**, and the terms “transmission system operator” and “transmission system” shall include “transmission system operator” and “transmission system” within the meaning of that Directive.

4. **Contracting Parties** may allow for derogations from points (b) and (c) of paragraph 1 until **1 June 2017**, provided that transmission system operators are not part of a vertically integrated undertaking.

5. The obligation set out in paragraph 1(a) of this Article shall be deemed to be fulfilled in a situation where two or more undertakings which own transmission systems have created a joint venture which acts as a transmission system operator in two or more **Contracting Parties** for the transmission systems concerned. No other undertaking may be part of the joint venture, unless it has been approved under Article 14 as an independent system operator or as an independent transmission operator for the purposes of Chapter IV.

6. For the implementation of this Article, where the person referred to in points (b), (c) and (d) of paragraph 1 is the Contracting Party or another public body, two separate public bodies exercising control over a transmission system operator or over a transmission system on the one hand, and over an undertaking performing any of the functions of production or supply on the other, shall be deemed not to be the same person or persons.

7. **Contracting Parties** shall ensure that neither commercially sensitive information referred to in Article 16 held by a transmission system operator which was part of a vertically integrated undertaking, nor the staff of such a transmission system operator, is transferred to undertakings performing any of the functions of production and supply.

8. Where on **6 October 2011**, the transmission system belongs to a vertically integrated undertaking a **Contracting Party** may decide not to apply paragraph 1.

In such case, the **Contracting Party** concerned shall either:

(a) designate an independent system operator in accordance with Article 14, or

(b) comply with the provisions of Chapter IV.

9. Where on 6 October 2011, the transmission system belongs to a vertically integrated undertaking and there are arrangements in place which guarantee more effective independence of the transmission system operator than the provisions of Chapter IV, a **Contracting Party** may decide not to apply paragraph 1.

10. Before an undertaking is approved and designated as a transmission system operator under paragraph 9 of this Article, it shall be certified according to the procedures laid down in Article 10(4), (5) and (6) of this Directive and in Article 3 of Regulation (EC) No 715/2009, **as adapted under Article 24 of the Energy Community Treaty**, pursuant to which the Energy Community Secretariat shall verify that the arrangements in place clearly guarantee more effective independence of the transmission system operator than the provisions of Chapter IV.

11. Vertically integrated undertakings which own a transmission system shall not in any event be prevented from taking steps to comply with paragraph 1.

12. Undertakings performing any of the functions of production or supply shall not in any event be able to directly or indirectly take control over or exercise any right over unbundled transmission system operators in **Contracting Parties** which apply paragraph 1.

Article 10

Designation and certification of transmission system operators

1. Before an undertaking is approved and designated as transmission system operator, it shall be certified according to the procedures laid down in paragraphs 4, 5 and 6 of this Article and in Article 3 of Regulation (EC) No 715/2009, **as adapted under Article 24 of the Energy Community Treaty**.
2. Undertakings which own a transmission system and which have been certified by the national regulatory authority as having complied with the requirements of Article 9, pursuant to the certification procedure, shall be approved and designated as transmission system operators by **Contracting Parties**. The designation of transmission system operators shall be notified to the **Energy Community Secretariat** and published in a dedicated section of the website of the **Energy Community**.
3. Transmission system operators shall notify to the regulatory authority any planned transaction which may require a reassessment of their compliance with the requirements of Article 9.
4. The regulatory authorities shall monitor the continuing compliance of transmission system operators with the requirements of Article 9. They shall open a certification procedure to ensure such compliance:
 - (a) upon notification by the transmission system operator pursuant to paragraph 3;
 - (b) on their own initiative where they have knowledge that a planned change in rights or influence over transmission system owners or transmission system operators may lead to an infringement of Article 9, or where they have reason to believe that such an infringement may have occurred; or
 - (c) upon a reasoned request from the **Energy Community Secretariat**.
5. The regulatory authorities shall adopt a decision on the certification of a transmission system operator within a period of four months from the date of the notification by the transmission system operator or from the date of the **Energy Community Secretariat** request. After expiry of that period, the certification shall be deemed to be granted. The explicit or tacit decision of the regulatory authority shall become effective only after the conclusion of the procedure set out in paragraph 6.
6. The explicit or tacit decision on the certification of a transmission system operator shall be notified without delay to the **Energy Community Secretariat** by the regulatory authority, together with all the relevant information with respect to that decision. The **Energy Community Secretariat** shall act in accordance with the procedure laid down in Article 3 of Regulation (EC) No 715/2009, as adapted under Article 24 of the **Energy Community Treaty**.
7. The regulatory authorities and the **Energy Community Secretariat** may request from transmission system operators and undertakings performing any of the functions of production or supply any information relevant for the fulfillment of their tasks under this Article.
8. The regulatory authorities and the **Energy Community Secretariat** shall preserve the confidentiality of commercially sensitive information.

Article 11

Certification in relation to third countries

1. Where certification is requested by a transmission system owner or a transmission system operator which is controlled by a person or persons from a third country or third countries, the regulatory authority shall notify the **Energy Community Secretariat**.

The regulatory authority shall also notify to the **Energy Community Secretariat** without delay any circumstances that would result in a person or persons from a third country or third countries acquiring control of a transmission system or a transmission system operator.

2. The transmission system operator shall notify to the regulatory authority any circumstances that would result in a person or persons from a third country or third countries acquiring control of the transmission system or the transmission system operator.

3. The regulatory authority shall adopt a draft decision on the certification of a transmission system operator within four months from the date of notification by the transmission system operator. It shall refuse the certification if it has not been demonstrated:

(a) that the entity concerned complies with the requirements of Article 9; and

(b) to the regulatory authority or to another competent authority designated by the **Contracting Party** that granting certification will not put at risk the security of energy supply of the **Contracting Party** and the **Energy Community**. In considering that question the regulatory authority or other competent authority so designated shall take into account:

(i) the rights and obligations of the **Energy Community** with respect to that third country arising under international law, including any agreement concluded with one or more third countries to which the **Energy Community** is a party and which addresses the issues of security of energy supply

(ii) the rights and obligations of the **Contracting Party** with respect to that third country arising under agreements concluded with it, insofar as they are in compliance with **Energy Community law**; and

(iii) other specific facts and circumstances of the case and the third country concerned.⁵

4. The regulatory authority shall notify the decision to the **Energy Community Secretariat** without delay, together with all the relevant information with respect to that decision.

5. Contracting Parties shall provide for the regulatory authority or the designated competent authority referred to in paragraph 3(b), before the regulatory authority adopts a decision on the certification, to request an opinion from the **Energy Community Secretariat** on whether:

(a) the entity concerned complies with the requirements of Article 9; and

(b) granting certification will not put at risk the security of energy supply to the **Energy Community**.

6. The **Energy Community Secretariat** shall examine the request referred to in paragraph 5 as soon as it is received. Within a period of two months after receiving the request, it shall deliver its opinion to the national regulatory authority or, if the request was made by the designated competent authority, to that authority.

In preparing its opinion, the Secretariat shall request the views of the Energy Community Regulatory Board. It may also request the views of the **Contracting Party** concerned and interested

⁵ According to Article 10(1) of Decision 2011/02/MC-EnC, 'the regulatory authority or other competent authority designated shall also take into account the rights and obligations resulting from association or trade agreements between the Contracting Party and the European Union'.

parties. In the event that the **Energy Community Secretariat** makes such a request, the two-month period shall be extended by two months.

In the absence of an opinion by the **Energy Community Secretariat** within the period referred to in the first and second subparagraphs, the **Energy Community Secretariat** is deemed not to raise objections to the decision of the regulatory authority.

7. When assessing whether the control by a person or persons from a third country or third countries will put at risk the security of energy supply to the **Energy Community**, the **Energy Community Secretariat** shall take into account:

- (a) the specific facts of the case and the third country or third countries concerned; and
- (b) the rights and obligations of the **Energy Community** with respect to that third country arising under international law, including any agreement concluded with one or more third countries to which the **Energy Community** is a party and which addresses the issues of security of energy supply.⁶

8. The national regulatory authority shall, within a period of two months after the expiry of the period referred to in paragraph 6, adopt its final decision on the certification. In adopting its final decision the national regulatory authority shall take utmost account of the the **Energy Community Secretariat's** opinion. In any event **Contracting Parties** shall have the right to refuse certification where granting certification puts at risk the **Contracting Party's** security of energy supply or the security of energy supply of another **Contracting Party**. Where the **Contracting Party** has designated another competent authority to assess paragraph 3(b), it may require the national regulatory authority to adopt its final decision in accordance with the assessment of that competent authority. The regulatory authority's final decision and the opinion of the **Energy Community Secretariat** shall be published together. Where the final decision diverges from the **Energy Community Secretariat's** opinion, the **Contracting Party** concerned shall provide and publish, together with that decision, the reasoning underlying such decision.

9. Nothing in this Article shall affect the right of **Contracting Parties** to exercise, in compliance with **Energy Community** law, national legal controls to protect legitimate public security interests.

10. <...>

11. <...>

Article 12

Designation of storage and LNG system operators

Contracting Parties shall designate, or shall require natural gas undertakings which own storage or LNG facilities to designate, for a period of time to be determined by **Contracting Parties**, having regard to considerations of efficiency and economic balance, one or more storage and LNG system operators.

⁶ According to Article 10(2) of Decision 2011/02/MC-EnC, Article 10(1) of the same Decision applies - 'the regulatory authority or other competent authority designated shall also take into account the rights and obligations resulting from association or trade agreements between the Contracting Party and the European Union'.

Article 13

Tasks of transmission, storage and/or LNG system operators

1. Each transmission, storage and/or LNG system operator shall:
 - (a) operate, maintain and develop under economic conditions secure, reliable and efficient transmission, storage and/or LNG facilities to secure an open market, with due regard to the environment, ensure adequate means to meet service obligations;
 - (b) refrain from discriminating between system users or classes of system users, particularly in favour of its related undertakings;
 - (c) provide any other transmission system operator, any other storage system operator, any other LNG system operator and/or any distribution system operator, sufficient information to ensure that the transport and storage of natural gas may take place in a manner compatible with the secure and efficient operation of the interconnected system; and
 - (d) provide system users with the information they need for efficient access to the system.
2. Each transmission system operator shall build sufficient cross-border capacity to integrate European transmission infrastructure accommodating all economically reasonable and technically feasible demands for capacity and taking into account security of gas supply.
3. Rules adopted by transmission system operators for balancing the gas transmission system shall be objective, transparent and non-discriminatory, including rules for the charging of system users of their networks for energy imbalance. Terms and conditions, including rules and tariffs, for the provision of such services by transmission system operators shall be established pursuant to a methodology compatible with Article 41(6) in a non-discriminatory and cost-reflective way and shall be published.
4. The regulatory authorities where **Contracting Parties** have so provided or **Contracting Parties** may require transmission system operators to comply with minimum standards for the maintenance and development of the transmission system, including interconnection capacity.
5. Transmission system operators shall procure the energy they use for the carrying out of their functions according to transparent, non-discriminatory and market based procedures.

Article 14

Independent system operators

1. Where the transmission system belongs to a vertically integrated undertaking on **6 October 2011**, **Contracting Parties** may decide not to apply Article 9(1) and designate an independent system operator upon a proposal from the transmission system owner. Such designation shall be subject to the opinion of the **Energy Community Secretariat**.
2. The **Contracting Party** may approve and designate an independent system operator only where:
 - (a) the candidate operator has demonstrated that it complies with the requirements of Article 9(1) (b), (c) and (d);
 - (b) the candidate operator has demonstrated that it has at its disposal the required financial, technical,

physical and human resources to carry out its tasks under Article 13;

(c) the candidate operator has undertaken to comply with a ten-year network development plan monitored by the regulatory authority;

(d) the transmission system owner has demonstrated its ability to comply with its obligations under paragraph 5. To that end, it shall provide all the draft contractual arrangements with the candidate undertaking and any other relevant entity; and

(e) the candidate operator has demonstrated its ability to comply with its obligations under Regulation (EC) No 715/2009, **as adapted under Article 24 of the Energy Community Treaty**, including the cooperation of transmission system operators at regional level.

3. Undertakings which have been certified by the regulatory authority as having complied with the requirements of Article 11 and of paragraph 2 of this Article shall be approved and designated as independent system operators by Contracting Parties. The certification procedure in either Article 10 of this Directive and Article 3 of Regulation (EC) No 715/2009, **as adapted under Article 24 of the Energy Community Treaty**, or in Article 11 of this Directive shall be applicable.

4. Each independent system operator shall be responsible for granting and managing third-party access, including the collection of access charges and congestion charges, for operating, maintaining and developing the transmission system, as well as for ensuring the long-term ability of the system to meet reasonable demand through investment planning. When developing the transmission system the independent system operator shall be responsible for planning (including authorisation procedure), construction and commissioning of the new infrastructure. For this purpose, the independent system operator shall act as a transmission system operator in accordance with this Chapter. The transmission system owner shall not be responsible for granting and managing third-party access, nor for investment planning.

5. Where an independent system operator has been designated, the transmission system owner shall:

(a) provide all the relevant cooperation and support to the independent system operator for the fulfillment of its tasks, including in particular all relevant information;

(b) finance the investments decided by the independent system operator and approved by the regulatory authority, or give its agreement to financing by any interested party including the independent system operator. The relevant financing arrangements shall be subject to approval by the regulatory authority. Prior to such approval, the regulatory authority shall consult the transmission system owner together with other interested parties;

(c) provide for the coverage of liability relating to the network assets, excluding the liability relating to the tasks of the independent system operator; and

(d) provide guarantees to facilitate financing any network expansions with the exception of those investments where, pursuant to point (b), it has given its agreement to financing by any interested party including the independent system operator.

6. In close cooperation with the regulatory authority, the relevant national competition authority shall be granted all relevant powers to effectively monitor compliance of the transmission system owner with its obligations under paragraph 5.

Article 15**Unbundling of transmission system owners and storage system operators**

1. A transmission system owner, where an independent system operator has been appointed, and a storage system operator which are part of vertically integrated undertakings shall be independent at least in terms of their legal form, organisation and decision making from other activities not relating to transmission, distribution and storage.

This Article shall apply only to storage facilities that are technically and/or economically necessary for providing efficient access to the system for the supply of customers pursuant to Article 33.

2. In order to ensure the independence of the transmission system owner and storage system operator referred to in paragraph 1, the following minimum criteria shall apply:

(a) persons responsible for the management of the transmission system owner and storage system operator shall not participate in company structures of the integrated natural gas undertaking responsible, directly or indirectly, for the day-to-day operation of the production and supply of natural gas;

(b) appropriate measures shall be taken to ensure that the professional interests of persons responsible for the management of the transmission system owner and storage system operator are taken into account in a manner that ensures that they are capable of acting independently;

(c) the storage system operator shall have effective decision-making rights, independent from the integrated natural gas undertaking, with respect to assets necessary to operate, maintain or develop the storage facilities. This shall not preclude the existence of appropriate coordination mechanisms to ensure that the economic and management supervision rights of the parent company in respect of return on assets regulated indirectly in accordance with Article 41(6) in a subsidiary are protected. In particular, this shall enable the parent company to approve the annual financial plan, or any equivalent instrument, of the storage system operator and to set global limits on the levels of indebtedness of its subsidiary. It shall not permit the parent company to give instructions regarding day-to-day operations, nor with respect to individual decisions concerning the construction or upgrading of storage facilities, that do not exceed the terms of the approved financial plan, or any equivalent instrument; and

(d) the transmission system owner and the storage system operator shall establish a compliance programme, which sets out measures taken to ensure that discriminatory conduct is excluded, and ensure that observance of it is adequately monitored. The compliance programme shall set out the specific obligations of employees to meet those objectives. An annual report, setting out the measures taken, shall be submitted by the person or body responsible for monitoring the compliance programme to the regulatory authority and shall be published.

3. <...>

Article 16

Confidentiality for transmission system operators and transmission system owners

1. Without prejudice to Article 30 or any other legal duty to disclose information, each transmission, storage and/or LNG system operator, and each transmission system owner, shall preserve the confidentiality of commercially sensitive information obtained in the course of carrying out its activities, and shall prevent information about its own activities which may be commercially advantageous from being disclosed in a discriminatory manner. In particular, it shall not disclose any commercially sensitive information to the remaining parts of the undertaking, unless this is necessary for carrying out a business transaction. In order to ensure the full respect of the rules on information unbundling, **Contracting Parties** shall ensure that the transmission system owner including, in the case of a combined operator, the distribution system operator, and the remaining part of the undertaking do not use joint services, such as joint legal services, apart from purely administrative or IT functions.
2. Transmission, storage and/or LNG system operators shall not, in the context of sales or purchases of natural gas by related undertakings, misuse commercially sensitive information obtained from third parties in the context of providing or negotiating access to the system.
3. Information necessary for effective competition and the efficient functioning of the market shall be made public. That obligation shall be without prejudice to protecting commercially sensitive information.

CHAPTER IV

INDEPENDENT TRANSMISSION OPERATOR

Article 17

Assets, equipment, staff and identity

1. Transmission system operators shall be equipped with all human, technical, physical and financial resources necessary for fulfilling their obligations under this Directive and carrying out the activity of gas transmission, in particular:
 - (a) assets that are necessary for the activity of gas transmission, including the transmission system, shall be owned by the transmission system operator;
 - (b) personnel necessary for the activity of gas transmission, including the performance of all corporate tasks, shall be employed by the transmission system operator;
 - (c) leasing of personnel and rendering of services, to and from any other parts of the vertically integrated undertaking shall be prohibited. A transmission system operator may, however, render services to the vertically integrated undertaking as long as:
 - (i) the provision of those services does not discriminate between system users, is available to all system users on the same terms and conditions and does not restrict, distort or prevent competition in production or supply; and
 - (ii) the terms and conditions of the provision of those services are approved by the regulatory authority;

(d) without prejudice to the decisions of the Supervisory Body under Article 20, appropriate financial resources for future investment projects and/or for the replacement of existing assets shall be made available to the transmission system operator in due time by the vertically integrated undertaking following an appropriate request from the transmission system operator.

2. The activity of gas transmission shall include at least the following tasks in addition to those listed in Article 13:

(a) the representation of the transmission system operator and contacts to third parties and the regulatory authorities;

(b) <...>

(c) granting and managing third-party access on a non-discriminatory basis between system users or classes of system users;

(d) the collection of all the transmission system related charges including access charges, balancing charges for ancillary services such as gas treatment, purchasing of services (balancing costs, energy for losses);

(e) the operation, maintenance and development of a secure, efficient and economic transmission system;

(f) investment planning ensuring the long-term ability of the system to meet reasonable demand and guaranteeing security of supply;

(g) the setting up of appropriate joint ventures, including with one or more transmission system operators, gas exchanges, and the other relevant actors pursuing the objective to develop the creation of regional markets or to facilitate the liberalisation process; and

(h) all corporate services, including legal services, accountancy and IT services.

3. Transmission system operators shall be organised in a legal form as referred to in Article 1 of Council Directive 68/151/EEC.

4. The transmission system operator shall not, in its corporate identity, communication, branding and premises, create confusion in respect of the separate identity of the vertically integrated undertaking or any part thereof.

5. The transmission system operator shall not share IT systems or equipment, physical premises and security access systems with any part of the vertically integrated undertaking, nor use the same consultants or external contractors for IT systems or equipment, and security access systems.

6. The accounts of transmission system operators shall be audited by an auditor other than the one auditing the vertically integrated undertaking or any part thereof.

Article 18

Independence of the transmission system operator

1. Without prejudice to the decisions of the Supervisory Body under Article 20, the transmission system operator shall have:

(a) effective decision-making rights, independent from the vertically integrated undertaking, with respect to assets necessary to operate, maintain or develop the transmission system; and

(b) the power to raise money on the capital market in particular through borrowing and capital increase.

2. The transmission system operator shall at all times act so as to ensure it has the resources it needs in order to carry out the activity of transmission properly and efficiently and develop and maintain an efficient, secure and economic transmission system.

3. Subsidiaries of the vertically integrated undertaking performing functions of production or supply shall not have any direct or indirect shareholding in the transmission system operator. The transmission system operator shall neither have any direct or indirect shareholding in any subsidiary of the vertically integrated undertaking performing functions of production or supply, nor receive dividends or any other financial benefit from that subsidiary.

4. The overall management structure and the corporate statutes of the transmission system operator shall ensure effective independence of the transmission system operator in compliance with this Chapter. The vertically integrated undertaking shall not determine, directly or indirectly, the competitive behaviour of the transmission system operator in relation to the day to day activities of the transmission system operator and management of the network, or in relation to activities necessary for the preparation of the ten-year network development plan developed pursuant to Article 22.

5. In fulfilling their tasks in Article 13 and Article 17(2) of this Directive, and in complying with Article 13(1), Article 14(1)(a), Article 16(2), (3) and (5), Article 18(6) and Article 21(1) of Regulation (EC) No 715/2009, **as adapted under Article 24 of the Energy Community Treaty**, transmission system operators shall not discriminate against different persons or entities and shall not restrict, distort or prevent competition in production or supply.

6. Any commercial and financial relations between the vertically integrated undertaking and the transmission system operator, including loans from the transmission system operator to the vertically integrated undertaking shall comply with market conditions. The transmission system operator shall keep detailed records of such commercial and financial relations and make them available to the regulatory authority upon request.

7. The transmission system operator shall submit for approval by the regulatory authority all commercial and financial agreements with the vertically integrated undertaking.

8. The transmission system operator shall inform the regulatory authority of the financial resources, referred to in Article 17(1)(d), available for future investment projects and/or for the replacement of existing assets.

9. The vertically integrated undertaking shall refrain from any action impeding or prejudicing the transmission system operator from complying with its obligations in this Chapter and shall not require the transmission system operator to seek permission from the vertically integrated undertaking in fulfilling those obligations.

10. An undertaking which has been certified by the regulatory authority as being in compliance with the requirements of this Chapter shall be approved and designated as a transmission system operator by the **Contracting Party** concerned. The certification procedure in either Article 10 of this Directive and Article 3 of Regulation (EC) No 715/2009, **as adapted under Article 24 of the Energy Community Treaty**, or in Article 11 of this Directive shall apply.

Article 19

Independence of the staff and the management of the transmission system operator

1. Decisions regarding the appointment and renewal, working conditions including remuneration, and termination of the term of office, of the persons responsible for the management and/or members of the administrative bodies of the transmission system operator shall be taken by the Supervisory Body of the transmission system operator appointed in accordance with Article 20.

2. The identity of, and the conditions governing the term, the duration and the termination of office of, the persons nominated by the Supervisory Body for appointment or renewal as persons responsible for the executive management and/or as members of the administrative bodies of the transmission system operator, and the reasons for any proposed decision terminating such term of office, shall be notified to the regulatory authority. Those conditions and the decisions referred to in paragraph 1 shall become binding only if the regulatory authority has raised no objections within three weeks of notification.

The regulatory authority may object to the decisions referred to in paragraph 1 where:

(a) doubts arise as to the professional independence of a nominated person responsible for the management and/or member of the administrative bodies; or

(b) in the case of premature termination of a term of office, doubts exist regarding the justification of such premature termination.

3. No professional position or responsibility, interest or business relationship, directly or indirectly, with the vertically integrated undertaking or any part of it or its controlling shareholders other than the transmission system operator shall be exercised for a period of three years before the appointment of the persons responsible for the management and/or members of the administrative bodies of the transmission system operator who are subject to this paragraph.

4. The persons responsible for the management and/or members of the administrative bodies, and employees of the transmission system operator shall have no other professional position or responsibility, interest or business relationship, directly or indirectly, with any other part of the vertically integrated undertaking or with its controlling shareholders.

5. The persons responsible for the management and/or members of the administrative bodies, and employees of the transmission system operator shall hold no interest in or receive any financial benefit, directly or indirectly, from any part of the vertically integrated undertaking other than the transmission system operator. Their remuneration shall not depend on activities or results of the vertically integrated undertaking other than those of the transmission system operator.

6. Effective rights of appeal to the regulatory authority shall be guaranteed for any complaints by the persons responsible for the management and/or members of the administrative bodies of the transmission system operator against premature terminations of their term of office.

7. After termination of their term of office in the transmission system operator, the persons responsible for its management and/or members of its administrative bodies shall have no professional position or responsibility, interest or business relationship with any part of the vertically integrated undertaking other than the transmission system operator, or with its controlling shareholders for a period of not less than four years.

8. Paragraph 3 shall apply to the majority of the persons responsible for the management and/or members of the administrative bodies of the transmission system operator.

The persons responsible for the management and/or members of the administrative bodies of the transmission system operator who are not subject to paragraph 3 shall have exercised no management or other relevant activity in the vertically integrated undertaking for a period of at least six months before their appointment.

The first subparagraph of this paragraph and paragraphs 4 to 7 shall be applicable to all the persons belonging to the executive management and to those directly reporting to them on matters related to the operation, maintenance or development of the network.

Article 20

Supervisory Body

1. The transmission system operator shall have a Supervisory Body which shall be in charge of taking decisions which may have a significant impact on the value of the assets of the shareholders within the transmission system operator, in particular decisions regarding the approval of the annual and longer-term financial plans, the level of indebtedness of the transmission system operator and the amount of dividends distributed to shareholders. The decisions falling under the remit of the Supervisory Body shall exclude those that are related to the day to day activities of the transmission system operator and management of the network, and in relation to activities necessary for the preparation of the ten-year network development plan developed pursuant to Article 22.

2. The Supervisory Body shall be composed of members representing the vertically integrated undertaking, members representing third party shareholders and, where the relevant legislation of a Contracting Party so provides, members representing other interested parties such as employees of the transmission system operator.

3. The first subparagraph of Article 19(2) and Article 19(3) to (7) shall apply to at least half of the members of the Supervisory Body minus one.

Point (b) of the second subparagraph of Article 19(2) shall apply to all the members of the Supervisory Body.

Article 21

Compliance programme and compliance officer

1. **Contracting Parties** shall ensure that transmission system operators establish and implement a compliance programme which sets out the measures taken in order to ensure that discriminatory conduct is excluded, and ensure that the compliance with that programme is adequately monitored. The compliance programme shall set out the specific obligations of employees to meet those objectives. It shall be subject to approval by the regulatory authority. Without prejudice to the powers of the national regulator, compliance with the program shall be independently monitored by a compliance officer.

2. The compliance officer shall be appointed by the Supervisory Body, subject to the approval by the regulatory authority. The regulatory authority may refuse the approval of the compliance officer only for reasons of lack of independence or professional capacity. The compliance officer may be a natural or legal person. Article 19(2) to (8) shall apply to the compliance officer.

3. The compliance officer shall be in charge of:

- (a) monitoring the implementation of the compliance programme;
- (b) elaborating an annual report, setting out the measures taken in order to implement the compliance programme and submitting it to the regulatory authority;
- (c) reporting to the Supervisory Body and issuing recommendations on the compliance programme and its implementation;
- (d) notifying the regulatory authority on any substantial breaches with regard to the implementation of the compliance programme; and
- (e) reporting to the regulatory authority on any commercial and financial relations between the vertically integrated undertaking and the transmission system operator.

4. The compliance officer shall submit the proposed decisions on the investment plan or on individual investments in the network to the regulatory authority. This shall occur at the latest when the management and/or the competent administrative body of the transmission system operator submits them to the Supervisory Body.

5. Where the vertically integrated undertaking, in the general assembly or through the vote of the members of the Supervisory Body it has appointed, has prevented the adoption of a decision with the effect of preventing or delaying investments, which under the ten-year network development plan, was to be executed in the following three years, the compliance officer shall report this to the regulatory authority, which then shall act in accordance with Article 22.

6. The conditions governing the mandate or the employment conditions of the compliance officer, including the duration of his mandate, shall be subject to approval by the regulatory authority. Those conditions shall ensure the independence of the compliance officer, including by providing it with all the resources necessary for fulfilling his duties. During his mandate, the compliance officer shall have no other professional position, responsibility or interest, directly or indirectly, in or with any part of the vertically integrated undertaking or with its controlling shareholders.

7. The compliance officer shall report regularly, either orally or in writing, to the regulatory authority and shall have the right to report regularly, either orally or in writing, to the Supervisory Body of the transmission system operator.

8. The compliance officer may attend all meetings of the management or administrative bodies of the transmission system operator, and those of the Supervisory Body and the general assembly. The compliance officer shall attend all meetings that address the following matters:

- (a) conditions for access to the network, as defined in Regulation (EC) No 715/2009, **as adapted under Article 24 of the Energy Community Treaty**, in particular regarding tariffs, third party access services, capacity allocation and congestion management, transparency, balancing and secondary markets;
- (b) projects undertaken in order to operate, maintain and develop the transmission system, including investments in new transport connections, in expansion of capacity and in optimisation of existing capacity;
- (c) energy purchases or sales necessary for the operation of the transmission system.

9. The compliance officer shall monitor the compliance of the transmission system operator with Article 16.

10. The compliance officer shall have access to all relevant data and to the offices of the transmission

system operator and to all the information necessary for the fulfillment of his task.

11. After prior approval by the regulatory authority, the Supervisory Body may dismiss the compliance officer. It shall dismiss the compliance officer for reasons of lack of independence or professional capacity upon request of the regulatory authority.

12. The compliance officer shall have access to the offices of the transmission system operator without prior announcement.

Article 22

Network development and powers to make investment decisions

1. Every year, transmission system operators shall submit to the regulatory authority a ten-year network development plan based on existing and forecast supply and demand after having consulted all the relevant stakeholders. That network development plan shall contain efficient measures in order to guarantee the adequacy of the system and the security of supply.

2. The ten-year network development plan shall, in particular:

(a) indicate to market participants the main transmission infrastructure that needs to be built or upgraded over the next ten years;

(b) contain all the investments already decided and identify new investments which have to be executed in the next three years; and

(c) provide for a time frame for all investment projects.

3. When elaborating the ten-year network development plan, the transmission system operator shall make reasonable assumptions about the evolution of the production, supply, consumption and exchanges with other countries, taking into account investment plans for regional and **Energy Community**-wide networks, as well as investment plans for storage and LNG regasification facilities.

4. The regulatory authority shall consult all actual or potential system users on the ten-year network development plan in an open and transparent manner. Persons or undertakings claiming to be potential system users may be required to substantiate such claims. The regulatory authority shall publish the result of the consultation process, in particular possible needs for investments.

5. The regulatory authority shall examine whether the ten-year network development plan covers all investment needs identified during the consultation process <...>. The regulatory authority may require the transmission system operator to amend its ten-year network development plan.

6. The regulatory authority shall monitor and evaluate the implementation of the ten-year network development plan.

7. In circumstances where the transmission system operator, other than for overriding reasons beyond its control, does not execute an investment, which, under the ten-year network development plan, was to be executed in the following three years, **Contracting Parties** shall ensure that the regulatory authority is required to take at least one of the following measures to ensure that the investment in question is made if such investment is still relevant on the basis of the most recent ten-year network development plan:

(a) to require the transmission system operator to execute the investments in question;

- (b) to organise a tender procedure open to any investors for the investment in question; or
 (c) to oblige the transmission system operator to accept a capital increase to finance the necessary investments and allow independent investors to participate in the capital.

Where the regulatory authority has made use of its powers under point (b) of the first subparagraph, it may oblige the transmission system operator to agree to one or more of the following:

- (a) financing by any third party;
 (b) construction by any third party;
 (c) building the new assets concerned itself;
 (d) operating the new asset concerned itself.

The transmission system operator shall provide the investors with all information needed to realise the investment, shall connect new assets to the transmission network and shall generally make its best efforts to facilitate the implementation of the investment project.

The relevant financial arrangements shall be subject to approval by the regulatory authority.

8. Where the regulatory authority has made use of its powers under the first subparagraph of paragraph 7, the relevant tariff regulations shall cover the costs of the investments in question.

Article 23

Decision-making powers regarding the connection of storage facilities, LNG regasification facilities and industrial customers to the transmission system

1. The transmission system operator shall establish and publish transparent and efficient procedures and tariffs for non-discriminatory connection of storage facilities, LNG regasification facilities and industrial customers to the transmission system. Those procedures shall be subject to approval by the regulatory authority.

2. The transmission system operator shall not be entitled to refuse the connection of a new storage facility, LNG regasification facility or industrial customer on the grounds of possible future limitations to available network capacities or additional costs linked with necessary capacity increase. The transmission system operator shall ensure sufficient entry and exit capacity for the new connection.

CHAPTER V DISTRIBUTION AND SUPPLY

Article 24

Designation of distribution system operators

Contracting Parties shall designate, or shall require undertakings which own or are responsible for distribution systems to designate, for a period of time to be determined by **Contracting Parties**, having regard to considerations of efficiency and economic balance, one or more distribution system operators and shall ensure that those operators act in accordance with Articles 25, 26 and 27.

Article 25

Tasks of distribution system operators

1. Each distribution system operator shall be responsible for ensuring the long-term ability of the system to meet reasonable demands for the distribution of gas, and for operating, maintaining and developing under economic conditions a secure, reliable and efficient system in its area, with due regard for the environment and energy efficiency.
2. In any event, the distribution system operator shall not discriminate between system users or classes of system users, particularly in favour of its related undertakings.
3. Each distribution system operator shall provide any other distribution, transmission, LNG, and/ or storage system operator with sufficient information to ensure that the transport and storage of natural gas takes place in a manner compatible with the secure and efficient operation of the interconnected system.
4. Each distribution system operator shall provide system users with the information they need for efficient access to, including use of, the system.
5. Where a distribution system operator is responsible for balancing the distribution system, rules adopted by it for that purpose shall be objective, transparent and non-discriminatory, including rules for the charging of system users for energy imbalance. Terms and conditions, including rules and tariffs, for the provision of such services by distribution system operators shall be established pursuant to a methodology compatible with Article 41(6) in a non-discriminatory and cost-reflective way and shall be published.

Article 26

Unbundling of distribution system operators

1. Where the distribution system operator is part of a vertically integrated undertaking, it shall be independent at least in terms of its legal form, organisation and decision making from other activities not relating to distribution. Those rules shall not create an obligation to separate the ownership of assets of the distribution system from the vertically integrated undertaking.
2. In addition to the requirements under paragraph 1, where the distribution system operator is part of a vertically integrated undertaking, it shall be independent in terms of its organisation and decision-making from the other activities not related to distribution. In order to achieve this, the following minimum criteria shall apply:
 - (a) those persons responsible for the management of the distribution system operator must not participate in company structures of the integrated natural gas undertaking responsible, directly or indirectly, for the day-to-day operation of the production, transmission and supply of natural gas;
 - (b) appropriate measures must be taken to ensure that the professional interests of persons responsible for the management of the distribution system operator are taken into account in a manner that ensures that they are capable of acting independently;
 - (c) the distribution system operator must have effective decision-making rights, independent from the integrated natural gas undertaking, with respect to assets necessary to operate, maintain or develop the network. In order to fulfill those tasks, the distribution system operator shall have at its disposal the necessary resources including human, technical, financial and physical resources. This should not prevent

the existence of appropriate coordination mechanisms to ensure that the economic and management supervision rights of the parent company in respect of return on assets, regulated indirectly in accordance with Article 41(6) in a subsidiary are protected. In particular, this shall enable the parent company to approve the annual financial plan, or any equivalent instrument, of the distribution system operator and to set global limits on the levels of indebtedness of its subsidiary. It shall not permit the parent company to give instructions regarding day-to-day operations, nor with respect to individual decisions concerning the construction or upgrading of distribution lines, that do not exceed the terms of the approved financial plan, or any equivalent instrument; and

(d) the distribution system operator must establish a compliance programme, which sets out measures taken to ensure that discriminatory conduct is excluded, and ensure that observance of it is adequately monitored. The compliance programme shall set out the specific obligations of employees to meet that objective. An annual report, setting out the measures taken, shall be submitted by the person or body responsible for monitoring the compliance programme, the compliance officer of the distribution system operator, to the regulatory authority referred to in Article 39(1) and shall be published. The compliance officer of the distribution system operator shall be fully independent and shall have access to all the necessary information of the distribution system operator and any affiliated undertaking to fulfill his task.

3. Where the distribution system operator is part of a vertically integrated undertaking, the **Contracting Parties** shall ensure that the activities of the distribution system operator are monitored by regulatory authorities or other competent bodies so that it cannot take advantage of its vertical integration to distort competition. In particular, vertically integrated distribution system operators shall not, in their communication and branding, create confusion in respect of the separate identity of the supply branch of the vertically integrated undertaking.

4. **Contracting Parties** may decide not to apply paragraphs 1, 2 and 3 to integrated natural gas undertakings serving less than 100 000 connected customers.

Article 27

Confidentiality obligations of distribution system operators

1. Without prejudice to Article 30 or any other legal duty to disclose information, each distribution system operator shall preserve the confidentiality of commercially sensitive information obtained in the course of carrying out its business, and shall prevent information about its own activities which may be commercially advantageous from being disclosed in a discriminatory manner.

2. Distribution system operators shall not, in the context of sales or purchases of natural gas by related undertakings, abuse commercially sensitive information obtained from third parties in the context of providing or negotiating access to the system.

Article 28

Closed distribution systems

1. **Contracting Parties** may provide for national regulatory authorities or other competent authorities to classify a system which distributes gas within a geographically confined industrial, commercial or shared services site and does not, without prejudice to paragraph 4, supply household customers, as a closed distribution system if:

(a) for specific technical or safety reasons, the operations or the production process of the users of that system are integrated; or

(b) that system distributes gas primarily to the owner or operator of the system or to their related undertakings.

2. **Contracting Parties** may provide for national regulatory authorities to exempt the operator of a closed distribution system from the requirement under Article 32(1) that tariffs, or the methodologies underlying their calculation, are approved prior to their entry into force in accordance with Article 41.

3. Where an exemption is granted under paragraph 2, the applicable tariffs, or the methodologies underlying their calculation, shall be reviewed and approved in accordance with Article 41 upon request by a user of the closed distribution system.

4. Incidental use by a small number of households with employment or similar associations with the owner of the distribution system and located within the area served by a closed distribution system shall not preclude an exemption under paragraph 2 being granted.

Article 29

Combined operator

Article 26(1) shall not prevent the operation of a combined transmission, LNG, storage and distribution system operator provided that operator complies with Articles 9(1), or 14 and 15, or Chapter IV or falls under Article 49(6).

CHAPTER VI

UNBUNDLING AND TRANSPARENCY OF ACCOUNTS

Article 30

Right of access to accounts

1 **Contracting Parties** or any competent authority they designate, including the regulatory authorities referred to in Article 39(1) and the dispute settlement authorities referred to in Article 34(3) shall, insofar as necessary to carry out their functions, have right of access to the accounts of natural gas undertakings as set out in Article 31.

2. **Contracting Parties** and any designated competent authority, including the regulatory authorities referred to in Article 39(1) and the dispute settlement authorities, shall preserve the confidentiality of commercially sensitive information. Contracting Parties may provide for the disclosure of such information where this is necessary in order for the competent authorities to carry out their functions.

Article 31

Unbundling of accounts

1. **Contracting Parties** shall take the necessary steps to ensure that the accounts of natural gas undertakings are kept in accordance with paragraphs 2 to 5 of this Article. Where natural gas undertakings benefit from a derogation from this provision on the basis of Article 49(2) and (4), they shall at least keep their internal accounts in accordance with this Article.

2. Natural gas undertakings, whatever their system of ownership or legal form, shall draw up, submit to audit and publish their annual accounts in accordance with the rules of national law concerning the annual accounts of limited liability companies which should comply with the Fourth Council Directive 78/660/EEC of 25 July 1978 based on Article 44(2)(g) of the Treaty on the annual accounts of certain types of companies. Undertakings which are not legally obliged to publish their annual accounts shall keep a copy thereof at the disposal of the public at their head office.

3. Natural gas undertakings shall, in their internal accounting, keep separate accounts for each of their transmission, distribution, LNG and storage activities as they would be required to do if the activities in question were carried out by separate undertakings, with a view to avoiding discrimination, cross-subsidisation and distortion of competition. They shall also keep accounts, which may be consolidated, for other gas activities not relating to transmission, distribution, LNG and storage. Until **1 January 2015**, they shall keep separate accounts for supply activities for eligible customers and supply activities for non-eligible customers. Revenue from ownership of the transmission or distribution network shall be specified in the accounts. Where appropriate, they shall keep consolidated accounts for other, non-gas activities. The internal accounts shall include a balance sheet and a profit and loss account for each activity.

4. The audit, referred to in paragraph 2, shall, in particular, verify that the obligation to avoid discrimination and cross-subsidies referred to in paragraph 3 is respected.

5. Undertakings shall specify in their internal accounting the rules for the allocation of assets and liabilities, expenditure and income as well as for depreciation, without prejudice to nationally applicable accounting rules, which they follow in drawing up the separate accounts referred to in paragraph 3. Those internal rules may be amended only in exceptional cases. Such amendments shall be mentioned and duly substantiated.

6. The annual accounts shall indicate in notes any transaction of a certain size conducted with related undertakings.

CHAPTER VII

ORGANISATION OF ACCESS TO THE SYSTEM

Article 32

Third-party access

1. **Contracting Parties** shall ensure the implementation of a system of third party access to the transmission and distribution system, and LNG facilities based on published tariffs, applicable to all eligible customers, including supply undertakings, and applied objectively and without discrimination between system users. **Contracting Parties** shall ensure that those tariffs, or the methodologies underlying their calculation are approved prior to their entry into force in accordance with Article 41 by a regulatory authority referred to in Article 39(1) and that those tariffs - and the methodologies, where only methodologies are approved - are published prior to their entry into force.
2. Transmission system operators shall, if necessary for the purpose of carrying out their functions including in relation to cross-border transmission, have access to the network of other transmission system operators.
3. The provisions of this Directive shall not prevent the conclusion of long-term contracts in so far as they comply with **Energy Community** competition rules.

Article 33

Access to storage

1. For the organisation of access to storage facilities and linepack when technically and/or economically necessary for providing efficient access to the system for the supply of customers, as well as for the organisation of access to ancillary services, Contracting Parties may choose either or both of the procedures referred to in paragraphs 3 and 4. Those procedures shall operate in accordance with objective, transparent and non-discriminatory criteria.

The regulatory authorities where **Contracting Parties** have so provided or **Contracting Parties** shall define and publish criteria according to which the access regime applicable to storage facilities and linepack may be determined. They shall make public, or oblige storage and transmission system operators to make public, which storage facilities, or which parts of those storage facilities, and which linepack is offered under the different procedures referred to in paragraphs 3 and 4.

The obligation referred to in the second sentence of the second subparagraph shall be without prejudice to the right of choice granted to **Contracting Parties** in the first subparagraph.

2. The provisions of paragraph 1 shall not apply to ancillary services and temporary storage that are related to LNG facilities and are necessary for the re-gasification process and subsequent delivery to the transmission system.

3. In the case of negotiated access, **Contracting Parties** or, where **Contracting Parties** have so provided, the regulatory authorities shall take the necessary measures for natural gas undertakings and eligible customers either inside or outside the territory covered by the interconnected system to be able to negotiate access to storage facilities and linepack, when technically and/or economically necessary for providing

efficient access to the system, as well as for the organisation of access to other ancillary services. The parties shall be obliged to negotiate access to storage, linepack and other ancillary services in good faith. Contracts for access to storage, linepack and other ancillary services shall be negotiated with the relevant storage system operator or natural gas undertakings. The regulatory authorities where **Contracting Parties** have so provided or **Contracting Parties** shall require storage system operators and natural gas undertakings to publish their main commercial conditions for the use of storage, linepack and other ancillary services **1 January 2007** and on an annual basis every year thereafter.

When developing the conditions referred to in the second subparagraph, storage operators and natural gas undertakings shall consult system users.

4. In the case of regulated access, **the regulatory authorities where Contracting Parties** have so provided or **Contracting Parties** shall take the necessary measures to give natural gas undertakings and eligible customers either inside or outside the territory covered by the interconnected system a right to access to storage, linepack and other ancillary services, on the basis of published tariffs and/or other terms and obligations for use of that storage and linepack, when technically and/or economically necessary for providing efficient access to the system, as well as for the organisation of access to other ancillary services. The regulatory authorities where **Contracting Parties** have so provided or **Contracting Parties** shall consult system users when developing those tariffs or the methodologies for those tariffs. The right of access for eligible customers may be given by enabling them to enter into supply contracts with competing natural gas undertakings other than the owner and/or operator of the system or a related undertaking.

Article 34

Access to upstream pipeline networks

1. **Contracting Parties** shall take the necessary measures to ensure that natural gas undertakings and eligible customers, wherever they are located, are able to obtain access to upstream pipeline networks, including facilities supplying technical services incidental to such access, in accordance with this Article, except for the parts of such networks and facilities which are used for local production operations at the site of a field where the gas is produced. The measures shall be notified to the **Energy Community Secretariat**.

2. The access referred to in paragraph 1 shall be provided in a manner determined by the **Contracting Party** in accordance with the relevant legal instruments. **Contracting Parties** shall apply the objectives of fair and open access, achieving a competitive market in natural gas and avoiding any abuse of a dominant position, taking into account security and regularity of supplies, capacity which is or can reasonably be made available, and environmental protection. The following matters may be taken into account:

- (a) the need to refuse access where there is an incompatibility of technical specifications which cannot reasonably be overcome;
- (b) the need to avoid difficulties which cannot reasonably be overcome and could prejudice the efficient, current and planned future production of hydrocarbons, including that from fields of marginal economic viability;
- (c) the need to respect the duly substantiated reasonable needs of the owner or operator of the upstream pipeline network for the transport and processing of gas and the interests of all other users of the upstream pipeline network or relevant processing or handling facilities who may be affected; and

(d) the need to apply their laws and administrative procedures, in conformity with **Energy Community law**, for the grant of authorisation for production or upstream development.

3. **Contracting Parties** shall ensure that they have in place dispute-settlement arrangements, including an authority independent of the parties with access to all relevant information, to enable disputes relating to access to upstream pipeline networks to be settled expeditiously, taking into account the criteria in paragraph 2 and the number of parties which may be involved in negotiating access to such networks.

4. In the event of cross-border disputes, the dispute-settlement arrangements for the **Contracting Party** having jurisdiction over the upstream pipeline network which refuses access shall be applied. Where, in cross-border disputes, more than one **Contracting Party** covers the network concerned, the **Contracting Parties** concerned shall consult each other with a view to ensuring that the provisions of this Directive are applied consistently.

Article 35

Refusal of access

1. Natural gas undertakings may refuse access to the system on the basis of lack of capacity or where the access to the system would prevent them from carrying out the public service obligations referred to in Article 3(2) which are assigned to them or on the basis of serious economic and financial difficulties with take-or-pay contracts having regard to the criteria and procedures set out in Article 48 and the alternative chosen by the **Contracting Party** in accordance with paragraph 1 of that Article. Duly substantiated reasons shall be given for any such a refusal.

2. **Contracting Parties** may take the measures necessary to ensure that the natural gas undertaking refusing access to the system on the basis of lack of capacity or a lack of connection makes the necessary enhancements as far as it is economic to do so or when a potential customer is willing to pay for them. In circumstances where **Contracting Parties** apply Article 4(4), **Contracting Parties** shall take such measures.

Article 36

New infrastructure

1. Major new gas infrastructure, i.e. interconnectors, LNG and storage facilities, may, upon request, be exempted, for a defined period of time, from the provisions of Articles 9, 32, 33 and 34 and Article 41(6), (8) and (10) under the following conditions:

- (a) the investment must enhance competition in gas supply and enhance security of supply;
- (b) the level of risk attached to the investment must be such that the investment would not take place unless an exemption was granted;
- (c) the infrastructure must be owned by a natural or legal person which is separate at least in terms of its legal form from the system operators in whose systems that infrastructure will be built;
- (d) charges must be levied on users of that infrastructure; and

(e) the exemption must not be detrimental to competition or the effective functioning of the internal market in natural gas, or the efficient functioning of the regulated system to which the infrastructure is connected.

2. Paragraph 1 shall also apply to significant increases of capacity in existing infrastructure and to modifications of such infrastructure which enable the development of new sources of gas supply.

3. The regulatory authority referred to in Chapter VIII may, on a case-by-case basis, decide on the exemption referred to in paragraphs 1 and 2.

4. Where the infrastructure in question is located in the territory of more than one **Contracting Party**, the **Energy Community Regulatory Board** may submit an advisory opinion to the regulatory authorities of the **Contracting Parties** concerned, which may be used as a basis for their decision, within two months from the date on which the request for exemption was received by the last of those regulatory authorities.

Where all the regulatory authorities concerned agree on the request for exemption within six months of the date on which it was received by the last of the regulatory authorities, they shall inform the **Energy Community Regulatory Board** of their decision.

The **Energy Community Regulatory Board** shall exercise the tasks conferred on the regulatory authorities of the **Contracting Parties** concerned by the present Article:

(a) where all regulatory authorities concerned have not been able to reach an agreement within a period of six months from the date on which the request for exemption was received by the last of those regulatory authorities; or

(b) upon a joint request from the regulatory authorities concerned.

All regulatory authorities concerned may, jointly, request that the period referred to in point (a) of the third subparagraph is extended by up to three months.

5. Before taking a decision, the **Energy Community Regulatory Board** shall consult the relevant regulatory authorities and the applicants.

6. An exemption may cover all or part of the capacity of the new infrastructure, or of the existing infrastructure with significantly increased capacity.

In deciding to grant an exemption, consideration shall be given, on a case-by-case basis, to the need to impose conditions regarding the duration of the exemption and non-discriminatory access to the infrastructure. When deciding on those conditions, account shall, in particular, be taken of the additional capacity to be built or the modification of existing capacity, the time horizon of the project and national circumstances.

Before granting an exemption, the regulatory authority shall decide upon the rules and mechanisms for management and allocation of capacity. The rules shall require that all potential users of the infrastructure are invited to indicate their interest in contracting capacity before capacity allocation in the new infrastructure, including for own use, takes place. The regulatory authority shall require congestion management rules to include the obligation to offer unused capacity on the market, and shall require users of the infrastructure to be entitled to trade their contracted capacities on the secondary market. In its assessment of the criteria referred to in points (a), (b) and (e) of paragraph 1, the regulatory authority shall take into account the results of that capacity allocation procedure.

The exemption decision, including any conditions referred to in the second subparagraph of this paragraph, shall be duly reasoned and published.

7. Notwithstanding paragraph 3, **Contracting Parties** may provide that their regulatory authority or the

Energy Community Regulatory Board, as the case may be, shall submit, for the purposes of the formal decision, to the relevant body in the **Contracting Party** its opinion on the request for an exemption. That opinion shall be published together with the decision.

8. The regulatory authority shall transmit to the **Energy Community Secretariat**, without delay, a copy of every request for exemption as of its receipt. The decision shall be notified, without delay, by the competent authority to the **Energy Community Secretariat**, together with all the relevant information with respect to the decision. That information may be submitted to the **Energy Community Secretariat** in aggregate form, enabling the **Energy Community Secretariat** to reach a well-founded decision. In particular, the information shall contain:

- (a) the detailed reasons on the basis of which the regulatory authority, or **Contracting Party**, granted or refused the exemption together with a reference to paragraph 1 including the relevant point or points of that paragraph on which such decision is based, including the financial information justifying the need for the exemption;
- (b) the analysis undertaken of the effect on competition and the effective functioning of the internal market in natural gas resulting from the grant of the exemption;
- (c) the reasons for the time period and the share of the total capacity of the gas infrastructure in question for which the exemption is granted;
- (d) in case the exemption relates to an interconnector, the result of the consultation with the regulatory authorities concerned; and
- (e) the contribution of the infrastructure to the diversification of gas supply.

9. Within a period of two months from the day following the receipt of a notification, the **Secretariat** may issue an opinion inviting the regulatory authority to amend or withdraw the decision to grant an exemption. That two-month period may be extended by an additional period of two months where further information is sought by the **Energy Community Secretariat**. That additional period shall begin on the day following the receipt of the complete information. The initial two-month period may also be extended with the consent of both the **Energy Community Secretariat** and the regulatory authority.

Where the requested information is not provided within the period set out in the request, the notification shall be deemed to be withdrawn unless, before the expiry of that period, either the period has been extended with the consent of both the **Energy Community Secretariat** and the regulatory authority, or the regulatory authority, in a duly reasoned statement, has informed the **Energy Community Secretariat** that it considers the notification to be complete.

The notifying bodies shall take the utmost account of a Secretariat opinion that recommends to amend or withdraw the exemption decision. Where the final decision diverges from the Secretariat's opinion, the regulatory authority concerned shall provide and publish, together with that decision, the reasoning underlying its decision. Diverting decisions shall be included in the agenda of the first meeting of the Ministerial Council following the date of the decision, for information and discussion.

The **Secretariat** shall preserve the confidentiality of commercially sensitive information.

The **Secretariat's** opinion on an exemption decision shall lose its effect two years from its adoption in the event that construction of the infrastructure has not yet started, and five years from its adoption in the event that the infrastructure has not become operational unless the **Secretariat** considers that any

delay is due to major obstacles beyond control of the person to whom the exemption has been granted.

10. <...>

Article 37

Market opening and reciprocity

1. **Contracting Parties** shall ensure that the eligible customers comprise⁷:

- (a) <...>;
- (b) **from 1 January 2008**, all non-household customers;
- (c) **from 1 January 2015**, all customers.

2. To avoid imbalance in the opening of the gas markets:

- (a) contracts for the supply with an eligible customer in the system of another **Contracting Party** shall not be prohibited if the customer is eligible in both systems involved; and
- (b) <...>.

Article 38

Direct lines

1. **Contracting Parties** shall take the necessary measures to enable:

- (a) natural gas undertakings established within their territory to supply the eligible customers through a direct line; and,
- (b) any such eligible customer within their territory to be supplied through a direct line by natural gas undertakings.

2. In circumstances where an authorisation (for example, licence, permission, concession, consent or approval) is required for the construction or operation of direct lines, the **Contracting Parties** or any competent authority they designate shall lay down the criteria for the grant of authorisations for the construction or operation of such lines in their territory. Those criteria shall be objective, transparent and non-discriminatory.

3. **Contracting Parties** may issue an authorisation to construct a direct line subject either to the refusal of system access on the basis of Article 35 or to the opening of a dispute-settlement procedure under Article 41.

⁷ According to Article 17(2) of Decision 2011/02/MC-EnC, the following deadlines 'shall apply without prejudice to special deadlines agreed in the Protocols of Accession to the Energy Community'.

CHAPTER VIII

NATIONAL REGULATORY AUTHORITIES

Article 39

Designation and independence of regulatory authorities

1. Each **Contracting Party** shall designate a single national regulatory authority at national level.
2. Paragraph 1 of this Article shall be without prejudice to the designation of other regulatory authorities at regional level within **Contracting Parties**, provided that there is one senior representative for representation and contact purposes at **Energy Community** level.
3. By way of derogation from paragraph 1 of this Article, a **Contracting Party** may designate regulatory authorities for small systems on a geographically separate region whose consumption, in 2008, accounted for less than 3% of the total consumption of the **Contracting Party** of which it is part. That derogation shall be without prejudice to the appointment of one senior representative for representation and contact purposes at **Energy Community** level.
4. **Contracting Parties** shall guarantee the independence of the regulatory authority and shall ensure that it exercises its powers impartially and transparently. For this purpose, **Contracting Parties** shall ensure that, when carrying out the regulatory tasks conferred upon it by this Directive and related legislation, the regulatory authority:
 - (a) is legally distinct and functionally independent from any other public or private entity;
 - (b) ensures that its staff and the persons responsible for its management:
 - (i) act independently from any market interest; and
 - (ii) do not seek or take direct instructions from any government or other public or private entity when carrying out the regulatory tasks. That requirement is without prejudice to close cooperation, as appropriate, with other relevant national authorities or to general policy guidelines issued by the government not related to the regulatory powers and duties under Article 41.
5. In order to protect the independence of the regulatory authority, **Contracting Parties** shall in particular ensure that:
 - (a) the regulatory authority can take autonomous decisions, independently from any political body, and has separate annual budget allocations, with autonomy in the implementation of the allocated budget, and adequate human and financial resources to carry out its duties; and
 - (b) the members of the board of the regulatory authority or, in the absence of a board, the regulatory authority's top management are appointed for a fixed term of five up to seven years, renewable once.In regard to point (b) of the first subparagraph, **Contracting Parties** shall ensure an appropriate rotation scheme for the board or the top management. The members of the board or, in the absence of a board, members of the top management may be relieved from office during their term only if they no longer fulfill the conditions set out in this Article or have been guilty of misconduct under national law.

Article 40**General objectives of the regulatory authority**

In carrying out the regulatory tasks specified in this Directive, the regulatory authority shall take all reasonable measures in pursuit of the following objectives within the framework of their duties and powers as laid down in Article 41, in close consultation with other relevant national authorities, including competition authorities, as appropriate, and without prejudice to their competencies:

- (a) promoting, in close cooperation with the **Energy Community Regulatory Board**, regulatory authorities of other **Contracting Parties** and the **Energy Community Secretariat**, a competitive, secure and environmentally sustainable internal market in natural gas within the **Energy Community**, and effective market opening for all customers and suppliers in the **Energy Community**, and ensuring appropriate conditions for the effective and reliable operation of gas networks, taking into account long-term objectives;
- (b) developing competitive and properly functioning regional markets within the **Energy Community** in view of the achievement of the objectives referred to in point (a);
- (c) eliminating restrictions on trade in natural gas between **Contracting Parties**, including developing appropriate cross-border transmission capacities to meet demand and enhancing the integration of national markets which may facilitate natural gas flow across the **Energy Community**;
- (d) helping to achieve, in the most cost-effective way, the development of secure, reliable and efficient non-discriminatory systems that are consumer oriented, and promoting system adequacy and, in line with general energy policy objectives, energy efficiency as well as the integration of large and small scale production of gas from renewable energy sources and distributed production in both transmission and distribution networks;
- (e) facilitating access to the network for new production capacity, in particular removing barriers that could prevent access for new market entrants and of gas from renewable energy sources;
- (f) ensuring that system operators and system users are granted appropriate incentives, in both the short and the long term, to increase efficiencies in system performance and foster market integration;
- (g) ensuring that customers benefit through the efficient functioning of their national market, promoting effective competition and helping to ensure consumer protection;
- (h) helping to achieve high standards of public service for natural gas, contributing to the protection of vulnerable customers and contributing to the compatibility of necessary data exchange processes for customer switching.

Article 41**Duties and powers of the regulatory authority**

1. The regulatory authority shall have the following duties:

- (a) fixing or approving, in accordance with transparent criteria, transmission or distribution tariffs or their methodologies;
- (b) ensuring compliance of transmission and distribution system operators, and where relevant, system

owners, as well as of any natural gas undertakings, with their obligations under this Directive and other relevant **Energy Community** legislation, including as regards cross-border issues;

(c) cooperating in regard to cross-border issues with the regulatory authority or authorities of the **Contracting Parties** concerned and with the **Energy Community Regulatory Board**;

(d) complying with, and implementing, any relevant legally binding decisions of the **Energy Community Regulatory Board** <...>;

(e) reporting annually on its activity and the fulfillment of its duties to the relevant authorities of the **Contracting Parties**, to the **Energy Community Regulatory Board** and the **Energy Community Secretariat**. Such reports shall cover the steps taken and the results obtained as regards each of the tasks listed in this Article;

(f) ensuring that there are no cross-subsidies between transmission, distribution, storage, LNG and supply activities;

(g) monitoring investment plans of the transmission system operators, and providing in its annual report an assessment of the investment plans of the transmission system operators <...>; which may include recommendations to amend those investment plans;

(h) monitoring compliance with and reviewing the past performance of network security and reliability rules and setting or approving standards and requirements for quality of service and supply or contributing thereto together with other competent authorities;

(i) monitoring the level of transparency, including of wholesale prices, and ensuring compliance of natural gas undertakings with transparency obligations;

(j) monitoring the level and effectiveness of market opening and competition at wholesale and retail levels, including on natural gas exchanges, prices for household customers including prepayment systems, switching rates, disconnection rates, charges for and the execution of maintenance services and complaints by household customers, as well as any distortion or restriction of competition, including providing any relevant information, and bringing any relevant cases to the relevant competition authorities;

(k) monitoring the occurrence of restrictive contractual practices, including exclusivity clauses which may prevent large non-household customers from contracting simultaneously with more than one supplier or restrict their choice to do so, and, where appropriate, informing the national competition authorities of such practices;

(l) respecting contractual freedom with regard to interruptible supply contracts as well as with regard to long-term contracts provided that they are compatible with **Energy Community law**;

(m) monitoring the time taken by transmission and distribution system operators to make connections and repairs;

(n) monitoring and reviewing the access conditions to storage, linepack and other ancillary services as provided for in Article 33. In the event that the access regime to storage is defined according to Article 33(3), that task shall exclude the reviewing of tariffs;

(o) helping to ensure, together with other relevant authorities, that the consumer protection measures, including those set out in Annex I, are effective and enforced;

(p) publishing recommendations, at least annually, in relation to compliance of supply prices with Article 3, and providing those to the competition authorities, where appropriate;

(q) ensuring access to customer consumption data, the provision for optional use, of an easily understandable harmonised format at national level for consumption data and prompt access for all customers to such data under point (h) of Annex I;

(r) monitoring the implementation of rules relating to the roles and responsibilities of transmission system operators, distribution system operators, suppliers and customers and other market parties pursuant to Regulation (EC) No 715/2009, **as adapted under Article 24 of the Energy Community Treaty**;

(s) monitoring the correct application of the criteria that determine whether a storage facility falls under Article 33(3) or (4); and

(t) monitoring the implementation of safeguards measures as referred to in Article 46;

(u) contributing to the compatibility of data exchange processes for the most important market processes at regional level.

2. Where a **Contracting Party** has so provided, the monitoring duties set out in paragraph 1 may be carried out by other authorities than the regulatory authority. In such a case, the information resulting from such monitoring shall be made available to the regulatory authority as soon as possible.

While preserving their independence, without prejudice to their own specific competencies and consistent with the principles of better regulation, the regulatory authority shall, as appropriate, consult transmission system operators and, as appropriate, closely cooperate with other relevant national authorities when carrying out the duties set out in paragraph 1.

Any approvals given by a regulatory authority or the **Energy Community Regulatory Board** under this Directive are without prejudice to any duly justified future use of its powers by the regulatory authority under this Article or to any penalties imposed by other relevant authorities <...>.

3. In addition to the duties conferred upon it under paragraph 1 of this Article, when an independent system operator has been designated under Article 14, the regulatory authority shall:

(a) monitor the transmission system owner's and the independent system operator's compliance with their obligations under this Article, and issue penalties for non compliance in accordance with paragraph 4(d);

(b) monitor the relations and communications between the independent system operator and the transmission system owner so as to ensure compliance of the independent system operator with its obligations, and in particular approve contracts and act as a dispute settlement authority between the independent system operator and the transmission system owner in respect of any complaint submitted by either party pursuant to paragraph 11;

(c) without prejudice to the procedure under Article 14(2)(c), for the first ten-year network development plan, approve the investments planning and the multi-annual network development plan presented annually by the independent system operator;

(d) ensure that network access tariffs collected by the independent system operator include remuneration for the network owner or network owners, which provides for adequate remuneration of the network assets and of any new investments made therein, provided they are economically and efficiently incurred; and

(e) have the powers to carry out inspections, including unannounced inspections, at the premises of transmission system owner and independent system operator.

4. **Contracting Parties** shall ensure that regulatory authorities are granted the powers enabling them to carry out the duties referred to in paragraph 1, 3 and 6 in an efficient and expeditious manner. For this

purpose, the regulatory authority shall have at least the following powers:

- (a) to issue binding decisions on natural gas undertakings;
- (b) to carry out investigations into the functioning of the gas markets, and to decide upon and impose any necessary and proportionate measures to promote effective competition and ensure the proper functioning of the market. Where appropriate, the regulatory authority shall also have the power to cooperate with the national competition authority and the financial market regulators or the **Energy Community Secretariat** in conducting an investigation relating to competition law;
- (c) to require any information from natural gas undertakings relevant for the fulfillment of its tasks, including the justification for any refusal to grant third-party access, and any information on measures necessary to reinforce the network;
- (d) to impose effective, proportionate and dissuasive penalties on natural gas undertakings not complying with their obligations under this Directive or any relevant legally binding decisions of the regulatory authority or of the **Energy Community Regulatory Board**, or to propose to a competent court to impose such penalties. This shall include the power to impose or propose the imposition of penalties of up to 10% of the annual turnover of the transmission system operator or of up to 10% of the annual turnover of the vertically integrated undertaking on the transmission system operator or on the vertically integrated undertaking, as the case may be, for non compliance with their respective obligations pursuant to this Directive; and
- (e) appropriate rights of investigations and relevant powers of instructions for dispute settlement under paragraphs 11 and 12.

5. In addition to the duties and powers conferred on it under paragraphs 1 and 4 of this Article, when a transmission system operator has been designated in accordance with Chapter IV, the regulatory authority shall be granted at least the following duties and powers:

- (a) to issue penalties in accordance with paragraph 4(d) for discriminatory behaviour in favour of the vertically integrated undertaking;
- (b) to monitor communications between the transmission system operator and the vertically integrated undertaking so as to ensure compliance of the transmission system operator with its obligations;
- (c) to act as dispute settlement authority between the vertically integrated undertaking and the transmission system operator in respect of any complaint submitted pursuant to paragraph 11;
- (d) to monitor commercial and financial relations including loans between the vertically integrated undertaking and the transmission system operator;
- (e) to approve all commercial and financial agreements between the vertically integrated undertaking and the transmission system operator, on the condition that they comply with market conditions;
- (f) to request justification from the vertically integrated undertaking when notified by the compliance officer in accordance with Article 21(4). Such justification shall in particular include evidence to the end that no discriminatory behaviour to the advantage of the vertically integrated undertaking has occurred;
- (g) to carry out inspections, including unannounced inspections, on the premises of the vertically integrated undertaking and the transmission system operator; and
- (h) to assign all or specific tasks of the transmission system operator to an independent system operator appointed in accordance with Article 14 in case of a persistent breach by the transmission system operator of its obligations under this Directive, in particular in case of repeated discriminatory behaviour to the

benefit of the vertically integrated undertaking.

6. The regulatory authorities shall be responsible for fixing or approving sufficiently in advance of their entry into force at least the methodologies used to calculate or establish the terms and conditions for:

(a) connection and access to national networks, including transmission and distribution tariffs, and terms, conditions and tariffs for access to LNG facilities. Those tariffs or methodologies shall allow the necessary investments in the networks and LNG facilities to be carried out in a manner allowing those investments to ensure the viability of the networks and LNG facilities;

(b) the provision of balancing services which shall be performed in the most economic manner and provide appropriate incentives for network users to balance their input and off-takes. The balancing services shall be provided in a fair and non-discriminatory manner and be based on objective criteria; and

(c) access to cross-border infrastructures, including the procedures for the allocation of capacity and congestion management.

7. The methodologies or the terms and conditions referred to in paragraph 6 shall be published.

8. In fixing or approving the tariffs or methodologies and the balancing services, the regulatory authorities shall ensure that transmission and distribution system operators are granted appropriate incentive, over both the short and long term, to increase efficiencies, foster market integration and security of supply and support the related research activities

9. The regulatory authorities shall monitor congestion management of national gas transmission networks including interconnectors, and the implementation of congestion management rules. To that end, transmission system operators or market operators shall submit their congestion management rules, including capacity allocation, to the national regulatory authorities. National regulatory authorities may request amendments to those rules.

10. Regulatory authorities shall have the authority to require transmission, storage, LNG and distribution system operators, if necessary, to modify the terms and conditions, including tariffs and methodologies referred to in this Article, to ensure that they are proportionate and applied in a non-discriminatory manner. In the event that the access regime to storage is defined according to Article 33(3), that task shall exclude the modification of tariffs. In the event of delay in the fixing of transmission and distribution tariffs, regulatory authorities shall have the power to fix or approve provisional transmission and distribution tariffs or methodologies and to decide on the appropriate compensatory measures if the final tariffs or methodologies deviate from those provisional tariffs or methodologies.

11. Any party having a complaint against a transmission, storage, LNG or distribution system operator in relation to that operator's obligations under this Directive may refer the complaint to the regulatory authority which, acting as dispute settlement authority, shall issue a decision within a period of two months after receipt of the complaint. That period may be extended by two months where additional information is sought by the regulatory authorities. That extended period may be further extended with the agreement of the complainant. The regulatory authority's decision shall have binding effect unless and until overruled on appeal.

12. Any party who is affected and who has a right to complain concerning a decision on methodologies taken pursuant to this Article or, where the regulatory authority has a duty to consult, concerning the proposed tariffs or methodologies, may, at the latest within two months, or a shorter time period as provided by **Contracting Parties**, following publication of the decision or proposal for a decision, submit a

complaint for review. Such a complaint shall not have suspensive effect.

13. **Contracting Parties** shall create appropriate and efficient mechanisms for regulation, control and transparency so as to avoid any abuse of a dominant position, in particular to the detriment of consumers, and any predatory behaviour. Those mechanisms shall take account the provisions of the Treaty, and in particular Article 82 thereof.⁸

14. **Contracting Parties** shall ensure that the appropriate measures are taken, including administrative action or criminal proceedings in conformity with their national law, against the natural or legal persons responsible where confidentiality rules imposed by this Directive have not been respected.

15. Complaints referred to in paragraphs 11 and 12 shall be without prejudice to the exercise of rights of appeal under national law.

16. Decisions taken by regulatory authorities shall be fully reasoned and justified to allow for judicial review. The decisions shall be available to the public while preserving the confidentiality of commercially sensitive information.

17. **Contracting Parties** shall ensure that suitable mechanisms exist at national level under which a party affected by a decision of a regulatory authority has a right of appeal to a body independent of the parties involved and of any government.

Article 42

Regulatory regime for cross-border issues

1. Regulatory authorities shall closely consult and cooperate with each other, and shall provide each other and the **Energy Community Regulatory Board** with any information necessary for the fulfillment of their tasks under this Directive. In respect of the information exchanged, the receiving authority shall ensure the same level of confidentiality as that required of the originating authority.

2. Regulatory authorities shall cooperate at least at a regional level to:

(a) foster the creation of operational arrangements in order to enable an optimal management of the network, promote joint gas exchanges and the allocation of cross-border capacity, and to enable an adequate level of interconnection capacity, including through new interconnections, within the region and between regions to allow for development of effective competition and improvement of security of supply without discriminating between supply undertakings in different **Contracting Parties**;

(b) coordinate the development of all network codes for the relevant transmission system operators and other market actors; and

(c) coordinate the development of the rules governing the management of congestion.

3. National regulatory authorities shall have the right to enter into cooperative arrangements with each other to foster regulatory cooperation.

4. The actions referred to in paragraph 2 shall be carried out, as appropriate, in close consultation with other relevant national authorities and without prejudice to their specific competencies.

5. <...>

⁸ In the Energy Community Treaty, Article 82 of the EC Treaty is incorporated through Article 18 and Annex III.

Article 43**Compliances with the Guidelines⁹**

The Energy Community shall endeavour to apply the Guidelines adopted by the European Commission under <...> Directive 2009/73/EC, <...> [and] Regulation (EC) No 715/2009.

These Guidelines, which may need to be adapted to the institutional framework of the Energy Community, shall be adopted by the Permanent High Level Group, following the procedure laid down in Article 79 of the Treaty.

The Permanent High Level Group shall adopt a Procedural Act on application of this article.¹⁰

Article 44**Record keeping**

1. **Contracting Parties** shall require supply undertakings to keep at the disposal of the national authorities, including the regulatory authority, the national competition authorities and the **Energy Community Secretariat**, for the fulfillment of their tasks, for at least five years, the relevant data relating to all transactions in gas supply contracts and gas derivatives with wholesale customers and transmission system operators as well as storage and LNG operators.

2. The data shall include details on the characteristics of the relevant transactions such as duration, delivery and settlement rules, the quantity, the dates and times of execution and the transaction prices and means of identifying the wholesale customer concerned, as well as specified details of all unsettled gas supply contracts and gas derivatives.

3. The regulatory authority may decide to make available to market participants elements of this information provided that commercially sensitive information on individual market players or individual transactions is not released. This paragraph shall not apply to information about financial instruments which fall within the scope of Directive 2004/39/EC.

4. <...>

5. With respect to transactions in gas derivatives of supply undertakings with wholesale customers and transmission system operators as well as storage and LNG operators, this Article shall apply only once the **Permanent High Level Group** has endorsed the Guidelines referred to in paragraph 4.

6. <...>

7. <...>

⁹ Not applicable according to Article 21 of Decision 2011/02/MC-EnC. The following text corresponds to Article 27 of Decision 2011/02/MC-EnC.

¹⁰ Procedural Act 01/2012/PHLG-EnC of Permanent High Level Group of 21 June 2012 laying down the rules governing the adoption of Guidelines and Network Codes in the Energy Community was adopted on 21 June 2012.

CHAPTER IX RETAIL MARKETS

Article 45

Retail markets

In order to facilitate the emergence of well functioning and transparent retail markets in the **Energy Community**, **Contracting Parties** shall ensure that the roles and responsibilities of transmission system operators, distribution system operators, supply undertakings and customers and if necessary other market parties are defined with respect to contractual arrangements, commitment to customers, data exchange and settlement rules, data ownership and metering responsibility.

Those rules shall be made public, be designed with the aim to facilitate customers' and suppliers' access to networks and they shall be subject to review by the regulatory authorities or other relevant national authorities.

CHAPTER X FINAL PROVISIONS

Article 46

Safeguard measures

1. In the event of a sudden crisis in the energy market or where the physical safety or security of persons, apparatus or installations or system integrity is threatened, a Contracting Party may temporarily take the necessary safeguard measures.

Instead of the second and third subparagraphs, Articles 36 to 39 of the Energy Community Treaty apply.

Article 47

Level playing field

1. Measures that the **Contracting Parties** may take pursuant to this Directive in order to ensure a level playing field shall be compatible with the Treaty, notably Article 30 thereof,¹¹ and with **Energy Community law**.

2. The measures referred to in paragraph 1 shall be proportionate, non-discriminatory and transparent. Those measures may be put into effect only **following notification to the Secretariat, which shall issue an opinion**.

¹¹ Procedural Act 01/2012/PHLG-EnC of Permanent High Level Group of 21 June 2012 laying down the rules governing the adoption of Guidelines and Network Codes in the Energy Community was adopted on 21 June 2012.

3. The **Energy Community Secretariat** shall act on the notification referred to in paragraph 2 within two months of the receipt of the notification. That period shall begin on the day following receipt of the complete information. In the event that the **Energy Community Secretariat** has not acted within that two-month period, it shall be deemed not to have raised objections to the notified measures.

Article 48

Derogations in relation to take-or-pay commitments

1. If a natural gas undertaking encounters, or considers it would encounter, serious economic and financial difficulties because of its take-or-pay commitments accepted in one or more gas-purchase contracts, it may send an application for a temporary derogation from Article 32 to the **Contracting Party** concerned or the designated competent authority. Applications shall, in accordance with the choice of **Contracting Parties**, be presented on a case-by-case basis either before or after refusal of access to the system. **Contracting Parties** may also give the natural gas undertaking the choice of presenting an application either before or after refusal of access to the system. Where a natural gas undertaking has refused access, the application shall be presented without delay. The applications shall be accompanied by all relevant information on the nature and extent of the problem and on the efforts undertaken by the natural gas undertaking to solve the problem.

If alternative solutions are not reasonably available, and taking into account paragraph 3, the **Contracting Party** or the designated competent authority may decide to grant a derogation.

2. The **Contracting Party**, or the designated competent authority, shall notify the **Energy Community Secretariat** without delay of its decision to grant a derogation, together with all the relevant information with respect to the derogation. That information may be submitted to the **Energy Community Secretariat** in an aggregated form, enabling the **Energy Community Secretariat** to reach a well-founded decision. Within eight weeks of receipt of that notification, the **Secretariat shall issue an opinion, inviting, as the case may be, the Contracting Party** or the designated competent authority concerned to amend or withdraw the decision to grant a derogation.

<...>

The **Energy Community Secretariat** shall preserve the confidentiality of commercially sensitive information.

3. When deciding on the derogations referred to in paragraph 1, the **Contracting Party**, or the designated competent authority, and the **Energy Community Secretariat** shall take into account, in particular, the following criteria:

- (a) the objective of achieving a competitive gas market;
- (b) the need to fulfill public-service obligations and to ensure security of supply;
- (c) the position of the natural gas undertaking in the gas market and the actual state of competition in that market;
- (d) the seriousness of the economic and financial difficulties encountered by natural gas undertakings and transmission undertakings or eligible customers;
- (e) the dates of signature and terms of the contract or contracts in question, including the extent to which

they allow for market changes;

(f) the efforts made to find a solution to the problem;

(g) the extent to which, when accepting the take-or-pay commitments in question, the undertaking could reasonably have foreseen, having regard to the provisions of this Directive, that serious difficulties were likely to arise;

(h) the level of connection of the system with other systems and the degree of interoperability of those systems; and

(i) the effects the granting of a derogation would have on the correct application of this Directive as regards the smooth functioning of the internal market in natural gas.

A decision on a request for a derogation concerning take-or-pay contracts concluded before **1 July 2006** should not lead to a situation in which it is impossible to find economically viable alternative outlets. Serious difficulties shall in any case be deemed not to exist when the sales of natural gas do not fall below the level of minimum offtake guarantees contained in gas-purchase take-or-pay contracts or in so far as the relevant gas-purchase take-or-pay contract can be adapted or the natural gas undertaking is able to find alternative outlets.

4. Natural gas undertakings which have not been granted a derogation as referred to in paragraph 1 of this Article shall not refuse, or shall no longer refuse, access to the system because of take-or-pay commitments accepted in a gas purchase contract. **Contracting Parties** shall ensure that the relevant provisions of Articles 32 to 44 are complied with.

5. Any derogation granted under the above provisions shall be duly substantiated. **The Energy Community Secretariat** shall publish the decision in a dedicated section of the website of the **Energy Community**.

6. <...>

Article 49

Emergent and isolated markets

<...>

Article 50

Review procedure

<...>

Article 51

Committee

<...>

Article 52

Reporting

The Secretariat shall monitor and review the application of this Directive and submit an annual Implementation Report to the Ministerial Council.¹²

Article 53

Repeal

<...>

Article 54¹³

Implementation of the energy acquis

1. Each Contracting Party shall bring into force the laws, regulations and administrative provisions necessary to comply with <...> Directive 2009/73/EC, <...> and Regulation (EC) No 715/2009, as adapted by this Decision, by 1 January 2015.¹⁴ They shall forthwith inform the Energy Community Secretariat thereof

The Contracting Parties shall apply the measures referred to in the previous paragraph with effect from 1 January 2015 with the following exceptions:

– <...>;

Article 11 of Directive 2009/73/EC, which they shall apply from 1 January 2017.

2. The Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by this Decision.

Articles 55 and 56¹⁵

Entry into force and Addressees

This Decision [2011/02/MC-EnC] enters into force upon its adoption and is addressed to the Contracting Parties.

¹² The text displayed here corresponds to Article 6 of Ministerial Council Decision 2021/14/MC-EnC

¹³ The text displayed here corresponds to Article 3 of Decision 2011/02/MC-EnC.

¹⁴ In accordance with the Accession Protocol, the corresponding date for Georgia is 31 December 2020.

¹⁵ The text displayed here corresponds to Article 32 of Decision 2011/02/MC-EnC.

ANNEX I

MEASURES ON CONSUMER PROTECTION

1. Without prejudice to Energy Community rules on consumer protection <...> the measures referred to in Article 3 are to ensure that customers:

(a) have a right to a contract with their gas service provider that specifies:

- the identity and address of the supplier,
- the services provided, the service quality levels offered, as well as the time for the initial connection,
- the types of maintenance service offered,
- the means by which up-to-date information on all applicable tariffs and maintenance charges may be obtained,
- the duration of the contract, the conditions for renewal and termination of services and of the contract, and whether withdrawal from the contract without charge is permitted,
- any compensation and the refund arrangements which apply if contracted service quality levels are not met including inaccurate and delayed billing,
- the method of initiating procedures for settlement of disputes in accordance with point (f); and,
- information relating to consumer rights, including on the complaint handling and all of the information referred to in this point, clearly communicated through billing or the natural gas undertaking's web site, Conditions shall be fair and well-known in advance. In any event, that information should be provided prior to the conclusion or confirmation of the contract. Where contracts are concluded through intermediaries, the information relating to the matters set out in this point shall also be provided prior to the conclusion of the contract;

(b) are given adequate notice of any intention to modify contractual conditions and are informed about their right of withdrawal when the notice is given. Service providers shall notify their subscribers directly of any increase in charges, at an appropriate time no later than one normal billing period after the increase comes into effect in a transparent and comprehensible manner. **Contracting Parties** shall ensure that customers are free to withdraw from contracts if they do not accept the new conditions notified to them by their gas service provider;

(c) receive transparent information on applicable prices and tariffs and on standard terms and conditions, in respect of access to and use of gas services;

(d) are offered a wide choice of payment methods, which do not unduly discriminate between customers. Prepayment systems shall be fair and adequately reflect likely consumption. Any difference in terms and conditions shall reflect the costs to the supplier of the different payment systems. General terms and conditions shall be fair and transparent. They shall be given in clear and comprehensible language and shall not include non-contractual barriers to the exercise of customers' rights, for example excessive contractual documentation. Customers shall be protected against unfair or misleading selling methods;

(e) are not charged for changing supplier;

(f) benefit from transparent, simple and inexpensive procedures for dealing with their complaints. In particular, all consumers shall have the right to a good standard of service and complaint handling by their

gas service provider. Such out-of-court dispute settlements procedures shall enable disputes to be settled fairly and promptly, preferably within three months, with provision, where warranted, for a system of reimbursement and/or compensation. They should, wherever possible, be in line with the principles set out in Commission Recommendation 98/257/EC of 30 March 1998 on the principles applicable to the bodies responsible for out-of-court settlement of consumer disputes;

(g) connected to the gas system are informed about their rights to be supplied, under the national legislation applicable, with natural gas of a specified quality at reasonable prices;

(h) have at their disposal their consumption data, and shall be able to, by explicit agreement and free of charge, give any registered supply undertaking access to its metering data. The party responsible for data management shall be obliged to give those data to the undertaking. **Contracting Parties** shall define a format for the data and a procedure for suppliers and consumers to have access to the data. No additional costs shall be charged to the consumer for that service;

(i) are properly informed of actual gas consumption and costs frequently enough to enable them to regulate their own gas consumption. That information shall be given by using a sufficient time frame, which takes account of the capability of customer's metering equipment. Due account shall be taken of the cost-efficiency of such measures. No additional costs shall be charged to the consumer for that service;

(j) receive a final closure account following any change of natural gas supplier no later than six weeks after the change of supplier has taken place.

2. **Contracting Parties** shall ensure the implementation of intelligent metering systems that shall assist the active participation of consumers in the gas supply market. The implementation of those metering systems may be subject to an economic assessment of all the long-term costs and benefits to the market and the individual consumer or which form of intelligent metering is economically reasonable and cost-effective and which timeframe is feasible for their distribution.

Such assessment shall take place by **1 January 2014**.

Subject to that assessment, **Contracting Parties** or any competent authority they designate, shall prepare a timetable for the implementation of intelligent metering systems.

The **Contracting Parties** or any competent authority they designate, shall ensure the interoperability of those metering systems to be implemented within their territories and shall have due regard to the use of appropriate standards and best practice and the importance of the development of the internal market in natural gas.



REGULATION (EC) 715/2009 of 13 July 2009 on conditions for access to the natural gas transmission networks

Incorporated and adapted by Permanent High Level Group Decision 2018/01/PHLG-EnC of 12 January 2018 and by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011 on the implementation of Directive 2009/72/EC, Directive 2009/73/EC, Regulation (EC) 714/2009 and Regulation (EC) 715/2009 and amending Articles 11 and 59 of the Energy Community Treaty.

*The adaptations made by by Permanent High Level Group Decision 2018/01/PHLG-EnC of 12 January 2018 and Ministerial Council Decisions 2021/14/MC-EnC and 2011/02/MC-EnC are highlighted in **bold and blue**.*

Article 1

Subject matter and scope

This Regulation aims at:

- (a) setting non-discriminatory rules for access conditions to natural gas transmission systems taking into account the special characteristics of national and regional markets with a view to ensuring the proper functioning of the internal market in gas;
- (b) setting non-discriminatory rules for access conditions to LNG facilities and storage facilities taking into account the special characteristics of national and regional markets; and
- (c) facilitating the emergence of a well-functioning and transparent wholesale market with a high level of security of supply in gas and providing mechanisms to harmonise the network access rules for cross-border exchanges in gas.

The objectives referred to in the first subparagraph shall include the setting of harmonised principles for tariffs, or the methodologies underlying their calculation, for access to the network, but not to storage facilities, the establishment of third-party access services and harmonised principles for capacity-allocation and congestion-management, the determination of transparency requirements, balancing rules and imbalance charges, and the facilitation of capacity trading.

This Regulation, with the exception of Article 19(4), shall apply only to storage facilities falling under Article 33(3) or (4) of Directive 2009/73/EC.

The **Contracting Parties** may establish an entity or body set up in compliance with Directive 2009/73/EC for the purpose of carrying out one or more functions typically attributed to the transmission system operator, which shall be subject to the requirements of this Regulation. That entity or body shall be subject to certification in accordance with Article 3 of this Regulation and shall be subject to designation in accordance with Article 10 of Directive 2009/73/EC.

Article 2

Definitions

1. For the purpose of this Regulation, the following definitions apply:

(1) “transmission” means the transport of natural gas through a network, which mainly contains high-pressure pipelines, other than an upstream pipeline network and other than the part of high-pressure pipelines primarily used in the context of local distribution of natural gas, with a view to its delivery to customers, but not including supply;

(2) “transport contract” means a contract which the transmission system operator has concluded with a network user with a view to carrying out transmission;

(3) “capacity” means the maximum flow, expressed in normal cubic meters per time unit or in energy unit per time unit, to which the network user is entitled in accordance with the provisions of the transport contract;

(4) “unused capacity” means firm capacity which a network user has acquired under a transport contract but which that user has not nominated by the deadline specified in the contract;

(5) “congestion management” means management of the capacity portfolio of the transmission system operator with a view to optimal and maximum use of the technical capacity and the timely detection of future congestion and saturation points;

(6) “secondary market” means the market of the capacity traded otherwise than on the primary market;

(7) “nomination” means the prior reporting by the network user to the transmission system operator of the actual flow that the network user wishes to inject into or withdraw from the system;

(8) “re-nomination” means the subsequent reporting of a corrected nomination;

(9) “system integrity” means any situation in respect of a transmission network including necessary transmission facilities in which the pressure and the quality of the natural gas remain within the minimum and maximum limits laid down by the transmission system operator, so that the transmission of natural gas is guaranteed from a technical standpoint;

(10) “balancing period” means the period within which the off-take of an amount of natural gas, expressed in units of energy, must be offset by every network user by means of the injection of the same amount of natural gas into the transmission network in accordance with the transport contract or the network code;

(11) “network user” means a customer or a potential customer of a transmission system operator, and transmission system operators themselves in so far as it is necessary for them to carry out their functions in relation to transmission;

(12) “interruptible services” means services offered by the transmission system operator in relation to interruptible capacity;

(13) “interruptible capacity” means gas transmission capacity that may be interrupted by the transmission system operator in accordance with the conditions stipulated in the transport contract;

(14) “long-term services” means services offered by the transmission system operator with a duration of one year or more;

(15) “short-term services” means services offered by the transmission system operator with a duration of less than one year;

(16) “firm capacity” means gas transmission capacity contractually guaranteed as uninterrupted by the transmission system operator;

(17) “firm services” mean services offered by the transmission system operator in relation to firm capacity;

(18) “technical capacity” means the maximum firm capacity that the transmission system operator can offer to the network users, taking account of system integrity and the operational requirements of the transmission network;

(19) “contracted capacity” means capacity that the transmission system operator has allocated to a network user by means of a transport contract;

(20) “available capacity” means the part of the technical capacity that is not allocated and is still available to the system at that moment;

(21) “contractual congestion” means a situation where the level of firm capacity demand exceeds the technical capacity;

(22) “primary market” means the market of the capacity traded directly by the transmission system operator;

(23) “physical congestion” means a situation where the level of demand for actual deliveries exceeds the technical capacity at some point in time;

(24) “LNG facility capacity” means capacity at an LNG terminal for the liquefaction of natural gas or the importation, offloading, ancillary services, temporary storage and re-gasification of LNG;

(25) “space” means the volume of gas which a user of a storage facility is entitled to use for the storage of gas;

(26) “deliverability” means the rate at which the storage facility user is entitled to withdraw gas from the storage facility;

(27) “injectability” means the rate at which the storage facility user is entitled to inject gas into the storage facility;

(28) “storage capacity” means any combination of space, injectability and deliverability.

2. Without prejudice to the definitions in paragraph 1 of this Article, the definitions contained in Article 2 of Directive 2009/73/EC which are relevant for the application of this Regulation, also apply, with the exception of the definition of transmission in point 3 of that Article.

The definitions in points 3 to 23 of paragraph 1 of this Article in relation to transmission apply by analogy in relation to storage and LNG facilities.

Article 3

Certification of transmission system operators

1. The **Energy Community Secretariat** shall examine any notification of a decision on the certification of a transmission system operator as laid down in Article 10(6) of Directive 2009/73/EC as soon as it is received. Within **four months** of the day of receipt of such notification, the **Energy Community Secretariat** shall deliver its opinion to the relevant national regulatory authority in regard to its compatibility with Article 10(2) or Article 11, and Article 9 of Directive 2009/73/EC.

When preparing the opinion referred to in the first subparagraph, the Energy Community

Secretariat shall request the Energy Community Regulatory Board to provide its opinion on the national regulatory authority's decision.

In the absence of an opinion by the **Energy Community Secretariat** within the periods referred to in the first subparagraph, the **Energy Community Secretariat** shall be deemed not to raise objections against the regulatory authority's decision.

2. Within two months of receiving an opinion of the **Energy Community Secretariat**, the national regulatory authority shall adopt its final decision regarding the certification of the transmission system operator, taking the utmost account of that opinion. The regulatory authority's decision and the **Energy Community Secretariat's** opinion shall be published together.

3. At any time during the procedure regulatory authorities and/or the **Energy Community Secretariat** may request from a transmission system operator and/or an undertaking performing any of the functions of production or supply any information relevant to the fulfillment of their tasks under this Article.

4. Regulatory authorities and the **Energy Community Secretariat** shall preserve the confidentiality of commercially sensitive information.

5. <...>

6. Where the **Energy Community Secretariat** has received notification of the certification of a transmission system operator under Article 9(10) of Directive 2009/73/EC, the **Secretariat shall issue an opinion relating to certification. The regulatory authority shall take the utmost account of that opinion. Where the final decision diverges from the Secretariat's opinion, the regulatory authority concerned shall provide and publish, together with that decision, the reasoning underlying its decision. Diverting decisions shall be included in the agenda of the first meeting of the Ministerial Council following the date of the decision, for information and discussion.**

Article 4

European network of transmission system operators for gas

<...>

Article 5

Establishment of the ENTSO for Gas

<...>

Article 6

Establishment of network codes¹

1. **The Energy Community shall endeavour to apply the network codes developed at European Union level <...>.**

2. **The relevant network codes shall be adopted by the Permanent High Level Group, following the procedure laid down in Article 79 of the Treaty. Before taking a decision, the Permanent High Level Group shall seek the opinion of the Energy Community Regulatory Board.**

¹ The following text corresponds to Article 28 of Decision 2011/02/MC-EnC.

3. The Permanent High Level Group shall adopt a procedural act on application of this Article.²

Article 7

Amendments of network codes

<...>

Article 8

Tasks of the ENTSO for Gas

<...>

Article 9

Monitoring by the Agency

<...>

Article 10

Consultations

<...>

Article 11

Costs

<...>

Article 12³

Regional cooperation of transmission system operators

Transmission system operators shall promote operational arrangements in order to ensure the optimum management of the Energy Community network and shall promote the development of energy exchanges, the coordinated allocation of cross-border capacity through non-discriminatory market-based solutions, paying due attention to the specific merits of implicit auctions for short-term allocations, and the integration of balancing and reserve power mechanisms.

² Procedural Act 01/2012/PHLG-EnC of Permanent High Level Group of 21 June 2012 laying down the rules governing the adoption of Guidelines and Network Codes in the Energy Community was adopted on 21 June 2021.

³ In accordance with Article 7(3) of Decision 2011/02/MC-EnC, Article 25 of that Decision is displayed here.

Article 13

Tariffs for access to networks

1. Tariffs, or the methodologies used to calculate them, applied by the transmission system operators and approved by the regulatory authorities pursuant to Article 41(6) of Directive 2009/73/EC, as well as tariffs published pursuant to Article 32(1) of that Directive, shall be transparent, take into account the need for system integrity and its improvement and reflect the actual costs incurred, insofar as such costs correspond to those of an efficient and structurally comparable network operator and are transparent, whilst including an appropriate return on investments, and, where appropriate, taking account of the benchmarking of tariffs by the regulatory authorities. Tariffs, or the methodologies used to calculate them, shall be applied in a non-discriminatory manner.

Contracting Parties may decide that tariffs may also be determined through market-based arrangements, such as auctions, provided that such arrangements and the revenues arising there from are approved by the regulatory authority.

Tariffs, or the methodologies used to calculate them, shall facilitate efficient gas trade and competition, while at the same time avoiding cross-subsidies between network users and providing incentives for investment and maintaining or creating interoperability for transmission networks.

Tariffs for network users shall be non-discriminatory and set separately for every entry point into or exit point out of the transmission system. Cost-allocation mechanisms and rate setting methodology regarding entry points and exit points shall be approved by the national regulatory authorities. By 3 September 2011, the **Contracting Parties** shall ensure that, after a transitional period, network charges shall not be calculated on the basis of contract paths.

2. Tariffs for network access shall neither restrict market liquidity nor distort trade across borders of different transmission systems. Where differences in tariff structures or balancing mechanisms would hamper trade across transmission systems, and notwithstanding Article 41(6) of Directive 2009/73/EC, transmission system operators shall, in close cooperation with the relevant national authorities, actively pursue convergence of tariff structures and charging principles, including in relation to balancing.

Article 14

Third-party access services concerning transmission system operators

1. Transmission system operators shall:

- (a) ensure that they offer services on a non-discriminatory basis to all network users;
- (b) provide both firm and interruptible third-party access services. The price of interruptible capacity shall reflect the probability of interruption;
- (c) offer to network users both long and short-term services.

In regard to point (a) of the first subparagraph, where a transmission system operator offers the same service to different customers, it shall do so under equivalent contractual terms and conditions, either using harmonised transport contracts or a common network code approved by the competent authority in accordance with the procedure laid down in Article 41 of Directive 2009/73/EC.

2. Transport contracts signed with non-standard start dates or with a shorter duration than a standard annual transport contract shall not result in arbitrarily higher or lower tariffs that do not reflect the market value of the service, in accordance with the principles laid down in Article 13(1).

3. Where appropriate, third-party access services may be granted subject to appropriate guarantees from network users with respect to the creditworthiness of such users. Such guarantees shall not constitute undue market-entry barriers and shall be non-discriminatory, transparent and proportionate.

Article 15

Third-party access services concerning storage and LNG facilities

1. LNG and storage system operators shall:

(a) offer services on a non-discriminatory basis to all network users that accommodate market demand; in particular, where an LNG or storage system operator offers the same service to different customers, it shall do so under equivalent contractual terms and conditions;

(b) offer services that are compatible with the use of the interconnected gas transport systems and facilitate access through cooperation with the transmission system operator; and

(c) make relevant information public, in particular data on the use and availability of services, in a time-frame compatible with the LNG or storage facility users' reasonable commercial needs, subject to the monitoring of such publication by the national regulatory authority.

2. Each storage system operator shall:

(a) provide both firm and interruptible third-party access services; the price of interruptible capacity shall reflect the probability of interruption;

(b) offer to storage facility users both long and short-term services; and

(c) offer to storage facility users both bundled and unbundled services of storage space, injectability and deliverability.

3. LNG and storage facility contracts shall not result in arbitrarily higher tariffs in cases in which they are signed:

(a) outside a natural gas year with non-standard start dates; or

(b) with a shorter duration than a standard LNG and storage facility contract on an annual basis.

5. Contractual limits on the required minimum size of LNG facility capacity and storage capacity shall be justified on the basis of technical constraints and shall permit smaller storage users to gain access to storage services.

4. Where appropriate, third-party access services may be granted subject to appropriate guarantees from network users with respect to the creditworthiness of such users. Such guarantees shall not constitute undue market-entry barriers and shall be non-discriminatory, transparent and proportionate.

Article 16

Principles of capacity-allocation mechanisms and congestion-management procedures concerning transmission system operators

1. The maximum capacity at all relevant points referred to in Article 18(3) shall be made available to market participants, taking into account system integrity and efficient network operation.
2. The transmission system operator shall implement and publish non-discriminatory and transparent capacity-allocation mechanisms, which shall:
 - (a) provide appropriate economic signals for the efficient and maximum use of technical capacity, facilitate investment in new infrastructure and facilitate cross-border exchanges in natural gas;
 - (b) be compatible with the market mechanisms including spot markets and trading hubs, while being flexible and capable of adapting to evolving market circumstances; and
 - (c) be compatible with the network access systems of the **Contracting Parties**.
3. The transmission system operator shall implement and publish non-discriminatory and transparent congestion-management procedures which facilitate cross-border exchanges in natural gas on a non-discriminatory basis and which shall be based on the following principles:
 - (a) in the event of contractual congestion, the transmission system operator shall offer unused capacity on the primary market at least on a day-ahead and interruptible basis; and
 - (b) network users who wish to re-sell or sublet their unused contracted capacity on the secondary market shall be entitled to do so.In regard to point (b) of the first subparagraph, a **Contracting Party** may require notification or information of the transmission system operator by network users.
4. In the event that physical congestion exists, non-discriminatory, transparent capacity-allocation mechanisms shall be applied by the transmission system operator or, as appropriate, by the regulatory authorities.
5. Transmission system operators shall regularly assess market demand for new investment. When planning new investments, transmission system operators shall assess market demand and take into account security of supply.

Article 17

Principles of capacity-allocation mechanisms and congestion-management procedures concerning storage and LNG facilities

1. The maximum storage and LNG facility capacity shall be made available to market participants, taking into account system integrity and operation.
2. LNG and storage system operators shall implement and publish non-discriminatory and transparent capacity-allocation mechanisms which shall:
 - (a) provide appropriate economic signals for the efficient and maximum use of capacity and facilitate investment in new infrastructure;
 - (b) be compatible with the market mechanism including spot markets and trading hubs, while being flexible

and capable of adapting to evolving market circumstances; and

(c) be compatible with the connected network access systems.

3. LNG and storage facility contracts shall include measures to prevent capacity-hoarding, by taking into account the following principles, which shall apply in cases of contractual congestion:

(a) the system operator must offer unused LNG facility and storage capacity on the primary market without delay; for storage facilities this must be at least on a day-ahead and interruptible basis;

(b) LNG and storage facility users who wish to re-sell their contracted capacity on the secondary market must be entitled to do so.

Article 18

Transparency requirements concerning transmission system operators

1. The transmission system operator shall make public detailed information regarding the services it offers and the relevant conditions applied, together with the technical information necessary for network users to gain effective network access.

2. In order to ensure transparent, objective and non-discriminatory tariffs and facilitate efficient utilisation of the gas network, transmission system operators or relevant national authorities shall publish reasonably and sufficiently detailed information on tariff derivation, methodology and structure.

3. For the services provided, each transmission system operator shall make public information on technical, contracted and available capacities on a numerical basis for all relevant points including entry and exit points on a regular and rolling basis and in a user-friendly and standardised manner.

4. The relevant points of a transmission system on which the information is to be made public shall be approved by the competent authorities after consultation with network users.

5. The transmission system operator shall always disclose the information required by this Regulation in a meaningful, quantifiably clear and easily accessible manner and on a non-discriminatory basis.

6. The transmission system operator shall make public ex-ante and ex-post supply and demand information, based on nominations, forecasts and realised flows in and out of the system. The national regulatory authority shall ensure that all such information is made public. The level of detail of the information that is made public shall reflect the information available to the transmission system operator.

The transmission system operator shall make public measures taken as well as costs incurred and revenue generated to balance the system.

The market participants concerned shall provide the transmission system operator with the data referred to in this Article.

Article 19

Transparency requirements concerning storage facilities and LNG facilities

1. LNG and storage system operators shall make public detailed information regarding the services it offers and the relevant conditions applied, together with the technical information necessary for LNG and storage

facility users to gain effective access to the LNG and storage facilities.

2. For the services provided, LNG and storage system operators shall make public information on contracted and available storage and LNG facility capacities on a numerical basis on a regular and rolling basis and in a user-friendly standardised manner.

3. LNG and storage system operators shall always disclose the information required by this Regulation in a meaningful, quantifiably clear and easily accessible way and on a non-discriminatory basis.

4. LNG and storage system operators shall make public the amount of gas in each storage or LNG facility, or group of storage facilities if that corresponds to the way in which the access is offered to system users, inflows and outflows, and the available storage and LNG facility capacities, including for those facilities exempted from third-party access. That information shall also be communicated to the transmission system operator, which shall make it public on an aggregated level per system or subsystem defined by the relevant points. The information shall be updated at least daily.

In cases in which a storage system user is the only user of a storage facility, the storage system user may submit to the national regulatory authority a reasoned request for confidential treatment of the data referred to in the first subparagraph. Where the national regulatory authority comes to the conclusion that such a request is justified, taking into account, in particular, the need to balance the interest of legitimate protection of business secrets, the disclosure of which would negatively affect the overall commercial strategy of the storage user, with the objective of creating a competitive internal gas market, it may allow the storage system operator not to make public the data referred to in the first subparagraph, for a duration of up to one year.

The second subparagraph shall apply without prejudice to the obligations of communication to and publication by the transmission system operator referred to in the first subparagraph, unless the aggregated data are identical to the individual storage system data for which the national regulatory authority has approved non-publication.

5. In order to ensure transparent, objective and non-discriminatory tariffs and facilitate efficient utilisation of the infrastructures, the LNG and storage facility operators or relevant regulatory authorities shall make public sufficiently detailed information on tariff derivation, the methodologies and the structure of tariffs for infrastructure under regulated third-party access.

Article 20

Record keeping by system operators

Transmission system operators, storage system operators and LNG system operators shall keep at the disposal of the national authorities, including the national regulatory authority, the national competition authority and of the **Energy Community Secretariat**, all information referred to in Articles 18 and 19, and in Part 3 of Annex I for a period of five years.

Article 21**Balancing rules and imbalance charges**

1. Balancing rules shall be designed in a fair, non-discriminatory and transparent manner and shall be based on objective criteria. Balancing rules shall reflect genuine system needs taking into account the resources available to the transmission system operator. Balancing rules shall be market-based.

2. In order to enable network users to take timely corrective action, the transmission system operator shall provide sufficient, well-timed and reliable on-line based information on the balancing status of network users.

The information provided shall reflect the level of information available to the transmission system operator and the settlement period for which imbalance charges are calculated.

No charge shall be made for the provision of information under this paragraph.

3. Imbalance charges shall be cost-reflective to the extent possible, whilst providing appropriate incentives on network users to balance their input and off-take of gas. They shall avoid cross-subsidisation between network users and shall not hamper the entry of new market entrants.

Any calculation methodology for imbalance charges as well as the final tariffs shall be made public by the competent authorities or the transmission system operator, as appropriate.

4. **Contracting Parties** shall ensure that transmission system operators endeavour to harmonise balancing regimes and streamline structures and levels of balancing charges in order to facilitate gas trade.

Article 22**Trading of capacity rights**

Each transmission, storage and LNG system operator shall take reasonable steps to allow capacity rights to be freely tradable and to facilitate such trade in a transparent and non-discriminatory manner. Every such operator shall develop harmonised transport, LNG facility and storage contracts and procedures on the primary market to facilitate secondary trade of capacity and shall recognise the transfer of primary capacity rights where notified by system users.

The harmonised transport, LNG facility and storage contracts and procedures shall be notified to the regulatory authorities.

Article 23**Guidelines⁴**

1. The Energy Community shall endeavour to apply the Guidelines adopted by the European Commission under <...> Regulation (EC) No 715/2009.

2. These Guidelines, which may need to be adapted to the institutional framework of the Energy Community, shall be adopted by the Permanent High Level Group, following the pro-

⁴ The text displayed here corresponds to Article 27 of Decision 2011/02/MC-EnC.

cedure laid down in Article 79 of the Treaty.

3. The Permanent High Level Group shall adopt a Procedural Act on application of this article.⁵

Article 24

Regulatory authorities

When carrying out their responsibilities under this Regulation, the regulatory authorities shall ensure compliance with this Regulation and the Guidelines adopted pursuant to Article 18.⁶

Where appropriate, they shall cooperate with each other, **with the Energy Community Secretariat and the Energy Community Regulatory Board** in compliance with Chapter VIII of Directive 2009/73/EC.

Article 25

Provision of information

Contracting Parties and the regulatory authorities shall, on request, provide to the **Energy Community Secretariat** all information necessary for the purposes of Article 23.⁷

The **Energy Community Secretariat** shall set a reasonable time limit within which the information is to be provided, taking into account the complexity of the information required and the urgency with which the information is needed.

Article 26

Right of Contracting Parties to provide for more detailed measures

This Regulation shall be without prejudice to the rights of **Contracting Parties** to maintain or introduce measures that contain more detailed provisions than those set out herein or in the Guidelines referred to in Article 23.⁸

Article 27

Penalties⁹

1. Contracting Parties shall lay down rules on penalties applicable to infringements of the provisions of this Regulation and shall take all measures necessary to ensure that those provisions are implemented. The penalties provided for must be effective, proportionate and dissuasive. Contracting Parties shall notify these provisions to the Secretariat by 1 January 2015 and shall

⁵ Procedural Act 01/2012/PHLG-EnC of Permanent High Level Group of 21 June 2012 laying down the rules governing the adoption of Guidelines and Network Codes in the Energy Community was adopted on 21 June 2012.

⁶ As adopted by the Permanent High Level Group under Procedural Act 01/2012/PHLG-EnC.

⁷ As adopted by the Permanent High Level Group under Procedural Act 01/2012/PHLG-EnC.

⁸ As adopted by the Permanent High Level Group under Procedural Act 01/2012/PHLG-EnC.

⁹ As adapted by Article 19 of Decision 2011/02/MC-EnC.

notify the Secretariat without delay of any subsequent amendment affecting them.

2. Penalties provided for pursuant to paragraph 1 shall not be of a criminal law nature.

Article 28

Committee procedure

<...>

Article 29

Secretariat report

<...>¹⁰

Article 30

Derogations and exemptions

This Regulation shall not apply to:

(a) <...>¹¹

(b) major new infrastructure, i.e. interconnectors, LNG and storage facilities, and significant increases of capacity in existing infrastructure and modifications of such infrastructure which enable the development of new sources of gas supply referred to in Article 36(1) and (2) of Directive 2009/73/EC which are exempt from the provisions of Articles 9, 14, 32, 33, 34 or Article 41(6), (8) and (10) of that Directive as long as they are exempt from the provisions referred to in this subparagraph, with the exception of Article 19(4) of this Regulation; or

(c) natural gas transmission systems which have been granted derogations under Article 48 of Directive 2009/73/EC.

<...>¹²

Article 31

Repeal

<...>

Article 32¹³

Entry into force

This Decision [2011/02/MC-EnC] enters into force upon its adoption and is addressed to the Contracting Parties.

¹⁰ Not applicable according to Article 6 of Decision 2021/14/MC-EnC.

¹¹ Not applicable in accordance with Article 24(4) of Decision 2011/02/MC-EnC.

¹² Not applicable in accordance with Article 24(4) of Decision 2011/02/MC-EnC.

¹³ The text displayed here corresponds to Article 32 of Decision 2011/02/MC-EnC.

Article 3 of Decision 2011/02/MC-EnC

Each Contracting Party shall bring into force the laws, regulations and administrative provisions necessary to comply with <...> Regulation (EC) 715/2009, as adapted by this Decision, by 1 January 2015.¹⁴ They shall forthwith inform the Energy Community Secretariat thereof.

<...>

The Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by this Decision.

¹⁴ In accordance with the Accession Protocol, the corresponding date for Georgia, is 31 December 2020.

ANNEX I TO REGULATION (EC) NO 715/2009 ON CONDITIONS FOR ACCESS TO THE NATURAL GAS TRANSMISSION NETWORKS AS AMENDED BY COMMISSION DECISION (EU) 2012/490 OF 24 AUGUST 2012 AND COMMISSION DECISION (EU) 2015/715 OF 30 APRIL 2015

Incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011 and Permanent High Level Group Decision 2018/01/PHLG-EnC of 12 January 2018

*Amendments to Annex I to Regulation (EC) 715/2009 incorporated by Permanent High Level Group Decision 2018/01/ PHLG-EnC are highlighted in **bold**. The adaptations made to Annex I to Regulation (EC) 715/ 2009 by Decision 2018/01/ PHLG-EnC are highlighted in **bold and blue**.¹⁵*

GUIDELINES ON

1. THIRD-PARTY ACCESS SERVICES CONCERNING TRANSMISSION SYSTEM OPERATORS

1. Transmission system operators shall offer firm and interruptible services down to a minimum period of one day.
2. Harmonised transport contracts and common network codes shall be designed in a manner that facilitates trading and re-utilisation of capacity contracted by network users without hampering capacity release.
3. Transmission system operators shall develop network codes and harmonised contracts following proper consultation with network users.
4. Transmission system operators shall implement standardised nomination and re-nomination procedures. They shall develop information systems and electronic communication means to provide adequate data to network users and to simplify transactions, such as nominations, capacity contracting and transfer of capacity rights between network users.
5. Transmission system operators shall harmonise formalised request procedures and response times according to best industry practice with the aim of minimising response times. They shall provide for online screen-based capacity booking and confirmation systems and nomination and re-nomination procedures no later than 1 January 2010 after consultation with the relevant network users.
6. Transmission system operators shall not separately charge network users for information requests and transactions associated with their transport contracts and which are carried out according to standard rules and procedures.
7. Information requests that require extraordinary or excessive expenses such as feasibility studies may be charged separately, provided the charges can be duly substantiated.
8. Transmission system operators shall cooperate with other transmission system operators in coordinating the maintenance of their respective networks in order to minimise any disruption of transmission services to network users and transmission system operators in other areas and in order to ensure equal benefits with respect to security of supply including in relation to transit.

¹⁵ According to Article 1(1) of Decision 2018/01/PHLG-EnC each Contracting Party shall transpose the amendments into national legislation no later than 1 October 2018.

9. Transmission system operators shall publish at least annually, by a predetermined deadline, all planned maintenance periods that might affect network users' rights from transport contracts and corresponding operational information with adequate advance notice. This shall include publishing on a prompt and non-discriminatory basis any changes to planned maintenance periods and notification of unplanned maintenance, as soon as that information becomes available to the transmission system operator. During maintenance periods, transmission system operators shall publish regularly updated information on the details of and expected duration and effect of the maintenance.

10. Transmission system operators shall maintain and make available to the competent authority upon request a daily log of the actual maintenance and flow disruptions that have occurred. Information shall also be made available on request to those affected by any disruption.

2. PRINCIPLES OF CAPACITY-ALLOCATION MECHANISMS AND CONGESTION-MANAGEMENT PROCEDURES CONCERNING TRANSMISSION SYSTEM OPERATORS AND THEIR APPLICATION IN THE EVENT OF CONTRACTUAL CONGESTION

2.1. Principles of capacity-allocation mechanisms and congestion-management procedures concerning transmission system operators

1. Capacity-allocation mechanisms and congestion-management procedures shall facilitate the development of competition and liquid trading of capacity and shall be compatible with market mechanisms including spot markets and trading hubs. They shall be flexible and capable of adapting to evolving market circumstances.

2. Those mechanisms and procedures shall take into account the integrity of the system concerned as well as security of supply.

3. Those mechanisms and procedures shall neither hamper the entry of new market participants nor create undue barriers to market entry. They shall not prevent market participants, including new market entrants and companies with a small market share, from competing effectively.

4. Those mechanisms and procedures shall provide appropriate economic signals for efficient and maximum use of technical capacity and facilitate investment in new infrastructure.

5. Network users shall be advised about the type of circumstance that could affect the availability of contracted capacity. Information on interruption should reflect the level of information available to the transmission system operator.

6. Should difficulties in meeting contractual delivery obligations arise due to system integrity reasons, transmission system operators should notify network users and seek a non-discriminatory solution without delay. Transmission system operators shall consult network users regarding procedures prior to their implementation and agree them with the regulatory authority.

2.2. Congestion management procedures in the event of contractual congestion

2.2.1. General Provisions

1. The provisions of point 2.2 shall apply to interconnection points between adjacent entry-exit systems, irrespective of whether they are physical or virtual, between two or more Contracting Parties or within the same Contracting Party in so far as the points are subject

to booking procedures by users and subject to the decision of the relevant Contracting Party's national regulatory authority. They may also apply to entry points from and exit points to third countries, subject to the decision of the relevant national regulatory authority. Exit points to end-consumers and distribution networks, entry points from LNG terminals and production facilities, and entry-exit points from and to storage facilities are not subject to the provisions of point 2.2.¹⁶

2. On the basis of the information published by the transmission system operators pursuant to Section 3 of this Annex and, where appropriate, validated by national regulatory authorities, the **Energy Community Regulatory Board** shall publish by 1 June of every year, commencing with the year 2020, a monitoring report on congestion at interconnection points with respect to firm capacity products sold in the preceding year, taking into consideration to the extent possible capacity trading on the secondary market and the use of interruptible capacity.¹⁷

3. Any additional capacity made available through the application of one of the congestion-management procedures as provided for in points 2.2.2, 2.2.3, 2.2.4 and 2.2.5 shall be offered by the respective transmission system operator(s) in the regular allocation process.

4. The measures provided for in points 2.2.2, 2.2.4 and 2.2.5 shall be implemented as of 1 October 2018. Points 2.2.3(1) to 2.2.3(5) shall apply as of 1 July 2020.¹⁸

2.2.2. Capacity increase through oversubscription and buy-back scheme

1. Transmission system operators shall propose and, after approval by the national regulatory authority, implement an incentive-based oversubscription and buy-back scheme in order to offer additional capacity on a firm basis. Before implementation, the national regulatory authority shall consult with the national regulatory authorities of adjacent **Contracting Parties and the Member States of the European Union** and take account of the adjacent national regulatory authorities' opinions. Additional capacity is defined as the firm capacity offered in addition to the technical capacity of an interconnection point calculated on the basis of Article 16(1) of this Regulation.¹⁹

2. The oversubscription and buy-back scheme shall provide transmission system operators with an incentive to make available additional capacity, taking account of the technical conditions, such as the calorific value, temperature and expected consumption, of the relevant entry-exit system and the capacities in adjacent networks. Transmission system operators shall apply a dynamic approach with regard to the recalculation of the technical or additional capacity of the entry-exit system.

3. The oversubscription and buy-back scheme shall be based on an incentive regime reflecting the risks of transmission system operators in offering additional capacity. The scheme shall be structured in such a way that revenues from selling additional capacity and costs arising from the buy-back scheme or measures pursuant to paragraph 6 are shared between the transmission system operators and the network users. National regulatory authorities shall decide on the distribution of revenues and costs between the transmission system operator and the network user.

¹⁶ As adapted by Article 3(1) of Decision 2018/01/PHLG-EnC.

¹⁷ As adapted by Article 3(2) of Decision 2018/01/PHLG-EnC.

¹⁸ As adapted by Article 3(3) and (4) of Decision 2018/01/PHLG-EnC.

¹⁹ As adapted by Article 3(5) of Decision 2018/01/PHLG-EnC.

4. For the purpose of determining transmission system operators' revenues, technical capacity, in particular surrendered capacity as well as, where relevant, capacity arising from the application of firm day-ahead use-it-or-lose-it and long term use-it-or-lose-it mechanisms, shall be considered to be allocated prior to any additional capacity.

5. In determining the additional capacity, the transmission system operator shall take into account statistical scenarios for the likely amount of physically unused capacity at any given time at interconnection points. It shall also take into account a risk profile for offering additional capacity which does not lead to excessive buy-back obligation. The oversubscription and buy-back scheme shall also estimate the likelihood and the costs of buying back capacity on the market and reflect this in the amount of additional capacity to be made available.

6. Where necessary to maintain system integrity, transmission system operators shall apply a market-based buy-back procedure in which network users can offer capacity. Network users shall be informed about the applicable buy-back procedure. The application of a buy-back procedure is without prejudice to the applicable emergency measures.

7. Transmission system operators shall, before applying a buy-back procedure, verify whether alternative technical and commercial measures can maintain system integrity in a more cost-efficient manner.

8. When proposing the oversubscription and buy-back scheme the transmission system operator shall provide all relevant data, estimates, and models to the national regulatory authority in order for the latter to assess the scheme. The transmission system operator shall regularly report to the national regulatory authority on the functioning of the scheme and, upon request of the national regulatory authority, provide all relevant data. The national regulatory authority may request the transmission system operator to revise the scheme.

2.2.3. Firm day-ahead use-it-or-lose-it mechanism

1. National regulatory authorities shall require transmission system operators to apply at least the rules laid down in paragraph 3 per network user at interconnection points with respect to altering the initial nomination if, on the basis of the yearly monitoring report of the [Energy Community Regulatory Board](#) in accordance with point 2.2.1(2), it is shown that at interconnection points demand exceeded offer, at the reserve price when auctions are used, in the course of capacity allocation procedures in the year covered by the monitoring report for products for use in either that year or in one of the subsequent two years,

(a) for at least three firm capacity products with a duration of one month or

(b) for at least two firm capacity products with a duration of one quarter or

(c) for at least one firm capacity product with a duration of one year or more or

(d) where no firm capacity product with a duration of one month or more has been offered.

2. If, on the basis of the yearly monitoring report, it is shown that a situation as defined in paragraph 1 is unlikely to reoccur in the following three years, for example as a result of capacity becoming available from physical expansion of the network or termination of long-term contracts, the relevant national regulatory authorities may decide to terminate the firm day-ahead use-it-or-lose-it mechanism.

3. Firm renomination is permitted up to 90% and down to 10% of the contracted capacity by the network user at the interconnection point. However, if the nomination exceeds 80% of the contracted capacity, half of the non-nominated volume may be renominated upwards. If the nomination does not exceed 20% of the contracted capacity, half of the nominated volume may be renominated downwards. The application of this paragraph is without prejudice to the applicable emergency measures.

4. The original holder of the contracted capacity may renominate the restricted part of its contracted firm capacity on an interruptible basis.

5. Paragraph 3 shall not apply to network users persons or undertakings and the undertakings they control pursuant to Article 3 of Regulation (EC) No 139/2004 holding less than 10% of the average technical capacity in the preceding year at the interconnection point.

6. On interconnection points where a firm day-ahead use-it-or-lose-it mechanism in accordance with paragraph 3 is applied, an evaluation of the relationship with the oversubscription and buy-back scheme pursuant to point 2.2.2. shall be carried out by the national regulatory authority, which may result in a decision by the national regulatory authority not to apply the provisions of point 2.2.2. at those interconnection points. Such a decision shall be notified, without delay, to the [Energy Community Regulatory Board](#).

7. A national regulatory authority may decide to implement a firm day-ahead use-it-or-lose-it mechanism pursuant to paragraph 3 on an interconnection point. Before adopting its decision, the national regulatory authority shall consult with the national regulatory authorities of adjacent [Contracting Parties and the Member States of the European Union](#) In adopting its decision the national regulatory authority shall take account of the adjacent national regulatory authorities' opinions.²⁰

2.2.4. Surrender of contracted capacity

Transmission system operators shall accept any surrender of firm capacity which is contracted by the network user at an interconnection point, with the exception of capacity products with a duration of a day and shorter. The network user shall retain its rights and obligations under the capacity contract until the capacity is reallocated by the transmission system operator and to the extent the capacity is not reallocated by the transmission system operator Surrendered capacity shall be considered to be reallocated only after all the available capacity has been allocated. The transmission system operator shall notify the network user without delay of any reallocation of its surrendered capacity. Specific terms and conditions for surrendering capacity, in particular for cases where several network users surrender their capacity, shall be approved by the national regulatory authority.

2.2.5. Long-term use-it-or-lose-it mechanism

1. National regulatory authorities shall require transmission system operators to partially or fully withdraw systematically underutilised contracted capacity on an interconnection point by a network user where that user has not sold or offered under reasonable conditions its

²⁰ As adapted by Article 3(6) of Decision 2018/01/PHLG-EnC.

unused capacity and where other network users request firm capacity. Contracted capacity is considered to be systematically underutilised in particular if:

(a) the network user uses less than on average 80% of its contracted capacity both from 1 April until 30 September and from 1 October until 31 March with an effective contract duration of more than one year for which no proper justification could be provided; or

(b) the network user systematically nominates close to 100% of its contracted capacity and renominates downwards with a view to circumventing the rules laid down in point 2.2.3(3).

2. The application of a firm day-ahead use-it-or-lose-it mechanism shall not be regarded as justification to prevent the application of paragraph 1.

3. Withdrawal shall result in the network user losing its contracted capacity partially or completely for a given period or for the remaining effective contractual term. The network user shall retain its rights and obligations under the capacity contract until the capacity is reallocated by the transmission system operator and to the extent the capacity is not reallocated by the transmission system operator.

4. Transmission system operators shall regularly provide national regulatory authorities with all the data necessary to monitor the extent to which contracted capacities with effective contract duration of more than one year or recurring quarters covering at least two years are used.

3. DEFINITION OF THE TECHNICAL INFORMATION NECESSARY FOR NETWORK USERS TO GAIN EFFECTIVE ACCESS TO THE SYSTEM, THE DEFINITION OF ALL RELEVANT POINTS FOR TRANSPARENCY REQUIREMENTS AND THE INFORMATION TO BE PUBLISHED AT ALL RELEVANT POINTS AND THE TIME SCHEDULE ACCORDING TO WHICH THAT INFORMATION SHALL BE PUBLISHED

3.1. Definition of the technical information necessary for network users to gain effective access to the system

3.1.1. Form of publication

(1) Transmission system operators (TSOs) shall provide all information referred to under paragraph

3.1.2 and paragraph 3.3(1) to 3.3(5) in the following manner:

(a) on a website accessible to the public, free of charge and without any need to register or otherwise sign on with the transmission system operator;

(b) on a regular/rolling basis; the frequency shall be according to the changes that take place and the duration of the service;

(c) in a user-friendly manner;

(d) in a clear, quantifiable, easily accessible way and on a non-discriminatory basis;

(e) in a downloadable format that **has been agreed between transmission system operators and the national regulatory authorities on the basis of an opinion on a harmonised format that shall be provided by the Energy Community Regulatory Board** and that allows for quantitative analyses;

(f) in consistent units, in particular kWh (with a combustion reference temperature of 298,15 K) shall be the unit for energy content and m³ (at 273,15 K and 1,01325 bar) shall be the unit for volume. The constant conversion factor to energy content shall be provided. In addition to the format above, publication in other units is also possible;

(g) in the official language(s) of the Energy Community Contracting Party and in English.²¹

(h) all data shall be made available as of 1 October 2018 on the <...> central platform, established by ENTSOG on a cost-efficient basis.²²

(2) Transmission system operators shall provide details on actual changes to all information referred to under paragraph 3.1.2 and paragraph 3.3(1) to 3.3(5) in a timely manner as soon as available to them.

3.1.2. Content of publication

Transmission system operators shall publish at least the following information about their systems and services:

- (a) a detailed and comprehensive description of the different services offered and their charges;
- (b) the different types of transportation contracts available for these services;
- (c) the network code and/or the standard conditions outlining the rights and responsibilities of all network users including:
 1. harmonised transportation contracts and other relevant documents;
 2. if relevant for access to the system, for all relevant points as defined in paragraph 3.2 of this Annex, a specification of relevant gas quality parameters, including at least the gross calorific value and the Wobbe index, and the liability or costs of conversion for network users in case gas is outside these specifications;
 3. if relevant for access to the system, for all relevant points information on pressure requirements;
 4. the procedure in the event of an interruption of interruptible capacity, including, where applicable, the timing, extent, and ranking of individual interruptions (for example pro-rata or first-come-last-interrupted);
- (d) the harmonised procedures applied when using the transmission system, including the definition of key terms;
- (e) provisions on capacity allocation, congestion management and anti-hoarding and reutilisation procedures;
- (f) the rules applicable for capacity trade on the secondary market vis-à-vis the transmission system operator;
- (g) rules on balancing and methodology for the calculation of imbalance charges;
- (h) if applicable, the flexibility and tolerance levels included in transportation and other services without separate charge, as well as any flexibility offered in addition to this and the corresponding charges;
- (i) a detailed description of the gas system of the transmission system operator and its relevant points of interconnection as defined in paragraph 3.2 of this Annex as well as the names of the operators of the interconnected systems or facilities;
- (j) the rules applicable for connection to the system operated by the transmission system operator;
- (k) information on emergency mechanisms, as far as it is the responsibility of the transmission system operator, such as measures that can lead to the disconnection of customers groups and other general liability rules that apply to the transmission system operator;
- (l) procedures agreed upon by transmission system operators at interconnection points, of relevance for access of network users to the transmission systems concerned, relating to interoperability of the network,

²¹ As adapted by Article 4(1) litera (a) of Decision 2011/02/MC-EnC.

²² As adapted by Article 3(7) and (8) of Decision 2018/01/PHLG-EnC.

agreed procedures on nomination and matching procedures and other agreed procedures that set out provisions in relation to gas flow allocations and balancing, including the methods used;

(m) transmission system operators shall publish a detailed and comprehensive description of the methodology and process, including information on the parameters employed and the key assumptions, used to calculate the technical capacity.

3.2. Definition of all relevant points for transparency requirements

(1) Relevant points shall include at least:

(a) all entry and exit points to and from a transmission network operated by a transmission system operator with the exception of exit points connected to a single final customer, and with the exception of entry points linked directly to a production facility of a single producer that is located within the Energy Community;

(b) all entry and exit points connecting balancing zones of transmission system operators;

(c) all points connecting the network of a transmission system operator with an LNG terminal, physical gas hubs, storage and production facilities, unless these production facilities are exempted under (a);

(d) all points connecting the network of a given transmission system operator to infrastructure necessary for providing ancillary services as defined by Article 2(14) of Directive 2009/73/EC.

(2) Information for single final customers and for production facilities, that is excluded from the definition of relevant points as described under 3.2(1)(a), shall be published in aggregate format, at least per balancing zone. The aggregation of single final customers and of production facilities, excluded from the definition of relevant points as described under 3.2(1)(a), shall for the application of this Annex be considered as one relevant point.

(3) Where points between two or more transmission operators are managed solely by the transmission operators concerned, with no contractual or operational involvement of system users whatsoever, or where points connect a transmission system to a distribution system and there is no contractual congestion at these points, transmission system operators shall be exempted for these points from the obligation to publish the requirements under paragraph 3.3 of this Annex. The national regulatory authority may require the transmission system operators to publish the requirements under paragraph 3.3 of this Annex for groups or all of the exempted points. In such case, the information, if available to the TSO, shall be published in an aggregated form at a meaningful level, at least per balancing zone. This aggregation of these points shall for the application of this annex be considered as one relevant point.

3.3. Information to be published at all relevant points and the time schedule according to which that information should be published

(1) At all relevant points, transmission system operators shall publish the information as listed in paragraphs (a) to (g), for all services and ancillary services provided (in particular information on blending, ballasting and conversion). This information shall be published on a numerical basis, in hourly or daily periods, equal to the smallest reference period for capacity booking and (re-)nomination and the smallest settlement period for which imbalance charges are calculated. If the smallest reference period is different from a daily period, information as listed in paragraphs (a) to (g) shall be made available also for the daily period. This information and updates shall be published as soon as available to the system operator (“near real time”).

- (a) the maximum technical capacity for flows in both directions;
- (b) the total contracted firm and interruptible capacity in both directions;
- (c) the nominations and re-nominations in both directions;
- (d) the available firm and interruptible capacity in both directions;
- (e) actual physical flows;
- (f) planned and actual interruption of interruptible capacity;
- (g) planned and unplanned interruptions to firm services as well as the information on restoration of the firm services (in particular, maintenance of the system and the likely duration of any interruption due to maintenance). Planned interruptions shall be published at least 42 days in advance.

(h) occurrence of unsuccessful, legally valid requests for firm capacity products with a duration of one month or longer including the number and volume of the unsuccessful requests; and

(i) in the case of auctions, where and when firm capacity products with a duration of one month or longer have cleared at prices higher than the reserve price;

(j) where and when no firm capacity product with a duration of one month or longer has been offered in the regular allocation process;

(k) total capacity made available through the application of the congestion-management procedures laid down in points 2.2.2, 2.2.3, 2.2.4 and 2.2.5 per applied congestion-management procedure;

(l) points (h) to (k) shall apply from 1 October 2018.²³

(2) At all relevant points, the information under paragraph 3.3(1)(a), (b) and (d) shall be published for a period of at least 24 months ahead.

(3) At all relevant points, transmission system operators shall publish historical information on the requirements of paragraph 3.3(1)(a) to (g) for the past 5 years on a rolling basis.

(4) Transmission system operators shall publish measured values of the gross calorific value or the Wobbe index at all relevant points, on a daily basis. Preliminary figures shall be published at the latest 3 days following the respective gas day. Final figures shall be published within 3 months after the end of the respective month.

(5) For all relevant points, transmission system operators shall publish available capacities, booked and technical capacities, on an annual basis over all years where capacity is contracted plus 1 year, and at least for the next 10 years. This information shall be updated at least every month or more frequently, if new information becomes available. The publication shall reflect the period for which capacity is offered to the market.

²³ As adapted by Article 3(9) of Decision 2018/01/PHLG-EnC.

3.4. Information to be published regarding the transmission system and the time schedule according to which this information should be published

(1) Transmission system operators shall ensure the publication on a daily basis and updated every day the aggregated amounts of capacities offered, and contracted on the secondary market (i.e. sold from one network user to another network user), where the information is available to the TSO. This information shall include the following specifications:

- (a) interconnection point where the capacity is sold;
- (b) type of capacity, i.e. entry, exit, firm, interruptible;
- (c) quantity and duration of the capacity usage rights;
- (d) type of sale, e.g. transfer or assignment;
- (e) the total number of trades/transfers;
- (f) any other conditions known to the transmission system operator as mentioned in 3.3.

In so far such information is provided by a third party, transmission system operators shall be exempted from this provision.

(2) Transmission system operators shall publish harmonised conditions under which capacity transactions (e.g. transfers and assignments) will be accepted by them. These conditions must at least include:

- (a) a description of standardised products which can be sold on the secondary market;
- (b) lead time for the implementation/acceptation/registration of secondary trades. In case of delays the reasons have to be published;
- (c) the notification to the transmission system operator by the seller or the third party as referred to under 3.4(1) about name of seller and buyer and capacity specifications as outlined in 3.4(1).

In so far such information is provided by a third party, transmission system operators shall be exempted from this provision.

(3) Regarding the balancing service of its system, each transmission system operator shall provide to each network user, for each balancing period, its specific preliminary imbalance volumes and cost data per individual network user, at the latest 1 month after the end of the balancing period. Final data of customers supplied according to standardised load profiles may be provided up to 14 months later. In so far such information is provided by a third party, transmission system operators shall be exempted from this provision. The provision of this information shall respect confidentiality of commercially sensitive information.

(4) Where flexibility services, other than tolerances, are offered for third party access, transmission system operators shall publish daily forecasts on a day-ahead basis of the maximum amount of flexibility, the booked level of flexibility and the availability of flexibility for the market for the next gas day. The transmission system operator shall also publish ex-post information on the aggregate utilisation of every flexibility service at the end of each gas day. If the national regulatory authority is satisfied that such information could give room to potential abuse by network users, it may decide to exempt the transmission system operator from this obligation.

(5) Transmission system operators shall publish, per balancing zone, the amount of gas in the transmission system at the start of each gas day and the forecast of the amount of gas in the transmission system at the end of each gas day. The forecast amount of gas for the end of the gas day shall be updated on an hourly basis throughout the gas day. If imbalance charges are calculated on an hourly basis, the transmission

system operator shall publish the amount of gas in the transmission system on an hourly basis. Alternatively, transmission system operators shall publish, per balancing zone, the aggregate imbalance position of all users at the start of each balancing period and the forecast of the aggregated imbalance position of all users at the end of each gas day. If the national regulatory authority is satisfied that such information could give room to potential abuse by network users, it may decide to exempt the transmission system operator from this obligation.

(6) Transmission system operators shall provide user-friendly instruments for calculating tariffs.

(7) Transmission system operators shall keep at the disposal of the relevant national authorities, for at least 5 years, effective records of all capacity contracts and all other relevant information in relation to calculating and providing access to available capacities, in particular individual nominations and interruptions. Transmission system operators must keep documentation of all relevant information under point 3.3(4) and (5) for at least 5 years and make them available to the regulatory authority upon request. Both parties shall respect commercial confidentiality.



REGULATION (EU) 312/2014 of 26 March 2014 establishing a network code on gas balancing of transmission networks

Incorporated and adapted by Permanent High Level Group Decision 2019/01/PHLG-EnC of 12 December 2019.

*The adaptations made by Permanent High Level Group Decision 2019/01/PHLG-EnC are highlighted in **bold and blue***

CHAPTER I GENERAL PROVISIONS

Article 1

Subject matter

This Regulation establishes a Network Code setting out gas balancing rules, including network-related rules on nomination procedures, imbalance charges, settlement processes associated with the daily imbalance charge and operational balancing between transmission system operators' networks.

Article 2

Scope

1. This Regulation shall apply to balancing zones within the borders of the **Energy Community Contracting Parties**.

2. <...>

3. This Regulation shall not apply to reconciliation that would be necessary between the allocations and actual consumption subsequently derived from final customer meter readings when obtained.

4. This Regulation shall not apply in emergency situations where the transmission system operator shall implement specific measures defined under the applicable national rules and on the basis of **the applicable Energy Community security of supply rules**, as appropriate.

5. The respective rights and obligations originating from this Regulation with regard to network users shall only apply to those network users which have concluded a legally binding agreement, being a transport contract or another contract, which enables them to submit trade notifications in accordance with Article 5.

Article 3

Definitions

For the purposes of this Regulation, the definitions in Article 2 of Regulation (EC) No 715/2009, Article 3 Commission Regulation (EU) No **459/2017** establishing a Network Code on Capacity Allocation Mech-

anisms in Gas Transmission Systems and **repealing Regulation (EU) 984/2013** as well as Article 2 of Directive 2009/73/EC shall apply. In addition, the following definitions shall apply:

- (1) 'balancing zone' means an entry-exit system to which a specific balancing regime is applicable and which may include distribution systems or part of them;
- (2) 'balancing action' means an action undertaken by the transmission system operator to change the gas flows onto or off the transmission network, excluding those actions related to gas unaccounted for as off-taken from the system and gas used by the transmission system operator for the operation of the system;
- (3) 'neutrality charge for balancing' means a charge amounting to the difference between the amounts received or receivable and the amounts paid or payable by the transmission system operator due to performance of its balancing activities which is payable to or recoverable from the relevant network users;
- (4) 'trading platform' means an electronic platform provided and operated by a trading platform operator by means of which trading participants may post and accept, including the right to revise and withdraw, bids and offers for gas required to meet short term fluctuations in gas demand or supply, in accordance with the terms and conditions applicable on the trading platform and at which the transmission system operator trades for the purpose of undertaking balancing actions;
- (5) 'trading participant' means a network user or a transmission system operator holding a contract with the trading platform operator and satisfying the conditions necessary to transact on the trading platform.
- (6) 'balancing platform' means a trading platform where a transmission system operator is a trading participant to all trades;
- (7) 'balancing service' means a service provided to a transmission system operator via a contract for gas required to meet short term fluctuations in gas demand or supply, which is not a short term standardised product;
- (8) 'confirmed quantity' means the quantity of gas confirmed by a transmission system operator to be scheduled or re-scheduled to flow on gas day D;
- (9) 'daily imbalance charge' means the amount of money a network user pays or receives in respect of a daily imbalance quantity;
- (10) 'daily metered' means that the gas quantity is measured and collected once per gas day;
- (11) 'intraday metered' means that the gas quantity is measured and collected a minimum of two times within the gas day;
- (12) 'non daily metered' means that the gas quantity is measured and collected less frequently than once per gas day;
- (13) 'balancing portfolio' means a grouping of a network user's inputs and off-takes;
- (14) 'notification quantity' means the quantity of gas transferred between a transmission system operator and a network user or network users or balancing portfolios, as appropriate;
- (15) 'allocation' means the quantity of gas attributed to a network user by a transmission system operator as an input or an off-take expressed in kWh for the purpose of determining the daily imbalance quantity;
- (16) 're-nomination cycle' means the process carried out by the transmission system operator in order to provide a network user with the message regarding the confirmed quantities following the receipt of a re-nomination;
- (17) 'within day charge' means a charge levied or a payment made by a transmission system operator on

or to a network user as a result of a within day obligation;

(18) 'within day obligation' means a set of rules regarding network users' inputs and off-takes within the gas day imposed by a transmission system operator on network users;

(19) 'base case' means the model for information provision where the information on non- daily metered off-takes consists of a day ahead and within day forecasts;

(20) 'variant 1' means the model for information provision where the information on non- daily metered and daily metered off-takes is based on apportionment of measured flows during the gas day;

(21) 'variant 2' means the model for information provision where the information on non- daily metered off-takes is a day ahead forecast

CHAPTER II BALANCING SYSTEM

Article 4

General principles

1. The network users shall be responsible to balance their balancing portfolios in order to minimise the need for transmission system operators to undertake balancing actions set out under this Regulation.
2. Balancing rules established in accordance with this Regulation shall reflect genuine system needs, taking into account the resources available to transmission system operators and shall provide incentives for network users to balance their balancing portfolios efficiently.
3. Network users shall have the possibility to enter into a legally binding agreement with a transmission system operator which enables them to submit trade notifications irrespective of whether they have contracted transport capacity or not.
4. In a balancing zone where more than one transmission system operator is active, this Regulation shall apply to all the transmission system operators within that balancing zone. In case the responsibility of keeping their transmission networks in balance has been transferred to an entity, this Regulation shall apply to that entity to the extent defined under the applicable national rules.

Article 5

Trade notifications and allocations

1. Gas transfer between two balancing portfolios within one balancing zone shall be made through disposing and acquiring trade notifications submitted to the transmission system operator in respect of the gas day.
2. The timing for submitting, withdrawing and amending trade notifications shall be defined by the transmission system operator in the transport contract or other legally binding agreement with network users taking into account the time, if any, for processing the trade notifications. The transmission system operator shall enable the network users to submit trade notifications close to the time when the trade notification becomes effective.

3. The transmission system operator shall minimise the time for processing trade notifications. The time for processing shall not take more than thirty minutes except where the time when the trade notification becomes effective permits to extend the time for processing up to two hours.

4. A trade notification shall provide at least the following information:

(a) the gas day for which gas is transferred;

(b) the identification of the balancing portfolios concerned;

(c) whether it is a disposing or an acquiring trade notification;

(d) the notification quantity expressed in kWh/d for daily notification quantity or in kWh/h for hourly notification quantity, as required by the transmission system operator.

5. If the transmission system operator receives a corresponding set of a disposing and an acquiring trade notifications and the notification quantities are equal then the transmission system operator shall allocate the notification quantity to the balancing portfolios concerned:

(a) as an off-take to the balancing portfolio of the network user making the disposing trade notification; and

(b) as an input to the balancing portfolio of the network user making the acquiring trade notification.

6. Where the notification quantities referred to in paragraph 5 are not equal, the transmission system operator shall either allocate the lower notification quantity specified in the relevant trade notification or shall reject both trade notifications. The applicable rule shall be defined by the transmission system operator in the applicable transport contract or other legally binding agreement.

7. A service provider shall not be prevented to act on behalf of a network user for the purpose of paragraph 5, subject to the prior approval of the transmission system operator.

8. A network user may make a trade notification on a gas day irrespective of whether any nomination was made by this network user for that gas day.

9. Paragraphs 1 to 8 shall apply, *mutatis mutandis*, to the transmission system operators trading in accordance with Article 6(3)(a).

CHAPTER III

OPERATIONAL BALANCING

Article 6

General provisions

1. The transmission system operator shall undertake balancing actions in order to:

(a) maintain the transmission network within its operational limits;

(b) achieve an end of day linepack position in the transmission network different from the one anticipated on the basis of expected inputs and off-takes for that gas day, consistent with economic and efficient operation of the transmission network.

2. While undertaking balancing actions the transmission system operator shall consider at least the following in respect of the balancing zone:

- (a) the transmission system operator's own estimates of demand of gas over and within the gas day for which the balancing action(s) is (are) considered;
 - (b) nomination and allocation information and measured gas flows;
 - (c) gas pressures throughout the transmission network(s).
3. The transmission system operator shall undertake balancing actions through:
- (a) purchase and sale of short term standardised products on a trading platform; and/or
 - (b) the use of balancing services.
4. While undertaking balancing actions the transmission system operator shall take into account the following principles:
- (a) the balancing actions shall be undertaken on a non-discriminatory basis;
 - (b) the balancing actions shall have regard to any obligation upon transmission system operators to operate an economic and efficient transmission network.

Article 7

Short term standardised products

1. The short term standardised products shall be traded for delivery on a within day or day ahead basis seven days a week in accordance with the applicable rules of the trading platform as defined between the trading platform operator and the transmission system operator.
2. The originating trading participant is the trading participant that posts a bid or an offer to trade on the trading platform and the accepting trading participant is the trading participant that accepts it.
3. Where a title product is traded:
- (a) one trading participant makes an acquiring trade notification and the other makes a disposing trade notification;
 - (b) both trade notifications shall specify the gas quantity transferred from the trading participant who makes a disposing trade notification to the trading participant who makes an acquiring trade notification;
 - (c) where an hourly notification quantity is used, it shall be applied flat to all the remaining hours of the gas day from a specified start time and shall be equal to zero for all the hours before this start time.
4. Where a locational product is traded:
- (a) the transmission system operator shall determine the relevant entry and exit points or groups thereof that can be used;
 - (b) all the conditions specified in paragraph 3 shall be fulfilled;
 - (c) the originating trading participant shall modify the quantity of gas to be delivered to or off-taken from the transmission network at the specified entry or exit point by an amount equal to the notification quantity and provide evidence to the transmission system operator that the quantity was modified accordingly;
5. Where a temporal product is traded:
- (a) the conditions specified in paragraph 3(a) and (b) shall be fulfilled;
 - (b) an hourly notification quantity shall be applied to the hours of the gas day from a specified start time

up to a specified end time and shall be equal to zero for all the hours before the start time and zero for all the hours after the end time.

6. Where a temporal locational product is traded, the conditions specified in paragraph 4(a), and (c) and paragraph 5 shall be fulfilled.

7. When establishing the short term standardised products, the transmission system operators from adjacent balancing zones shall cooperate in order to determine the relevant products. Each transmission system operator shall inform the relevant trading platform operators of the result of such cooperation without undue delay.

Article 8

Balancing services

1. The transmission system operator is entitled to procure balancing services for those situations in which short- term standardised products will not or are not likely to provide the response necessary to keep the transmission network within its operational limits or in the absence of liquidity of trade in short term standardised products.

2. For the purpose of undertaking balancing actions through the use of balancing services, the transmission system operator when procuring these balancing services shall consider at least the following:

- (a) how balancing services will keep the transmission network within its operational limits;
- (b) the response time of the balancing services compared to the response times of any available short term standardised products;
- (c) the estimated cost of the procurement and use of balancing services compared to the estimated cost of use of any available short term standardised products;
- (d) the area at which the gas needs to be delivered;
- (e) the transmission system operator's gas quality requirements;
- (f) to what extent the procurement and use of balancing services may affect the liquidity of the short term wholesale gas market.

3. Balancing services shall be procured in a market-based manner, through a transparent and non-discriminatory public tender procedure in accordance with the applicable national rules, in particular:

- (a) prior to any commitment to contract for a balancing service, the transmission system operator shall publish a non-restrictive call for tender indicating the purpose, scope and related instructions to tenderers, to enable them to participate in the tender process;
- (b) the results shall be published without prejudice to the protection of commercially sensitive information and individual results shall be disclosed to each tenderer.

4. Under specific circumstances a transparent and non-discriminatory procedure other than a public tender may be approved by the national regulatory authority.

5. Unless a decision by the national regulatory authority allows for a longer duration of a balancing service, the duration of a balancing service shall not exceed one year and the starting date shall occur within a twelve month period from the related binding commitment of the contracting parties.

6. The transmission system operator shall review the use of its balancing services annually in order to assess whether available short term standardised products would better meet the transmission system operator's operational requirements and whether the use of balancing services could be reduced for the next year.

7. The transmission system operator shall publish annually the information with regard to the balancing services procured and the related costs incurred.

Article 9

Merit order

1. Subject to the principles set out in Article 6(4), when deciding upon the appropriate balancing actions, the transmission system operator, shall:

(a) prioritise the use of title products where and to the extent appropriate over any other available short term standardised products.

(b) use the other short term standardised products when the following circumstances are met:

(1) locational products when, in order to keep the transmission network within its operational limits, gas flow changes are needed at specific entry and/or exit points and/or to start from a specific period of time within the gas day.

(2) temporal products when, in order to keep the transmission network within its operational limits, gas flow changes are needed within a specific period of time within the gas day. The transmission system operator shall only use a temporal product when it would be more economic and efficient than the purchase and sale of a combination of title products or locational products.

(3) temporal locational products when, in order to keep the transmission network within its operational limits, gas flow changes are needed at specific entry and/or exit points and within a specific period of time within the gas day. The transmission system operator shall only use a temporal locational product when it would be more economic and efficient than the purchase and sale of a combination of locational products.

(c) only use balancing services where short term standardised products will not or are not likely to provide, upon assessment of the transmission system operator concerned, the response necessary to keep the transmission network within its operational limits.

The transmission system operator shall take into account cost-efficiency within the respective levels of the merit order referred to under (a)-(c).

2. While trading in short- term standardised products, the transmission system operator shall prioritise the use of within day products over day ahead products where and to the extent appropriate.

3. The transmission system operator may seek approval from the national regulatory authority to trade within an adjacent balancing zone, and have the gas transported to and from this balancing zone, as an alternative to trading title products and/or locational products in its own balancing zone(s). When deciding on granting the approval, the national regulatory authority may consider alternative solutions to improve the functioning of the domestic market. The applicable terms and conditions shall be reconsidered on an annual basis by the transmission system operator and the national regulatory authority. The use of this balancing action shall not limit the access to and use by the network users of capacity at the interconnec-

tion point concerned.

4. The transmission system operator shall publish on a yearly basis the information with regard to the costs, frequency and quantity of the balancing actions undertaken in accordance with each of the requirements set out in paragraph 1 and of the balancing actions undertaken in accordance with paragraph 3.

Article 10

Trading platform

1. For the purpose of procurement of short-term standardised products, the transmission system operator shall trade on a trading platform that meets all of the following criteria:

- (a) provides sufficient support throughout the gas day to both the network users to trade in and the transmission system operators to undertake appropriate balancing actions through trade in the relevant short term standardised products;
- (b) provides transparent and non-discriminatory access;
- (c) provides services on an equal treatment basis;
- (d) ensures anonymous trading at least until a transaction is concluded;
- (e) provides a detailed overview of the current bids and offers to all trading participants;
- (f) ensures that all trades are duly notified to the transmission system operator.

2. The transmission system operator shall endeavour to ensure that the criteria set out in paragraph 1 are met on at least one trading platform. Where the transmission system operator has been unable to ensure that these criteria are met on at least one trading platform it shall take the necessary measures towards the establishment of a balancing platform or a joint balancing platform as set out in Article 47.

3. After each trade is concluded, the trading platform operator shall make available to the trading participants sufficient details to confirm the trade.

4. The trading participant shall be responsible for submitting trade notification to the transmission system operator as defined in Article 5 unless the responsibility is assigned to the trading platform operator or a third party in accordance with the applicable rules of the trading platform.

5. The trading platform operator shall:

- (a) publish the evolution of the marginal buy price and the marginal sell price after each trade without undue delay; or
- (b) provide the transmission system operator with the information where the transmission system operator elects to publish the evolution of the marginal buy price and the marginal sell price. The transmission system operator shall publish this information without undue delay.

Where there is more than one trading platform operator in the same balancing zone point (b) shall apply.

6. The trading platform operator shall only allow network users to trade on its trading platform if they are entitled to make trade notifications.

7. The transmission system operator shall without undue delay inform the trading platform operator of network user's losing the right to make trade notifications pursuant to the applicable contractual arrangement in force which shall result in the suspension of the network user's right to trade on the trading plat-

form, without prejudice to the other remedies that could be available in such case to the trading platform operator under the applicable rules of the trading platform.

Article 11

Incentives

1. With the view to foster the liquidity of the short term wholesale gas market, the national regulatory authority can incentivise the transmission system operator to undertake balancing actions efficiently or to maximise the undertaking of balancing actions through the trade in short term standardised products.
2. The transmission system operator may submit for approval to the national regulatory authority an incentive mechanism that shall be consistent with the general principles set out in this Regulation.
3. Prior to submitting the proposal referred to in paragraph 2, the transmission system operator may consult stakeholders upon the transmission system operator's own initiative or upon the national regulatory authority's request.
4. The incentive mechanism shall:
 - (a) be based on the transmission system operator's performance via capped payments to the transmission system operator for outperformance and by the transmission system operator for underperformance, that are measured against predetermined performance targets which may include, *inter alia*, costs targets;
 - (b) take into account the means available to the transmission system operator to control the performance;
 - (c) ensure that its application accurately reflects the allocation of responsibilities between the parties involved;
 - (d) be adapted to the state of development of the relevant gas market where it is to be implemented;
 - (e) be subject to a regular review by the national regulatory authority in close cooperation with the transmission system operator to evaluate where and to what extent changes thereto may be needed.

CHAPTER IV NOMINATIONS

Article 12

General provisions

1. The gas quantity to be specified in the nomination and re-nomination shall be expressed either in kWh/d for daily nominations and re-nominations or in kWh/h for hourly nominations and re-nominations.
2. The transmission system operator may require network users to provide further information on nominations and re-nominations in addition to the requirements set out in this Regulation, including, *inter alia*, an accurate, updated and sufficiently detailed forecast of the expected inputs and off-takes, this in accordance with the specific need(s) of the transmission system operator.
3. Articles 13 to 16 regarding nominations and re-nominations for unbundled capacity products shall apply

mutatis mutandis to single nominations and re-nominations for bundled capacity products. Transmission system operators shall cooperate for the purpose of implementing nomination and re-nomination rules for bundled capacity products at interconnection points.

4. Article 15(3) and Article 17(1) shall be without prejudice to the rule for minimum interruption lead times referred to in Article 33 of Commission Regulation (EU) No 459/2017 of 16 March 2017 establishing a Network Code on Capacity Allocation Mechanisms in Gas Transmission Systems and repealing Regulation (EU) 984/2013.

Article 13

Information regarding nominations and re-nominations at interconnection points

Nominations and re-nominations provided by network users to the transmission system operators with regard to interconnection points shall contain at least the following information:

- (1) interconnection point identification;
- (2) direction of the gas flow;
- (3) network user identification or, if applicable, its balancing portfolio identification;
- (4) network user's counterparty identification or, if applicable, its balancing portfolio identification;
- (5) start and end time of the gas flow for which the nomination or re-nomination is submitted;
- (6) gas day D;
- (7) the gas quantity requested to be transported.

Article 14

Nomination procedure at interconnection points

1. A network user shall be entitled to submit to the transmission system operator a nomination for gas day D no later than the nomination deadline on gas day D-1. The nomination deadline shall be 13:00 UTC (winter time) or 12:00 UTC (daylight saving) on gas day D-1.

2. The last nomination received by the transmission system operator from a network user before the nomination deadline shall be taken into account by the transmission system operator.

3. The transmission system operator shall send the message regarding the confirmed quantities to the respective network users no later than the confirmation deadline on gas day D-1. The confirmation deadline shall be 15:00 UTC (winter time) or 14:00 UTC (daylight saving) on gas day D-1.

4. The transmission system operators at either side of the interconnection point may agree to offer a pre-nomination cycle within which:

- (a) network users are not obliged to submit nominations;
- (b) network users may submit to transmission system operators the nominations for gas day D no later than 12:00 UTC (winter time) or 11:00 UTC (daylight saving) on gas day D-1;
- (c) the transmission system operator shall send the message regarding the processed quantities to the re-

spective network users no later than 12:30 UTC (winter time) or 11:30 UTC (daylight saving) on gas day D-1.

5. In the absence of a valid nomination sent by the network user before the nomination deadline, the respective transmission system operators shall apply the default nomination rule agreed between these transmission system operators. The default nomination rule in force at an interconnection point shall be made available to the network users of the transmission system operators.

Article 15

Re-nomination procedure at interconnection points

1. A network user shall be entitled to submit re-nominations within the re-nomination period which starts immediately after the confirmation deadline and ends no earlier than three hours before the end of gas day D. The transmission system operator shall start a re-nomination cycle at the start of every hour within the re-nomination period.
2. The last re-nomination received by the transmission system operator from a network user before the re-nomination cycle starts shall be taken into account by the transmission system operator in the re-nomination cycle.
3. The transmission system operator shall send the message regarding the confirmed quantities to the respective network users within two hours from the start of each re-nomination cycle. The start time of the effective gas flow change shall be two hours from the start of the re-nomination cycle, unless:
 - (a) a later time is requested by the network user; or
 - (b) an earlier time is allowed by the transmission system operator.
4. It shall be assumed that any change to the gas flow occurs at the start of each hour.

Article 16

Specific provisions at interconnection points

1. Where daily and hourly nominations and re-nominations co-exist at an interconnection point, the transmission system operators or national regulatory authorities (as appropriate) may consult the stakeholders for the purpose of identifying whether harmonised nominations and re-nominations should be submitted at both sides of this interconnection point. This consultation shall consider at least the following:
 - (a) financial impact on transmission system operators and network users;
 - (b) impact on cross-border trade;
 - (c) impact on the daily balancing regime at the interconnection point(s).
2. Following this consultation, the proposed changes, if any, shall be approved by the national regulatory authorities. Once the proposed changes are approved the transmission system operators shall amend accordingly the existing interconnection agreements and the transport contracts or other legally binding agreements and publish those changes.

Article 17

Rejection of nominations and re-nominations or amendment of the requested gas quantity at interconnection points

1. The transmission system operator may reject:

(a) a nomination or re-nomination no later than two hours after the nomination deadline or the beginning of the re-nomination cycle in the following cases:

- (i) it does not comply with the requirements as to its content;
- (ii) it is submitted by an entity other than a network user;
- (iii) the acceptance of the daily nomination or re-nomination would result in a negative implied nomination flow rate;
- (iv) it exceeds the network user's allocated capacity;

(b) a re-nomination no later than two hours after the beginning of the re-nomination cycle in the following additional cases:

- (i) it exceeds the network user's allocated capacity for the remaining hours, unless this re-nomination is submitted in order to request interruptible capacity, where offered by the transmission system operator;
- (ii) the acceptance of the hourly re-nomination would result in an expected gas flow change before the end of the re-nomination cycle.

2. The transmission system operator shall not reject a network user's nomination and re-nomination on the sole ground that this network user's intended inputs are not equal to its intended off-takes.

3. In case a re-nomination is rejected, the transmission system operator shall use the network user's last confirmed quantity, if any.

4. Without prejudice to the specific terms and conditions applicable to interruptible capacity and capacity subject to congestion management rules, the transmission system operator may in principle only amend the gas quantity requested under a nomination and re-nomination in exceptional events, and emergency situations when there is an evident danger to system security and stability. Transmission system operators shall notify to the national regulatory authority any such action taken.

Article 18

Nomination and re-nomination procedure at points other than interconnection points

1. The national regulatory authority shall, if not determined already, after consultation of the transmission system operator, determine at which points other than interconnection points nominations and re-nominations are required.

2. Where nominations and re-nominations are required at points other than interconnection points the following principles shall apply:

(a) network users shall be entitled to submit re-nominations for the gas day;

(b) the transmission system operator shall confirm or reject the submitted nominations and re-nominations considering the timelines referred to in Article 17.

CHAPTER V

DAILY IMBALANCE CHARGES

Article 19

General provisions

1. Network users shall be bound to pay or be entitled to receive (as appropriate) daily imbalance charges in relation to their daily imbalance quantity for each gas day.
2. Daily imbalance charges shall be identified separately on the transmission system operator's invoices to network users.
3. The daily imbalance charge shall be cost reflective and shall take account of the prices associated with transmission system operator's balancing actions, if any, and of the small adjustment referred to in Article 22(6).

Article 20

Daily imbalance charge calculation methodology

1. The transmission system operator shall submit the daily imbalance charge calculation methodology to be applied in its balancing zone to the national regulatory authority for approval.
2. Once approved, the daily imbalance charge calculation methodology shall be published on the relevant website. Any update thereof shall be published in a timely manner.
3. The daily imbalance charge calculation methodology shall define:
 - (a) the calculation of the daily imbalance quantity referred to in Article 21;
 - (b) the derivation of the applicable price referred to in Article 22; and
 - (c) any other necessary parameter.

Article 21

Daily imbalance quantity calculation

1. The transmission system operator shall calculate a daily imbalance quantity for each network user's balancing portfolio for each gas day in accordance with the following formula:
daily imbalance quantity = inputs – off-takes
2. The daily imbalance quantity calculation shall be adapted accordingly where:
 - (a) a linepack flexibility service is offered; and/or
 - (b) any arrangement is in place whereby network users provide gas, including gas in kind, to cover:
 - (i) gas unaccounted for as off taken from the system, such as losses, metering errors; and/or
 - (ii) gas used by the transmission system operator for the operation of the system, such as fuel gas

3. Where the sum of a network user's inputs for the gas day is equal to the sum of its off-takes for this gas day, a network user is deemed balanced for this gas day.
4. Where the sum of a network user's inputs for the gas day is not equal to the sum of its off-takes for this gas day, a network user is deemed imbalanced for this gas day and daily imbalance charges shall be applied in accordance with Article 23.
5. The transmission system operator shall provide a network user with its initial and its final daily imbalance quantities in accordance with Article 37.
6. The daily imbalance charge shall be based on the final daily imbalance quantity.

Article 22

Applicable price

1. For the purpose of daily imbalance charge calculation as provided in Article 23 the applicable price shall be determined as follows:
 - (a) marginal sell price where the daily imbalance quantity is positive (i.e. the network user's inputs for that gas day exceed its off-takes for that gas day); or
 - (b) marginal buy price where the daily imbalance quantity is negative (i.e. the network user's off-takes for that gas day exceed its inputs for that gas day).
2. A marginal sell price and a marginal buy price shall be calculated for each gas day pursuant to the following:
 - (a) a marginal sell price is the lower of:
 - (i) the lowest price of any sales of title products in which the transmission system operator is involved in respect of the gas day; or
 - (ii) the weighted average price of gas in respect of that gas day, minus a small adjustment.
 - (b) a marginal buy price is the higher of:
 - (i) the highest price of any purchases of title products in which the transmission system operator is involved in respect of the gas day; or
 - (ii) the weighted average price of gas in respect of that gas day, plus a small adjustment.
3. For the purpose of determining the marginal sell price, the marginal buy price and the weighted average price, the related trades shall be made on trading platforms that are pre-identified by the transmission system operator and approved by the national regulatory authority. The weighted average price shall be the energy weighted average price of trades in title products carried out at the virtual trading point in respect of a gas day.
4. A default rule shall be defined in case paragraph 2(a) and (b) do not allow for the derivation of a marginal sell price and/or a marginal buy price.
5. Subject to the approval of the national regulatory authority, the price of locational products may be taken into account for the purpose of determining the marginal sell price, the marginal buy price and the weighted average price, where proposed by the transmission system operator with corresponding consideration of the extent of the transmission system operator's use of locational products.

6. The small adjustment shall:

- (a) incentivise network users to balance their inputs and off-takes;
- (b) be designed and applied in a non-discriminatory manner in order to:
 - (i) not deter market entry;
 - (ii) not impede the development of competitive markets;
- (c) not have a detrimental impact on cross-border trade;
- (d) not result in network users' excessive financial exposure to daily imbalance charges.

7. The value of the small adjustment may differ for determining the marginal buy price and the marginal sell price. The value of the small adjustment shall not exceed ten percent of the weighted average price unless the transmission system operator concerned can justify otherwise to the national regulatory authority and have it approved pursuant to Article 20.

Article 23

Daily imbalance charge

1. To calculate daily imbalance charges for each network user, the transmission system operator shall multiply a network user's daily imbalance quantity by the applicable price determined in accordance with Article 22.

2. Daily imbalance charges shall be applied as follows:

- (a) if a network user's daily imbalance quantity for the gas day is positive then this network user shall be deemed to have sold gas to the transmission system operator equivalent to the daily imbalance quantity and therefore shall be entitled to receive a credit in respect of daily imbalance charges from the transmission system operator; and
- (b) if a network user's daily imbalance quantity for the gas day is negative then this network user shall be deemed to have purchased gas from the transmission system operator equivalent to the daily imbalance quantity and therefore shall be obliged to pay daily imbalance charges to the transmission system operator.

CHAPTER VI

WITHIN DAY OBLIGATIONS

Article 24

General provisions

1. A transmission system operator is only entitled to apply within day obligations in order to incentivise network users to manage their within day position in view of ensuring the system integrity of its transmission network and minimising its need to undertake balancing actions.

2. Where the transmission system operator is required to provide information to network users to enable them to manage their exposures associated with within day positions, it shall be provided to them regularly. Where applicable, this information shall be provided upon a request submitted by each network user once.

Article 25

Types of within day obligations

There are three types of within day obligations, each incentivising the network user for a specific objective as set out in this Article:

(1) System-wide within day obligation

shall be designed to provide incentives for network users to keep the transmission network within its operational limits and shall set out the following:

- (a) the operational limits of the transmission network within which it has to remain;
- (b) the actions the network users can undertake to keep the transmission network within the operational limits;
- (c) the consequential balancing actions of the transmission system operator when the operational limits of the transmission network are approached or reached;
- (d) the attribution of costs and/or revenues to the network users and/or consequences on the within day position of these network users resulting from balancing actions undertaken by the transmission system operator;
- (e) the related charge which shall be based on the individual within day position of the network user.

(2) Balancing portfolio within day obligation

shall be designed to incentivise network users to keep their individual position during the gas day within a pre-defined range and shall set out the following:

- (a) for each balancing portfolio the range within which this balancing portfolio has to stay;
- (b) how the range referred to above is determined;
- (c) the consequences for network users not staying within the defined range and, where appropriate, details of how any corresponding charge is derived;
- (d) the related charge which shall be based on the individual within day position of the network user.

(3) Entry-exit point within day obligation

shall be designed to provide incentives for network users to limit the gas flow or the gas flow variation under specific conditions at specific entry-exit points and shall set out the following:

- (a) the limits in the gas flow and/or the gas flow variation;
- (b) the entry and/or exit point or groups of entry and/or exit points to which such limits apply;
- (c) the conditions under which such limits shall apply;
- (d) the consequences of not complying with such limits.

This obligation is additional to any other agreements with final costumers containing, amongst other things, localised specific restrictions and obligations regarding the physical gas flow.

Article 26

Requirements for within day obligations

1. The transmission system operator may propose to the national regulatory authority a within day obligation or an amendment thereof. It may combine features of the different types described in Article 25 provided the proposal meets the criteria set out in paragraph 2. The transmission system operator's right of proposal is without prejudice to the right of the national regulatory authority to take a decision on its own initiative.

2. Any within day obligation shall meet the following criteria:

(a) a within day obligation and related within day charge, if any, shall not pose any undue barriers on cross-border trade and new network users entering the relevant market;

(b) a within day obligation shall only be applied where the network users are provided with adequate information before a potential within day charge is applied regarding their inputs and/or off-takes and have reasonable means to respond to manage their exposure;

(c) the main costs to be incurred by the network users in relation to their balancing obligations shall relate to their position at the end of the gas day;

(d) to the extent possible, within day charges shall be reflective of the costs of the transmission system operator for the undertaking of any associated balancing actions;

(e) a within day obligation will not result in network users being financially settled to a position of zero during the gas day;

(f) the benefits of introducing a within day obligation in terms of economic and efficient operation of the transmission network outweigh any potential negative impacts thereof, including on liquidity of trades at the virtual trading point.

3. The transmission system operator may propose different within day obligations for distinct categories of entry or exit points with the aim to provide better incentives for different categories of network users in order to avoid cross subsidies. The transmission system operator's right of proposal is without prejudice to the right of the national regulatory authority to take a decision on its own initiative.

4. The transmission system operator shall consult stakeholders, including the national regulatory authorities, the affected distribution system operators and transmission system operators in adjacent balancing zones, on any within day obligation it intends to introduce, including the methodology and assumptions used in arriving at the conclusion that it meets the criteria set out in paragraph 2.

5. Following the consultation process, the transmission system operator shall produce a recommendation document which shall include the finalised proposal and an analysis of:

(a) the necessity of the within day obligation, taking into account the transmission network's characteristics and the flexibility available to the transmission system operator through purchase and sale of short term standardised products or use of balancing services in accordance with Chapter III;

(b) the information available to enable network users to manage in a timely manner their within day positions;

(c) the expected financial impact on network users;

(d) the effect on new network users entering the relevant market, including any undue negative impact thereon;

- (e) the effect on cross-border trade, including the potential impact on balancing in adjacent balancing zones;
- (f) the impact on the short term wholesale gas market, including the liquidity thereof;
- (g) the non-discriminatory nature of the within day obligation.

6. The transmission system operator shall submit the recommendation document to the national regulatory authority for the approval of the proposal in accordance with the procedure set out in Article 27. In parallel, the transmission system operator shall publish this recommendation document, subject to any confidentiality obligations that it may be bound by <...>.

Article 27

National regulatory authority decision making

1. The national regulatory authority shall take and publish a motivated decision within six months following the receipt of the complete recommendation document. In deciding whether to approve the proposed within day obligation, the national regulatory authority shall assess whether this within day obligation meets the criteria set out in Article 26(2).
2. Before taking the motivated decision the national regulatory authority shall consult with the national regulatory authorities of adjacent **Energy Community Contracting Parties and adjacent EU** Member States and take account of their opinions. The adjacent national regulatory authority(-ies) may **consult** the **Energy Community Regulatory Board <...>** on the decision referred to in paragraph 1.

Article 28

Existing within day obligations

Where the transmission system operator has within day obligation(s) at the date of **expiry of the deadline for transposition** of this Regulation, within six months from such date this transmission system operator shall follow the process set out in Article 26(5) to (7) and shall submit the within day obligation(s) to the national regulatory authority for approval in accordance with Article 27 to continue its (their) use.

CHAPTER VII

NEUTRALITY ARRANGEMENTS

Article 29

Principles of neutrality

1. The transmission system operator shall not gain or lose by the payment and receipt of daily imbalance charges, within day charges, balancing actions charges and other charges related to its balancing activities, which shall be considered as all the activities undertaken by the transmission system operator to fulfil the obligations set out in this Regulation.

2. The transmission system operator shall pass to network users:
 - (a) any costs and revenues arising from daily imbalance charges and within day charges;
 - (b) any costs and revenues arising from the balancing actions undertaken pursuant to Article 9, unless the national regulatory authority considers those costs and revenues as incurred inefficiently in accordance with the applicable national rules. This consideration shall be based upon an assessment which:
 - (i) shall demonstrate to what extent the transmission system operator could have reasonably mitigated the costs incurred when undertaking the balancing action; and
 - (ii) shall be made with regard to the information, the time and the tools available to the transmission system operator at the moment it decided to undertake the balancing action;
 - (c) any other costs and revenues related to the balancing activities undertaken by the transmission system operator, unless the national regulatory authority considers these costs and revenues as incurred inefficiently in accordance with the applicable national rules.
3. Where an incentive to promote efficient undertaking of balancing actions is implemented, the aggregate financial loss shall be limited to the transmission system operator's inefficiently incurred costs and revenues.
4. Transmission system operators shall publish the relevant data regarding the aggregate charges referred to in paragraph 1 and the aggregate neutrality charges for balancing, at least at the same frequency as the respective charges are invoiced to network users, but no less than once per month.
5. Notwithstanding paragraphs 1 and 2, the transmission system operator in its balancing role may be subject to an incentive mechanism as referred to in Article 11.

Article 30

Balancing neutrality cash flows

1. The neutrality charge for balancing shall be paid by or to the network user concerned.
2. The national regulatory authority shall set or approve and publish the methodology for the calculation of the neutrality charges for balancing, including their apportionment amongst network users and credit risk management rules.
3. The neutrality charge for balancing shall be proportionate to the extent the network user makes use of the relevant entry or exit points concerned or the transmission network.
4. The neutrality charge for balancing shall be identified separately when invoiced to network users and the invoice shall be accompanied by sufficient supporting information defined in the methodology referred to in paragraph 2.
5. Where the information model variant 2 is applied and thus the neutrality charge for balancing may be based on forecasted costs and revenues, the transmission system operator's methodology for the calculation of neutrality charge for balancing shall provide rules for a separate neutrality charge for balancing in respect of non- daily metered off-takes.
6. Where relevant, the transmission system operator's methodology for the calculation of the neutrality charge for balancing may provide rules for the division of the neutrality charge for balancing components and the subsequent apportionment of the corresponding sums amongst the network users in order to reduce cross subsidies.

Article 31

Credit risk management arrangements

1. The transmission system operator shall be entitled to take necessary measures and impose relevant contractual requirements, including financial security safeguards, on network users to mitigate their default in payment regarding any payment due for the charges referred to in Article 29 and 30.
2. The contractual requirements shall be on a transparent and equal treatment basis, proportionate to the purpose and defined in the methodology referred to in Article 30(2).
3. In case of a default attributable to a network user, the transmission system operator shall not be liable to bear any loss incurred provided the measures and requirements referred to paragraphs 1 and 2 were duly implemented and such loss shall be recovered in accordance with the methodology referred to in Article 30(2).

CHAPTER VIII INFORMATION PROVISION

Article 32

Information obligations of transmission system operators towards the network users

The information provided to network users by the transmission system operator shall refer to:

- (1) the overall status of the transmission network in accordance with point 3.4(5) of Annex I to Regulation (EC) No 715/2009;
- (2) the transmission system operator's balancing actions referred to in Chapter III;
- (3) the network user's inputs and off-takes for the gas day referred to in Articles 33 to 42.

Article 33

General provisions

1. If not already provided by the transmission system operator according to point 3.1.2 of Annex I to Regulation (EC) No 715/2009, the transmission system operator shall provide all information referred to under Article 32 in the following manner:
 - (a) on the transmission system operator's website or other system providing the information in electronic format;
 - (b) accessible to network users free of charge;
 - (c) in a user-friendly manner;
 - (d) clear, quantifiable and easily accessible;
 - (e) on a non-discriminatory basis;
 - (f) in consistent units either in kWh or kWh/d and kWh/h;

(g) in the official language(s) of the **Contracting Party** and in English.

2. Where a measured quantity cannot be obtained from a meter, a replacement value may be used. This replacement value shall be used as an alternative reference without any further warranty from the transmission system operator.

3. Providing access to the information shall not be construed as giving any specific warranty other than the availability of this information in a defined format and via a defined tool such as a website or web address and the related access of the network users to this information under normal conditions of use. In no circumstances shall the transmission system operators be liable to provide any further warranty, in particular as to the IT system of the network users.

4. The national regulatory authority shall decide on one information model per balancing zone. For information provision on intraday metered inputs and off-takes, the same rules shall apply to all models.

5. For balancing zones where the information model variant 2 is sought to be applied after the **expiry of the deadline for transposition** of this Regulation, a prior market consultation shall be conducted by the transmission system operator or the national regulatory authority as relevant.

Article 34

Intraday metered inputs and off-takes

1. For intraday metered inputs to and off-takes from the balancing zone, where a network user's allocation equals its confirmed quantity, the transmission system operator shall not be obliged to provide information other than the confirmed quantity.

2. For intraday metered inputs to and off-takes from the balancing zone, where a network user's allocation does not equal its confirmed quantity, on gas day D the transmission system operator shall provide network users with a minimum of two updates of their measured flows for at least the aggregate intraday metered inputs and off-takes according to either of the following two options, as decided by the transmission system operator:

(a) each update covers gas flows from the beginning of this gas day D; or

(b) each update covers incremental gas flows after that reported in the previous update.

3. The first updates shall cover at least four hours of gas flow within gas day D. These updates shall be provided without undue delay and within four hours after the gas flow and no later than 17:00 UTC (winter time) or 16:00 UTC (daylight saving).

4. The time of the second update provision shall be defined upon approval by the national regulatory authority and published by the transmission system operator.

5. The transmission system operator may request the network users to indicate which of the information referred to in paragraph 2 they have access to. Based on the response received, this transmission system operator shall provide the network user with the part of information it does not have access to, in accordance with paragraphs 2 to 4.

6. Where the transmission system operator is not responsible for apportioning the gas quantities between network users as part of the allocation process, as an exception to paragraph 2, it shall provide at least information on aggregate inputs and off-takes at a minimum of two times per gas day D on that gas day D.

Article 35

Daily metered off-takes

1. Where the information model variant 1 is applied, on gas day D the transmission system operator shall provide network users with a minimum of two updates of their apportionment of measured flows for at least the aggregate daily metered off-takes according to either of the following two options, as decided by the transmission system operator:

- (a) each update covers gas flows from the beginning of this gas day D; or
- (b) each update covers incremental gas flows after that reported in the previous update.

2. Each update shall be provided within two hours from the end of the final hour of gas flows.

Article 36

Non- daily metered off-takes

1. Where the information model base case is applied:

- (a) on gas day D-1, the transmission system operator shall provide network users with a forecast of their non-daily metered off-takes for gas day D no later than 12:00 UTC (winter time) or 11:00 UTC (daylight saving);
- (b) on gas day D, the transmission system operator shall provide network users with a minimum of two updates of the forecast of their non- daily metered off-takes.

2. The first update shall be provided no later than 13:00 UTC (winter time) or 12:00 UTC (daylight saving).

3. The time of the second update provision shall be defined upon approval by the national regulatory authority and published by the transmission system operator. This shall take into consideration the following:

- (a) access to short term standardised products on a trading platform;
- (b) accuracy of the forecast of a network users non- daily off-takes as compared to the time of its provision;
- (c) time when the re-nomination period ends, as provided in Article 15(1);
- (d) time of the first update of the forecast for a network user's non- daily metered off-takes.

4. Where the information model variant 1 is applied, on gas day D, the transmission system operator shall provide network users with a minimum of two updates of their apportionment of measured flows for at least the aggregate non- daily metered off-takes as referred to in Article 35.

5. Where the information model variant 2 is applied, on gas day D-1, the transmission system operator shall provide network users with a forecast of their non- daily metered off-takes for gas day D as referred to in paragraph 1(a).

Article 37

Inputs and off-takes after the gas day

1. No later than the end of gas day D+1, the transmission system operator shall provide each network user with an initial allocation for its inputs and off-takes on day D and an initial daily imbalance quantity.

- (a) For the information models base case and variant 1, all gas delivered to the distribution system shall be allocated;
- (b) For the information model variant 2, the non- daily metered off-takes shall equal the forecast of a network user's non- daily metered off-takes provided day ahead;
- (c) For the information model variant 1, an initial allocation and an initial daily imbalance quantity shall be considered as the final allocation and the final daily imbalance quantity.
2. Where an interim measure referred to in Articles 47 to 51 applies, an initial allocation and an initial daily imbalance quantity can be provided within three gas days after gas day D in case it would not be technically or operationally feasible to comply with paragraph 1.
3. The transmission system operator shall provide each network user with the final allocation for its inputs and off-takes and the final daily imbalance quantity within a period of time defined under the applicable national rules.

Article 38

Cost benefit analysis

1. Within two years as from the **expiry of the deadline for transposition** of this Regulation, the transmission system operators shall assess the costs and benefits of:
- (a) increasing the frequency of information provision to network users;
- (b) reducing the related timelines of information provision;
- (c) improving the accuracy of the information provided.

This cost benefit analysis shall specify the breakdown of costs and benefits among the categories of affected parties.

2. The transmission system operator shall consult the stakeholders on this assessment, in cooperation with the distribution system operators where they are affected.
3. On the basis of the consultation results, the national regulatory authority shall decide on any relevant changes of information provision.

Article 39

Information obligations of distribution system operator(s) and forecasting party(-ies) towards the transmission system operator

1. Each distribution system operator associated to a balancing zone and each forecasting party shall provide the transmission system operator in the respective balancing zone with the information necessary for information provision to the network users under this Regulation. This shall include inputs and off-takes on the distribution system regardless whether that system is a part of the balancing zone or not.
2. The information, its format and the procedure for its provision shall be defined in cooperation between the transmission system operator, the distribution system operator and the forecasting party, as relevant, to ensure the due provision of information by the transmission system operator to the network users under

this Chapter and in particular the criteria set out in Article 33(1).

3. This information shall be provided to the transmission system operator in the same format as defined under the applicable national rules and shall be consistent with the format used by the transmission system operator to provide the information to the network users.

4. The national regulatory authority may ask the transmission system operator, the distribution system operator and the forecasting party, to propose an incentive mechanism regarding the provision of an accurate forecast for a network user's non-daily metered off-takes which shall meet the criteria set out for the transmission system operator in Article 11(4).

5. The national regulatory authority shall designate the forecasting party in a balancing zone after prior consultation with the transmission system operators and distribution system operators concerned. The forecasting party shall be responsible for forecasting a network user's non-daily metered off-takes and where appropriate its subsequent allocation. It may be a transmission system operator, distribution system operator or a third party.

Article 40

Information obligations of the distribution system operator(s) towards the transmission system operator

The distribution system operator shall provide the transmission system operator with information on the intraday and daily metered inputs and off-takes on the distribution system consistent with the information requirements set out in Articles 34(2) to (6), 35 and 37. This information shall be provided to the transmission system operator within the time sufficient for the transmission system operator to provide the information to network users.

Article 41

Information obligations of the distribution system operator(s) towards the forecasting party

1. Distribution system operators are responsible for providing the forecasting party with sufficient and updated information for the purpose of the methodology for the forecast of a network user's non-daily metered off-takes application as set out in Article 42(2). This information shall be provided in a timely manner in accordance with the timelines defined by the forecasting party to be consistent with its needs.

2. Paragraph 1 shall apply, *mutatis mutandis*, to variant 1.

Article 42

Information obligations of the forecasting party towards the transmission system operator

1. The forecasting party shall provide the transmission system operator with forecasts of network user's non-daily metered off-takes and subsequent allocations consistent with the information requirements set

out in Articles 36 and 37. This information shall be provided to the transmission system operator within the time sufficient for the transmission system operator to provide the information to network users and for day ahead and within day forecasts of a network user's non daily metered off-takes no later than one hour before the deadlines referred to in Article 36(1)(a) and (b), unless a later time sufficient for the transmission system operator to provide this information to the network users is agreed by the transmission system operator and the forecasting party.

2. The methodology for the forecast of a network user's non-daily metered off-takes shall be based on a statistical demand model, with each non- daily metered off-take assigned with a load profile, consisting of a formula of the variation in gas demand versus variables such as temperature, day of week, customer type and holiday seasons. The methodology shall be subject to consultation before its adoption.

3. A report on the accuracy of the forecast of a network user's non-daily metered off-takes shall be published by the forecasting party at least every two years.

4. Where relevant, transmission system operators shall provide the data regarding gas flows within the time sufficient for the forecasting party to comply with its obligations under this Article.

5. Paragraphs 2 to 4 shall, *mutatis mutandis*, apply to variant 1.

CHAPTER IX LINEPACK FLEXIBILITY SERVICE

Article 43

General provisions

1. A transmission system operator may offer the provision of a linepack flexibility service to network users after the approval of the related terms and conditions by the national regulatory authority.

2. The terms and conditions applicable to a linepack flexibility service shall be consistent with the responsibility of a network user to balance its inputs and off-takes over the gas day.

3. The linepack flexibility service shall be limited to the level of linepack flexibility available in the transmission network and deemed not required for carrying out its function of transmission according to the concerned transmission system operator's evaluation.

4. Gas delivered to and off-taken from the transmission network by network users under this service shall be taken into account for the purpose of calculation of their daily imbalance quantity.

5. The neutrality mechanism set out in Chapter VII shall not apply to the linepack flexibility service unless otherwise decided by the national regulatory authority.

6. Network users shall notify the transmission system operator concerned of the use of the linepack flexibility service by submitting nominations and re-nominations.

7. The transmission system operator may refrain from requiring the network users to submit nominations and re-nominations referred to in paragraph 6, where the absence of such a notification does not undermine the development of the short term wholesale gas market and the transmission system operator has sufficient information to provide an accurate allocation of the use of a linepack flexibility service the following gas day.

Article 44

Conditions for provision of linepack flexibility service

1. Linepack flexibility service can only be provided once all the following criteria are met:
 - (a) the transmission system operator shall not need to enter into any contracts with any other infrastructure provider, such as storage system operator or LNG system operator, for the purpose of provision of a linepack flexibility service;
 - (b) the revenues generated by the transmission system operator from the provision of a linepack flexibility service shall at least be equal to the costs incurred or to be incurred in providing this service;
 - (c) the linepack flexibility service shall be offered on a transparent and non-discriminatory basis and can be offered using competitive mechanisms;
 - (d) the transmission system operator shall not charge, either directly or indirectly, a network user for any costs incurred by the provision of a linepack flexibility service, should this network user not contract for it; and
 - (e) the provision of a linepack flexibility service shall not have a detrimental impact on cross-border trade.
2. The transmission system operator shall prioritise the reduction of within day obligations over the provision of a linepack flexibility service.

CHAPTER X INTERIM MEASURES

Article 45

Interim measures: general provisions

1. In the absence of sufficient liquidity of the short-term wholesale gas market, suitable interim measures referred to in Articles 47 to 50 shall be implemented by the transmission system operators. Balancing actions undertaken by the transmission system operator in case of interim measures shall foster the liquidity of the short-term wholesale gas market to the extent possible.
2. The resort to an interim measure is without prejudice to the implementation of any other interim measure(s) as an alternative or additionally, provided that such measures aim at promoting competition and liquidity of the short-term wholesale gas market and are consistent with the general principles set out in this Regulation.
3. The interim measures referred to in paragraph 1 and 2 shall be developed and implemented by each transmission system operator, in accordance with the report, referred to in Article 46(1), approved by the national regulatory authority in accordance with the procedure set out in Article 46.
4. The report shall foresee the termination of the interim measures no later than five years as from the **expiry of the deadline for transposition** of this Regulation.

Article 46

Interim measures: annual report

1. Where the transmission system operator foresees implementing or continuing to implement interim measures, it shall prepare a report which shall specify:
 - (a) a description of the state of development and the liquidity of the short term wholesale gas market at the time of preparing the report, including, where available to the transmission system operator, *inter alia*:
 - (i) the number of transactions concluded at the virtual trading point and the number of transactions in general;
 - (ii) the bid/offer spreads and the volumes of bids and offers;
 - (iii) the number of participants having access to the short term wholesale gas market;
 - (iv) the number of participants having been active on the short term wholesale gas market during a given period of time;
 - (b) the interim measures to be applied
 - (c) the reasons for the application of the interim measures:
 - (i) an explanation why they are needed due to the state of development of the short term wholesale gas market referred to in point (b);
 - (ii) an assessment of how they will increase the liquidity of the short term wholesale gas market.
 - (d) an identification of the steps that will be taken to remove the interim measures, including the criteria for making these steps and an assessment of the related timing.
2. The transmission system operator shall consult stakeholders on the proposed report.
3. Following the consultation process, the transmission system operator shall submit the report to the national regulatory authority for the approval. The first report shall be submitted within six months as from the **expiry of the deadline for transposition** of this Regulation and the subsequent reports updating it <...> shall be submitted annually.
4. The national regulatory authority shall take and publish a motivated decision within six months following the receipt of the complete report. Such a decision shall be notified, without delay, to the **Energy Community Regulatory Board and the Energy Community Secretariat**. In deciding whether to approve the report, the national regulatory authority shall assess its effect on balancing regimes' harmonisation, facilitation of market integration, ensuring non-discrimination, effective competition and the efficient functioning of the gas market.
5. The procedure as set out in Article 27(2) applies.

Article 47

Balancing platform

1. Where the short term wholesale gas market has or is anticipated to have insufficient liquidity or where temporal products and locational products required by the transmission system operator cannot reason-

ably be procured on this market, a balancing platform shall be established for the purpose of transmission system operator balancing.

2. The transmission system operators shall consider whether a joint balancing platform may be implemented for adjacent balancing zones in the framework of cooperation between the transmission system operators or where there is sufficient interconnection capacity and such joint balancing platform is deemed efficient to be implemented. If a joint balancing platform is established, it shall be operated by the transmission system operators concerned.

3. In case the situation described under paragraph 1 has not fundamentally changed after five years the national regulatory authority may, without prejudice to Article 45(4) and after submitting the appropriate amendment of the report, decide to continue the operation of the balancing platform for another period of no more than five years.

Article 48

Alternative to a balancing platform

Where the transmission system operator can demonstrate that as a result of insufficient interconnection capacity between balancing zones a balancing platform cannot increase the liquidity of the short term wholesale gas market and cannot enable the transmission system operator to undertake efficient balancing actions, it may use an alternative, such as balancing services, subject to the approval by the national regulatory authority. Where such an alternative is used, the terms and conditions of the subsequent contractual arrangements as well as the applicable prices and duration shall be specified

Article 49

Interim imbalance charge

1. Where interim measures referred to in Article 45 are necessary, the price derivation may be calculated in accordance with the report referred to in Article 46 which shall substitute the daily imbalance charge calculation methodology.

2. In that case, the price derivation may be based upon an administered price, a proxy for a market price or a price derived from balancing platform trades.

3. The proxy for a market price shall seek to satisfy the conditions provided for in Article 22(6). The design of this proxy shall consider the potential risk for market manipulation.

Article 50

Tolerance

1. Tolerances may only be applied in case network users do not have access:

- (a) to a short term wholesale gas market that has sufficient liquidity;
- (b) to gas required to meet short term fluctuations in gas demand or supply; or

(c) to sufficient information regarding their inputs and off-takes.

2. Tolerances shall be applied:

(a) with regard to network users' daily imbalance quantity;

(b) on a transparent and non-discriminatory basis;

(c) only to the extent necessary and for the minimum duration required.

3. The application of tolerances may reduce a network user's financial exposure to the marginal sell price or the marginal buy price in respect of a part of or the network user's entire daily imbalance quantity for the gas day.

4. The tolerance level shall be the maximum quantity of gas to be bought or sold by each network user at a weighted average price. If there is a remaining quantity of gas that constitutes each network user's daily imbalance quantity which exceeds the tolerance level, it shall be sold or bought at marginal sell price or marginal buy price.

5. The design of the tolerance level shall:

(a) reflect the transmission network's flexibility and network user's needs;

(b) reflect the level of risk to the network user in managing the balance of its inputs and off-takes;

(c) not undermine the development of the short term wholesale gas market;

(d) not result in an unduly excessive increase of the transmission system operator's balancing actions' costs.

6. The tolerance level shall be calculated on the basis of each network user's inputs and off-takes, excluding trades at the virtual trading point, for each gas day. The subcategories shall be defined under the applicable national rules.

7. The tolerance level applicable for a non- daily metered off-take defined under the applicable national rules shall be based upon the difference between the relevant forecast of a network user's non- daily metered off-takes and the allocation for non- daily metered off-take.

8. The tolerance level may include a component calculated taking into account the application of the deviation of the forecast of a network user's non- daily metered off-takes which is the amount by which the relevant forecast:

(a) exceeds the allocation for non- daily metered off-take in case the daily imbalance quantity is positive;

(b) is less than the allocation for non- daily metered off-take in case the daily imbalance quantity is negative.

CHAPTER XI FINAL AND TRANSITIONAL PROVISIONS

Article 51

Release of surplus transmission system operator's flexibility

1. Where long- term contracts for the procurement of flexibility in force at the date of **expiry of the deadline for transposition** of this Regulation provide the transmission system operator with a right to off-take or input specified volumes of gas, the transmission system operator shall aim to reduce these amounts of flexibility.

2. While determining the amount of surplus flexibility available for input or off-take under a long- term contract in force, the transmission system operator shall take into account the use of the short- term standardised products.
3. The surplus flexibility may be released either:
 - (a) pursuant to the terms and conditions of the existing contract where it contains provisions permitting to reduce the gas quantity committed and/or to terminate the existing contract; or
 - (b) as follows in the absence of such contractual rights:
 - (i) the contract remains in force until its termination pursuant to the applicable terms and conditions;
 - (ii) the contracting parties shall consider additional arrangements in order to release back to the market any surplus gas not required for balancing purposes to give access to the other network users to greater amounts of flexibility.
4. Where the contract in force provides for reducing the flexibility by amounts consistent with the surplus availability, the transmission system operator shall reduce such flexibility as soon as reasonably possible as from the **expiry of the deadline for transposition** of this Regulation or as soon as the existence of the surplus can be established.
5. The transmission system operator shall consult stakeholders on specific proposals to be implemented as interim measures for release of any surplus flexibility under a long- term contract in force.
6. The transmission system operator shall publish information on its balancing actions undertaken pursuant to the long- term contract in force.
7. The national regulatory authority may set targets for the proportion by which the long- term contracts should be reduced in order to increase the liquidity of the short term wholesale gas market.

Article 52

Transitional provisions

1. The national regulatory authority may allow the transmission system operator, based on its justified request, to comply with the provisions of this Regulation within a twenty four-month period as from **12 December 2020**, provided no interim measure referred to in Chapter X is implemented by the transmission system operator. In case the national regulatory authority makes use of this possibility, this Regulation shall not apply in the balancing zone of that transmission system operator to the extent and for the duration of the transitional period laid down in the decision of the national regulatory authority.
2. The national regulatory authority shall take and publish a motivated decision in accordance with paragraph 1 within three months following the receipt of such a request. Such a decision shall be notified, without delay, to the **Energy Community Regulatory Board and the Energy Community Secretariat**.

Article 53

Entry into force

<...>¹

¹ Replaced by deadlines set by PHLG Decision 2019/01/PHLG-EnC.



REGULATION (EU) 703/2015 of 30 April 2015 establishing a network code on interoperability and data exchange rules

Incorporated and adapted by Permanent High Level Group Decision 2018/02/PHLG-EnC of 12 January 2018

*The adaptations made by Permanent High Level Group Decision 2018/02/PHLG-EnC are highlighted in **bold and blue**.*

CHAPTER I GENERAL PROVISIONS

Article 1

Subject matter and scope

1. This Regulation establishes a network code which sets out rules regarding interoperability and data exchange as well as harmonised rules for the operation of gas transmission systems.
2. This Regulation shall apply at interconnection points **between the Contracting Parties to the Energy Community. The application at interconnection points within a Party is subject to the decision of the relevant national regulatory authority.** With regard to data publication, Article 13 shall apply to relevant points defined in paragraph 3.2 of Annex I to Regulation (EC) No 715/2009. In addition to interconnection points, Article 17 shall apply to other points on transmission network where the gas quality is measured. Article 18 shall apply to transmission systems. This Regulation may also apply at entry points from and exit points to third countries, subject to the decision of the national authorities.
3. <...>

Article 2

Definitions

For the purposes of this Regulation, the definitions in Article 2 of Regulation (EC) No 715/2009 ... as well as in Article 2 of Directive 2009/73/EC shall apply. In addition, the following definitions shall apply:

- (a) 'exceptional event' means any unplanned event that is not reasonably controllable or preventable and that may cause, for a limited period, capacity reductions, affecting thereby the quantity or quality of gas at a given interconnection point, with possible consequences on interactions between transmission system operators as well as between transmission system operator and network users;
- (b) 'initiating transmission system operator' means the transmission system operator initiating the matching process by sending the necessary data to the matching transmission system operator;
- (c) 'lesser rule' means that, in case of different processed quantities at either side of an interconnection point, the confirmed quantity will be equal to the lower of the two processed quantities.
- (d) 'matching process' is the process of comparing and aligning processed quantities of gas for network

users at both sides of a specific interconnection point, which results in confirmed quantities for the network users;

(e) 'matching transmission system operator' means the transmission system operator performing the matching process and sending the result of the matching process to the initiating transmission system operator;

(f) 'measured quantity' means the quantity of gas that, according to the measurement equipment from the transmission system operator, has physically flowed across an interconnection point per time period;

(g) 'operational balancing account' means an account between adjacent transmission system operators, to be used to manage steering differences at an interconnection point in order to simplify gas accounting for network users involved at the interconnection point;

(h) 'processed quantity' means the quantity of gas determined by the initiating transmission system operator and by the matching transmission system operator, which takes into account the network user's nomination or re-nomination and contractual provisions as defined under the relevant transport contract and which is used as the basis for the matching process;

(i) 'steering difference' means the difference between the quantity of gas that the transmission system operators had scheduled to flow and the measured quantity for an interconnection point.

(j) 'gas day' means the period from 5:00 to 5:00 UTC the following day for winter time and from 4:00 to 4:00 UTC the following day when daylight saving is applied;

(k) 'interconnection agreement' means an agreement entered into by adjacent transmission system operators, whose systems are connected at a particular interconnection point, which specifies terms and conditions, operating procedures and provisions, in respect of delivery and/or withdrawal of gas at the interconnection point with the purpose of facilitating efficient interoperability of the interconnected transmission networks;

(l) 'interconnection point' means a physical or virtual point connecting adjacent entry-exit systems or connecting an entry-exit system with an interconnector, in so far as these points are subject to booking procedures by network users;

(m) 'virtual interconnection point' means two or more interconnection points which connect the same two adjacent entry-exit systems, integrated together for the purposes of providing a single capacity service;

(n) 'confirmed quantity' means the quantity of gas confirmed by a transmission system operator to be scheduled or re-scheduled to flow on gas day D;

(o) 'allocation' means the quantity of gas attributed to a network user by a transmission system operator as an input or an off-take expressed in kWh for the purpose of determining the daily imbalance quantity;

(p) 're-nomination cycle' means the process carried out by the transmission system operator in order to provide a network user with the message regarding the confirmed quantities following the receipt of a re-nomination.

CHAPTER II

INTERCONNECTION AGREEMENTS

Article 3

General Provisions

Adjacent transmission system operators shall ensure that at least the following terms and conditions detailed in Articles 6 to 12 are covered by **any future and existing** interconnection agreement in respect of each interconnection point:

- (a) rules for flow control;
- (b) measurement principles for gas quantities and quality;
- (c) rules for the matching process;
- (d) rules for the allocation of gas quantities;
- (e) communication procedures in case of exceptional events;
- (f) settlement of disputes arising from interconnection agreements;
- (g) amendment process for the interconnection agreement.

Article 4

Information obligation

1. The transmission system operators shall identify the information contained in interconnection agreements that directly affects network users and shall inform them thereof.
2. Before concluding or amending an interconnection agreement which contains the rules referred to in Article 3(c), (d) and (e), transmission system operators shall invite network users to comment on the proposed text of those rules at least two months before the agreement is concluded or amended. The transmission system operators shall take the network users' comments into account when concluding or amending their interconnection agreement.
3. The mandatory terms of interconnection agreements listed in Article 3 or any amendments thereof concluded after the entry into force of this Regulation shall be communicated by the transmission system operators to their national regulatory authority and to Entso-g within 10 days after conclusion or amendment of the agreement. Transmission system operators shall also communicate interconnection agreements upon request of competent national authorities of the Contracting Party within 10 days.

Article 5

Interconnection agreement template

1. <...>
2. <...>

3. If adjacent transmission system operators fail to agree on one or more of the terms and conditions set out in Articles 6 to 10 in their interconnection agreement in accordance with Article 3, they shall conclude an interconnection agreement on the basis of the Entso-g template in respect of any term they failed to agree upon.

Article 6

Rules for flow control

1. In respect of flow control, the adjacent transmission system operators shall:

- (a) ensure that rules are established in order to facilitate a controllable, accurate, predictable and efficient gas flow across the interconnection point;
- (b) ensure that rules are established for steering the gas flow across the interconnection point and for minimising the deviations from the flow pursuant to the matching process;
- (c) designate the transmission system operator who is responsible for steering the gas flow across the interconnection point. If the adjacent transmission system operators fail to agree on this designation, the transmission system operator that operates the flow control equipment shall, in cooperation with the other transmission system operator(s), be responsible for steering the gas flow across the interconnection point.

2. In order to steer the gas flow, the adjacent transmission system operators shall decide on the quantity and direction of the gas flow for each interconnection point and for each hour of the gas day.

The transmission system operator designated pursuant to point (c) of paragraph 1 shall be responsible for steering the gas flow across the interconnection point provided that contractual obligations regarding pressure are complied with by all adjacent transmission system operators:

- (a) at a level of accuracy sufficient to minimise the steering difference; and
- (b) at a level of stability in line with the efficient use of the gas transmission networks.

3. The quantity and direction of the gas flow decided by the adjacent transmission system operators shall reflect:

- (a) the result of the matching process;
- (b) the operational balancing account correction;
- (c) any efficient flow control arrangements between the adjacent transmission system operators for purposes such as ramp-up, ramp-down, minimum flow, split of the flow at the virtual interconnection point if any, and/or switch of flow direction or operational cost efficiency;
- (d) any arrangement managing cross-border trade restrictions due to gas quality differences pursuant to Article 15 and/or odourisation practices pursuant to Article 19.

4. A transmission system operator may decide to alter the quantity of gas or the gas flow direction or both, if this is needed, in order to:

- (a) comply with provisions laid down in national or Union safety legislation applicable to the interconnection point;
- (b) comply with requirements laid down in Emergency Plans and Preventive Action Plans developed in accordance with **applicable Energy Community legislation on security of gas supply**;
- (c) react in case the operator's system is affected by an exceptional event.

Article 7

Measurement principles for gas quantity and quality

1. In respect of the measurement principles for volume, energy and gas quality, the adjacent transmission system operators shall ensure that:

(a) the details of the measurement standards applicable at the interconnection point are established;

(b) the transmission system operator responsible for the installation, operation and maintenance of the measurement equipment is identified. This operator shall have the obligation to make all information and data in respect of the measurement of gas flows at the interconnection point available to the other adjacent transmission system operator(s) in a timely manner and at a frequency specified.

2. The installation, operation and maintenance of measurement equipment at an interconnection point shall take into account the technical requirements imposed by national regulations on the adjacent transmission system operators.

3. The adjacent transmission system operators shall agree on measurement principles which shall at least include:

(a) a description of the metering station including measurement and analysis equipment to be used and details of any secondary equipment that may be used in case of failure;

(b) the gas quality parameters and volume and energy that shall be measured, as well as the range and the maximum permissible error or uncertainty margin within which the measurement equipment shall operate, the frequency of measurements, in what units and according to what standards the measurement shall be made as well as any conversion factors used;

(c) the procedures and methods that shall be used to calculate those parameters which are not directly measured;

(d) a description of the method of calculation in respect of the maximum permissible error or uncertainty in the determination of energy transported;

(e) a description of the data validation process in use for the measured parameters;

(f) the measurement validation and quality assurance arrangements, including verification and adjustment procedures to be agreed between the adjacent transmission system operators;

(g) the way data, including frequency and content, is provided among the adjacent transmission system operators in respect of the measured parameters;

(h) the specific list of signals and alarms to be provided by the adjacent transmission system operator(s) who operate(s) the measurement equipment to the other adjacent transmission system operator(s);

(i) the method of determining a correction to a measurement and any subsequent procedures that may be necessary in a temporary situation where the measurement equipment is found to be or have been in error (either under-reading or over-reading outside of its defined uncertainty range). This transmission system operator shall take appropriate action to end this situation.

(j) rules that shall apply between adjacent transmission system operators in the event of failure of the measurement equipment;

(k) rules that shall apply between the adjacent transmission system operators for:

(i) access to the measurement facility;

- (ii) additional verifications of measurement facility;
 - (iii) modification of the measurement facility; (iv) attendance during calibration and maintenance work at the measurement facility.
4. If the adjacent transmission system operators fail to comply with their obligations provided for in paragraphs 1 and 3:
- (a) the transmission system operator in control of the measurement equipment shall be responsible for the installation, operation and maintenance of such equipment and for providing the other transmission system operator with the data regarding the measurement of gas flows at the interconnection point in a timely manner;
 - (b) the European standard EN1776 'Gas Supply Natural Gas Measuring Stations Functional Requirements' in the version applicable at the time shall apply.

Article 8

Rules for the matching process

1. In respect of the matching process, the adjacent transmission system operators shall establish:
- (a) the rules detailing the matching process taking into account daily-hourly nomination arrangements where relevant;
 - (b) the rules governing the communication and processing of the relevant data among the adjacent transmission system operators in order to calculate the processed quantities and confirmed quantities of gas for network users and the quantity of gas that needs to be scheduled to flow at the interconnection point(s).
2. Nominations and re-nominations shall be managed in accordance with the following:
- (a) the application of a matching rule shall lead to identical confirmed quantities for each pair of network users at both sides of the interconnection point when processed quantities are not aligned;
 - (b) the adjacent transmission system operators may agree to maintain or implement a matching rule other than the lesser rule, provided that this rule is published and network users are invited to comment on the proposed matching rule within a period of time of not less than two months after publication of the matching rule;
 - (c) the adjacent transmission system operators shall specify their respective roles in the matching process by indicating whether they are the initiating or the matching transmission system operator;
 - (d) the adjacent transmission system operators shall specify the applicable time schedule for the matching process within the nomination or re-nomination cycle, given that the whole matching process shall not take more than two hours from the starting of the nomination or re-nomination cycle, and shall take into account:
 - (i) the data that needs to be exchanged between the adjacent transmission system operators in order to enable them to inform network users of their confirmed quantities before the end of the nomination or re-nomination cycle, including as a minimum the data referred to in paragraph 4(b);
 - (ii) the data exchange process defined in point (i) above shall enable the adjacent transmission system operators to perform all calculation and communication steps in an accurate and timely manner.

3. When processing nominations for an interconnection point, the adjacent transmission system operators shall ensure that the gas flow at both sides of the interconnection point is calculated on a consistent basis taking into account any temporary reduction of capacity due to any of the conditions referred to in Article 6(4) on one or both sides of the interconnection point.

4. Each interconnection agreement shall specify in its provisions on data exchange for the matching process:

(a) the use of data exchange between the adjacent transmission system operators for the matching process;
 (b) the harmonised information contained within the data exchange for the matching process which shall contain at least the following:

- (i) interconnection point identification;
- (ii) network user identification or if applicable its portfolio identification;
- (iii) identification of the party delivering to or receiving gas from the network user or if applicable its portfolio identification;
- (iv) start and end time of the gas flow for which the matching is made;
- (v) gas day;
- (vi) processed and confirmed quantities;
- (vii) direction of gas flow.

5. Unless otherwise agreed by the adjacent transmission system operators in their interconnection agreement, the following shall apply:

(a) the transmission system operators shall use the lesser rule. The application of the lesser rule as the default rule may only be restricted in case the conditions of point 2.2.3.1 of Annex I of Regulation (EC) No 715/2009 are fulfilled and its application would prevent the offer of firm capacity from the congestion management procedures;

(b) the transmission system operator in control of the flow control equipment shall be the matching transmission system operator;

(c) the transmission system operators shall perform the matching process in the following sequential steps:

- (i) calculating and sending of processed quantities of gas by the initiating transmission system operator within 45 minutes of the start of the nomination or re-nomination cycle;
- (ii) calculating and sending of confirmed quantities of gas by the matching transmission system operator within 90 minutes from the start of the nomination or re-nomination cycle;
- (iii) sending confirmed quantities of gas to network users and scheduling the gas flow across the interconnection point by the adjacent transmission system operators within two hours from the start of the nomination or re-nomination cycle. These sequential steps shall be without prejudice to the <...> minimum interruption lead times <...> **decided jointly by adjacent transmission system operators** and paragraph 2 (d) of this Article.

The default minimum interruption lead time for a given gas hour shall be forty five minutes after the start of the re-nomination cycle for that gas hour. Where two transmission system operators wish to shorten the lead time for interruptions, any related agreement entered into between the transmission system operators shall be subject to competent national regulatory authority approval.

Article 9

Rules for the allocation of gas quantities

1. In respect of the allocation of gas quantities, the adjacent transmission system operators shall establish rules ensuring consistency between the allocated quantities at both sides of the interconnection point.
2. Unless otherwise agreed in the interconnection agreement, the transmission system operators shall use an operational balancing account. The transmission system operator in control of the measurement equipment shall recalculate the operational balancing account with validated quantities and communicate it to the adjacent transmission system operator(s).
3. Where an operational balancing account applies:
 - (a) the steering difference shall be allocated to an operational balancing account of the adjacent transmission system operators and the allocations to be provided by each adjacent transmission system operator to their respective network users shall be equal to the confirmed quantities;
 - (b) the adjacent transmission system operators shall maintain an operational balancing account balance that is as close to zero as possible; (c) the operational balancing account limits shall take into account specific characteristics of each interconnection point and/or the interconnected transmission networks, in particular:
 - (i) physical characteristics of the interconnection point;
 - (ii) linepack capability of each transmission network;
 - (iii) the total technical capacities at the interconnection point;
 - (iv) gas flow dynamics at the interconnected transmission networks.

Where the defined limits of the operational balancing account are reached, the adjacent transmission system operators may agree to extend those limits in order to provide allocations to network users that are equal to their confirmed quantities or otherwise allocate quantities to network users proportionally based on the measured quantity.

4. The adjacent transmission system operators may agree to maintain or implement an allocation rule other than the operational balancing account, provided that this rule is published and network users are invited to comment on the proposed allocation rule within at least two months after publication of the allocation rule.

Article 10

Communication procedures in case of exceptional events

1. The adjacent transmission system operators shall ensure that communication procedures which facilitate fast and simultaneous communication in cases of exceptional events are established. Unless otherwise agreed, the communication between the involved transmission system operators shall be performed by oral communication in English for information, followed by an electronic written confirmation.
2. The transmission system operator affected by an exceptional event shall be required, as a minimum, to inform its network users with respect to point (b) and (c) of this paragraph if there is a potential impact on their confirmed quantities and the adjacent transmission system operator(s) with respect to point (a) and (c) of this paragraph of the occurrence of such exceptional event and to provide all necessary information

about:

- (a) the possible impact on the quantities and quality of gas that can be transported through the interconnection point;
- (b) the possible impact on the confirmed quantities for network users active at the concerned interconnection point(s);
- (c) the expected and actual end of the exceptional event.

3. <...>

Article 11

Settlement of disputes arising from Interconnection Agreements

1. The adjacent transmission system operators shall endeavour to solve amicably any disputes arising out of or in connection with the interconnection agreement and specify therein a dispute settlement mechanism for disputes which could not be amicably settled. The dispute settlement mechanism shall at least specify:

- (a) the applicable law; and
- (b) the court of jurisdiction or the terms and conditions of the appointment of experts either within the framework of an institutional forum or on an ad hoc basis, which may include arbitration.

<...>

2. <...>

Article 12

Amendment process

1. The adjacent transmission system operators shall establish a transparent and detailed amendment process of their interconnection agreement to be triggered by a written notice of one of the transmission system operators.

2. If the adjacent transmission system operators fail to reach an agreement on the amendment process, they may use the dispute settlement mechanisms developed in accordance with Article 11.

CHAPTER III UNITS

Article 13

Common set of units

1. Each transmission system operator shall use the common set of units defined in this Article for any data exchange and data publication related to Regulation (EC) No 715/2009.

2. For the parameters of pressure, temperature, volume, gross calorific value, energy, and Wobbe-index the transmission system operators shall use:

(a) pressure: bar

(b) temperature: °C (degree Celsius)

(c) volume: m³

(d) gross calorific value (GCV): kWh/m³

(e) energy: kWh (based on GCV)

(f) Wobbe-index: kWh/m³ (based on GCV)

For pressure, the transmission system operators shall indicate whether it refers to absolute pressure (bar (a)) or gauge pressure (bar (g)).

The reference conditions for volume shall be 0 °C and 1,01325 bar(a). For GCV, energy and Wobbe-index the default combustion reference temperature shall be 25 °C.

Whenever transmission system operators communicate data on the volume, GCV, energy and Wobbe-index, they shall specify under which reference conditions these values were calculated.

3. In cases where one **Contracting Party** is connected to only one other **Contracting Party** or one **Member State of the European Union**, the adjacent transmission system operators and the parties they communicate with may agree to continue to use other reference conditions for data exchange in connection with Regulation (EC) No 715/2009, subject to the approval of their national regulatory authorities.

Article 14

Additional units

The transmission system operators and the parties they communicate with in connection with Regulation (EC) No 715/2009 may agree to use, in addition to the common set of units, additional units or reference conditions for data exchange or data publication. In such a situation conversion between reference conditions shall be done on the basis of the actual gas composition. If the relevant gas composition data is not available, the conversion factors used shall be consistent with the Annex based on EN ISO 13443 'Natural gas - Standard reference conditions' in the version applicable at the time.

CHAPTER IV

GAS QUALITY AND ODOURISATION

Article 15

Managing cross-border trade restrictions due to gas quality differences

1. Transmission system operators shall cooperate to avoid restrictions to cross-border trade due to gas quality differences. These actions, initiated and carried out by the transmission system operators in their standard operations, may include, among others, swapping and co-mingling.

2. Where a restriction to cross-border trade due to gas quality differences cannot be avoided by the concerned transmission system operators and is recognised by the national regulatory authorities, those authorities may require the transmission system operators to perform, within 12 months, the actions referred to in points (a) to (e) in sequence:

(a) cooperate and develop technically feasible options, without changing the gas quality specifications, which may include flow commitments and gas treatment, in order to remove the recognised restriction;

(b) jointly carry out a cost benefit analysis on the technically feasible options to define economically efficient solutions which shall specify the breakdown of costs and benefits among the categories of affected parties;

(c) produce an estimate of the implementation time for each potential option;

(d) conduct a public consultation on identified feasible solutions and take into consideration the results of the consultation;

(e) submit a joint proposal for removing the recognised restriction, including the timeframe for implementation, based on the cost benefit analysis and results of the public consultation to their respective national regulatory authorities for approval and to the other competent national authorities of each involved Contracting Party for information.

Where the concerned transmission system operators do not reach an agreement on a solution, each transmission system operator shall promptly inform its national regulatory authority.

3. Before adopting a decision pursuant to point (e) of paragraph 2, each national regulatory authority shall consult the national regulatory authorities of the concerned Contracting Parties. In adopting its decision, each national regulatory authority shall take account of the adjacent national regulatory authorities' opinion with a view to have a coordinated decision based on mutual agreement.

Article 16

Short term monitoring on gas quality - data publication

Transmission system operators shall publish on their website for each interconnection point, with a frequency of at least once per hour during the gas day, the Wobbe-index and gross calorific value for gas directly entering their transmission networks at all physical interconnection points.

Exceptionally, for the interconnection points without adequate measurement equipment in place at the moment of adoption of this Regulation, a frequency of publishing the Wob-

be-index and gross calorific value shall be once per gas day. In such cases, the transmission system operator is obliged to submit a request for exemption without delay to the relevant regulatory authority. A request for exemption has to include a proposal on installing adequate measurement equipment with exact deadline of putting such equipment in operation, which cannot be longer than 2 years. An exemption has to be confirmed by the regulatory authorities having the jurisdiction over adjacent transmission system operators.

Entsog shall publish on its <...> central platform established pursuant to point 3.1.1(1)(h) of Annex I of Regulation (EC) No 715/2009 a link to the relevant information on the websites of the transmission system operators.

Article 17

Information provision on short-term gas quality variation

1. In addition to interconnection points, this Article shall apply to other points on transmission networks where the gas quality is measured.

2. A transmission system operator may select one or several of the following parties to receive information on gas quality variation:

(a) final customers directly connected to the transmission system operator's network, whose operational processes are adversely affected by gas quality changes or a network user acting on behalf of a final customer whose operational processes are adversely affected by gas quality changes, where a direct contractual arrangement between a transmission system operator and its directly connected final customers is not foreseen by the national rules;

(b) distribution system operators directly connected to the transmission system operator's network, with connected final customers whose operational processes are adversely affected by gas quality changes;

(c) storage system operators directly connected to the transmission system operator's network, whose operational processes are adversely affected by gas quality changes.

3. Each transmission system operator shall:

(a) define and maintain a list of parties entitled to receive indicative gas quality information;

(b) cooperate with the parties identified in the above list in order to assess:

(i) the relevant information on gas quality parameters to be provided;

(ii) the frequency for the information to be provided;

(iii) the lead time;

(iv) the method of communication.

4. Paragraph 3 shall not impose an obligation on transmission system operators to install additional measurement or forecasting equipment, unless otherwise required by the national regulatory authority. The information under paragraph 3(b)(i) of this Article shall be provided as the transmission system operator's best estimate at a point in time and for the internal use of the recipient of the information.

Article 18**Long-term monitoring on gas quality in transmission systems**

1. Entso-g shall publish every two years a long-term gas quality monitoring outlook for transmission systems in order to identify the potential trends of gas quality parameters and respective potential variability within the next 10 years. The first long-term gas quality monitoring outlook shall be published along with the Ten-Year Network Development Plan of 2017.
2. The outlook shall be based on the inputs gathered in the framework of the regional cooperation established within Entso-g in accordance with Article 12(1) of Regulation (EC) No 715/2009.
3. The long-term gas quality monitoring outlook shall cover at least the Wobbe-index and gross calorific value. Additional gas quality parameters may be included after consultation with the stakeholders referred to in paragraph 8.
4. The long-term gas quality monitoring outlook shall identify potential new supply sources from a gas quality perspective.
5. In order to define the reference values of gas quality parameters for the respective supply sources to be used in the outlook, an analysis of the previous years shall be carried out. Such data may be replaced by stakeholders' inputs which result from the stakeholders' engagement process referred to in paragraph 8.
6. For every gas quality parameter considered and every region, the analysis shall result in a range within which the parameter is likely to evolve.
7. The long-term gas quality monitoring outlook shall be consistent and aligned with the Entso-g Union-wide Ten-Year Network Development Plan under preparation at the same time.
8. The stakeholders' consultation process used for the Union-wide Ten-Year Network Development Plan shall be expanded to include gas quality as an item. Through this process, stakeholders shall be invited to provide Entso-g with their views on the evolution of gas quality parameters of supplies.

Article 19**Managing cross-border trade restrictions due to differences in odourisation practices**

1. Where a restriction to cross-border trade due to differences in odourisation practices cannot be avoided by the concerned transmission system operators and is recognised by national authorities, the authorities may require the concerned transmission system operators to reach an agreement within six months, which may include swapping and flow commitments, to solve any restriction recognised. The concerned adjacent transmission system operators shall provide their respective national authorities with the agreement for approval.
2. Where no agreement can be reached between the concerned transmission system operators after the six-month period referred to in paragraph 1 or where the national authorities agree that the proposed agreement by the concerned adjacent transmission system operators is not sufficiently effective to remove the restriction, the concerned transmission system operators, in cooperation with national authorities, shall, within the following 12 months, define a detailed plan setting out the most cost effective method to remove a recognised restriction at the specific cross-border interconnection point.

3. For the purpose of fulfilling the obligations under paragraph 2, the concerned transmission system operators shall in sequence:

- (a) develop options to remove the restriction by identifying and assessing:
 - (i) a conversion towards cross-border physical flow of non-odourised gas;
 - (ii) the potential physical flow of odourised gas into the non-odourised transmission network or part thereof and interconnected downstream systems;
 - (iii) an acceptable level of odourant for cross-border physical gas flow.
- (b) jointly carry out a cost-benefit analysis on the technically feasible options to define economically efficient solutions. That analysis shall:
 - (i) take into account the level of safety;
 - (ii) include information on projected volumes of gas to be transported and details of costs of necessary infrastructure investments;
 - (iii) specify the breakdown of costs and benefits between the categories of affected parties;
- (c) produce an estimate of the implementation time for each potential option;
- (d) conduct a public consultation and take into consideration the results of such consultation;
- (e) submit the feasible solutions including the cost recovery mechanism and implementation timing to the national authorities for approval.

Once a solution is approved by the national authorities, that solution shall be implemented in accordance with the timeframe provided for in point (e).

4. If the national authorities do not approve any solution submitted under point (e) of paragraph 3 within six months from its submission or if the concerned transmission system operators fail to propose a solution within the 12 months' framework of paragraph 2, a shift towards the cross-border physical flow of non-odourised gas shall be implemented within a time-frame approved by the national authorities, but not exceeding four years. After a full technical shift towards non-odourised gas, transmission system operators shall accept technically unavoidable levels of successively reducing residual amounts of odourants in cross-border flows.

CHAPTER V DATA EXCHANGE

Article 20

General provisions

1. For the purposes of this Chapter, 'counterparties' means network users active at:
 - (a) interconnection points; or
 - (b) both interconnection points and virtual trading points.
2. The data exchange requirements foreseen by point 2.2 of Annex I to Regulation (EC) No 715/2009 <...> and this Regulation between transmission system operators and from transmission system operators to their counterparties shall be fulfilled by common data exchange solutions set out in Article 21.

Article 21

Common data exchange solutions

1. Depending on the data exchange requirements under Article 20(2), one or more of the following types of data exchange may be implemented and used:
 - (a) document-based data exchange: the data is wrapped into a file and automatically exchanged between the respective IT systems;
 - (b) integrated data exchange: the data is exchanged between two applications directly on the respective IT systems;
 - (c) interactive data exchange: the data is exchanged interactively through a web application via a browser.
 2. The common data exchange solutions shall comprise the protocol, the data format and the network. The following common data exchange solutions shall be used for each of the types of data exchange listed in paragraph 1:
 - (a) For the document-based data exchange:
 - (i) protocol: AS4;
 - (ii) data format: Edig@s-XML, or an equivalent data format ensuring identical degree of interoperability, **as published by** Entso-g.
 - (b) For the integrated data exchange:
 - (i) protocol: HTTP/S-SOAP;
 - (ii) data format: Edig@s-XML, or an equivalent data format ensuring identical degree of interoperability, **as published by** Entso-g.
 - (c) For the interactive data exchange, the protocol shall be HTTP/S.
- For all data exchange types set out in points (a) to (c), the network shall be internet.
3. <...>

Article 22

Data exchange system security and availability

1. Each transmission system operator and each counterparty shall be responsible for ensuring that the appropriate security measures are undertaken. In particular, they shall:

(a) secure the communication chain in order to provide secured and reliable communications, including the protection of the confidentiality by encryption, integrity and the authenticity by signature of the sender and non-repudiation by a signed confirmation;

(b) implement appropriate security measures in order to prevent unauthorised access of their IT infrastructure;

(c) notify the other parties it communicates with, without delay, in regard to any unauthorised access which has or may have occurred on his own system.

2. Each transmission system operator shall be responsible for ensuring the availability of its own system and shall:

(a) take appropriate measures to prevent that a single point of failure causes an unavailability of the data exchange system, including up to the network connection(s) with the internet service provider(s);

(b) obtain the appropriate services and support from its internet service provider(s);

(c) keep the downtime, as a consequence of planned IT maintenance, to a minimum and shall inform its counterparties in a timely manner, prior to the planned unavailability.

Article 23

Implementation of the common data exchange solutions

1. Depending on the data exchange requirements under Article 20(2), transmission system operators shall make available and use the common data exchange solutions defined in Article 21.

2. Where data exchange solutions between a transmission system operator and concerned counterparties are in place on **1 October 2018** and provided that the existing data exchange solutions are compatible with Article 22 and with data exchange requirements under Article 20(2), the existing data exchange solutions may continue to apply after consultation with network users and subject to the approval of the national regulatory authority of the transmission system operator.

Article 24**Development process for common network operation tools**

1. For each data exchange requirement under Article 20(2), a common network operation tool **developed by EntsoG** in accordance with Article 8(3)(a) of Regulation (EC) No 715/2009 **exists**. A common network operation tool shall specify the common data exchange solution relevant for the respective data exchange requirement **as mentioned in Article 21**. A common network operation tool may also include business requirement specifications, release management and implementation guidelines.

CHAPTER VI**FINAL PROVISIONS****Article 25****Implementation monitoring**

1. **Six months after the expiry of the deadline for transposing and implementing this Regulation the Energy Community Secretariat** shall monitor and analyse how transmission system operators have implemented Chapters II to V of this Regulation <...> **and submit its report to the Energy Community Permanent High Level Group**.
2. By at the latest **three months after the expiry of the deadline for transposing and implementing this Regulation** transmission system operators shall communicate to **the Energy Community Secretariat** all necessary information enabling **the Energy Community Secretariat** to comply with its obligations under paragraph 1.

Article 26**Entry into force¹**

1. **Each Contracting Party shall transpose and implement Commission Regulation (EU) No 2015/703 by 1 October 2018.**
2. **This Decision [2018/02/PHLG-EnC] shall be made binding on all market participants. Transposition shall be made without changes to the structure and text of Commission Regulation (EU) No 2015/703 other than translation and the adaptations made by the present Decision.**
3. **Each Contracting Party shall notify the Energy Community Secretariat of completed transposition within two weeks following the adoption of such measures.**
4. **In transposing this Decision [2018/02/PHLG-EnC] Contracting Parties shall task national regulatory authorities with the monitoring of and enforcing compliance with this Decision [2018/02/PHLG-EnC].**

ANNEX

Conversion factors between reference conditions

Reference temperature in °C (combustion, volume)	25/20 to 25/0	25/20 to 15/15	25/20 to 0/0	25/0 to 15/15	25/0 to 0/0	15/15 to 0/0
Volume-basis real superior calorific value	1,0738	1,0185	1,0766	0,9486	1,0026	1,0570
Volume-basis real inferior calorific value	1,0738	1,0176	1,0741	0,9477	1,0003	1,0555
Real Wobbe index	1,0736	1,0185	1,0764	0,9487	1,0026	1,0569

Source: EN ISO 13443 'Natural gas – Standard reference conditions'

¹ Adapted by Article 1 of Decision 2018/02/PHLG-EnC.

COMMISSION REGULATION (EU) 2017/459 of 16 March 2017 establishing a network code on capacity allocation mechanisms in gas transmission systems

Incorporated and adapted by Permanent High Level Group Decision 2018/06/PHLG-EnC of 28 November 2018.

*The adaptations made by Permanent High Level Group Decision 2018/06/PHLG-EnC are highlighted in **bold and blue**.*

CHAPTER I GENERAL PROVISIONS

Article 1

Subject matter

This Regulation establishes a network code setting up capacity allocation mechanisms in gas transmission systems for existing and incremental capacity. This Regulation shall set out how adjacent transmission system operators cooperate in order to facilitate capacity sales, having regard to general commercial as well as technical rules related to capacity allocation mechanisms.

Article 2

Scope

1. This Regulation shall apply to interconnection points **between Contracting Parties**. It may also apply to entry points from and exit points to third countries, subject to the decision of the relevant national regulatory authority. This Regulation shall not apply to exit points to end consumers and distribution networks, entry points from 'liquefied natural gas' (LNG) terminals and production facilities, and entry points from or exit points to storage facilities.
2. The standardised capacity allocation mechanisms set up in accordance with this Regulation shall include an auction procedure for relevant interconnection points within the **Energy Community** and the standard capacity products to be offered and allocated. Where incremental capacity is offered, alternative allocation mechanisms may also be used, subject to the conditions set out in Article 30(2).
3. This Regulation shall apply to all technical and interruptible capacity at interconnection points as well as to additional capacity in the meaning of point 2.2.1 of Annex I of Regulation (EC) No 715/2009 and to incremental capacity. <...>
4. Where an alternative capacity allocation mechanism according to Article 30 is applied, Article 8(1) to (7), Articles 11 to 18, Article 19(2) and Article 37 shall not be applicable to the offer levels, unless decided otherwise by the relevant national regulatory authorities.
5. Where implicit capacity allocation methods are applied, national regulatory authorities may decide not to apply Articles 8 to 37.

6. In order to prevent foreclosure of downstream supply markets, national regulatory authorities may, after consulting network users, decide to take proportionate measures to limit up-front bidding for capacity by any single network user at interconnection points within a **Contracting Party**.

Article 3

Definitions

For the purposes of this Regulation, the definitions **and rules** in Article 2 of Regulation (EC) No 715/2009, Article 3 **and Article 24** of Commission Regulation (EU) 2017/460 and Article 2 Directive 2009/73/EC shall apply. In addition, the following definitions shall apply:

1. 'incremental capacity' means a possible future increase via market-based procedures in technical capacity or possible new capacity created where none currently exists that may be offered based on investment in physical infrastructure or long-term capacity optimisation and subsequently allocated subject to the positive outcome of an economic test, in the following cases:

(a) at existing interconnection points;

(b) by establishing a new interconnection point or points;

(c) as physical reverse flow capacity at an interconnection point or points, which has not been offered before;

2. 'interconnection point' means a physical or virtual point connecting adjacent entry-exit systems or connecting an entry-exit system with an interconnector, in so far as these points are subject to booking procedures by network users;

3. 'alternative allocation mechanism' means an allocation mechanism for offer level or incremental capacity designed on a case-by-case basis by the transmission system operators, and approved by the national regulatory authorities, to accommodate conditional demand requests;

4. 'standard capacity product' means a certain amount of transport capacity over a given period of time, at a specified interconnection point;

5. 'offer level' means the sum of the available capacity and the respective level of incremental capacity offered for each of the yearly standard capacity products at an interconnection point;

6. 'implicit allocation method' means a capacity allocation method where, possibly by means of an auction, both transmission capacity and a corresponding quantity of gas are allocated at the same time;

7. 'bidding round' means the period of time during which network users can submit, amend and withdraw bids;

8. 'large price step' means a fixed or variable amount that is defined per interconnection point and standard capacity product;

9. 'incremental capacity project' means a project to increase the amount of technical capacity at an existing interconnection point or to establish a new interconnection point based on capacity allocation in the preceding incremental capacity process;

10. 'economic test' means a test applied to assess the economic viability of incremental capacity projects;

11. 'incremental capacity process' means a process to assess the market demand for incremental capacity that includes a non-binding phase, in which network users express and quantify their demand for incremen-

tal capacity, and a binding phase, in which binding commitments for contracting capacity are requested from network users by one or more transmission system operators;

12. 'bundled capacity' means a standard capacity product offered on a firm basis which consists of corresponding entry and exit capacity at both sides of every interconnection point;

13. 'interconnection agreement' means an agreement entered into by adjacent transmission system operators, whose systems are connected at a particular interconnection point, which specifies terms and conditions, operating procedures and provisions, in respect of delivery and/or withdrawal of gas at the interconnection point with the purpose of facilitating efficient interoperability of the interconnected transmission networks, as set out in Chapter II of Regulation (EU) 2015/703;

14. 'competing capacities' means capacities for which the available capacity at one point of the network cannot be allocated without fully or partly reducing the available capacity at another point of the network;

15. 'auction calendar' means a table displaying information relating to specific auctions which is published by ENTSOG <...> every calendar year for auctions taking place during the period of March until February of the following calendar year and consisting of all relevant timings for auctions, including starting dates and standard capacity products to which they apply;

16. 'gas day' means the period from 5.00 to 5.00 UTC the following day for winter time and from 4.00 to 4.00 UTC the following day when daylight saving is applied;

17. 'within-day capacity' means capacity offered and allocated after the closure of the day-ahead capacity auctions with respect to that day;

18. 'ascending clock auction' means an auction in which a network user places requested quantities against defined price steps, which are announced sequentially;

19. 'uniform-price auction' means an auction in which the network user in a single bidding round bids price as well as quantity and all network users, who are successful in gaining capacity, pay the price of the lowest successful bid;

20. 'reserve price' means the eligible floor price in the auction;

21. 'small price step' means a fixed or variable amount that is defined per interconnection point and standard capacity product which is smaller than the large price step;

22. 'first-time undersell' means an occurrence where the aggregate demand across all network users is less than the capacity offered at the end of the second bidding round or a subsequent bidding round;

23. 'virtual interconnection point' means two or more interconnection points which connect the same two adjacent entry-exit systems, integrated together for the purposes of providing a single capacity service;

24. 'f-factor' means the share of the present value of the estimated increase in the allowed or target revenue of the transmission system operator associated with the incremental capacity included in the respective offer level as set out in Article 22(1)(b) to be covered by the present value of binding commitments of network users for contracting capacity calculated as set out in Article 22(1)(a);

25. 'over-nomination' means the entitlement of network users who fulfil minimum requirements for submitting nominations to request interruptible capacity at any time within-day by submitting a nomination which increases the total of their nominations to a level higher than their contracted capacity.

26. 'protected customers' means all household customers who is connected to a gas distribution network and, in addition, where the Contracting Party concerned so decides, may

also mean one or more of the following, provided that enterprises or services as referred to in points (a) and (b) do not, jointly, represent more than 20 % of the total annual final gas consumption in that Contracting Party

(a) small and medium-sized enterprises, provided that they are connected to a gas distribution network;(b) an essential social service, provided that it is connected to a gas distribution or transmission network;

(b) a district heating installation to the extent that it delivers heating to household customers, small or medium-sized enterprises, or essential social services, provided that such installation is not able to switch to other fuels than gas.

CHAPTER II PRINCIPLES OF COOPERATION

Article 4

Coordination of maintenance

Where maintenance of a pipeline or part of a transmission network has an impact on the amount of transmission capacity which can be offered at interconnection points, the transmission system operator(s) shall fully cooperate with their adjacent transmission system operator(s) regarding their respective maintenance plans in order to minimise the impact on potential gas flows and capacity at an interconnection point.

Article 5

Standardisation of communication

1. Transmission system operators shall coordinate the implementation of standard communication procedures, coordinated information systems and compatible electronic on-line communications, such as shared data exchange formats and protocols, as well as agree principles as to how this data is treated.
2. Standard communication procedures shall include, in particular, those relating to network users' access to the transmission system operators' auction system or a relevant booking platform and the review of auction information provided. The timing and content of the data to be exchanged shall be compliant with the provisions set out in Chapter III.
3. The standard communication procedures adopted by transmission systems operators shall include an implementation plan and duration of applicability, which shall be in line with the development of booking platform(s) as set out in Article 37. Transmission systems operators shall ensure confidentiality of commercially sensitive information.

Article 6

Capacity calculation and maximisation

1. The maximum technical capacity shall be made available to network users, taking into account system integrity, safety and efficient network operation.

(a) In order to maximise the offer of bundled capacity through the optimisation of the technical capacity transmission system operators shall take the following measures at interconnection points, giving priority to those interconnection points where there is contractual congestion pursuant to point 2.2.3(1) of Annex I to Regulation (EC) No 715/2009: the transmission system operators shall establish and apply a joint method, setting out the specific steps to be taken by the respective transmission system operators to achieve the required optimisation:

(1) the joint method shall include an in-depth analysis of the technical capacities, including any discrepancies therein on both sides of an interconnection point, as well as the specific actions and detailed timetable - including possible implications and containing the regulatory approvals required to recover costs and adjust the regulatory regime - necessary to maximise the offer of bundled capacity. Such specific actions shall not be detrimental to the offer of capacity at other relevant points of the concerned systems and points to distribution networks relevant for security of supply to final customers, such as those to storage facilities, LNG terminals and protected customers <...>;

(2) the calculation methodology and the rules of making available the capacity, adopted by the transmission system operators, shall address specific situations where competing capacities across systems involve interconnection points and exit points to storage facilities;

(3) this in-depth analysis shall take into account assumptions made in the <...> 10-year network development plan **where applicable <...>**, national investment plans, relevant obligations under the applicable national laws and any relevant contractual obligations;

(4) the relevant transmission system operators shall apply a dynamic approach to re-calculating technical capacity, where appropriate in conjunction with the dynamic calculation applied for additional capacity on the basis of point 2.2.2.2 of Annex I to Regulation (EC) No 715/2009, jointly identifying the appropriate frequency for re-calculation per interconnection point and having regard to the particular specificities thereof;

(5) in the joint method, adjacent transmission system operators shall consult other transmission system operators specifically affected by the interconnection point;

(6) transmission system operators shall have regard to information that network users may provide with regard to expected future flows when re-calculating the technical capacity.

(b) the transmission system operators shall jointly assess at least the following parameters and where appropriate adjust them:

(1) pressure commitments;

(2) all relevant demand and supply scenarios, including details on reference climatic conditions and network configurations associated with extreme scenarios;

(3) calorific value.

2. Where the optimisation of technical capacity causes costs to the transmission system operators, partic-

ularly costs that unevenly impact transmission system operators on either side of an interconnection point, transmission system operators shall be allowed to recover such efficiently incurred costs via the regulatory framework established by the relevant regulatory authorities in accordance with Article 13 of Regulation (EC) No 715/2009 and Article 42 of Directive 2009/73/EC. <...>

2a. For cross-border infrastructure, the **Energy Community** Regulatory Board shall decide upon those regulatory issues that fall within the competence of national regulatory authorities:

(a) where the competent national regulatory authorities have not been able to reach an agreement within a period of six months from when the case was referred to the last of those regulatory authorities; or

(b) upon a joint request from the competent national regulatory authorities. The competent national regulatory authorities may jointly request that the period referred to in point (a) is extended by a period of up to six months.

When preparing its decision, the **Energy Community** Regulatory Board shall consult the national regulatory authorities and the transmission system operators concerned and shall be informed of the proposals and observations of all the transmission system operators concerned.

Where a case has been referred to the **Energy Community** Regulatory Board under paragraph (2a), the **Energy Community** Regulatory Board

(a) shall provide its decision within a period of 6 months from the day of referral; and

(b) may, if necessary, provide an interim decision to ensure that security of supply or operational security of the infrastructure in question is protected.

3. Where appropriate, national regulatory authorities shall consult network users on the applied calculation method and joint approach.

4. Changes in the amount of bundled capacity offered at interconnection points as a result of the process pursuant to paragraph 1 shall be included in the report of the **Energy Community** Regulatory Board published pursuant to point 2.2.1(2) of Annex I to Regulation (EC) No 715/2009.

Article 7

Exchange of information between adjacent transmission system operators

1. Adjacent transmission system operators shall exchange nomination, re-nomination, matching and confirmation information at relevant interconnection points on a regular basis.

2. Adjacent transmission system operators shall exchange information about the maintenance of their individual transmission network in order to contribute to the decision making process with regard to the technical use of interconnection points. The procedures to exchange data between transmission system operators shall be integrated in their respective interconnection agreement.

CHAPTER III

ALLOCATION OF FIRM CAPACITY PRODUCTS

Article 8

Allocation methodology

1. Auctions shall be used for the allocation of capacity at interconnection points, except where the alternative allocation methodology pursuant to Article 30 is applied.
2. At all interconnection points the same auction design shall apply. The relevant auction processes shall start simultaneously for all concerned interconnection points. Each auction process, relating to a single standard capacity product, shall allocate capacity independently of every other auction process except where incremental capacity is offered or where, subject to the agreement of the directly involved transmission system operators and the approval of relevant national regulatory authorities, competing capacity is allocated. The national regulatory authority of any adjacent and affected **Contracting Party or Member State** may provide a position which shall be considered by the relevant national regulatory authority. In case incremental capacity is offered, the independent allocation shall not apply to the simultaneous auction processes for the respective offer levels, since these are dependent on each other, as only one offer level can be allocated.
3. The standard capacity products shall follow a logical order by which products covering yearly capacity shall be offered first, followed by the product with the next shortest duration for use during the same period. The timing of the auctions provided for in Articles 11 to 15 shall be consistent with this principle.
4. The rules on standard capacity products as set out in Article 9 and auctions as set out in Articles 11 to 15 shall apply to bundled capacity and unbundled capacity at an interconnection point.
5. For a given auction, the availability of the relevant standard capacity products shall be communicated in accordance with Articles 11 to 15 and according to the auction calendar.
6. An amount at least equal to 20% of the existing technical capacity at each interconnection point shall be set aside and offered in accordance with paragraph 7. If the available capacity is less than the proportion of technical capacity to be set aside, the whole of any available capacity shall be set aside. This capacity shall be offered in accordance with point (b) of paragraph 7, while any remaining capacity set aside shall be offered in accordance with point (a) of paragraph 7.
7. Any capacity set aside pursuant to paragraph 6 shall be offered, subject to the following provisions:
 - (a) an amount at least equal to 10% of the existing technical capacity at each interconnection point shall be offered no earlier than in the annual yearly capacity auction as provided for in Article 11 held in accordance with the auction calendar during the fifth gas year preceding the start of the relevant gas year; and
 - (b) a further amount at least equal to 10% of the existing technical capacity at each interconnection point shall first be offered no earlier than the annual quarterly capacity auction as provided for in Article 12, held in accordance with the auction calendar during the gas year preceding the start of the relevant gas year.
8. In the case of incremental capacity, an amount at least equal to 10% of the incremental technical capacity at the concerned interconnection point shall be set aside and offered no earlier than the annual quarterly capacity auction as provided for in Article 12, held in accordance with the auction calendar during the gas

year preceding the start of the relevant gas year.

9. The exact proportion of capacity to be set aside pursuant to paragraphs 6 and 8 shall be subject to a stakeholder consultation, alignment between transmission system operators and approval by national regulatory authorities at each interconnection point. National regulatory authorities shall in particular consider setting aside higher shares of capacity with a shorter duration to avoid foreclosure of downstream supply markets.

10. Capacity created via non-market based procedures and for which the final investment decision has been taken without prior commitments from network users shall be offered and allocated as available standard capacity products as set out in this Regulation.

Article 9

Standard capacity products

1. Transmission system operators shall offer yearly, quarterly, monthly, daily and within-day standard capacity products.
2. Yearly standard capacity products shall be the capacity which may be applied for, in a given amount, by a network user for all gas days in a particular gas year (starting on 1 October).
3. Quarterly standard capacity products shall be the capacity which may be applied for, in a given amount, by a network user for all gas days in a particular quarter (starting on 1 October, 1 January, 1 April or 1 July respectively).
4. Monthly standard capacity products shall be the capacity which may be applied for, in a given amount, by a network user for all gas days in a particular calendar month (starting on the first day of each month).
5. Daily standard capacity products shall be the capacity which may be applied for, in a given amount, by a network user for a single gas day.
6. Within-day standard capacity products shall be the capacity which may be applied for, in a given amount, by a network user from a start time within a particular gas day until the end of the same gas day.

Article 10

Applied capacity unit

The capacity offered shall be expressed in energy units per unit of time. The following units shall be used: kWh/h or kWh/d. In case of kWh/d a flat flow rate over the gas day is assumed.

Article 11**Annual yearly capacity auctions**

1. The yearly capacity auctions shall be held once a year.
2. Capacity for each yearly standard capacity product shall be auctioned through the annual yearly capacity auction using an ascending-clock auction algorithm in accordance with Article 17.
3. The auction process shall offer capacity at least for the upcoming 5 gas years and for no longer than the upcoming 15 gas years for existing capacity. When offering incremental capacity, the offer levels may be offered in yearly capacity auctions for a maximum of 15 years after the start of operational use.
4. As from 2020, annual yearly capacity auctions shall start on the first Monday of July each year unless otherwise specified in the auction calendar.
5. During the annual yearly capacity auction network users shall be able to participate in one or several concurrent auctions in relation to each interconnection point in order to apply for standard capacity products.
6. The capacity to be offered during the annual yearly capacity auction shall be equal to:

$$\mathbf{A - B - C + D + E - F}$$

Where:

A is the transmission system operator's technical capacity for each of the standard capacity products;

B for annual yearly auctions offering capacity for the next 5 years, is the amount of technical capacity (A) set aside in accordance with Article 8(7); for annual yearly auctions for capacity beyond the first 5 years, is the amount of technical capacity (A) set aside in accordance with Article 8(7);

C is the previously sold technical capacity, adjusted by the capacity which is re-offered in accordance with applicable congestion management procedures;

D is additional capacity, for such year, if any.

E is the incremental capacity for such year included in a respective offer level, if any;

F is the amount of incremental capacity (E), if any, set aside in accordance with Article 8(8) and (9).

7. The capacity to be offered may be either bundled capacity or unbundled capacity in accordance with Article 19. This also applies to all other auctions as set out in Articles 12 to 15.

8. At least 1 month before the auction starts, transmission system operators shall notify network users about the amount of firm capacity to be offered for each year for the upcoming annual yearly capacity auction.

9. The bidding rounds of each auction shall take place between 8.00 UTC to 17.00 UTC (winter time) or 7.00 UTC to 16.00 UTC (daylight saving) on all relevant gas days. Bidding rounds shall be opened and closed within each gas day, as specified in Article 17(2).

10. The allocation results of the auction shall be made available, as soon as reasonably possible, and no later than the next business day after the closing of the bidding round, simultaneously to individual network users participating in the respective auction.

In case of incremental capacity, the binding commitments of network users for contracting capacity, including whether the conditions for a repeated auction pursuant to Article 29(3) are met, shall be made available no later than the next business day after the closing of the bidding round, simultaneously to

individual network users participating in the respective auction. The results of the economic tests shall be made available no later than 2 business days after the closing of the bidding round, simultaneously to individual network users participating in the respective auction.

11. Aggregated information on auction results shall be published to the market.

Article 12

Annual quarterly capacity auctions

1. Four annual quarterly capacity auctions shall be held during each gas year.
2. Capacity for each quarterly standard capacity product shall be auctioned through the annual quarterly capacity auctions using an ascending-clock auction algorithm in accordance with Article 17.
3. Capacity for quarters of the upcoming gas year shall be auctioned via concurrent auctions for each quarter and in relation to each interconnection point as follows:
 - (a) for quarters one (October-December) through four (July-September) in the first annual quarterly capacity auction;
 - (b) for quarters two (January-March) through four (July-September) in the second annual quarterly capacity auction;
 - (c) for quarters three (April-June) through four (July-September) in the third annual quarterly capacity auction;
 - (d) for the last quarter (July-September) in the fourth annual quarterly capacity auction.

For each annual quarterly auction network users shall be able to participate in all of the concurrent auctions.

4. Each gas year the annual quarterly capacity auctions shall start on the following days, unless otherwise specified in the auction calendar:
 - (a) the first annual quarterly capacity auctions shall start on the first Monday of August;
 - (b) the second annual quarterly capacity auctions shall start on the first Monday of November;
 - (c) the third annual quarterly capacity auctions shall start on the first Monday of February;
 - (d) the fourth annual quarterly capacity auction shall start on the first Monday of May.
5. The capacity to be offered in all annual quarterly capacity auctions shall be equal to:

A – C + D

Where:

- A** is the transmission system operator's technical capacity for each of the standard capacity products;
- C** is the previously sold technical capacity, adjusted by the capacity which is re-offered in accordance with applicable congestion management procedures;
- D** is additional capacity, for such quarter, if any.

6. Two weeks before the auctions start, transmission system operators shall notify network users about the amount of capacity to be offered for each quarter for the upcoming annual quarterly capacity auction.
7. The bidding rounds of each auction, shall take place between 8.00 UTC to 17.00 UTC (winter time) or 7.00 UTC to 16.00 UTC (daylight saving) on all relevant gas days. Bidding rounds shall be opened and

closed within each gas day, as specified in Article 17(2).

8. The allocation results of the auction shall be published, as soon as reasonably possible, and no later than the next business day after the closing of the bidding round, simultaneously to individual network users participating in the respective auction.

9. Aggregated information on the auction results shall be published to the market.

Article 13

Rolling monthly capacity auctions

1. The rolling monthly capacity auction shall be held once a month.

2. Capacity for each monthly standard capacity product shall be auctioned through the rolling monthly capacity auction using an ascending-clock auction algorithm according to Article 17. Each month, the monthly standard capacity product for the following calendar month shall be auctioned.

3. During the rolling monthly capacity auction network users shall be able to apply for one monthly standard capacity product.

4. Rolling monthly capacity auctions shall start on the third Monday of each month for the following monthly standard capacity product unless otherwise specified in the auction calendar.

5. The capacity to be offered in the rolling monthly capacity auction shall be, each month, equal to:

$$\mathbf{A - C + D}$$

Where:

A is the transmission system operator's technical capacity for each of the standard capacity products;

C is the previously sold technical capacity, adjusted by the capacity which is re-offered in accordance with applicable congestion management procedures;

D is additional capacity, for such month, if any.

6. One week before the auction starts, transmission system operators shall notify network users about the amount of capacity to be offered for the upcoming rolling monthly capacity auction.

7. The bidding rounds of each auction shall take place between 8.00 UTC to 17.00 UTC (winter time) or 7.00 UTC to 16.00 UTC (daylight saving) on all relevant gas days. Bidding rounds shall be opened and closed within each gas day, as specified in Article 17(2).

8. The allocation results of the auction shall be published, as soon as reasonably possible, and no later than the next business day after the closing of the bidding round, simultaneously to individual network users participating in the respective auction.

9. Aggregated information on the auction results shall be published to the market.

Article 14

Rolling day-ahead capacity auctions

1. The rolling day-ahead capacity auction shall be held once a day.
2. Every day, a standard capacity product for the following gas day shall be auctioned through the rolling day-ahead capacity auction.
3. Capacity for each daily standard capacity product shall be auctioned through the rolling day-ahead capacity auction using a uniform price auction algorithm according to Article 18. Each day, the daily standard capacity product for the following gas day shall be auctioned.
4. During the rolling day-ahead capacity auction network users shall be able to apply for capacity for one daily standard capacity product.
5. The bidding round shall open every day at 15.30 UTC (winter time) or 14.30 UTC (daylight saving).
6. A capacity bid for the daily standard capacity product for the rolling day-ahead capacity auction shall be handled as follows: submission, withdrawal or amendment from 15.30 UTC to 16.00 UTC (winter time) or 14.30 UTC to 15.00 UTC (daylight saving).
7. The capacity to be offered in the rolling day-ahead capacity auction shall be, each day, equal to:

$$\mathbf{A - C + D}$$

Where:

A is the transmission system operator's technical capacity for each of the standard capacity products;

C is the previously sold technical capacity, adjusted by the capacity which is re-offered in accordance with applicable congestion management procedures;

D is additional capacity, for such day, if any.

8. At the time the bidding round opens, transmission system operators shall notify network users about the amount of capacity to be offered for the upcoming rolling day-ahead capacity auction.
9. The allocation results of the auction shall be published, no later than 30 minutes after the closing of the bidding round, simultaneously to individual network users participating in the respective auction.
10. Aggregated information on the auction results shall be published to the market.

Article 15

Within-day capacity auctions

1. Subject to capacity being made available, a within-day capacity auction shall be held every hour during gas day using a uniform price auction algorithm in accordance with Article 18.
2. The first bidding round shall open directly on the next hour bar following the publication of results of the last day-ahead auction (including interruptible capacity if offered) in accordance with Article 14. The first bidding round closes at 1.30 UTC (winter time) or 0.30 UTC (daylight saving) before the gas day. The allocation of successful bids shall be effective from 5.00 UTC (winter time) or 4.00 UTC (daylight saving) on the relevant gas day.

3. The last bidding round shall close at 0.30 UTC (winter time) or 23.30 UTC (daylight saving) on the relevant gas day.
4. Network users shall be entitled to place, withdraw or amend bids from the opening of each bidding round until closure of that bidding round.
5. Each hour on the relevant gas day, capacity effective from the hour + 4 shall be auctioned as within-day capacity.
6. Each bidding round shall open at the start of every hour on the relevant gas day.
7. The duration of each bidding round shall be 30 minutes as of the opening of the bidding round.
8. The capacity to be offered in the within-day capacity auction shall be, each hour, equal to:

$$\mathbf{A - C + D}$$

Where:

- A** is the transmission system operator's technical capacity for each of the standard capacity products;
- C** is the previously sold technical capacity, adjusted by the capacity which is re-offered in accordance with applicable congestion management procedures; D is additional capacity, if any.
9. Transmission system operators shall publish the available amount of within-day firm capacity on offer, after closure of the last day-ahead auction and in accordance with Article 32(9).
 10. Transmission system operators shall provide network users who bid in the day-ahead auctions with the option to have valid unsuccessful bids automatically entered into the subsequent within-day auction.
 11. The capacity shall be allocated within 30 minutes of the closure of the bidding round provided that the bids are accepted and the transmission system operator runs the allocation process.
 12. The results of the auction shall be made available simultaneously to individual network users.
 13. Aggregated information on the auction results shall be published at least at the end of each day.

Article 16

Auction algorithms

1. If several standard capacity products are offered during an auction, the respective allocation algorithm shall be applied separately for each standard capacity product when it is being allocated. Bids for the different standard capacity products shall be considered independently from each other in the application of the auction algorithm.
2. For annual yearly, annual quarterly and rolling monthly capacity auctions, an ascending clock auction algorithm, with multiple bidding rounds, as provided for in Article 17, shall be applied.
3. For rolling day-ahead capacity auctions and within-day capacity auctions, a uniform-price auction algorithm, with a single bidding round, shall be applied in accordance with Article 18.

Article 17**Ascending clock auction algorithm**

1. Ascending clock auctions shall enable network users to place volume bids against escalating prices announced in consecutive bidding rounds, starting at the reserve price P_0 .
2. The first bidding round, with an associated price equal to the reserve price P_0 , shall have a duration of 3 hours. Subsequent bidding rounds shall have a duration of 1 hour. There shall be a period of 1 hour between bidding rounds.
3. A bid shall specify:
 - (a) the identity of the network user applying;
 - (b) the concerned interconnection point and direction of the flow;
 - (c) the standard capacity product for which the capacity is applied for;
 - (d) per price step, the amount of capacity for the respective standard capacity product applied for;
 - (e) where incremental capacity is offered, the concerned offer level.
4. A bid shall be considered valid if it is submitted by a network user and complies with all provisions of this Article.
5. In order for network users to participate in an auction, it shall be mandatory for network users to place a volume bid in the first bidding round.
6. Transmission system operators shall provide network users with the option to enter bids automatically against any price step.
7. Once the relevant bidding round closes, no modification, withdrawal or variation to valid bids shall be accepted. All valid bids shall become binding commitments of a network user to book capacity to the amount requested per announced price, provided the clearing price of the auction is that which is announced in the relevant bidding round.
8. The volume bid in any bidding round per network user shall be equal or smaller to the capacity offered in a specific auction. The volume bid per network user at a specific price shall be equal to or less than the volume bid placed by this network user in the previous round, except where paragraph 16 applies.
9. Bids may be freely entered, modified and withdrawn during a bidding round, providing all bids comply with paragraph 8. Valid bids shall remain valid until modified or withdrawn.
10. A large price step and a small price step shall be defined per interconnection point and per standard capacity product and shall be published in advance of the relevant auction. The small price step shall be set such that an increase by an integer number of small price steps is equal to an increase by a large price step.
11. The determination of the large price step shall seek to minimise, as far as reasonably possible, the length of the auction process. The determination of the small price step shall seek to minimise, as far as reasonably possible, the level of unsold capacity where the auction closes at a price higher than the reserve price.
12. If the aggregate demand across all network users is less than or equal to the capacity offered at the end of the first bidding round, the auction shall close.
13. If the aggregate demand across all network users is greater than the capacity offered at the end of the first bidding round or a subsequent bidding round, a further bidding round shall be opened with a price

equal to the price in the previous bidding round, plus the large price step.

14. If the aggregate demand across all network users is equal to the capacity offered at the end of the second bidding round or a subsequent bidding round, the auction shall close.

15. If a first-time undersell occurs, a price reduction shall take place and a further bidding round shall be opened. The further bidding round will have a price equal to the price applicable in the bidding round preceding the first-time undersell, plus the small price step. Further bidding rounds with increments of the small price step shall then be opened until the aggregate demand across all network users is less than or equal to the capacity offered, at which point the auction shall close.

16. The volume bid per network user in all bidding rounds where small price steps are applied shall be equal to or less than the volume bid placed by this network user in the bidding round which preceded the first-time undersell. The volume bid per network user for a specific small price step shall be equal to or smaller than the volume bid placed by this network user in the previous bidding round of small price steps. The volume bid per network user in all bidding rounds where small price steps are applied shall be equal to or greater than the volume bid placed by this network user during the bidding round in which the first-time undersell occurred.

17. If the aggregate demand across all network users is greater than the capacity offered in the bidding round with a price equal to that which led to the first-time undersell, minus one small price step, the auction shall close. The clearing price shall be the price that led to the first-time undersell and the successful bids shall be those submitted during the original bidding round in which the first-time undersell occurred.

18. After each bidding round, the demand of all network users in a specific auction shall be published as soon as reasonably possible in an aggregated form.

19. The price announced for the last bidding round in which the auction closes shall be considered as the clearing price of the specific auction, except cases where paragraph 17 applies.

20. All network users who have placed valid volume bids at the clearing price shall be allocated the capacity according to their volume bids at the clearing price. Where incremental capacity is offered, the allocation of incremental capacity shall be subject to the outcome of the economic test according to Article 22. Successful network users shall pay the clearing price of the specific auction, which may be a fixed or a floating payable price approach set out in Article 24 of Regulation (EU) 2017/460, and any other possible charges applicable at the time when the capacity allocated to them can be used.

21. Following every closed auction, the final auction result including the aggregation of allocated capacities and the clearing price shall be published. Successful network users shall be informed about the amount of capacities they are allocated, individual information shall be communicated only to concerned parties. Where incremental capacity is allocated, this paragraph shall only apply to the auction results of the offer level offering the largest amount of capacity that resulted in a positive economic test according to Article 22(3).

22. If an ascending clock auction has not ended by the scheduled starting point (according to the auction calendar) of the next auction for capacity covering the same period, the first auction shall close and no capacity shall be allocated. The capacity shall be offered in the next relevant auction.

Article 18

Uniform-price auction algorithm

1. In a uniform-price auction, there is a single bidding round in which the network user bids price as well as quantity.
2. During the bidding round of a given auction, network users may submit up to 10 bids. Each bid shall be treated independently from other bids. After the closure of the bidding round, remaining bids may not be modified or withdrawn.
3. A bid shall specify:
 - (a) the identity of the network user applying;
 - (b) the concerned interconnection point and direction of the flow;
 - (c) the standard capacity product for which the capacity is applied for;
 - (d) the amount of capacity for the respective standard capacity product applied for, which shall be equal to or smaller than the capacity offered in a specific auction;
 - (e) the minimum amount of capacity for the respective standard capacity product which the network user is willing to be allocated according to the relevant algorithm in case the network user is not allocated the amount requested in accordance with point (d);
 - (f) the bid prices, which shall not be less than the reserve price applicable for the relevant standard capacity product, which the network user is willing to pay in respect of the capacity applied for. Bids with a bid price below the reserve price shall not be accepted.
4. The transmission system operator shall rank all bids relating to a given standard capacity product according to their bid price, the highest price ranking first.
5. All remaining bids at bidding round closing time shall be considered as binding on those network users that are allocated at least the minimum amount of capacity requested in accordance with point (e) of paragraph 3.
6. Following the ranking of the bids in accordance with paragraph 4, and subject to paragraphs 7 to 10, capacity shall be allocated to the bids in function of their price ranking. All bids for which capacity is allocated shall be considered as successful. After the allocation of capacity, the remaining unallocated capacity shall be reduced by such quantity.
7. Following the application of paragraph 6 and subject to paragraph 9, where the amount of capacity bid for by a network user exceeds the remaining unallocated capacity (after capacity has been allocated to network users placing higher bids), this network user shall be allocated capacity equal to the remaining unallocated capacity.
8. Following the application of paragraph 7 and subject to paragraph 9, where each of two or more bids specifies the same bid price, and the amount of relevant capacity remaining applied for in aggregate under such bids exceeds the remaining unallocated amount, the remaining unallocated amount shall be allocated pro rata to the amounts applied for in each such bid.
9. Where the amount to be allocated in respect of a bid pursuant to paragraphs 6, 7 or 8 is less than the minimum amount of capacity according to point (e) of paragraph 3, the bid shall be considered unsuccessful, and a revised allocation shall be made between remaining equal price bid(s) under paragraph 8,

or an allocation shall be made in respect of the next priced bid, pursuant to paragraph 6.

10. Where the remaining amount to be allocated in respect of any bid pursuant to paragraphs 6, 7, 8 or 9 is equal to zero, no further capacity shall be allocated to the remaining bids. Those bids shall be considered unsuccessful.

11. The clearing price shall be defined as the price of the lowest successful bid, if the demand exceeds the offer at the reserve price. In all other cases, the clearing price shall be equal to the reserve price.

Successful network users shall pay the clearing price of the specific auction, which may be a fixed or floating payable price approach as set out in Article 24 of Regulation (EU) 2017/460 and any other possible charges applicable at the time when the capacity allocated to them can be used.

CHAPTER IV

BUNDLING OF CAPACITY AT INTERCONNECTION POINTS

Article 19

Bundled capacity products

Adjacent transmission system operators shall jointly offer bundled capacity products, according to the following principles:

1. on both sides of an interconnection point all firm capacity shall be offered as bundled capacity, in so far as there is available firm or incremental capacity on both sides of the interconnection point;
2. transmission system operators shall offer capacity for the relevant standard capacity product on a booking platform, in accordance with Article 37 and in accordance with the applicable allocation procedure, as set out in Chapter III;
3. the bundled capacity to be offered by the transmission system operators concerned at an interconnection point shall be contracted through a single allocation procedure;
4. network users shall comply with applicable terms and conditions of the transport contract(s) of the transmission system operators concerned as from the time the transport capacity is contracted;
5. where there is more available firm capacity on one side of an interconnection point than on the other side for any period considered, the transmission system operator with the most available firm capacity may offer such extra capacity to the network users as an unbundled product in accordance with the auction calendar and the following rules:
 - (a) where there is an existing unbundled transport contract at the other side of the interconnection point, capacity may be offered on an unbundled basis not exceeding the amount and duration of the existing transport contract at the other side;
 - (b) where such extra capacity does not fall under point (a) of paragraph 5, it may be offered for a maximum period of 1 year;
6. any unbundled capacity allocated in accordance with paragraph 5 may be used and nominated as such. It may also be traded on the secondary market;
7. adjacent transmission system operators shall establish a joint nomination procedure for bundled capac-

ity, providing network users with the means to nominate the flows of their bundled capacity via a single nomination;

8. the obligations to offer bundled capacity also apply, to the extent that they are relevant, to secondary capacity markets. Without prejudice to paragraph 1, capacity originally allocated as bundled capacity can only be resold as bundled capacity on the secondary market;

9. where two or more interconnection points connect the same two adjacent entry-exit systems, the adjacent transmission system operators concerned shall offer the available capacities at the interconnection points at one virtual interconnection point. In case more than two transmission system operators are involved because capacity in one or both entry-exit systems is marketed by more than one transmission system operator, the virtual interconnection point shall include all of these transmission system operators, to the extent possible. In all cases a virtual interconnection point shall be established only if the following conditions are met:

(a) the total technical capacity at the virtual interconnection points shall be equal to or higher than the sum of the technical capacities at each of the interconnection points contributing to the virtual interconnection points;

(b) they facilitate the economic and efficient use of the system including but not limited to rules set out in Article 16 of Regulation (EC) No 715/2009.

Adjacent transmission system operators shall start the necessary analysis and shall establish functional virtual interconnection points no later than 1 November 2021.

Article 20

Alignment of main terms and conditions for bundled capacity products

<...>

4. <...> Transmission system operators, subject to the approval of national regulatory authority, may apply the terms and conditions set out in the template **published on ENTSOG's website covering contractual provisions which are not affected by fundamental differences in principles of national law or jurisprudence, for the offer of bundled capacity products** in the case of newly contracted bundled capacity products.

Article 21

Bundling in case of existing transport contracts

1. The network users who are parties to unbundled transport contracts at respective interconnection points, shall aim to reach an agreement on the bundling of the capacity via contractual arrangements ('bundling arrangement'), in compliance with the provisions set out in Article 19. These network users and transmission system operators shall report to the relevant national regulatory authorities of all bundling arrangements reached by all parties to existing transport contracts.

2. The transmission system operators who are parties to the existing transport contracts may participate in the discussions regarding the bundling arrangement at any time, upon invitation of the network users

who are parties to the existing transport contracts.

3. **Nine months after the expiry of the deadline for transposition of this Regulation**, transmission system operators shall offer network users holding mismatched unbundled capacity at one side of an interconnection point a free-of-charge capacity conversion service. Such a capacity conversion service shall apply to annual, quarterly or monthly capacity products for bundled firm capacity at that interconnection point which the network user had to acquire because insufficient unbundled capacity on the other side of the interconnection point was offered by an adjacent transmission system operator. This service shall be offered on a non-discriminatory basis and shall prevent additional charges from being applied to network users for capacity they already hold. In particular, payments for the part of the contracted bundled capacity which network users already hold as mismatched unbundled capacity shall be limited to a possible auction premium. This service shall be based on the conversion model **developed** by ENTSOG <...>. The implementation may be facilitated by the capacity booking platform(s) referred to in Article 37. The use of this service shall be reported annually to the respective national regulatory authorities.

4. Where a bundling arrangement is agreed upon between respective network users, the transmission system operators involved at the interconnection point shall be informed by the parties of such intended bundling arrangement without undue delay and the transfer of the concerned capacity shall be implemented. In any case, the bundling arrangement shall be implemented subject to the applicable terms and conditions of existing related transport contracts. Once the bundling arrangement is implemented, the relevant capacity shall be treated as bundled capacity.

5. In any case, the duration of the bundling arrangements regarding the capacity bundled under the amendment of the existing contracts shall not exceed the duration of the original transport contracts.

6. All capacity shall be bundled at the earliest opportunity. Existing transport contracts for unbundled capacity cannot be renewed, prolonged or rolled over after their expiration date. Such capacity shall become available capacity as of the expiration date of the transport contracts.

CHAPTER V INCREMENTAL CAPACITY PROCESS

***Article 22* Economic test**

1. The economic test set out in this Article shall be carried out by the transmission system operator(s) or by the national regulatory authority, as decided by the national regulatory authority, for each offer level of an incremental capacity project after binding commitments of network users for contracting capacity have been obtained by the involved transmission system operators and shall consist of the following parameters:

(a) the present value of binding commitments of network users for contracting capacity, which is calculated as the discounted sum of the following parameters:

- (i) the sum of the respective estimated reference prices and a potential auction premium and a potential mandatory minimum premium multiplied by the amount of contracted incremental capacity;
- (ii) the sum of a potential auction premium and a potential mandatory minimum premium multiplied

- by the amount of available capacity that was contracted in combination with the incremental capacity;
- (b) the present value of the estimated increase in the allowed or target revenue of the transmission system operator associated with the incremental capacity included in the respective offer level, as approved by the relevant national regulatory authority in accordance with Article 28(2);
- (c) the f-factor.

2. The outcome of the economic test application shall be:

- (a) positive, where the value of the parameter set out in paragraph 1(a) is at least equal to the share of the parameter set out in paragraph 1(b) as defined by the f-factor;
- (b) negative, where the value of the parameter set out in paragraph 1(a) is lower than the share of the parameter set out in paragraph 1(b) as defined by the f-factor.

3. An incremental capacity project shall be initiated if the economic test has a positive outcome on both sides of an interconnection point for at least one offer level that includes incremental capacity. In case more than one offer level results in a positive outcome of the economic test, the offer level with the largest amount of capacity that resulted in a positive outcome shall be used for proceeding with the incremental capacity project towards commissioning. In case no offer level results in a positive outcome, the specific incremental capacity process shall be terminated.

Article 23

The f-factor

1. When applying the economic test referred to in Article 22, the national regulatory authority shall set the level of the f-factor for a given offer level, taking into account the following:

- (a) the amount of technical capacity set aside in accordance with Article 8(8) and (9);
- (b) positive externalities of the incremental capacity project on the market or the transmission network, or both;
- (c) the duration of binding commitments of network users for contracting capacity compared to the economic life of the asset;
- (d) the extent to which the demand for the capacity established in the incremental capacity project can be expected to continue after the end of the time horizon used in the economic test.

2. If the economic test has a positive outcome then the investment costs associated with the incremental capacity shall be reflected in an increase in the allowed or target revenue in accordance with the applicable national rules.

Article 24

Combination into single economic test

1. In order to facilitate the offer of bundled capacity products, individual economic test parameters of the involved transmission system operators for a given offer level shall be combined into a single economic test.

2. The single economic test shall consist of the following parameters:

- (a) the present value of binding commitments of network users for contracting bundled capacity, which is the sum of the values according to Article 22(1)(a) of the involved transmission system operators;
- (b) the sum of the individual present values of the estimated increase in the allowed or target revenue of the involved transmission system operators that is attributable to the incremental capacity of a respective offer level;
- (c) the f-factor that defines the share of the parameter set out in point (b) that needs to be covered by the parameter set out in point (a) and allows all the involved transmission system operators individually to cover their upfront defined respective shares.

3. The outcome of the single economic test application shall be positive where all underlying economic tests result in positive outcomes as set out in Article 22(2)(a) taking into account a possible redistribution of revenues according to paragraphs 4 and 5. Otherwise, the outcome of the single economic test application shall be negative.

4. In case a redistribution of revenues could potentially lead to a decrease in the level of binding commitments of network users for contracting capacity required for a positive single economic test outcome, transmission system operators may submit to the relevant national regulatory authorities for coordinated approvals the mechanisms for a redistribution of revenues from incremental capacity.

5. A redistribution of revenues may be carried out as follows:

- (a) during the process of integrating the individual economic test parameters into a single economic test;
- (b) in case the single economic test has a negative outcome while at the same time the level of binding commitment of network users for contracting capacity exceeds the minimum required to cover the individual present value of the increase in the allowed or target revenue for at least one of the involved transmission system operators.

Article 25

Publication requirements relating to the economic test

1. For a given incremental capacity project, the transmission system operator(s) shall submit to the relevant national regulatory authority(-ies) for approval the following information for each offer level:

- (a) the reference prices estimated for the time horizon of the initial offer of incremental capacity that are used for the calculation of the parameter set out in Article 22(1)(a) and 24(2)(a), respectively in case separate or a single economic test is applied;
- (b) the parameters set out in Article 22(1)(b) to (c) and 24(2)(b) to (c), respectively in case separate or a single economic test is applied;
- (c) if applicable, the range of the level for the mandatory minimum premium referred to in Article 33(4) of Regulation (EU) 2017/460 for each offer level and interconnection point applied in the first auction and possibly in subsequent auctions in which the incremental capacity is offered as defined in Article 33(3) of Regulation (EU) 2017/460.

2. Following the approval by the relevant national regulatory authority(-ies), the information set out in paragraph 1 shall be published by the involved transmission system operator(s) as set out in Article 28(3).

Article 26

Market demand assessment

1. Immediately after the start of the annual yearly capacity auction at least in each odd-numbered year, transmission system operators shall cooperate in the processes of assessing market demand for incremental capacity and of conducting technical studies for incremental capacity projects for their joint interconnection points. The first demand assessment shall be conducted in **2021**.
2. No later than 8 weeks after the start of the annual yearly capacity auction at least in each odd-numbered year, the concerned transmission system operators on each side of an entry-exit system border shall produce common market demand assessment reports, each covering all interconnection points of at least one entry-exit system border. The market assessment report shall evaluate the prospective demand for incremental capacity of all network users pursuant to paragraph 8 and shall state whether an incremental capacity project is initiated.
3. The market demand assessment report shall be published in one or more official languages of the **Contracting Party** and to the extent possible in English on the websites of the concerned transmission system operators no later than 16 weeks after the start of the annual yearly capacity auction at least in each odd-numbered year.
4. **Transmission system operators**, shall **complete** the demand assessment reports **based on the** standard template **developed by ENTSOG** and publish the reports on **their** website.
5. If demand for incremental capacity is expressed by network users no later than 8 weeks after the start of the annual yearly auction in even-numbered years, the concerned transmission system operators may agree to conduct a market demand assessment also in an even-numbered year, provided that:
 - (a) the process set out in Articles 26-30 can be concluded before the start of the next demand assessment cycle referred to in paragraph 1; and
 - (b) the auction calendar is respected.
6. Transmission system operators shall consider non-binding demand indications submitted no later than 8 weeks after the start of the annual yearly auction in the ongoing market demand assessment.
7. Transmission system operators may consider non-binding demand indications submitted after the deadline set out in paragraph 6 in the ongoing market demand assessment, or introduce them into the next market demand assessment.
8. The non-binding demand indications referred to in paragraphs 6 and 7 shall contain at least the following information:
 - (a) the two or more adjacent entry-exit systems between which demand for incremental capacity - on one or both sides of an interconnection point - is expressed and the requested direction;
 - (b) the gas year(s) for which a demand for incremental capacity is expressed;
 - (c) the amount of capacity demanded between the respective entry-exit systems;
 - (d) information on non-binding demand indications which were or will be submitted to other transmission system operators, in case such indications are linked to each other, such as demand for capacities at several related interconnection points;
9. Network users shall indicate whether their demand is subject to any conditions in relation to points (a)

to (d) of paragraph 8.

10. Transmission system operators shall respond to non-binding demand indications within 16 weeks after the start of the annual yearly auctions, or within 8 weeks of receipt of demand indications in accordance with paragraph 7. The response shall provide at least the following:

- (a) whether the demand indicated can be considered by the transmission system operator in the ongoing process; or
- (b) whether, in the case of demand indications in accordance with paragraph 7, they are sufficient to consider the initiation of an incremental capacity process according to paragraph 5; or (c) in which market demand assessment report, according to paragraph 3, the indicated demand will be assessed, provided that the demand indicated cannot be considered under points (a) or (b), which is to be justified.

11. A transmission system operator may charge fees for activities resulting from the submission of non-binding demand indications. Such fees shall reflect the administrative costs for submitting demand indications, and shall be subject to approval by the relevant national regulatory authority and published on the transmission system operator's website. Such fees shall be reimbursed to the respective network user if the economic test for at least one offer level that includes incremental capacity at the respective interconnection point is positive.

12. The market demand assessment report shall take into account all of the following criteria:

- (a) whether the <...> 10-year network development plan, **where applicable**, identifies a physical capacity gap whereby a specific region is undersupplied in a reasonable peak scenario and where offering incremental capacity at the interconnection point in question could close the gap; or a national network development plan identifies a concrete and sustained physical transport requirement;
- (b) whether no yearly standard capacity product linking two adjacent entry-exit systems is available in the annual yearly capacity auction for the year in which incremental capacity could be offered for the first time and in the 3 subsequent years, because all the capacity has been contracted;
- (c) whether network users submitted non-binding demand indications requesting incremental capacity for a sustained number of years and all other economically efficient means for maximising the availability of existing capacity are exhausted.

13. The market demand assessment report shall include at least the following:

- (a) a conclusion on whether to initiate an incremental capacity project;
- (b) the aggregated non-binding demand indications received no later than 8 weeks after the start of the annual yearly capacity auction in the year of the publication of the respective demand assessment report;
- (c) the aggregated non-binding demand indications submitted after the deadline referred to in paragraph 6 during the previous incremental capacity process in case these demand indications were not considered for the previous demand assessment;
- (d) the aggregated non-binding demand indications submitted in accordance with paragraph 7 where the transmission system operators has decide to consider them in the ongoing market demand assessment;
- (e) an assessment of the expected amount, direction and duration of demand for incremental capacity at the interconnection points with each adjacent entry-exit system or interconnectors;
- (f) a conclusion on whether technical studies for incremental capacity projects will be conducted, specifying for which interconnection points and for which expected demand level;

(g) provisional timelines for the incremental capacity project, technical studies and the consultation referred to in Article 27(3);

(h) a conclusion on what fees, if any, will be introduced, according to paragraph 10;

(i) the types and, where available the aggregated size of conditional demand indications according to point paragraph 9;

(j) how transmission system operators intend to apply Article 11(3) with regards to limitation of the number of years being offered in the annual yearly capacity auctions during the incremental process.

14. Transmission system operators and the relevant national regulatory authorities shall publish respective points of contact for incremental capacity projects initiated at the publication of the market demand assessment report and update this information on a regular basis throughout the project.

Article 27

Design phase

1. The day after the publication of the market demand assessment report, the design phase shall start, if the demand assessment report identifies demand for incremental capacity projects.

2. Transmission system operators active at the respective interconnection point shall conduct technical studies for incremental capacity projects in order to design the incremental capacity project and coordinated offer levels based on technical feasibility and the market demand assessment reports.

3. No later than 12 weeks after the start of the design phase, the concerned transmission system operators shall conduct a joint public consultation on the draft project proposal in one or more official languages of the **Contracting Party** and to the extent possible in English for a minimum of 1 month and no longer than 2 months. These operators shall take all reasonable steps to ensure cross-border coordination.

The consultation shall cover at least the following elements:

(a) a description of the incremental capacity project, including a cost estimate;

(b) the offer levels for bundled capacity products at the interconnection point;

(c) where relevant, based on conditional demand indications received, the transmission system operators' proposed alternative allocation mechanism including its justification;

(d) provisional timelines of the incremental capacity project;

(e) general rules and conditions that a network users must accept to participate and access capacity in the binding capacity allocation phase of the incremental capacity process, including any collateral to be provided by network users and how possible delays in the provision of capacity or the event of a disruption to the project are dealt with contractually;

(f) where a fixed price approach is followed for the incremental capacity project, the elements IND and RP described in Article 24(b) of Regulation (EU) 2017/460.

(g) the level of user commitments, expressed as an estimate of the f-factor as applied in accordance with Article 23, which, after having consulted with the transmission system operators, is proposed and subsequently approved by the concerned national regulatory authorities;

(h) any additional demand indications received in accordance with Article 26(7);

(i) whether the incremental capacity is likely to result in a sustained, significant decrease in the utilisation of other non-depreciated gas infrastructure in the same and adjacent entry-exit systems or along the same gas transport route.

4. In the process of designing coordinated offer levels, the transmission system operators shall closely cooperate with the involved national regulatory authorities and coordinate across borders in order to enable offers of incremental capacity as bundled products. The project proposal and design of coordinated offer levels shall take into account the results of the consultation provided for in paragraph 3.

Article 28

Approval and publication

1. Following the consultation and finalisation of the design phase for an incremental capacity project in accordance with Article 27, the involved transmission system operators shall submit the project proposal for an incremental capacity project to the relevant national regulatory authorities for coordinated approvals. The project proposal shall also be published by the involved transmission system operators in one or more official languages of the **Contracting Party** and to the extent possible in English and shall include at least the following information:

(a) all offer levels, reflecting the range of expected demand for incremental capacity at the relevant inter-connection points as a result of the processes provided for in paragraph 3 of Article 27 and Article 26;

(b) the general rules and conditions that a network user must accept to participate and access capacity in the binding capacity allocation phase of the incremental capacity process, including any collaterals to be provided by network users and how possible delays in the provision of capacity or the event of a disruption to the project are dealt with contractually;

(c) timelines of the incremental capacity project, including any changes since the consultation described in paragraph 3 of Article 27, and measures to prevent delays and minimise the impact of delays;

(d) the parameters defined in Article 22(1);

(e) whether an exceptionally extended time horizon for contracting capacity for an additional period of up to 5 years beyond the allocation of up to 15 years after the start of the operational use may be required, in accordance with Article 30;

(f) where applicable, the proposed alternative allocation mechanism including its justification pursuant to Article 30(2) as well as the conditions approved by the transmission system operator for the binding phase pursuant to Article 30(3);

(g) where a fixed price approach is followed for the incremental capacity project, the elements described in Article 24(b) of Regulation (EU) 2017/460.

2. Within 6 months of receipt of the complete project proposal by the last of the relevant regulatory authorities, those national regulatory authorities shall publish coordinated decisions on the project proposal defined in paragraph 1 in one or more official languages of the **Contracting Party** and to the extent possible in English. The decisions shall include justifications. National regulatory authorities shall inform each other of the receipt of the project proposal and its completeness in order to determine the start of the 6 months period.

When preparing the national regulatory authority's decision, each national regulatory authority shall consider the views of the other national regulatory authorities involved. In any case national regulatory authorities shall take into account any detrimental effects on competition or the effective functioning of the internal gas market associated with the incremental capacity projects concerned.

If a relevant national regulatory authority objects to the submitted project proposal, it shall inform the other involved national regulatory authorities as soon as possible. In such a situation, all the national regulatory authorities involved shall take all reasonable steps to work together and reach a common agreement.

Where the relevant national regulatory authorities cannot reach an agreement on the proposed alternative allocation mechanism within the 6 months period referred to in the first subparagraph, the **Energy Community Regulatory Board** shall decide on the alternative allocation mechanism to be implemented, following the process set out in **Article 6(2a) of this Regulation**.

3. Upon the publication of the decisions of the relevant national regulatory authorities pursuant to paragraph 2 and no later than 2 months before the offer of incremental capacity in the annual yearly capacity auction, the transmission system operators shall publish jointly a notice in one or more official languages of the **Contracting Party** and to the extent possible in English including the following minimum information

- (a) the information defined in paragraph 1 as approved by the national regulatory authorities;
- (b) a template of the contract(s) related to the capacity offered.

Article 29

Auctioning of incremental capacity

1. Subject to the completion of the steps provided for in Article 27, the involved transmission system operators shall offer the incremental capacity together with the respective available capacity in the annual yearly capacity auction as standard bundled products in ascending clock auctions according to Article 17 as a default and in accordance with Article 8(8) and (9) and Article 19.

2. The auctions for the respective offer levels shall be conducted in parallel and independently from each other in accordance with Article 17 and subject to Article 8(2). Only coordinated offer levels shall be auctioned.

3. In order to minimise potential auction premia and to achieve a positive economic test outcome for the highest possible offer level, a new auction may be initiated once and only if:

- (a) there were at least two offer levels set by the transmission system operators before the start of the auctions described in paragraph 2; and
- (b) at least one offer level was unsuccessful and resulted in a negative economic test; and (c) the next smaller offer level of the lowest unsuccessful offer level resulted in a positive economic test, and cleared with an auction premium for at least one yearly standard capacity product.

If these conditions are met, the new auction may be initiated for the lowest unsuccessful offer level referred in point (b).

4. If the new auction does not result in a positive economic test outcome, the allocation results of the original auction referred to in point (c) shall prevail in accordance with Articles 17(20) and (21).

Article 30**Principles for alternative allocation mechanisms**

1. An alternative allocation mechanism covers a maximum of 15 years after the start of operational use. If the economic test could not be passed based on the 15 years' bookings, national regulatory authorities may exceptionally extend the time horizon by up to 5 additional years.
2. An alternative capacity allocation mechanism can be used, subject to national regulatory authorities' approval, where it is reasonable to conclude from the market demand assessment pursuant to Article 26 or the consultation defined in Article 27(3) that the ascending clock auction is not suitable and that the incremental capacity project fulfils both of the following conditions:
 - (a) it involves more than two entry-exit systems and bids are requested along several interconnection points during the allocation procedure;
 - (b) bids with a duration of more than 1 year are requested.
3. In an alternative allocation mechanism network users may submit binding conditional bids for contracting capacity subject to one or more of the following conditions specified by the transmission system operators in the approved project proposal pursuant to Article 28(1):
 - (a) commitments linking or excluding commitments at other interconnection points;
 - (b) commitments across a number of different yearly standard capacity products at an interconnection point;
 - (c) commitments conditional on the allocation of a specific or minimum amount of capacity.
4. The alternative allocation mechanism is subject to approvals by the concerned national regulatory authorities according to Article 28(2). The mechanism shall be transparent and non-discriminatory but may allow for the prioritisation of booking duration or bids for higher amounts of capacity for a yearly standard capacity product.
5. If either booking duration or bids for higher amounts of capacity are prioritised, national regulatory authorities shall decide on setting aside an amount of at least 10 % and up to 20 % of the technical capacity at each interconnection point when applying Article 8(8). Capacity set aside in this manner shall be offered in accordance with Article 8(7).

Article 31**Transitional arrangements**

In the case of incremental capacity projects initiated before the **expiry of the deadline for transposition** of this Regulation **in the Energy Community**, Articles 26 to 30 shall apply unless such projects have been granted the applicable approvals for capacity allocation by the respective national regulatory authorities before **4 month after expiry of the deadline for transposition of this Regulation in the Energy Community**.

CHAPTER VI

INTERRUPTIBLE CAPACITY

Article 32

Allocation of interruptible services

1. As from **9 months after the expiry of the deadline for transposition of this Regulation in the Energy Community**, transmission system operators may only offer standard capacity products for interruptible capacity of a duration longer than one day if the corresponding monthly, quarterly or yearly standard capacity product for firm capacity was sold at an auction premium, was sold out, or was not offered.
2. Transmission system operators shall offer a daily capacity product for interruptible capacity in both directions at interconnection points where the respective standard capacity product for firm capacity was sold out day-ahead or was not offered. At unidirectional interconnection points where firm capacity is offered only in one direction, transmission system operators shall offer at least a daily product for interruptible capacity in the other direction.
3. If interruptible capacity is offered, this shall not be detrimental to the amount of firm capacity on offer. Transmission system operators shall not set aside capacity that can be offered as firm capacity in order to offer it as interruptible capacity.
4. To the extent interruptible capacity products other than daily products are offered, the same standard capacity products for firm capacity shall also apply for interruptible capacity, in terms of duration of the products.
5. To the extent interruptible capacity is offered, it shall be allocated via an auction process with the exception of within-day interruptible capacity.
6. Within-day interruptible capacity shall be allocated by means of an over-nomination procedure.
7. Within-day interruptible capacity shall only be allocated when firm capacity, whether technical capacity or additional capacity, is sold out.
8. Where auctions are held for any interruptible products longer than within-day transmission system operators shall, if known, publish the amounts of interruptible capacity on offer before the start of the auction process.
9. If offered, interruptible capacity shall be allocated by means of a separate auction after firm capacity of equal duration has been allocated, but before the auction of firm capacity with a shorter duration starts, with the exception of within-day interruptible capacity.
10. If offered, interruptible capacity auctions shall be conducted in accordance with the same design principles and timescales as applied for firm capacity. The exact auction dates to be used for the interruptible capacity auctions shall be detailed within the auction calendar with the exception of within-day interruptible capacity. For the annual yearly, all annual quarterly and all rolling monthly capacity auctions, the transmission system operators shall notify network users about the amount of interruptible capacity to be offered one week before the auction starts. Where an auction of firm capacity has not closed on the scheduled start day for the interruptible auctions, the interruptible auctions shall open no later than the next business day after the closing of the respective auctions of firm capacity. In such cases, any change in the offered amounts shall be notified at least 12 hours before the start of the respective interruptible capacity auction.

Article 33

Minimum interruption lead times

1. Interruptible capacities shall have minimum interruption lead times, which shall be decided jointly by adjacent transmission system operators.
2. The default minimum interruption lead time for a given gas hour shall be 45 minutes after the start of the re-nomination cycle for that gas hour. Where two transmission system operators wish to shorten the lead time for interruptions, any related agreement entered into between the transmission system operators shall be subject to competent national regulatory authority approval.

Article 34

Coordination of interruption process

The transmission system operator that initiates the interruption shall notify the relevant adjacent transmission system operator. Adjacent transmission system operators shall notify their respective affected network users as soon as possible, but with due regard to the reliability of the information.

Article 35

Defined sequence of interruptions

1. The order in which interruptions shall be performed, if the total of nominations exceeds the quantity of gas that can flow at a certain interconnection point, shall be determined based on the contractual time stamp of the respective transport contracts on an interruptible basis. In case of an interruption, transport contract coming into force earlier shall prevail over transport contract coming into force later.
2. If, after applying the procedure provided for in paragraph 1, two or more nominations are ranked at the same position within the interruption order and the transmission system operator does not interrupt all of them, a pro rata reduction of these specific nominations shall apply.
3. To accommodate the differences between the various interruptible capacity services within the **Energy Community**, the adjacent transmission system operators shall implement and coordinate the joint procedures provided for in this Article on an interconnection point by interconnection point basis.

Article 36

Reasons for interruptions

Transmission system operators shall include reasons for interruptions either directly in their interruptible transport contracts or in the general terms and conditions that govern these contracts. Reasons for interruptions can include but are not limited to gas quality, pressure, temperature, flow patterns, use of firm

contracts, maintenance, upon downstream constraints, public service obligations and capacity management deriving from congestion management procedures.

CHAPTER VII CAPACITY BOOKING PLATFORMS

Article 37

Capacity booking platforms

1. Transmission system operators shall apply this Regulation by offering capacity by means of one or a limited number of joint web-based booking platforms. Transmission system operators can operate such platforms themselves or via an agreed party that, where necessary, acts on behalf of them towards the network users.

2. Joint booking platforms shall apply the following rules:

(a) the rules and procedures for the offer and allocation of all capacity in accordance with Chapter III shall apply;

(b) the establishment of a process to offer firm bundled capacity in accordance with Chapter IV shall have priority;

(c) functionalities for network users to offer and obtain secondary capacity shall be provided;

(d) in order to use the services of the booking platforms network users shall accede to and be compliant with all applicable legal and contractual requirements that enable them to book and use capacity on the relevant transmission system operators' network under a transport contract;

(e) capacity at any single interconnection point or virtual interconnection point shall be offered at not more than one booking platform but a transmission system operator may offer capacity at different interconnection or virtual interconnection points through different booking platforms.

3. Within 6 months from **expiry of the deadline for transposition** of this Regulation in the **Energy Community** all transmission system operators shall reach a contractual agreement to use a single booking platform to offer capacity on the two sides of their respective interconnection points or virtual interconnection points. If no agreement is reached by the transmission system operators within that period, the matter shall be referred immediately by the transmission system operators to the respective national regulatory authorities. The national regulatory authorities shall then, within a period of a further 6 months from the date of referral, jointly select the single booking platform for a period not longer than 3 years. If the national regulatory authorities are not able to jointly select a single booking platform within 6 months from the date of referral, **Article (2a) of this Regulation** shall apply. The **Energy Community Regulatory Board** shall decide on the booking platform to be used, for a period not longer than 3 years, at the specific interconnection point or virtual interconnection point.

4. In case the selection of the booking platform at an interconnection point or virtual interconnection point was made either by the national regulatory authorities or by the **Energy Community Regulatory Board**, the transmission system operators shall reach a contractual agreement on the use of a booking platform at the latest by the end of the period referred to in the last sentence of paragraph 3, for which the selection was made by the national regulatory authorities or the **Energy Community Regulatory Board**. If no contractual agreement is reached, the procedure set out in paragraph 3 shall be resumed.

5. The establishment of one or a limited number of joint booking platforms shall facilitate and simplify

capacity booking at interconnection points across the **Energy Community** for the benefit of network users. <...>

6. For increases in technical capacity, the allocation results shall be published on the booking platform which is used for auctioning existing capacity, and for new capacity created where none currently exists, on a joint booking platform agreed by the relevant transmission system operators.

CHAPTER VIII FINAL PROVISIONS

Article 38

Implementation monitoring

1. <...> **In context of its implementation monitoring responsibilities, the Secretariat** shall monitor and analyse how transmission system operators have implemented this Regulation <...>.
2. Transmission system operators shall submit to **the Secretariat** all information required by **the Secretariat** to comply with its obligations pursuant to paragraph 1 by **no later than 9 months after the expiry of the deadline for transposition of this Regulation**.
3. The confidentiality of commercially sensitive information shall be preserved by **the Secretariat**.
4. **Not later than two years after the expiry of the deadline for transposition of this Regulation**, the **Energy Community Regulatory Board** shall <...> report on the conditionalities stipulated in contracts for standard capacity products for firm capacity, having regard to their effect on efficient network use and the integration of the **Energy Community** gas markets. The **Energy Community Regulatory Board** shall be supported in its assessment by the relevant national regulatory authorities and transmission system operators.

Article 39

<...>

Article 40

<...>

COMMISSION REGULATION (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas

Incorporated and adapted by Permanent High Level Group Decision 2018/07/PHLG-EnC of 28 November 2018.

*The adaptations made by Permanent High Level Group Decision 2018/07/PHLG-EnC are highlighted in **bold and blue**.*

CHAPTER I GENERAL PROVISIONS

Article 1

Subject matter

This Regulation establishes a network code setting out the rules on harmonised transmission tariff structures for gas, including rules on the application of a reference price methodology, the associated consultation and publication requirements as well as the calculation of reserve prices for standard capacity products.

Article 2

Scope

1. This Regulation shall apply to all entry points and all exit points of gas transmission networks with the exception of Chapters III, V, VI, Article 28, Article 31(2) and (3) and Chapter IX which shall apply only to interconnection points. Chapters III, V, VI, Article 28 and Chapter IX shall apply to entry points from third countries or exit points to third countries, or both, where the national regulatory authority takes a decision to apply Regulation (EU) 2017/459 at those points.

2. <...>

Article 3

Definitions

For the purposes of this Regulation, the definitions in Article 2 of Regulation (EC) No 715/2009, Article 3 of **Commission** Regulation (EU) 2017/459, <...> , Article 2 of Commission Regulation (EU) 2015/703 as well as Article 2 of Directive 2009/73/EC shall apply. In addition, the following definitions shall apply:

- (1) 'reference price' means the price for a capacity product for firm capacity with a duration of one year, which is applicable at entry and exit points and which is used to set capacity-based transmission tariffs;
- (2) 'reference price methodology' means the methodology applied to the part of the transmission services revenue to be recovered from capacity-based transmission tariffs with the aim of deriving reference prices;

- (3) 'non-price cap regime' means a regulatory regime, such as the revenue cap, rate of return and cost plus regime, under which the allowed revenue for the transmission system operator is set in accordance with Article 41(6)(a) of Directive 2009/73/EC;
- (4) 'non-transmission services revenue' means the part of the allowed or target revenue which is recovered by non-transmission tariffs;
- (5) 'regulatory period' means the time period for which the general rules for the allowed or target revenue are set in accordance with Article 41(6)(a) of Directive 2009/73/EC;
- (6) 'transmission services revenue' means the part of the allowed or target revenue which is recovered by transmission tariffs;
- (7) 'transmission tariffs' means the charges payable by network users for transmission services provided to them;
- (8) 'intra-system network use' means transporting gas within an entry-exit system to customers connected to that same entry-exit system;
- (9) 'cross-system network use' means transporting gas within an entry-exit system to customers connected to another entry-exit system;
- (10) 'homogeneous group of points' means a group of one of the following types of points: entry interconnection points, exit interconnection points, domestic entry points, domestic exit points, entry points from storage facilities, exit points to storage facilities, entry points from liquefied natural gas facilities (hereinafter, referred to as 'LNG facilities'), exit points to LNG facilities and entry points from production facilities;
- (11) 'allowed revenue' means the sum of transmission services revenue and non-transmission services revenue for the provision of services by the transmission system operator for a specific time period within a given regulatory period which such transmission system operator is entitled to obtain under a non-price cap regime and which is set in accordance with Article 41(6)(a) of Directive 2009/73/EC;
- (12) 'transmission services' means the regulated services that are provided by the transmission system operator within the entry-exit system for the purpose of transmission;
- (13) 'non-transmission tariffs' means the charges payable by network users for non-transmission services provided to them;
- (14) 'target revenue' means the sum of expected transmission services revenue calculated in accordance with the principles set out in Article 13(1) of Regulation (EC) No 715/2009 and expected non-transmission services revenue for the provision of services by the transmission system operator for a specific time period within a given regulatory period under a price cap regime;
- (15) 'non-transmission services' means the regulated services other than transmission services and other than services **related to the balancing of the transmission network** that are provided by the transmission system operator;
- (16) 'multiplier' means the factor applied to the respective proportion of the reference price in order to calculate the reserve price for a non-yearly standard capacity product;
- (17) 'price cap regime' means a regulatory regime under which a maximum transmission tariff based on the target revenue is set in accordance with Article 41(6)(a) of Directive 2009/73/EC;
- (18) 'cost driver' means a key determinant of the transmission system operator's activity which is correlated to the costs of that transmission system operator, such as distance or technical capacity;

(19) 'cluster of entry or exit points' means a homogeneous group of points or group of entry points or of exit points located within the vicinity of each other and which are considered as, respectively, one entry point or one exit point for the application of the reference price methodology;

(20) 'flow scenario' means a combination of an entry point and an exit point which reflects the use of the transmission system according to likely supply and demand patterns and for which there is at least one pipeline route allowing to flow gas into the transmission network at that entry point and out of the transmission network at that exit point, irrespective of whether the capacity is contracted at that entry point and that exit point;

(21) 'seasonal factor' means the factor reflecting the variation of demand within the year which may be applied in combination with the relevant multiplier;

(22) 'fixed payable price' means a price calculated in accordance with Article 24(b) where the reserve price is not subject to any adjustments;

(23) 'tariff period' means the time period during which a particular level of reference price is applicable, which minimum duration is one year and maximum duration is the duration of the regulatory period;

(24) 'regulatory account' means the account aggregating at least under- and over-recovery of the transmission services revenue under a non-price cap regime;

(25) 'auction premium' means the difference between the clearing price and the reserve price in an auction;

(26) 'floating payable price' means a price calculated in accordance with Article 24(a) where the reserve price is subject to adjustments such as revenue reconciliation, adjustment of the allowed revenue or adjustment of the forecasted contracted capacity.

Article 4

Transmission and non-transmission services and tariffs

1. A given service shall be considered a transmission services where both of the following criteria are met:

(a) the costs of such service are caused by the cost drivers of both technical or forecasted contracted capacity and distance;

(b) the costs of such service are related to the investment in and operation of the infrastructure which is part of the regulated asset base for the provision of transmission services.

Where any of the criteria set out in points (a) and (b) are not complied with, a given service may be attributed to either transmission or non-transmission services subject to the findings of the periodic consultation by the transmission system operator(s) or the national regulatory authority and decision by the national regulatory authority, as set out in Articles 26 and 27.

2. Transmission tariffs may be set in a manner as to take into account the conditions for firm capacity products.

3. The transmission services revenue shall be recovered by capacity-based transmission tariffs.

As an exception, subject to the approval of the national regulatory authority, a part of the transmission services revenue may be recovered only by the following commodity-based transmission tariffs which are set separately from each other:

- (a) a flow-based charge, which shall comply with all of the following criteria:
- (i) levied for the purpose of covering the costs mainly driven by the quantity of the gas flow;
 - (ii) calculated on the basis of forecasted or historical flows, or both, and set in such a way that is the same at all entry points and the same at all exit points;
 - (iii) expressed in monetary terms or in kind.
- (b) a complementary revenue recovery charge, which shall comply with all of the following criteria:
- (i) levied for the purpose of managing revenue under- and over-recovery;
 - (ii) calculated on the basis of forecasted or historical capacity allocations and flows, or both;
 - (iii) applied at points other than interconnection points;
 - (iv) applied after the national regulatory authority has made an assessment of its cost-reflectivity and its impact on cross-subsidisation between interconnection points and points other than interconnection points.
4. The non-transmission services revenue shall be recovered by non-transmission tariffs applicable for a given non-transmission service. Such tariffs shall be as follows:
- (a) cost-reflective, non-discriminatory, objective and transparent;
 - (b) charged to the beneficiaries of a given non-transmission service with the aim of minimising cross-subsidisation between network users within or outside a **Contracting Party**, or both.
- Where according to the national regulatory authority a given non-transmission service benefits all network users, the costs for such service shall be recovered from all network users.

Article 5

Cost allocation assessments

1. The national regulatory authority or the transmission system operator, as decided by the national regulatory authority, shall perform the following assessments and shall publish them as part of the final consultation referred to in Article 26:
- (a) a cost allocation assessment relating to the transmission services revenue to be recovered by capacity-based transmission tariffs and based exclusively on the cost drivers of
 - (i) technical capacity; or
 - (ii) forecasted contracted capacity; or
 - (iii) technical capacity and distance; or
 - (iv) forecasted contracted capacity and distance;
 - (b) a cost allocation assessment relating to the transmission services revenue to be recovered by commodity-based transmission tariffs, if any, and based exclusively on the cost drivers of:
 - (i) the amount of gas flows; or
 - (ii) the amount of gas flows and distance.
2. The cost allocation assessments shall indicate the degree of cross-subsidisation between intra-system and cross-system network use based on the proposed reference price methodology.

3. The cost allocation assessment referred to in paragraph 1(a) shall be carried out as follows:

(a) the transmission services capacity revenue to be obtained from intra-system network use at both all entry points and all exit points shall be divided by the value of the relevant capacity cost driver(s) for intra-system network use in order to calculate the intra-system capacity ratio, which is defined as a monetary unit per measurement unit, such as in euro per MWh/day, in accordance with the following formula:

$$\text{Ratio}_{\text{cap}}^{\text{intra}} = \frac{\text{Revenue}_{\text{cap}}^{\text{intra}}}{\text{Driver}_{\text{cap}}^{\text{intra}}}$$

Where:

$\text{Revenue}_{\text{cap}}^{\text{intra}}$ is the revenue, defined in a monetary unit such as the euro, which is obtained from capacity tariffs and charged for intra-system network use;

$\text{Driver}_{\text{cap}}^{\text{intra}}$ is the value of capacity-related cost driver(s) for intra-system network use, such as the sum of the average daily forecasted capacities contracted at each intra-system entry point and intra-system exit point, or cluster of points, and is defined in a measurement unit such as MWh/day.

(b) the transmission services capacity revenue to be obtained from cross-system network use at both all entry points and all exit points shall be divided by the value of the relevant capacity cost driver(s) for cross-system network use in order to calculate the cross-system capacity ratio, which is defined as a monetary unit per measurement unit, such as in euro per MWh/day, in accordance with the following formula:

$$\text{Ratio}_{\text{cap}}^{\text{cross}} = \frac{\text{Revenue}_{\text{cap}}^{\text{cross}}}{\text{Driver}_{\text{cap}}^{\text{cross}}}$$

Where:

$\text{Revenue}_{\text{cap}}^{\text{cross}}$ is the revenue, defined in a monetary unit such as the euro, which is obtained from capacity tariffs and charged for cross-system network use;

$\text{Driver}_{\text{cap}}^{\text{cross}}$ is the value of capacity-related cost driver(s) for cross-system network use, such as the sum of the average daily forecasted capacities contracted at each cross-system entry and exit point, or cluster of points, and is defined in a measurement unit such as MWh/day.

(c) the capacity cost allocation comparison index between the ratios referred to in points (a) and (b), which is defined in percentage, shall be calculated in accordance with the following formula:

$$\text{Comp}_{\text{cap}} = \frac{2 \times |\text{Ratio}_{\text{cap}}^{\text{intra}} - \text{Ratio}_{\text{cap}}^{\text{cross}}|}{\text{Ratio}_{\text{cap}}^{\text{intra}} + \text{Ratio}_{\text{cap}}^{\text{cross}}} \times 100 \%$$

4. The cost allocation assessment referred to in paragraph 1(b) shall be carried out as follows:

(a) the transmission services commodity revenue to be obtained from intra-system network use at both all entry points and all exit points shall be divided by the value of the relevant commodity cost driver(s) for intra-system network use in order to calculate the intra-system commodity ratio, which is defined as a monetary unit per measurement unit, such as in euro per MWh, in accordance with the following formula:

$$\text{Ratio}_{\text{comm}}^{\text{intra}} = \frac{\text{Revenue}_{\text{comm}}^{\text{intra}}}{\text{Driver}_{\text{comm}}^{\text{intra}}}$$

Where:

$\text{Revenue}_{\text{comm}}^{\text{intra}}$ is the revenue, defined in a monetary unit such as the euro, which is obtained from commodity tariffs and charged for intra-system network use;

$\text{Driver}_{\text{comm}}^{\text{intra}}$ is the value of commodity-related cost driver(s) for intra-system network use, such as the sum of the average daily forecasted flows at each intra-system entry and exit point, or cluster of points, and is defined in a measurement unit such as MWh.

(b) the transmission services commodity revenue to be obtained from cross-system network use at both all entry points and all exit points shall be divided by the value of the relevant commodity cost driver(s) for cross-system network use in order to calculate the cross-system commodity ratio, which is defined as a monetary unit per measurement unit, such as in euro per MWh, in accordance with the following formula:

$$\text{Ratio}_{\text{comm}}^{\text{cross}} = \frac{\text{Revenue}_{\text{comm}}^{\text{cross}}}{\text{Driver}_{\text{comm}}^{\text{cross}}}$$

Where:

$\text{Revenue}_{\text{comm}}^{\text{cross}}$ is the revenue, defined in a monetary unit such as the euro, which is obtained from commodity tariffs and charged on cross-system network use;

$\text{Driver}_{\text{comm}}^{\text{cross}}$ is the value of commodity-related cost driver(s) for cross-system network use, such as the sum of the average daily forecasted flows at each cross-system entry and exit point, or cluster of points, and is defined in a measurement unit such as MWh.

(c) the commodity cost allocation comparison index between the ratios referred to in points (a) and (b), which is defined in percentage, shall be calculated in accordance with the following formula:

$$\text{Comp}_{\text{comm}} = \frac{2 \times |\text{Ratio}_{\text{comm}}^{\text{intra}} - \text{Ratio}_{\text{comm}}^{\text{cross}}|}{\text{Ratio}_{\text{comm}}^{\text{intra}} + \text{Ratio}_{\text{comm}}^{\text{cross}}} \times 100 \%$$

5. The transmission services revenue to be obtained from intra-system network use at entry points referred to in paragraphs 3(a) and 4(a) shall be calculated as follows:

(a) the amount of allocated capacity or, respectively, flows attributed to the provision of transmission services for cross-system network use at all entry points shall be deemed equal to the amount of capacity or, respectively, flows attributed to the provision of transmission services for cross-system network use at all exit points;

(b) the capacity and, respectively, flows, determined as set out in point (a) of this paragraph shall be used to calculate the transmission services revenue to be obtained from cross-system network use at entry points;

(c) the difference between the overall transmission services revenue to be obtained at entry points and the resulting value referred to in point (b) of this paragraph shall be equal to the transmission services revenue to be obtained from intra-system network use at entry points.

6. Where distance is used as a cost driver in combination with technical or forecasted contracted capacity or flows, the capacity weighted average distance or, respectively, commodity weighted average distance shall be used. Where the results of the capacity, or respectively commodity cost allocation comparison indexes referred to in paragraph 3(c) or, respectively paragraph 4(c), exceed 10 percent, the national regulatory authority shall provide the justification for such results in the decision referred to in Article 27(4).

CHAPTER II

REFERENCE PRICE METHODOLOGIES

Article 6

Reference price methodology application

1. The reference price methodology shall be set or approved by the national regulatory authority as set out in Article 27. The reference price methodology to be applied shall be subject to the findings of the periodic consultations carried out in accordance with Article 26 by the transmission system operator(s) or the national regulatory authority, as decided by the national regulatory authority.
2. The application of the reference price methodology shall provide a reference price.
3. The same reference price methodology shall be applied to all entry and exit points in a given entry-exit system subject to the exceptions set out in Articles 10 and 11.
4. Adjustments to the application of the reference price methodology to all entry and exit points may only be made in accordance with Article 9 or as a result of one or more of the following:
 - (a) benchmarking by the national regulatory authority, whereby reference prices at a given entry or exit point are adjusted so that the resulting values meet the competitive level of reference prices;
 - (b) equalisation by the transmission system operator(s) or the national regulatory authority, as decided by the national regulatory authority, whereby the same reference price is applied to some or all points within a homogeneous group of points;
 - (c) rescaling by the transmission system operator(s) or the national regulatory authority, as decided by the national regulatory authority, whereby the reference prices at all entry or all exit points, or both, are adjusted either by multiplying their values by a constant or by adding to or subtracting from their values a constant.

Article 7

Choice of a reference price methodology

The reference price methodology shall comply with Article 13 of Regulation (EC) No 715/2009 and with the following requirements. It shall aim at:

- (a) enabling network users to reproduce the calculation of reference prices and their accurate forecast;
- (b) taking into account the actual costs incurred for the provision of transmission services considering the level of complexity of the transmission network;
- (c) ensuring non-discrimination and prevent undue cross-subsidisation including by taking into account the cost allocation assessments set out in Article 5;
- (d) ensuring that significant volume risk related particularly to transports across an entry-exit system is not assigned to final customers within that entry-exit system;
- (e) ensuring that the resulting reference prices do not distort cross-border trade.

Article 8

Capacity weighted distance reference price methodology

1. The parameters for the capacity weighted distance reference price methodology shall be as follows:

- (a) the part of the transmission services revenue to be recovered from capacity-based transmission tariffs;
- (b) the forecasted contracted capacity at each entry point or a cluster of entry points and at each exit point or a cluster of exit points;
- (c) where entry points and exit points can be combined in a relevant flow scenario, the shortest distance of the pipeline routes between an entry point or a cluster of entry points and an exit point or a cluster of exit points;
- (d) the combinations of entry points and exit points, where some entry points and some exit points can be combined in a relevant flow scenario;
- (e) the entry-exit split referred to in Article 30(1)(b)(v)(2) shall be 50/50.

Where entry points and exit points cannot be combined in a flow scenario, this combination of entry and exit points shall not be taken into account.

2. The reference prices shall be derived in the following sequential steps:

(a) the weighted average distance for each entry point or each cluster of entry points and for each exit point or each cluster of exit points shall be calculated, taking into account, where relevant, the combinations referred to in paragraph 1(d), in accordance with the following respective formulas:

(i) for an entry point or cluster of entry points, as the sum of the products of capacity at each exit point or cluster of exit points and the distance from this entry point or cluster of entry points to each exit point or cluster of exit points, divided by the sum of capacities at each exit point or cluster of exit points:

$$AD_{En} = \frac{\sum_{all\ Ex} CAP_{Ex} \times D_{En,Ex}}{\sum_{all\ Ex} CAP_{Ex}}$$

Where:

AD_{En} is the weighted average distance for an entry point or a cluster of entry points;

CAP_{Ex} is the forecasted contracted capacity at an exit point or a cluster of exit points;

D_{En,Ex} is the distance between a given entry point or a cluster of entry points and a given exit point or a cluster of exit points referred to in paragraph 1(c).

(ii) for an exit point or cluster of exit points, as the sum of the products of capacity at each entry point or cluster of entry points and the distance to this exit point or cluster of exit points from each entry point or cluster of entry points, divided by the sum of capacities at each entry point or cluster of entry points:

$$AD_{Ex} = \frac{\sum_{all\ En} CAP_{En} \times D_{En,Ex}}{\sum_{all\ En} CAP_{En}}$$

Where:

AD_{Ex} is the weighted average distance for an exit point or a cluster of exit points;

CAP_{En} is the forecasted contracted capacity at an entry point or a cluster of entry points;

D_{En,Ex} is the distance between a given entry point or a cluster of entry points and a given exit point or

a cluster of exit points referred to in paragraph 1(c).

(b) the weight of cost for each entry point or each cluster of entry points and for each exit point or each cluster of exit points shall be calculated in accordance with the following respective formulas:

$$W_{c,En} = \frac{CAP_{En} \times AD_{En}}{\sum_{\text{all En}} CAP_{En} \times AD_{En}}$$

$$W_{c,Ex} = \frac{CAP_{Ex} \times AD_{Ex}}{\sum_{\text{all Ex}} CAP_{Ex} \times AD_{Ex}}$$

Where:

$W_{c,En}$ is the weight of cost for a given entry point or a cluster of entry points;

$W_{c,Ex}$ is the weight of cost for a given exit point or a cluster of exit points;

AD_{En} is the weighted average distance for an entry point or a cluster of entry points;

AD_{Ex} is the weighted average distance for an exit point or a cluster of exit points;

CAP_{En} is the forecasted contracted capacity at an entry point or a cluster of entry points;

CAP_{Ex} is the forecasted contracted capacity at an exit point or a cluster of exit points.

(c) the part of the transmission services revenue to be recovered from capacity-based transmission tariffs at all entry points and the part of the transmission services revenue to be recovered from capacity-based transmission tariffs at all exit points shall be identified by applying the entry-exit split;

(d) the part of the transmission services revenue to be recovered from capacity-based transmission tariffs at each entry point or each cluster of entry points and for each exit point or each cluster of exit points shall be calculated in accordance with the following respective formulas:

$$R_{En} = W_{c,En} \times R_{\Sigma En}$$

$$R_{Ex} = W_{c,Ex} \times R_{\Sigma Ex}$$

Where:

$W_{c,En}$ is the weight of cost for a given entry point or a cluster of entry points;

$W_{c,Ex}$ is the weight of cost for a given exit point or a cluster of exit points;

R_{En} is the part of the transmission services revenue to be recovered from capacity-based transmission tariffs at an entry point or a cluster of entry points;

R_{Ex} is the part of the transmission services revenue to be recovered from capacity-based transmission tariffs at an exit point or a cluster of exit points;

$R_{\Sigma En}$ is the part of the transmission services revenue to be recovered from capacity-based transmission tariffs at all entry points;

$R_{\Sigma Ex}$ is the part of the transmission services revenue to be recovered from capacity-based transmission tariffs at all exit points."

(e) the resulting values referred to in point (d) shall be divided by the forecasted contracted capacity at each entry point or each cluster of entry points and at each exit point or each cluster of exit points in accordance with the following respective formulas:

$$T_{En} = \frac{R_{En}}{CAP_{En}}$$

$$T_{Ex} = \frac{R_{Ex}}{CAP_{Ex}}$$

Where:

T_{En} is the reference price at an entry point or each entry point within a cluster of entry points;

T_{Ex} is the reference price at an exit point or each exit point within a cluster of exit points;

CAP_{En} is the forecasted contracted capacity at an entry point or a cluster of entry points;

CAP_{Ex} is the forecasted contracted capacity at an exit point or a cluster of exit points.

Article 9

Adjustments of tariffs at entry points from and exit points to storage facilities and at entry points from LNG facilities and infrastructure ending isolation

1. A discount of at least 50 % shall be applied to capacity-based transmission tariffs at entry points from and exit points to storage facilities, unless and to the extent a storage facility which is connected to more than one transmission or distribution network is used to compete with an interconnection point.
2. At entry points from LNG facilities, and at entry points from and exit points to infrastructure developed with the purpose of ending the isolation of **Contracting Parties** in respect of their gas transmission systems, a discount may be applied to the respective capacity-based transmission tariffs for the purposes of increasing security of supply.

Article 10

Rules for entry-exit systems within a **Contracting Party** where more than one transmission system operator is active

1. In accordance with Article 6(3), the same reference price methodology shall be applied jointly by all transmission system operators within an entry-exit system within a **Contracting Party**.
2. As an exception to paragraph 1 and subject to paragraph 3, the national regulatory authority may decide:
 - (a) that the same reference price methodology is applied separately by each transmission system operator within an entry-exit system;
 - (b) as an exception to Article 6(3), when planning entry-exit system mergers, on intermediate steps allowing for different reference price methodologies to be applied separately by each transmission system operator within the entry-exit systems concerned. Such a decision shall set out the time period for the application of the intermediate steps. The national regulatory authority or the transmission system operators, as decided by the national regulatory authority, shall carry out an impact assessment and a cost benefit analysis prior to implementing such intermediate steps.

As a result of applying different reference price methodologies separately, the transmission services revenue

of the transmission system operators involved shall be adjusted accordingly.

3. In order to allow for the proper application of the same reference price methodology jointly, an effective inter-transmission system operator compensation mechanism shall be established.

The decision referred to in paragraph 2(a) or, respectively, paragraph 2(b) may be taken where the following conditions are complied with:

(a) an effective inter-transmission system operator compensation mechanism is established with the aim to:

(i) prevent detrimental effects on the transmission services revenue of the transmission system operators involved;

(ii) avoid cross-subsidisation between intra-system and cross-system network use;

(b) such separate application ensures that the costs correspond to those of an efficient transmission system operator.

4. The maximum time period set out in the decision referred to in paragraph 2(a) or, respectively, paragraph 2(b) shall be no later than five years as from the date referred to in Article 38(2). Sufficiently in advance of the date set out in that decision, the national regulatory authority may decide to postpone this date.

5. At the same time as the final consultation in accordance with Article 26, the national regulatory authority shall conduct a consultation on the principles of an effective inter-transmission system operator compensation mechanism referred to in paragraph 3 and its consequences on the tariff levels. The inter-transmission system operator compensation mechanism shall be applied in accordance with Article 41(6)(a) of Directive 2009/73/EC and published together with the consultation responses received.

6. The reserve price referred to in Article 22(1) shall be calculated as set out therein. Where paragraph 2 is applied, the following two calculations shall be carried out:

(a) the calculation set out in Article 22(1) shall be carried out by each transmission system operator involved;

(b) the weighted average of the resulting values referred to in point (a) shall be calculated in accordance with the formula set out in Article 22(1)(b), *mutatis mutandis*.

7. The final consultation referred to in Article 26 shall be conducted by all transmission system operators jointly or by the national regulatory authority. Where paragraph 2 is applied, such consultation shall be conducted by each transmission system operator separately or by the national regulatory authority, as decided by the national regulatory authority.

8. The information referred to in Articles 29 and 30 shall be published on an aggregated level for all transmission system operators involved. Where paragraph 2 is applied, the following two actions shall be carried out:

(a) such information shall be published individually for each transmission system operator involved;

(b) the information on the entry-exit split referred to in Article 30(1)(b)(v)(2) for the entry-exit system shall be published by the national regulatory authority.

Article 11**Rules for entry-exit systems covering more than one Contracting Party or covering Contracting Party(-ies) and Member State(s) where more than one transmission system operator is active**

The same reference price methodology may be applied jointly or separately or different reference price methodologies may be applied separately where more than one transmission system operator is active in an entry-exit system covering more than one **Contracting Party** or Member State.

CHAPTER III RESERVE PRICES

Article 12**General provisions**

1. For yearly standard capacity products for firm capacity, the reference prices shall be used as reserve prices. For non-yearly standard capacity products for firm capacity, the reserve prices shall be calculated as set out in this Chapter. For both yearly and non-yearly standard capacity products for interruptible capacity, the reserve prices shall be calculated as set out in this Chapter. The level of multipliers and of seasonal factors, set out in accordance with Article 13, and the level of discounts for the standard capacity products for interruptible capacity, set out in accordance with Article 16, may be different at interconnection points.
2. Where the tariff period and gas year do not coincide, separate reserve prices may be applied respectively:
 - (a) for the time period from 1 October to the end of the prevailing tariff period; and
 - (b) for the time period from the beginning of the tariff period following the prevailing tariff period to 30 September.
3. The respective reserve prices published according to Article 29 shall be binding for the subsequent gas year or beyond the subsequent gas year in case of fixed payable price, beginning after the annual yearly capacity auction, unless:
 - (a) the discounts for monthly and daily standard capacity products for interruptible capacity are recalculated within the tariff period if the probability of interruption referred to in Article 16 changes by more than twenty percent;
 - (b) the reference price is recalculated within the tariff period due to exceptional circumstances under which the non-adjustment of tariff levels would jeopardise the operation of the transmission system operator.

Article 13**Level of multipliers and seasonal factors**

1. The level of multipliers shall fall within the following ranges:

(a) for quarterly standard capacity products and for monthly standard capacity products, the level of the respective multiplier shall be no less than 1 and no more than 1,5;

(b) for daily standard capacity products and for within-day standard capacity products, the level of the respective multiplier shall be no less than 1 and no more than 3. In duly justified cases, the level of the respective multipliers may be less than 1, but higher than 0, or higher than 3.

2. Where seasonal factors are applied, the arithmetic mean over the gas year of the product of the multiplier applicable for the respective standard capacity product and the relevant seasonal factors shall be within the same range as for the level of the respective multipliers set out in paragraph 1.

3. By **1 October 2025**, the maximum level of multipliers for daily standard capacity products and for within-day standard capacity products shall be no more than 1,5, if by **1 October 2023** the **Energy Community Regulatory Board** issues a recommendation <...> that the maximum level of multipliers should be reduced to this level. This recommendation shall take into account the following aspects related to the use of multipliers and seasonal factors before and as from 31 May **2021**:

(a) changes in booking behaviour;

(b) impact on the transmission services revenue and its recovery;

(c) differences between the level of transmission tariffs applicable for two consecutive tariff periods;

(d) cross-subsidisation between network users having contracted yearly and non-yearly standard capacity products;

(e) impact on cross-border flows.

Article 14**Calculation of reserve prices for non-yearly standard capacity products for firm capacity in absence of seasonal factors**

The reserve prices for non-yearly standard capacity products for firm capacity shall be calculated as follows:

(a) for quarterly standard capacity products, for monthly standard capacity products and for daily standard capacity products, in accordance with the following formula:

$$P_{st} = (M \times T / 365) \times D$$

Where:

P_{st} is the reserve price for the respective standard capacity product;

M is the level of the multiplier corresponding to the respective standard capacity product;

T is the reference price;

D is the duration of the respective standard capacity product expressed in gas days. For leap years, the

formula shall be adjusted so that the figure 365 is substituted with the figure 366.

(b) for within-day standard capacity products, in accordance with the following formula:

$$P_{st} = (M \times T / 8760) \times H$$

Where:

P_{st} is the reserve price for the within-day standard capacity product;

M is the level of the corresponding multiplier;

T is the reference price;

H is the duration of the within-day standard capacity product expressed in hours. For leap years, the formula shall be adjusted so that the figure 8760 is substituted with the figure 8784.

Article 15

Calculation of reserve prices for non-yearly standard capacity products for firm capacity with seasonal factors

1. Where seasonal factors are applied, the reserve prices for non-yearly standard capacity products for firm capacity shall be calculated in accordance with the relevant formulas set out in Article 14 which shall be then multiplied by the respective seasonal factor calculated as set out in paragraphs 2 to 6.

2. The methodology set out in paragraph 3 shall be based on the forecasted flows, unless the quantity of the gas flow at least for one month is equal to 0. In such case, the methodology shall be based on the forecasted contracted capacity.

3. For monthly standard capacity products for firm capacity, the seasonal factors shall be calculated in the following sequential steps:

(a) for each month within a given gas year the usage of the transmission system shall be calculated on the basis of forecasted flows or forecasted contracted capacity using:

(i) the data for the individual interconnection point, where the seasonal factors are calculated for each interconnection point;

(ii) the average data on the forecasted flows or the forecasted contracted capacity, where the seasonal factors are calculated for some or all of the interconnection points.

(b) the resulting values referred to in point (a) shall be summed up;

(c) the usage rate shall be calculated by dividing each of the resulting values referred to in point (a) by the resulting value referred to in point (b);

(d) each of the resulting values referred to in point (c) shall be multiplied by 12. Where the resulting values are equal to 0, these values shall be adjusted to whichever of the following is the lower: 0,1 or the lowest of the resulting values other than 0;

(e) the initial level of the respective seasonal factors shall be calculated by raising each of the resulting values referred to in point (d) to the same power which is no less than 0 and no more than 2;

(f) the arithmetic mean of the products of the resulting values referred to in point (e) and the multiplier for monthly standard capacity products shall be calculated;

(g) the resulting value referred to in point (f) shall be compared with the range referred to in Article 13(1), as follows:

- (i) if this value falls within this range then the level of seasonal factors shall be equal to with the respective resulting values referred to in point (e);
- (ii) if this value falls outside of this range then point (h) shall apply.

(h) the level of seasonal factors shall be calculated as the product of the respective resulting values referred to in point (e) and the correction factor calculated as follows:

- (i) where the resulting value referred to in point (f) is more than 1,5, the correction factor shall be calculated as 1,5 divided by this value;
- (ii) where the resulting value referred to in point (f) is less than 1, the correction factor shall be calculated as 1 divided by this value.

4. For daily standard capacity products for firm capacity and within-day standard capacity products for firm capacity, the seasonal factors shall be calculated by carrying out the steps set out in paragraph 3(f) to (h), *mutatis mutandis*.

5. For quarterly standard capacity products for firm capacity, the seasonal factors shall be calculated in sequential steps as follows:

(a) the initial level of the respective seasonal factors shall be calculated as either of the following:

- (i) equal to the arithmetic mean of the respective seasonal factors applicable for the three relevant months;
- (ii) no less than the lowest and no more than the highest level of the respective seasonal factors applicable for the three relevant months.

(b) the steps set out in paragraph 3(f) to (h) shall be carried out, using the resulting values referred to in point (a), *mutatis mutandis*.

6. For all non-yearly standard capacity products for firm capacity, the values resulting from the calculation referred to in paragraphs 3 to 5 may be rounded up or down.

Article 16

Calculation of reserve prices for standard capacity products for interruptible capacity

1. The reserve prices for standard capacity products for interruptible capacity shall be calculated by multiplying the reserve prices for the respective standard capacity products for firm capacity calculated as set out in Articles 14 or 15, as relevant, by the difference between 100% and the level of an ex-ante discount calculated as set out in paragraphs 2 and 3.

2. An ex-ante discount shall be calculated in accordance with the following formula:

$$D_{\text{ex-ante}} = \text{Pro} \times A \times 100 \%$$

Where:

$D_{\text{ex-ante}}$ is the level of an ex-ante discount;

Pro factor is the probability of interruption which is set or approved in accordance with Article 41(6)(a)

of Directive 2009/73/EC pursuant to Article 28, and which refers to the type of standard capacity product for interruptible capacity;

A is the adjustment factor which is set or approved in accordance with Article 41(6)(a) of Directive 2009/73/EC pursuant to Article 28, applied to reflect the estimated economic value of the type of standard capacity product for interruptible capacity, calculated for each, some or all interconnection points, which shall be no less than 1.

3. The Pro factor referred to in paragraph 2 shall be calculated for each, some or all interconnection points per type of standard capacity product for interruptible capacity offered in accordance with the following formula on the basis of forecasted information related to the components of this formula:

$$\text{Pro} = \frac{N \times D_{\text{int}}}{D} \times \frac{\text{CAP}_{\text{av.int}}}{\text{CAP}}$$

Where:

N is the expectation of the number of interruptions over D;

D_{int} is the average duration of the expected interruptions expressed in hours;

D is the total duration of the respective type of standard capacity product for interruptible capacity expressed in hours;

CAP_{av.int} is the expected average amount of interrupted capacity for each interruption where such amount is related to the respective type of standard capacity product for interruptible capacity;

CAP is the total amount of interruptible capacity for the respective type of standard capacity product for interruptible capacity.

4. As an alternative to applying ex-ante discounts in accordance with paragraph 1, the national regulatory authority may decide to apply an ex-post discount, whereby network users are compensated after the actual interruptions incurred. Such ex-post discount may only be used at interconnection points where there was no interruption of capacity due to physical congestion in the preceding gas year.

The ex-post compensation paid for each day on which an interruption occurred shall be equal to three times the reserve price for daily standard capacity products for firm capacity.

CHAPTER IV RECONCILIATION OF REVENUE

Article 17

General provisions

1. Where and to the extent that the transmission system operator functions under a non-price cap regime, the following principles shall apply:

(a) the under- or over-recovery of the transmission services revenue shall be minimised having due regard to necessary investments;

(b) the level of transmission tariffs shall ensure that the transmission services revenue is recovered by the transmission system operator in a timely manner;

(c) significant differences between the levels of transmission tariffs applicable for two consecutive tariff periods shall be avoided to the extent possible.

2. Where and to the extent that the transmission system operator functions under a price cap regime or applies a fixed payable price approach set out in Article 24(b), no revenue reconciliation shall occur and all risks related to under- or over-recovery shall be covered exclusively by the risk premium. In such case Articles 18, 19(1) to (4) and 20 shall not apply.

3. Subject to the requirements of periodic consultations pursuant to Article 26 and subject to approval in accordance with Article 41(6)(a) of Directive 2009/73/EC, non-transmission services revenue may be reconciled as set out in this Chapter, *mutatis mutandis*.

Article 18

Under- and over-recovery

The under- or over-recovery of the transmission services revenue shall be equal to:

$$R_A - R$$

Where:

R_A is the actually obtained revenue related to the provision of transmission services;

R is the transmission services revenue. The values of R_A and R shall be attributed to the same tariff period and, where an effective inter-transmission system operator compensation mechanism referred to in Article 10(3) is established, shall take such mechanism into account.

Where the difference calculated in accordance with paragraph 1 is positive, it shall indicate an over-recovery of the transmission services revenue. Where such difference is negative, it shall indicate an under-recovery of the transmission services revenue.

Article 19

Regulatory account

1. The regulatory account shall indicate the information referred to in Article 18(1) for a given tariff period and may include other information, such as the difference between the anticipated and the actual cost components.

2. The transmission system operator's under- or over-recovered transmission services revenue shall be attributed to the regulatory account, unless other rules have been enacted in accordance with Article 41(6)(a) of Directive 2009/73/EC.

3. Where incentive mechanisms for capacity sales are implemented, subject to a decision in accordance with Article 41(6)(a) of Directive 2009/73/EC, only a part of the transmission system operator's under- or over-recovery shall be attributed to the regulatory account. In such case, the residual part thereof shall be kept or paid, as relevant, by the transmission system operator.

4. Each transmission system operator shall use one regulatory account.

5. Subject to a decision in accordance with Article 41(6)(a) of Directive 2009/73/EC, the earned auction premium, if any, may be attributed to a specific account separate from the regulatory account referred to in

paragraph 4. The national regulatory authority may decide to use this auction premium for reducing physical congestion or, where the transmission system operator functions only under a non-price cap regime, to decrease the transmission tariffs for the next tariff period(s) as set out in Article 20.

Article 20

Reconciliation of regulatory account

1. The full or partial reconciliation of the regulatory account shall be carried out in accordance with the applied reference price methodology and, in addition, by using the charge referred to in Article 4(3)(b), if applied.
2. The reconciliation of the regulatory account shall be carried out pursuant to the rules enacted in accordance with Article 41(6)(a) of Directive 2009/73/EC over a given reconciliation period, meaning the time period over which the regulatory account referred to in Article 19 shall be reconciled.
3. The regulatory account shall be reconciled with the aim of reimbursing to the transmission system operator the under-recovery and of returning to the network users the over-recovery.

CHAPTER V

PRICING OF BUNDLED CAPACITY AND CAPACITY AT VIRTUAL INTERCONNECTION POINTS

Article 21

Pricing of bundled capacity

1. The reserve price for a bundled capacity product shall be equal to the sum of the reserve prices for the capacities contributing to such product. The reserve prices for corresponding entry and exit capacities shall be made available when the bundled capacity product is offered and allocated by means of a joint booking platform referred to in Article 37 of Regulation (EU) 2017/459.
2. The revenue originating from the bundled capacity product sales corresponding to the reserve price for such product shall be attributed to the respective transmission system operators as follows:
 - (a) after each transaction for a bundled capacity product;
 - (b) in proportion to the reserve prices for the capacities contributing to such product.
3. The auction premium originating from the bundled capacity product sales shall be attributed in accordance with the agreement between the respective transmission system operators which is subject to the approval by the national regulatory authority or authorities to be granted no later than three months before the start of the annual yearly capacity auctions. In absence of such approval by all national regulatory authorities involved, the auction premium shall be attributed to the respective transmission system operators equally.
4. Where the interconnection point concerned connects adjacent entry-exit systems of two **Contracting Parties**, the respective national regulatory authorities shall submit the agreement referred to in paragraph 3 to the **Energy Community Regulatory Board** for information.

Article 22

Pricing of capacity at a virtual interconnection point

1. The reserve price for an unbundled standard capacity product offered at a virtual interconnection point shall be calculated in accordance with either of the following approaches:

(a) calculated on the basis of the reference price, where the applied reference price methodology allows for taking into account the established virtual interconnection point;

(b) equal to the weighted average of the reserve prices, where such average is calculated on the basis of the reference prices for each interconnection point contributing to such virtual interconnection point, where the applied reference price methodology does not allow for taking into account the established virtual interconnection point, in accordance with the following formula:

$$P_{st, VIP} = \frac{\sum_i^n (P_{st, i} \times CAP_i)}{\sum_i^n CAP_i}$$

Where:

$P_{st, VIP}$ is the reserve price for a given unbundled standard capacity product at the virtual interconnection point;

i is an interconnection point contributing to the virtual interconnection point;

n is the number of interconnection points contributing to the virtual interconnection point;

$P_{st, i}$ is the reserve price for a given unbundled standard capacity product at interconnection point i ;

CAP_i is technical capacity or forecasted contracted capacity, as relevant, at interconnection point i .

2. The reserve price for a bundled standard capacity product offered at a virtual interconnection point shall be calculated as set out in Article 21(1).

CHAPTER VI

CLEARING PRICE AND PAYABLE PRICE

Article 23

Calculation of clearing price at interconnection points

The clearing price for a given standard capacity product at an interconnection point shall be calculated in accordance with the following formula:

$$P_d = P_{R, au} + AP$$

Where:

P_d is the clearing price;

$P_{R, au}$ is the applicable reserve price for a standard capacity product which is published at the time when this product is auctioned;

AP is the auction premium, if any.

Article 24**Calculation of payable price at interconnection points**

The payable price for a given standard capacity product at an interconnection point shall be calculated in accordance with either of the following formulas:

(a) where the floating payable price approach is applied:

$$P_{\text{flo}} = P_{\text{R,flo}} + \text{AP}$$

Where:

P_{flo} is the floating payable price;

$P_{\text{R,flo}}$ is the reserve price for a standard capacity product applicable at the time when this product may be used;

AP is the auction premium, if any.

(b) where the fixed payable price approach is applied:

$$P_{\text{fix}} = (P_{\text{R,y}} \times \text{IND}) + \text{RP} + \text{AP}$$

Where:

P_{fix} is the fixed payable price;

$P_{\text{R,y}}$ is the applicable reserve price for a yearly standard capacity product which is published at the time when this product is auctioned;

IND is the ratio between the chosen index at the time of use and the same index at the time the product was auctioned;

RP is the risk premium reflecting the benefits of certainty regarding the level of transmission tariff, where such premium shall be no less than 0;

AP is the auction premium, if any.

Article 25**Conditions for offering payable price approaches**

1. Where and to the extent that the transmission system operator functions under a non-price cap regime, the conditions for offering payable price approaches shall be as follows:

(a) for cases where only existing capacity is offered:

- (i) the floating payable price approach shall be offered;
- (ii) the fixed payable price approach shall not be allowed.

(b) for incremental capacity and existing capacity offered in the same auction or same alternative allocation mechanism:

- (i) the floating payable price approach may be offered;
- (ii) the fixed payable price approach may be offered where one of the following conditions is met:

(1) an alternative allocation mechanism set out in Article 30 of Regulation (EU) 2017/459 is used;

(2) a project is included in the **list of Projects of Energy Community Interest or Projects of Mutual Interest** as set out in Article 3 of Regulation (EU) No 347/2013 **as adopted and adapted by Ministerial Council Decision 2015/09/MC-EnC**.

2. Where and to the extent that the transmission system operator functions under a price cap regime, the floating payable price approach or the fixed payable price approach, or both, may be offered.

CHAPTER VII CONSULTATION REQUIREMENTS

Article 26

Periodic consultation

1. One or more consultations shall be carried out by the national regulatory authority or the transmission system operator(s), as decided by the national regulatory authority. To the extent possible and in order to render more effective the consultation process, the consultation document should be published in the English language. The final consultation prior to the decision referred to in Article 27(4) shall comply with the requirements set out in this Article and Article 27, and shall include the following information:

- (a) the description of the proposed reference price methodology as well as the following items:
 - (i) the indicative information set out in Article 30(1)(a), including:
 - (1) the justification of the parameters used that are related to the technical characteristics of the system;
 - (2) the corresponding information on the respective values of such parameters and the assumptions applied.
 - (ii) the value of the proposed adjustments for capacity-based transmission tariffs pursuant to Article 9;
 - (iii) the indicative reference prices subject to consultation;
 - (iv) the results, the components and the details of these components for the cost allocation assessments set out in Article 5;
 - (v) the assessment of the proposed reference price methodology in accordance with Article 7;
 - (vi) where the proposed reference price methodology is other than the capacity weighted distance reference price methodology detailed in Article 8, its comparison against the latter accompanied by the information set out in point (iii);
- (b) the indicative information set out in Article 30(1)(b)(i), (iv), (v);
- (c) the following information on transmission and non-transmission tariffs:
 - (i) where commodity-based transmission tariffs referred to in Article 4(3) are proposed:
 - (1) the manner in which they are set;
 - (2) the share of the allowed or target revenue forecasted to be recovered from such tariffs;
 - (3) the indicative commodity-based transmission tariffs;
 - (ii) where non-transmission services provided to network users are proposed:

- (1) the non-transmission service tariff methodology therefor;
 - (2) the share of the allowed or target revenue forecasted to be recovered from such tariffs;
 - (3) the manner in which the associated non-transmission services revenue is reconciled as referred to in Article 17(3);
 - (4) the indicative non-transmission tariffs for non-transmission services provided to network users;
- (d) the indicative information set out in Article 30(2);
- (e) where the fixed payable price approach referred to in Article 24(b) is considered to be offered under a price cap regime for existing capacity:
- (i) the proposed index;
 - (ii) the proposed calculation and how the revenue derived from the risk premium is used;
 - (iii) at which interconnection point(s) and for which tariff period(s) such approach is proposed;
 - (iv) the process of offering capacity at an interconnection point where both fixed and floating payable price approaches referred to in Article 24 are proposed.
2. The final consultation prior to the decision referred to in Article 27(4) shall be open for at least two months. Consultation documents for any of the consultations referred to in paragraph 1 may require that replies submitted in response to the consultation shall include a non-confidential version suitable for publication.
3. Within one month following the end of the consultation, the transmission system operator(s) or the national regulatory authority, depending on the entity that publishes the consultation document referred to in paragraph 1, shall publish the consultation responses received and their summary. To the extent possible and in order to render more effective the consultation process, the summary should be provided in the English language.
4. The subsequent periodic consultations shall be conducted in accordance with Article 27(5).
5. <...> **For** the consultation document referred to in paragraph 1, **the template developed by Agency for Cooperation of European Regulators may be used.** <...>

Article 27

Periodic national regulatory authority decision-making

1. Upon launching the final consultation pursuant to Article 26 prior to the decision referred to in Article 27(4), the national regulatory authority or the transmission system operator(s), as decided by the national regulatory authority, shall forward the consultation documents to the **Energy Community Regulatory Board**.
2. The **Energy Community Regulatory Board** shall analyse the following aspects of the consultation document:
- (a) whether all the information referred to in Article 26(1) has been published;
 - (b) whether the elements consulted on in accordance with Article 26 comply with the following requirements:
 - (i) whether the proposed reference price methodology complies with the requirements set out in Article 7;

- (ii) whether the criteria for setting commodity-based transmission tariffs as set out in Article 4(3) are met;
- (iii) whether the criteria for setting non-transmission tariffs as set out in Article 4(4) are met.

3. Within two months following the end of the consultation referred to in paragraph 1, the Energy Community Regulatory Board shall publish and send to the national regulatory authority or transmission system operator, depending on which entity published the consultation document, and the Energy Community Secretariat the conclusion of its analysis in accordance with paragraph 2 in English.

The **Energy Community Regulatory Board** shall preserve the confidentiality of any commercially sensitive information.

4. Within five months following the end of the final consultation, the national regulatory authority, acting in accordance with Article 41(6)(a) of Directive 2009/73/EC, shall take and publish a motivated decision on all items set out in Article 26(1). Upon publication, the national regulatory authority shall send to the **Energy Community Regulatory Board** and the **Energy Community Secretariat** its decision.

5. The procedure consisting of the final consultation on the reference price methodology in accordance with Article 26, the decision by the national regulatory authority in accordance with paragraph 4, the calculation of tariffs on the basis of this decision, and the publication of the tariffs in accordance with Chapter VIII may be initiated as from the entry into force of this Regulation and shall be concluded no later than 31 May **2021**. The requirements set out in Chapters II, III and IV shall be taken into account in this procedure. The tariffs applicable for the prevailing tariff period at 31 May **2021** will be applicable until the end thereof. This procedure shall be repeated at least every five years starting from 31 May **2021**.

Article 28

Consultation on discounts, multipliers and seasonal factors

1. At the same time as the final consultation carried out in accordance with Article 26(1), the national regulatory authority shall conduct a consultation with the national regulatory authorities of all directly connected Member States and **Contracting Parties** and the relevant stakeholders on the following:

- (a) the level of multipliers;
- (b) if applicable, the level of seasonal factors and the calculations set out in Article 15;
- (c) the levels of discounts set out in Articles 9(2) and 16.

After the end of the consultation a motivated decision shall be taken in accordance with Article 41(6) (a) of Directive 2009/73/EC on the aspects referred to in points (a) to (c) of this paragraph. Each national regulatory authority shall consider the positions of national regulatory authorities of directly connected Member States and **Contracting Parties**.

2. The subsequent consultations shall be conducted every tariff period as from the date of the decision referred to in paragraph 1. After each consultation and as set out in Article 32(a), the national regulatory authority shall take and publish a motivated decision on the aspects referred to in paragraph 1(a), (b) and (c).

3. When adopting the decision referred to in paragraphs 1 and 2, the national regulatory authority shall take into account the consultation responses received and the following aspects:

- (a) for multipliers:

- (i) the balance between facilitating short-term gas trade and providing long-term signals for efficient investment in the transmission system;
 - (ii) the impact on the transmission services revenue and its recovery;
 - (iii) the need to avoid cross-subsidisation between network users and to enhance cost-reflectivity of reserve prices;
 - (iv) situations of physical and contractual congestion;
 - (v) the impact on cross-border flows;
- (b) for seasonal factors:
- (i) the impact on facilitating the economic and efficient utilisation of the infrastructure;
 - (ii) the need to improve the cost-reflectivity of reserve prices.

CHAPTER VIII

PUBLICATION REQUIREMENTS

Article 29

Information to be published before the annual yearly capacity auction

For interconnection points and, where the national regulatory authority takes a decision to apply Regulation (EU) 2017/459, points other than interconnection points, the following information shall be published before the annual yearly capacity auction in accordance with the requirements set out in Articles 31 and 32 by the national regulatory authority or the transmission system operator(s), as decided by the national regulatory authority:

- (a) for standard capacity products for firm capacity:
- (i) the reserve prices applicable until at least the end of the gas year beginning after the annual yearly capacity auction;
 - (ii) the multipliers and seasonal factors applied to reserve prices for non-yearly standard capacity products;
 - (iii) the justification of the national regulatory authority for the level of multipliers;
 - (iv) where seasonal factors are applied, the justification for their application.
- (b) for standard capacity products for interruptible capacity:
- (i) the reserve prices applicable until at least the end of the gas year beginning after the annual yearly capacity auction;
 - (ii) an assessment of the probability of interruption including:
 - (1) the list of all types of standard capacity products for interruptible capacity offered including the respective probability of interruption and the level of discount applied;
 - (2) the explanation of how the probability of interruption is calculated for each type of product referred to in point (1);
 - (3) the historical or forecasted data, or both, used for the estimation of the probability of inter-

ruption referred to in point (2).

Article 30

Information to be published before the tariff period

1. The following information shall be published before the tariff period in accordance with the requirements set out in Articles 31 and 32 by the national regulatory authority or the transmission system operator(s), as decided by the national regulatory authority:

(a) information on parameters used in the applied reference price methodology that are related to the technical characteristics of the transmission system, such as:

- (i) technical capacity at entry and exit points and associated assumptions;
- (ii) forecasted contracted capacity at entry and exit points and associated assumptions;
- (iii) the quantity and the direction of the gas flow for entry and exit points and associated assumptions, such as demand and supply scenarios for the gas flow under peak conditions;
- (iv) the structural representation of the transmission network with an appropriate level of detail;
- (v) additional technical information about the transmission network, such as the length and the diameter of pipelines and the power of compressor stations.

(b) the following information:

- (i) the allowed or target revenue, or both, of the transmission system operator;
- (ii) the information related to changes in the revenue referred to in point (i) from one year to the next year;
- (iii) the following parameters:
 - (1) types of assets included in the regulated asset base and their aggregated value;
 - (2) cost of capital and its calculation methodology;
 - (3) capital expenditures, including:
 - (a) methodologies to determine the initial value of the assets;
 - (b) methodologies to re-evaluate the assets;
 - (c) explanations of the evolution of the value of the assets;
 - (d) depreciation periods and amounts per asset type.

(4) operational expenditures;

(5) incentive mechanisms and efficiency targets;

(6) inflation indices.

(iv) the transmission services revenue;

(v) the following ratios for the revenue referred to in point (iv):

(1) capacity-commodity split, meaning the breakdown between the revenue from capacity-based transmission tariffs and the revenue from commodity-based transmission tariffs;

(2) entry-exit split, meaning the breakdown between the revenue from capacity-based transmission tariffs at all entry points and the revenue from capacity-based transmission tariffs at all exit points;

(3) intra-system/cross-system split, meaning the breakdown between the revenue from intra-system network use at both entry points and exit points and the revenue from cross-system network use at both entry points and exit points calculated as set out in Article 5.

(vi) where and to the extent that the transmission system operator functions under a non-price cap regime, the following information related to the previous tariff period on regarding the reconciliation of the regulatory account:

(1) the actually obtained revenue, the under- or over-recovery of the allowed revenue and the part thereof attributed to the regulatory account and, if applicable, sub-accounts within such regulatory account;

(2) the reconciliation period and the incentive mechanisms implemented.

(vii) the intended use of the auction premium.

(c) the following information on transmission and non-transmission tariffs, accompanied by the relevant information related to their derivation:

(i) where applied, commodity-based transmission tariffs referred to in Article 4(3);

(ii) where applied, non-transmission tariffs for non-transmission services referred to in Article 4(4);

(iii) the reference prices and other prices applicable at points other than those referred to in Article 29.

2. In addition, the following information shall be published with regard to transmission tariffs:

(a) explanation of the following:

(i) the difference in the level of transmission tariffs for the same type of transmission service applicable for the prevailing tariff period and for the tariff period for which the information is published;

(ii) the estimated difference in the level of transmission tariffs for the same type of transmission service applicable for the tariff period for which the information is published and for each tariff period within the remainder of the regulatory period.

(b) at least a simplified tariff model, updated regularly, accompanied by the explanation of how to use it, enabling network users to calculate the transmission tariffs applicable for the prevailing tariff period and to estimate their possible evolution beyond such tariff period.

3. For the points excluded from the definition of relevant points referred to in point 3.2(1)(a) of Annex I to Regulation (EC) No 715/2009, the information on the amount of forecasted contracted capacity and the forecasted quantity of the gas flow shall be published as set out in point 3.2(2) of Annex I to Regulation (EC) No 715/2009.

Article 31

Form of publication

1. **For the Contracting Parties whose TSOs are members or observers of ENTSO for Gas** the information referred to in Articles 29 and 30 shall be published as set out in Article 32 via a link on the platform referred to in point 3.1.1(1)(h) of Annex I to Regulation (EC) No 715/2009 to the website of the respective entity. Such information shall be accessible to the public, free of charge and of any limitations as to its use. It shall be published:

(a) in a user-friendly manner;

- (b) in a clear, easily accessible way and on a non-discriminatory basis;
- (c) in a downloadable format;
- (d) in one or more of the official languages of the **Contracting Party** and, <...> to the extent possible, in English.

2. For the Contracting Parties whose TSOs are members or observers of ENTSO for Gas the following information shall be published for interconnection points on the platform referred to in point 3.1.1(1)(h) of Annex I to Regulation (EC) No 715/2009:

- (a) at the same time as set out in Article 29, the reserve prices for standard capacity products for firm capacity and for standard capacity products for interruptible capacity;
- (b) at the same time as set out in Article 30, a flow-based charge referred to in Article 4(3)(a), where applied.

For other Contracting Parties such information shall be published on the website of the national transmission system operator(s) for gas.

3. The information referred to in paragraph 2 shall be published in the following manner:

- (a) as set out in paragraph 1(a) to (c);
- (b) in English;
- (c) in a standardised table which shall include at least the following information:
 - (i) the interconnection point;
 - (ii) the direction of the gas flow;
 - (iii) the names of the relevant transmission system operators;
 - (iv) the start and the end time of the product;
 - (v) whether the capacity is firm or interruptible;
 - (vi) the indication of the standard capacity product;
 - (vii) the applicable tariff per kWh/h and per kWh/d in the local currency and in the euro taking into account the following:
 - (1) where the applied capacity unit is kWh/h, the information on the applicable tariff per kWh/d shall be non-binding, and vice versa;
 - (2) where the local currency is other than the euro, the information on the applicable tariff in euro shall be non-binding.

In addition, at the same time as set out in Article 30, such standardised table shall include the simulation of all the costs for flowing 1 GWh/day/year for each interconnection point in the local currency and in the euro subject to point vii(2).

4. Where the information referred to in paragraph 2 is different from the respective information referred to in paragraph 1, the respective information referred to in paragraph 1 shall prevail.

Article 32

Publication notice period

The deadline for the publication of the information set out in Articles 29 and 30 shall be as follows:

- (a) for the information set out in Article 29, no later than thirty days before the annual yearly capacity auction;
- (b) for the information set out in Article 30, no later than thirty days before the respective tariff period;
- (c) for the respective transmission tariffs updated within the tariff period as set out in Article 12(3), immediately after the approval in accordance with Article 41(6)(a) of Directive 2009/73/EC.

Each update of the transmission tariffs shall be accompanied by information indicating the reasons for the changes in their level. Where Article 12(3)(b) is applied, it shall also be accompanied by the updated report referred to in Article 29(b) for the respective types of standard capacity products for interruptible capacity.

CHAPTER IX INCREMENTAL CAPACITY

Article 33

Tariff principles for incremental capacity

1. The minimum price at which transmission system operators shall accept a request for incremental capacity is the reference price. For the calculation of the economic test, reference prices shall be derived by including into the reference price methodology the relevant assumptions related to the offer of incremental capacity.
2. Where the fixed payable price approach set out in Article 24(b) is considered to be offered for incremental capacity, the reserve price referred to in Article 24(b) shall be based on projected investment and operating costs. Once the incremental capacity is commissioned, such reserve price shall be adjusted proportionally to the difference, irrespective whether positive or negative, between the projected investment costs and the actual investment costs.
3. In case the allocation of all incremental capacity at the reference price would not generate sufficient revenues for a positive economic test outcome, a mandatory minimum premium may be applied in the first auction or alternative allocation mechanism in which the incremental capacity is offered. The mandatory minimum premium may also be applied in subsequent auctions when the capacity is offered that initially remained unsold or when capacity is offered that was initially set aside according to Article 8(8) and (9) of Regulation (EU) 2017/459. The decision on whether and in which auctions to apply a mandatory minimum premium shall be taken in accordance with Article 41(6)(a) of Directive 2009/73/EC.
4. The level of the mandatory minimum premium shall enable a positive economic test outcome with the revenues generated by the offered capacity in the first auction or alternative allocation mechanism in which the incremental capacity is on offer. The range of the level for the mandatory minimum premium, depending on the expected allocated capacity, shall be submitted to the relevant national regulatory authorities for approval in accordance with Article 25(1)(c) of Regulation (EU) 2017/459.
5. A mandatory minimum premium approved by the national regulatory authority shall be added to the reference price for the bundled capacity products at the respective interconnection point and shall exclusively be attributed to the transmission system operators for which the mandatory minimum premium was approved by the respective national regulatory authority. This default principle for the attribution of a mandatory minimum premium is without prejudice to the split of a possible additional auction premium according to Article 21(3) or an alternative agreement between the involved national regulatory authorities.

CHAPTER X FINAL AND TRANSITIONAL PROVISIONS

Article 34

Methodologies and parameters used to determine the allowed or target revenue of transmission system operators

1. Before **1 October 2021**, the **Energy Community Regulatory Board** shall publish a report on the methodologies and parameters used to determine the allowed or target revenue of transmission system operators. The report shall be based on at least the parameters referred to in Article 30(1)(b)(iii).
2. National regulatory authorities shall submit to the **Energy Community Regulatory Board**, in accordance with the process defined by the **Energy Community Regulatory Board**, all necessary information related to the methodologies and parameters used to determine the allowed or target revenue of transmission system operators.

Article 35

Existing contracts

1. This Regulation shall not affect the levels of transmission tariffs resulting from contracts or capacity bookings concluded before **1 October 2019** where such contracts or capacity bookings foresee no change in the levels of the capacity- and/or commodity-based transmission tariffs except for indexation, if any.
2. The contract provisions related to transmission tariffs and capacity bookings referred to in paragraph 1 shall not be renewed, prolonged or rolled over after their expiration date.
3. Before **1 November 2019**, a transmission system operator shall send the contracts or the information on capacity bookings, if any, referred to in paragraph 1 to the national regulatory authority for information.

Article 36

Implementation monitoring

1. <...> **In context of its implementation monitoring responsibilities, the Energy Community Secretariat** shall monitor and analyse <...> how transmission system operators have implemented this Regulation. <...>
2. Transmission system operators shall submit to the **Energy Community Secretariat** all information required by the **Energy Community Secretariat** to comply with its obligations pursuant to paragraph 1, in accordance with the following deadlines:
 - (a) **1 July 2020** as regards the requirements under Chapter VIII;

(b) 31 December **2021** as regards all other provisions of this Regulation.

3. <...>

4. The confidentiality of commercially sensitive information shall be preserved by the **Energy Community Secretariat**.

5. Within three years as from the deadline for transposition of this Regulation in the **Energy Community**, the **Energy Community Regulatory Board** shall publish a report on the application of reference price methodologies in **Contracting Parties**.

Article 37

Power to grant derogations

1. National regulatory authorities may, at the request of an entity which operates an interconnector that has benefited from an exemption from Article 41(6), (8) and (10) of Directive 2009/73/EC in accordance with Article 36 of that Directive or a similar exemption, jointly grant such entity a derogation from the application of one or more Articles of this Regulation in accordance with paragraphs 2 to 6 of this Article where the application of those Articles to such entity would have one or several of the following negative consequences. It would:

(a) not facilitate efficient gas trade and competition;

(b) not provide incentives for investment for new capacity or to maintain existing levels of capacity;

(c) unreasonably distort cross-border trade;

(d) distort competition with other infrastructure operators that offer services of a similar nature to those of the interconnector;

(e) not be implementable when taking into account the specific nature of interconnectors.

2. The entity requesting a derogation under paragraph 1 shall include in its request a detailed reasoning, with all supporting documents, including, where appropriate, a cost-benefit analysis, demonstrating that one or more of the conditions in paragraph 1(a) to (e) are complied with.

3. The national regulatory authorities concerned shall jointly assess the request for a derogation and deal with it in close cooperation. Where the relevant national regulatory authorities grant a derogation, they shall specify its duration in their decisions.

4. The national regulatory authorities shall notify their decisions granting such derogations to the **Energy Community Regulatory Board** and the **Energy Community Secretariat**.

5. The national regulatory authorities may revoke a derogation if the circumstances or underlying reasons, or both, no longer apply or upon a reasoned recommendation of the **Energy Community Regulatory Board** or the **Energy Community Secretariat** to revoke a derogation due to a lack of justification.

Article 38

<...>



PART II

ACQUIS COMMUNAUTAIRE

SECURITY OF SUPPLY



REGULATION (EU) 2019/941 of 5 June 2019 on risk-preparedness in the electricity sector

Incorporated and adapted by the Decision of the Ministerial Council of the Energy Community 2021/13/MC-EnC of 30 November 2021 amending Annex I to the Treaty Establishing the Energy Community (Energy Community Treaty) and incorporating Directive (EU) 2019/944 and Regulation (EU) 2019/941 in the Energy Community acquis communautaire.

*The adaptations made by the Ministerial Council Decision 2021/13/MC-EnC are highlighted in **bold and blue**.*

CHAPTER I

General Provisions

Article 1

Subject matter

This Regulation lays down rules for cooperation between **Contracting Parties** with a view to preventing, preparing for and managing electricity crises in a spirit of solidarity and transparency and in full regard for the requirements of a competitive internal market for electricity.

Article 2

Definitions

For the purposes of this Regulation, the following definitions apply:

- (1) 'security of electricity supply' means the ability of an electricity system to guarantee the supply of electricity to customers with a clearly established level of performance, as determined by the **Contracting Parties** concerned;
- (2) 'transmission system operator' means transmission system operator as defined in point (35) of Article 2 of Directive (EU) 2019/944 **as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC of 30 November 2021**;
- (3) 'distribution' means distribution as defined in point (28) of Article 2 of Directive (EU) 2019/944 **as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC of 30 November 2021**;
- (4) 'cross-border flow' means cross-border flow as defined in point **2(b) of Article 2 of Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**;
- (5) 'cross zonal capacity' means the capability of the interconnected system to accommodate energy transfer between bidding zones;

- (6) 'customer' means customer as defined in point (1) of Article 2 of Directive (EU) 2019/944 **as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC of 30 November 2021**;
- (7) 'distribution system operator' means distribution system operator as defined in point (29) of Article 2 of Directive (EU) 2019/944 **as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC of 30 November 2021**;
- (8) 'generation' means generation as defined in point (37) of Article 2 of Directive (EU) 2019/944 **as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC of 30 November 2021**;
- (9) 'electricity crisis' means a present or imminent situation in which there is a significant electricity shortage, as determined by the **Contracting Parties** and described in their risk-preparedness plans, or in which it is impossible to supply electricity to customers;
- (10) 'simultaneous electricity crisis' means an electricity crisis affecting more than one **Contracting Party** at the same time;
- (11) 'competent authority' means a national governmental authority or a regulatory authority designated by a **Contracting Party** in accordance with Article 3;
- (12) 'regulatory authorities' means regulatory authorities referred to in Article 57(1) of Directive (EU) 2019/944 **as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC of 30 November 2021**;
- (13) 'crisis coordinator' means a person, a group of persons, a team composed of the relevant national electricity crisis managers or an institution tasked with acting as a contact point and coordinating the information flow during an electricity crisis;
- (14) 'non-market-based measure' means any supply- or demand-side measure that deviates from market rules or commercial agreements, the purpose of which is to mitigate an electricity crisis;
- (15) 'producer' means producer as defined in point (38) of Article 2 of Directive (EU) 2019/944 **as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC of 30 November 2021**;
- (16) '**region**' means a group of **Contracting Parties** whose transmission system operators share the same synchronous area¹;
- (17) 'subgroup' means a group of **Contracting Parties**, within a region, which have the technical ability to provide each other assistance in accordance with Article 15;
- (18) 'early warning' means a provision of concrete, serious, reliable information indicating that an event may occur which is likely to result in a significant deterioration of the electricity supply situation and is likely to lead to electricity crisis;
- (19) 'transmission' means transmission as defined in point (34) of Article 2 of Directive (EU) 2019/944 **as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC of 30 November 2021**;
- (20) 'electricity undertaking' means electricity undertaking as defined in point (57) of Article 2 of Directive (EU) 2019/944 **as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC of 30 November 2021**;
- (21) 'capacity allocation' means the attribution of cross zonal capacity;
- (22) 'energy from renewable sources' means energy from renewable sources or renewable energy as defined in point (31) of Article 2 of Directive (EU) 2019/944 **as adapted and adopted by Ministerial**

¹ The definition displayed here corresponds to the first item in Article 5(2) of Ministerial Council Decision 2021/13/MC-EnC

Council Decision 2021/13/MC-EnC of 30 November 2021;

(23) 'Security of Supply Coordination Group' is the group established by Procedural Act 2008/02/MC-EnC of 11 December 2008, as amended by Procedural Act 2021/03/MC-EnC of 30 November 2021².

Article 3

Competent authority

1. As soon as possible and in any event by 5 January 2023³, each **Contracting Party** shall designate a national governmental or regulatory authority as its competent authority. The competent authorities shall be responsible for, and shall cooperate with each other for the purposes of, carrying out the tasks provided for in this Regulation. Where appropriate, until the competent authority has been designated, the national entities responsible for the security of electricity supply shall carry out the tasks of the competent authority in accordance with this Regulation.

2. **Contracting Parties** shall, without delay, notify the **Energy Community Secretariat** and the **Security of Supply Coordination Group** and make public the name and the contact details of their competent authorities designated pursuant to paragraph 1 and any changes to their name or contact details.

3. **Contracting Parties** may allow the competent authority to delegate the operational tasks regarding risk-preparedness planning and risk management set out in this Regulation to other bodies. Delegated tasks shall be performed under the supervision of the competent authority and shall be specified in the risk-preparedness plan in accordance with point (b) of Article 11(1).

CHAPTER II

Risk assessment

Article 4

Assessment of risks to security of electricity supply

Each competent authority shall ensure that all relevant risks relating to security of electricity supply are assessed in accordance with the rules laid down in this Regulation and in **Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**. To that end, it shall cooperate with transmission system operators, distribution system operators, regulatory authorities, the ENTSO for Electricity, regional coordination centres and other relevant stakeholders, as required.

² The definition displayed here corresponds to the second item in Article 5(2) of Ministerial Council Decision 2021/13/MC-EnC

³ The date corresponds to Article 5(3) of Ministerial Council Decision 2021/13/MC-EnC

Article 5**Methodology for identifying regional electricity crisis scenarios⁴**

< ... >

Article 6**Identification of regional electricity crisis scenarios**

1. **Based on the regional crisis scenarios identified according to Article 6 of Regulation (EU) 2019/941, within six months of the adoption of Ministerial Council Decision 2021/13/MC-EnC, the ENTSO for Electricity shall, on the basis of the methodology developed pursuant to Article 5 of Regulation (EU) 2019/941 and in close cooperation with the Security of Supply Coordination Group, competent authorities and regulatory authorities, identify the most relevant electricity crisis scenarios for each region⁵.**
2. The ENTSO for Electricity shall submit the regional electricity crisis scenarios to the relevant transmission system operators, regional coordination centres, competent authorities and regulatory authorities **of the Contracting Parties⁶** as well as to the **Security of Supply Coordination Group**. The **Security of Supply Coordination Group** may recommend amendments.
3. The ENTSO for Electricity shall update the regional electricity crisis scenarios **when updating the regional crisis scenarios pursuant to Article 6(3) of Regulation (EU) 2019/941⁷.**

Article 7**Identification of national electricity crisis scenarios**

1. Within four months of the identification of the regional electricity crisis scenarios in accordance with Article 6(1), the competent authority shall identify the most relevant national electricity crisis scenarios.
2. In identifying the national electricity crisis scenarios, the competent authority shall consult the transmission system operators, the distribution system operators that the competent authority considers to be relevant, the relevant producers or their trade bodies, and the regulatory authority where it is not the competent authority.
3. The national electricity crisis scenarios shall be identified on the basis of at least the risks referred to in Article 5(2) **of Regulation (EU) 2019/941⁸** and shall be consistent with the regional electricity crisis scenarios identified in accordance with Article 6(1). **Contracting Parties** shall update the national electricity crisis scenarios every four years, unless circumstances warrant more frequent updates.
4. Within four months of identification of regional electricity crisis scenarios in accordance with Article 6(1), **Contracting Parties** shall inform the **Security of Supply Coordination Group** and the **Energy Community Secretariat** of their assessment of the risks in relation to the ownership of infrastructure relevant for security of electricity supply, and any measures taken to prevent or mitigate such risks, with

4 Article 5 is not applicable according to Article 5(4) of Ministerial Council Decision 2021/13/MC-EnC

5 The text displayed here corresponds to the first item in Article 5(5) of Ministerial Council Decision 2021/13/MC-EnC

6 The text displayed here corresponds to the second item in Article 5(5) of Ministerial Council Decision 2021/13/MC-EnC

7 The text here corresponds to the third item in Article 5(5) of Ministerial Council Decision 2021/13/MC-EnC

8 The text here corresponds to Article 5(6) of Ministerial Council Decision 2021/13/MC-EnC

an indication of why such measures are considered necessary and proportionate.

Article 8

Methodology for short-term and seasonal adequacy assessments⁹

< ... >

Article 9

Short-term and seasonal adequacy assessments

1. **All short-term adequacy assessments, whether carried out at national or regional level, shall be carried out in accordance with the methodology developed pursuant to Article 8 of Regulation (EU) 2019/941¹⁰.**

2. The ENTSO for Electricity shall carry out seasonal adequacy assessments in accordance with the methodology developed pursuant to Article 8. It shall publish the results for the winter adequacy assessment by 1 December each year and for the summer adequacy assessment by 1 June each year. It may delegate tasks relating to the adequacy assessments to regional coordination centres. It shall present the adequacy assessment at a meeting of the **Security of Supply Coordination Group**, which may make recommendations where appropriate.

3. The regional coordination centres shall carry out week-ahead to at least day ahead adequacy assessments in accordance with Regulation (EU) 2017/1485 on the basis of the methodology adopted pursuant to Article 8 of this Regulation.

CHAPTER III

Risk-preparedness plans

Article 10

Establishment of risk-preparedness plans

1. On the basis of the regional and national electricity crisis scenarios identified pursuant to Articles 6 and 7, the competent authority of each **Contracting Party** shall establish a risk-preparedness plan, after consulting distribution system operators considered relevant by the competent authority, the transmission system operators, the relevant producers or their trade bodies, the electricity and natural gas undertakings, the relevant organisations that represent the interests of industrial and non-industrial electricity customers, and the regulatory authority where it is not the competent authority.

2. The risk-preparedness plan shall consist of national measures, regional and, where applicable, bilateral measures as provided for in Articles 11 and 12. In accordance with Article 16, all measures that are planned

⁹ Article 8 is not applicable according to Article 5(7) of Ministerial Council Decision 2021/13/MC-EnC

¹⁰ The text displayed here corresponds to Article 5(8) of Ministerial Council Decision 2021/13/MC-EnC

or taken to prevent, prepare for and mitigate electricity crises shall fully comply with the rules governing the internal electricity market and system operation. Those measures shall be clearly defined, transparent, proportionate and non-discriminatory.

3. The risk-preparedness plan shall be developed in accordance with Articles 11 and 12 and with the template set out in the Annex. If necessary, **Contracting Parties** may include additional information in the risk-preparedness plan.

4. In order to ensure consistency of risk-preparedness plans, competent authorities shall, before adopting their risk-preparedness plans, submit the draft plans, for consultation, to the competent authorities of the relevant **Contracting Parties** in the region and, where they are not in the same region, to the competent authorities of directly connected **Contracting Parties**, as well as to the **Security of Supply Coordination Group**.

5. Within six months of receipt of the draft risk-preparedness plans, the competent authorities referred to in paragraph 4 and the **Security of Supply Coordination Group** may issue recommendations relating to the draft plans submitted pursuant to paragraph 4.

6. Within nine months of submitting their draft plans, the competent authorities concerned shall adopt their risk-preparedness plans, taking into account the results of the consultation pursuant to paragraph 4 and any recommendations issued pursuant to paragraph 5. They shall notify their risk-preparedness plans to the **Energy Community Secretariat** without delay.

7. The competent authorities and the **Energy Community Secretariat** shall publish the risk-preparedness plans on their websites, while ensuring confidentiality of sensitive information, in particular information on measures relating to the prevention or mitigation of consequences of malicious attacks. The protection of the confidentiality of sensitive information shall be based on the principles determined pursuant to Article 19.

8. The competent authorities shall adopt and publish their first risk-preparedness plans by 5 January 2025¹¹. They shall update them every four years thereafter, unless circumstances warrant more frequent updates.

Article 11

Content of risk-preparedness plans as regards national measures

1. The risk-preparedness plan of each **Contracting Party** shall set out all national measures that are planned or taken to prevent, prepare for and mitigate electricity crises as identified pursuant to Articles 6 and 7. It shall at least:

(a) contain a summary of the electricity crisis scenarios defined for the relevant **Contracting Party** and region, in accordance with the procedures laid down in Articles 6 and 7;

(b) establish the role and responsibilities of the competent authority and describe which tasks, if any, have been delegated to other bodies;

(c) describe the national measures designed to prevent or prepare for the risks identified pursuant to Articles 6 and 7;

(d) designate a national crisis coordinator and establish its tasks;

¹¹ The date corresponds to Article 5(9) of Ministerial Council Decision 2021/13/MC-EnC

- (e) establish detailed procedures to be followed in electricity crises, including the corresponding schemes on information flows;
 - (f) identify the contribution of market-based measures in coping with electricity crises, in particular demand-side and supply-side measures;
 - (g) identify possible non-market-based measures to be implemented in electricity crises, specifying the triggers, conditions and procedures for their implementation, and indicating how they comply with the requirements laid down in Article 16 and with regional and bilateral measures;
 - (h) provide a framework for manual load shedding, stipulating the circumstances in which loads are to be shed and, with regard to public safety and personal security, specifying which categories of electricity users are, in accordance with national law, entitled to receive special protection against disconnection, justifying the need for such protection, and specifying how the transmission system operators and distribution system operators of the **Contracting Parties** concerned are to decrease consumption;
 - (i) describe the mechanisms used to inform the public about electricity crises;
 - (j) describe the national measures necessary to implement and enforce the regional and, where applicable, bilateral measures agreed pursuant to Article 12;
 - (k) include information on related and necessary plans for developing the future grid that will help to cope with the consequences of identified electricity crisis scenarios.
2. National measures shall take full account of the regional and, where applicable, bilateral measures agreed pursuant to Article 12 and shall endanger neither the operational security or safety of the transmission system, nor the security of electricity supply of other **Contracting Parties**.

Article 12

Content of risk-preparedness plans as regards regional and bilateral measures

1. In addition to the national measures referred to in Article 11, the risk-preparedness plan of each **Contracting Party** shall include regional and, where applicable, bilateral measures to ensure that electricity crises with a cross-border impact are properly prevented or managed. Regional measures shall be agreed within the region concerned between **Contracting Parties** that have the technical ability to provide each other assistance in accordance with Article 15. For that purpose, **Contracting Parties** may also form subgroups within a region. Bilateral measures shall be agreed between **Contracting Parties** which are directly connected but are not within the same region. **Contracting Parties** shall ensure consistency between regional and bilateral measures. Regional and bilateral measures shall include at least:
- (a) the designation of a crisis coordinator;
 - (b) mechanisms to share information and cooperate;
 - (c) coordinated measures to mitigate the impact of an electricity crisis, including a simultaneous electricity crisis, for the purpose of assistance in accordance with Article 15;
 - (d) procedures for carrying out annual or biennial tests of the risk-preparedness plans;
 - (e) the trigger mechanisms of non-market-based measures that are to be activated in accordance with Article 16(2).

2. The **Contracting Parties** concerned shall agree the regional and bilateral measures to be included in the risk-preparedness plan after consulting the relevant regional coordination centres. The **Energy Community Secretariat** may have a facilitating role in the preparation of the agreement on regional and bilateral measures. The **Energy Community Secretariat** may request the **Energy Community Regulatory Board** and the ENTSO for Electricity to provide technical assistance to **Contracting Parties** with a view to facilitating such an agreement. At least eight months before the deadline for the adoption or the updating of the risk-preparedness plan, the competent authorities shall report on the agreements reached to the **Security of Supply Coordination Group**. If the **Contracting Parties** are not able to reach an agreement, the competent authorities concerned shall inform the **Energy Community Secretariat** of the reasons for such disagreement. In such a case the **Energy Community Secretariat** shall propose measures including a cooperation mechanism **among Contracting Parties**¹² for the conclusion of an agreement on regional and bilateral measures.

3. With the involvement of relevant stakeholders, the competent authorities of the **Contracting Parties** of each region shall periodically test the effectiveness of the procedures developed in risk-preparedness plans for preventing electricity crises, including the mechanisms referred to in point (b) of paragraph 1, and carry out biennial simulations of electricity crises, in particular testing those mechanisms.

Article 13

Energy Community Secretariat assessment of the risk-preparedness plans

1. Within four months of the notification of the adopted risk-preparedness plan by the competent authority, the **Energy Community Secretariat** shall assess the plan taking duly into account the views expressed by the **Security of Supply Coordination Group**.

2. The **Energy Community Secretariat** shall, after consulting the **Security of Supply Coordination Group**, issue a non-binding opinion, setting out detailed reasons, and submit it to the competent authority, with a recommendation to review its risk-preparedness plan where that plan:

- (a) is not effective to mitigate the risks identified in the electricity crisis scenarios;
- (b) is inconsistent with the electricity crisis scenarios identified or with the risk-preparedness plan of another **Contracting Party**;
- (c) does not comply with the requirements laid down in Article 10(2);
- (d) sets out measures that are likely to jeopardise the security of electricity supply of other **Contracting Parties**;
- (e) unduly distorts competition or the effective functioning of the internal market; or
- (f) does not comply with the provisions of this Regulation or other provisions of **Energy Community** law.

3. Within three months of receipt of the **Energy Community Secretariat's** opinion referred to in paragraph 2, the competent authority concerned shall take full account of the **Energy Community Secretariat's** recommendation and shall either notify the amended risk-preparedness plan to the **Energy Community Secretariat** or notify the **Energy Community Secretariat** of the reasons why it objects to the recommendation.

¹² The text displayed here corresponds to Article 5(10) of Ministerial Council Decision 2021/13/MC-EnC

4. In the event that the competent authority objects to the **Energy Community Secretariat's** recommendation, the **Energy Community Secretariat** may, within four months of receipt of the notification of the competent authority's reasons for objection, withdraw its recommendation or convene a meeting with the competent authority and, where the **Energy Community Secretariat** considers it to be necessary, the **Security of Supply Coordination Group**, in order to assess the issue. The **Energy Community Secretariat** shall set out detailed reasons for requesting any modifications to the risk-preparedness plan. Where the final position of the competent authority concerned diverges from the **Energy Community Secretariat's** detailed reasons, that competent authority shall provide the **Energy Community Secretariat** with the reasons for its position within two months of receipt of the **Energy Community Secretariat's** detailed reasons.

CHAPTER IV

Managing electricity crises

Article 14

Early warning and declaration of an electricity crisis

1. Where a seasonal adequacy assessment or other qualified source provides concrete, serious and reliable information that an electricity crisis may occur in a **Contracting Party**, the competent authority of that **Contracting Party** shall, without undue delay, issue an early warning to the **Energy Community Secretariat**, the competent authorities of the **Contracting Parties** within the same region and, where they are not in the same region, the competent authorities of the directly connected **Contracting Parties**. The competent authority concerned shall also provide information on the causes of the possible electricity crisis, on measures planned or taken to prevent an electricity crisis and on the possible need for assistance from other **Contracting Parties**. The information shall include the possible impacts of the measures on the **neighbouring**¹³ electricity market. The **Energy Community Secretariat** shall provide that information to the **Security of Supply Coordination Group**.

2. When confronted with an electricity crisis, the competent authority shall, after consulting the transmission system operator concerned, declare an electricity crisis and inform the competent authorities of the **Contracting Parties** within the same region and, where they are not in the same region, the competent authorities of directly connected **Contracting Parties**, as well as the **Energy Community Secretariat**, without undue delay. That information shall include the causes of the deterioration of the electricity supply situation, the reasons for declaring an electricity crisis, the measures planned or taken to mitigate it and the need for any assistance from other **Contracting Parties**.

3. Where they consider the information provided pursuant to paragraph 1 or 2 to be insufficient, the **Energy Community Secretariat**, the **Security of Supply Coordination Group** or the competent authorities of the **Contracting Parties** within the same region and, where they are not in the same region, the competent authorities of directly connected **Contracting Parties** may request the **Contracting Party** concerned to provide additional information.

¹³ The text displayed here corresponds to Article 5(11) of Ministerial Council Decision 2021/13/MC-Enc

4. Where a competent authority issues an early warning or declares an electricity crisis, the measures set out in the risk-preparedness plan shall be followed to the fullest extent possible.

Article 15

Cooperation and assistance among Contracting Parties¹⁴

1. **Contracting Parties** shall act and cooperate in a spirit of solidarity in order to prevent or manage electricity crises.

2. Where they have the necessary technical ability, **Contracting Parties** shall offer each other assistance by means of regional or bilateral measures that have been agreed pursuant to this Article and to Article 12 before that assistance is provided. To that end, and with the purpose of protecting public safety and personal security, **Contracting Parties** shall agree on regional or bilateral measures of their choice in order to deliver electricity in a coordinated manner.

3. **Contracting Parties** shall agree on the necessary technical, legal and financial arrangements for the implementation of the regional or bilateral measures before assistance is offered. Such arrangements shall specify, inter alia, the maximum quantity of electricity to be delivered at regional or bilateral level, the trigger for any assistance and for suspension of assistance, how the electricity will be delivered, and provisions on fair compensation between **Contracting Parties** in accordance with paragraphs 4, 5 and 6.

4. Assistance shall be subject to a prior agreement between the **Contracting Parties** concerned with regard to fair compensation, which shall cover at least:

(a) the cost of the electricity delivered into the territory of the **Contracting Party** requesting assistance as well as the associated transmission costs; and

(b) any other reasonable costs incurred by the **Contracting Party** providing assistance, including as regards reimbursement for assistance prepared without effective activation, as well as any costs resulting from judicial proceedings, arbitration proceedings or similar proceedings and settlements.

5. Fair compensation pursuant to paragraph 4 shall include, inter alia, all reasonable costs that the **Contracting Party** providing assistance incurs from an obligation to pay compensation by virtue of fundamental rights guaranteed by **Energy Community** law and by virtue of the applicable international obligations when implementing the provisions of this Regulation on assistance and further reasonable costs incurred from the payment of compensation pursuant to national compensation rules.

6. **The Contracting Party requesting assistance shall promptly pay, or ensure the prompt payment of fair compensation to the Contracting Party providing assistance. The Commission Recommendation 2020/775 shall be applied as non-binding guidance.**¹⁵

7. < ... >¹⁶

8. In the event of an electricity crisis in which **Contracting Parties** have not yet agreed on regional or bilateral measures and technical, legal and financial arrangements pursuant to this Article, **Contracting Parties** shall agree on ad hoc measures and arrangements in order to apply this Article, including as regards fair compensation pursuant to paragraphs 4, 5 and 6. Where a **Contracting Party** requests assistance

¹⁴ The title displayed here corresponds to the first item in Article 5(12) of Ministerial Council Decision 2021/13/MC-EnC

¹⁵ The text displayed here corresponds to the second item in Article 5(12) of Ministerial Council Decision 2021/13/MC-EnC

¹⁶ Article 15(7) is not applicable according to the third item in Article 5(12) of Ministerial Council Decision 2021/13/MC-EnC

before such ad hoc measures and arrangements have been agreed, it shall undertake, prior to receiving assistance, to pay fair compensation in accordance with paragraphs 4, 5 and 6.

9. **Contracting Parties** shall ensure that the provisions of this Regulation on assistance are implemented in accordance with the **Energy Community Treaty < ... >**¹⁷ and other applicable international obligations. They shall take the necessary measures to that end.

Article 16

Compliance with market rules

1. Measures taken to prevent or mitigate electricity crises shall comply with the rules governing the internal electricity market and system operation.

2. Non-market-based measures shall be activated in an electricity crisis only as a last resort if all options provided by the market have been exhausted or where it is evident that market-based measures alone are not sufficient to prevent a further deterioration of the electricity supply situation. Non-market-based measures shall not unduly distort competition and the effective functioning of the internal electricity market. They shall be necessary, proportionate, non-discriminatory and temporary. The competent authority shall inform relevant stakeholders in its **Contracting Party** of the application of any non-market-based measures.

3. Transaction curtailment including curtailment of already allocated cross zonal capacity, limitation of provision of cross zonal capacity for capacity allocation or limitation of provision of schedules shall be initiated only in accordance with **Regulation (EC) 714/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011**.

CHAPTER V

Evaluation and monitoring

Article 17

***Ex post* evaluation**

1. As soon as possible and in any event three months after the end of an electricity crisis, the competent authority of the **Contracting Party** that declared the electricity crisis shall provide the **Security of Supply Coordination Group** and the **Energy Community Secretariat** with an *ex post* evaluation report, after having consulted the regulatory authority, where the regulatory authority is not the competent authority.

2. The *ex post* evaluation report shall include at least:

- (a) a description of the event that triggered the electricity crisis;
- (b) a description of any preventive, preparatory and mitigating measures taken and an assessment of their proportionality and effectiveness;
- (c) an assessment of the cross-border impact of the measures taken;

¹⁷ The text displayed here corresponds to the fourth item in Article 5(12) of Ministerial Council Decision 2021/13/MC-EnC

- (d) an account of the assistance prepared, with or without effective activation, provided to or received from neighbouring **Contracting Parties** and third countries;
 - (e) the economic impact of the electricity crisis and the impact of the measures taken on the electricity sector to an extent allowed by data available at the time of the assessment, in particular the volumes of energy non-served and the level of manual demand disconnection (including a comparison between the level of voluntary and forced demand disconnection);
 - (f) reasons justifying the application of any non-market-based measures;
 - (g) any possible improvements or proposed improvements to the risk-preparedness plan;
 - (h) an overview of possible improvements to grid development in cases where insufficient network development caused or contributed to the electricity crisis.
3. Where they consider the information provided in the *ex post* evaluation report to be insufficient, the **Security of Supply Coordination Group** and the **Energy Community Secretariat** may request the competent authority concerned to provide additional information.
4. The competent authority concerned shall present the results of the *ex post* evaluation at a meeting of the **Security of Supply Coordination Group**. Those results shall be reflected in the updated risk-preparedness plan.

Article 18

Monitoring

1. In addition to carrying out other tasks set out in this Regulation, the **Security of Supply Coordination Group** shall discuss:
- (a) the results of the 10-year network development plan in electricity prepared by the ENTSO for Electricity;
 - (b) the coherence of the risk-preparedness plans, adopted by the competent authorities following the procedure referred to in Article 10;
 - (c) the results of the European resource adequacy assessments carried out by the ENTSO for Electricity as referred to in Article 23(4) of Regulation (EU) 2019/943;
 - (d) the performance of **Contracting Parties** in the area of security of electricity supply taking into account at least the indicators calculated in the European resource adequacy assessment, namely the expected energy non-served and loss of load expectation;
 - (e) the results of the seasonal adequacy assessments referred to in Article 9(2);
 - (f) the information received from the **Contracting Parties** pursuant to Article 7(4);
 - (g) the results of the *ex post* evaluation referred to in Article 17(4);
 - (h) the methodology for short-term adequacy assessment referred to in Article 8 of Regulation (EU) 2019/941¹⁸;
 - (i) the methodology for identifying regional electricity crisis scenarios referred to in Article 5 of Regulation (EU) 2019/941¹⁸.
2. The **Security of Supply Coordination Group** may issue recommendations to the **Contracting Parties**

¹⁸ The text displayed here corresponds to the first item in Article 5(13) of Ministerial Council Decision 2021/13/MC-Enc

as well as to the ENTSO for Electricity related to the matters referred to in paragraph 1.

3. **The Energy Community Regulatory Board** shall, on an ongoing basis, monitor the security of electricity supply measures and shall report regularly to the **Security of Supply Coordination Group**.

4. By 1 September 2028¹⁹, the **Energy Community Secretariat** shall, on the basis of the experience gained in the application of this Regulation, evaluate the possible means by which to enhance security of electricity supply at **Energy Community** level and submit a report to the **Ministerial Council** on the application of this Regulation, including, where necessary, legislative proposals to amend this Regulation.

Article 19

Treatment of confidential information

1. **Contracting Parties** and competent authorities shall implement the procedures referred to in this Regulation in accordance with the applicable rules, including national rules relating to the handling of confidential information and processes. If the implementation of those rules results in information not being disclosed, inter alia as part of risk-preparedness plans, the **Contracting Party** or authority may provide a non-confidential summary thereof, and shall do so upon request.

2. The **Energy Community Secretariat**, the **Energy Community Regulatory Board**, the **Security of Supply Coordination Group**, the ENTSO for Electricity, **Contracting Parties**, competent authorities, regulatory authorities and other relevant bodies, entities or persons, which receive confidential information pursuant to this Regulation, shall ensure the confidentiality of sensitive information.

CHAPTER VI

Final provisions

Article 20

Cooperation between Contracting Parties and Member States²⁰

Where the Contracting Parties and the Member States cooperate in the area of security of electricity supply, such cooperation may include defining an electricity crisis, the process of the identification of electricity crisis scenarios and the establishment of risk-preparedness plans so that no measures are taken that endanger the security of electricity supply of the Contracting Parties, the Member States, the Energy Community or the Union. In that respect, the European Commission and the Member States may participate in the Security of Supply Coordination Group with regard to all matters with which they are concerned.

< ... >

¹⁹ The date corresponds to the second item in Article 5(13) of Ministerial Council Decision 2021/13/MC-EnC

²⁰ The text displayed here correspond to Article 5(14) of Ministerial Council Decision 2021/13/MC-EnC

Article 21
Derogation²¹

Until Georgia is directly connected with another Contracting Parties, Article 6, Article 12 and paragraphs 2 to 9 of Article 15 shall not apply between Georgia and other Contracting Parties. Georgia and relevant other Contracting Parties may develop, with the support of the Energy Community Secretariat, measures and procedures alternative to those provided for in Article 12, provided that such alternative measures and procedures do not affect the effective application of this Regulation between the other Contracting Parties. < ... >

Article 22

Transitional provision pending the establishment of regional coordination centres²²

< ... >

Article 23

Repeal

< ... >

Article 24

Entry into force

< ... >

²¹ The text displayed here corresponds to Article 5(15) of Ministerial Council Decision 2021/13/MC-EnC

²² Articles 22, 23 and 24 are not applicable according to Article 5(16) of Ministerial Council Decision 2021/13/MC-EnC

ANNEX

TEMPLATE FOR RISK-PREPAREDNESS PLAN

The following template shall be completed in English.

General information

- Name of the competent authority responsible for the preparation of this plan
- **Contracting Parties** in the region

1. SUMMARY OF THE ELECTRICITY CRISIS SCENARIOS

Describe briefly the electricity crisis scenarios identified at regional and national level in accordance with the procedure laid down in Articles 6 and 7, including the description of the assumptions applied.

2. ROLES AND RESPONSIBILITIES OF THE COMPETENT AUTHORITY

Define the role and responsibilities of the competent authority and the bodies to which tasks have been delegated.

Describe which tasks, if any, have been delegated to other bodies.

3. PROCEDURES AND MEASURES IN THE ELECTRICITY CRISIS

3.1. National procedures and measures

- (a) Describe procedures to be followed in the cases of an electricity crisis, including the corresponding schemes on information flows;
- (b) Describe preventive and preparatory measures;
- (c) Describe measures to mitigate electricity crises, in particular demand-side and supply-side measures, whilst indicating in which circumstances such measures can be used especially the trigger of each measure. Where non-market-based measures are considered, they must be duly justified in light of the requirements laid down in Article 16 and must comply with regional and, where applicable, bilateral measures;
- (d) Provide a framework for manual load shedding, stipulating under which circumstances loads are to be shed. Specify with regard to public safety and personal security which categories of electricity users are entitled to receive special protection against disconnection, and justify the need for such protection. Specify how the transmission system operators and the distribution system operators should act in order to decrease the consumption;
- (e) Describe the mechanisms used to inform the public about the electricity crisis.

3.2. Regional and bilateral procedures and measures

- (a) Describe the agreed mechanisms for cooperation within the region and for ensuring appropriate coordination before and during the electricity crisis, including the decision-making procedures for appropriate reaction at regional level;
- (b) Describe any regional and bilateral measures that have been agreed, including any necessary technical, legal and financial arrangements for the implementation of those measures. When describing such arrange-

ments, provide information on, inter alia, the maximum quantities of electricity to be delivered at regional or bilateral level, the trigger for the assistance and possibility to request its suspension, how the electricity will be delivered, and the provisions on fair compensation between **Contracting Parties**. Describe the national measures necessary to implement and enforce the regional and bilateral measures agreed;

(c) Describe the mechanisms in place for cooperation and for coordinating actions, before and during the electricity crisis, with other **Contracting Parties** outside of the region as well as with third countries within the relevant synchronous area.

4. CRISIS COORDINATOR

Indicate and define the role of the crisis coordinator. Specify the contact details.

5. STAKEHOLDER CONSULTATIONS

In accordance with Article 10(1), describe the mechanism used for and the results of the consultations carried out, for the development of this plan, with:

- (a) relevant electricity and natural gas undertakings, including relevant producers or their trade bodies;
- (b) relevant organisations representing the interests of non-industrial electricity customers;
- (c) relevant organisations representing the interests of industrial electricity customers;
- (d) regulatory authorities;
- (e) the transmission system operators;
- (f) relevant distribution system operators.

6. EMERGENCY TESTS

(a) Indicate the calendar for the biennial regional (and, if applicable also national) real time response simulations of electricity crises;

(b) In accordance with point (d) of Article 12(1), indicate procedures agreed and the actors involved.

For the updates of the plan: briefly describe the tests carried out since the last plan was adopted and the main results. Indicate which measures have been adopted as a result of those tests.





REGULATION (EU) 2017/1938 of 25 October 2017 concerning measures to safeguard the security of gas supply

Incorporated and adapted by the Ministerial Council Decision 2021/15/MC-EnC of 30 November 2021 on Annex I to the Treaty establishing the Energy Community and adapting and implementing Regulation (EU) 2017/1938 concerning measures to safeguard the security of gas supply

*The adaptations made by Ministerial Council Decision 2021/15/MC-EnC are highlighted in **bold and blue**.*

Article 1

Subject matter

This Regulation lays down rules for cooperation between Contracting Parties with a view to preventing, mitigating and managing gas crises in full regard for the requirements of a competitive single market for gas.¹

Article 2

Definitions

(1) For the purposes of this Regulation, the following definitions apply:

- (1) 'security' means security as defined in point 32 of Article 2 of Directive 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**;
- (2) 'customer' means customer as defined in point 24 of Article 2 of Directive 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**;
- (3) 'household customer' means household customer as defined in point 25 of Article 2 of Directive 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**;
- (4) 'essential social service' means a service related to healthcare, essential social care, emergency, security, education or public administration;
- (5) 'protected customer' means a household customer who is connected to a gas distribution network and, in addition, where the **Contracting Party** concerned so decides, may also mean one or more of the following, provided that enterprises or services as referred to in points (a) and (b) do not, jointly, represent more than 20 % of the total annual final gas consumption in that **Contracting Party**:
 - a) a small or medium-sized enterprise, provided that it is connected to a gas distribution network;
 - b) an essential social service, provided that it is connected to a gas distribution or transmission network;
 - c) a district heating installation to the extent that it delivers heating to household customers, small or medium-sized enterprises, or essential social services, provided that such installation is not able to switch to other fuels than gas;

¹ The text displayed here corresponds to Article 4(1) of Ministerial Council Decision 2021/15/MC-EnC

(6) <...>²

(7) 'competent authority' means a national governmental authority or a national regulatory authority designated by a **Contracting Party** to ensure the implementation of the measures provided for in this Regulation;

(8) 'national regulatory authority' means a national regulatory authority designated in accordance with Article 39(1) of Directive 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**;

(9) 'natural gas undertaking' means natural gas undertaking as defined in point 1 of Article 2 of Directive 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**;

(10) 'gas supply contract' means gas supply contract as defined in point 34 of Article 2 of Directive 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**;

(11) 'transmission' means transmission as defined in point 3 of Article 2 of Directive 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**;

(12) 'transmission system operator' means transmission system operator as defined in point 4 of Article 2 of Directive 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**;

(13) 'distribution' means distribution as defined in point 5 of Article 2 of Directive 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**;

(14) 'distribution system operator' means distribution system operator as defined in point 6 of Article 2 of Directive 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**;

(15) 'interconnector' means interconnector as defined in point 17 of Article 2 of Directive 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**;

(16) <...>³

(17) 'storage capacity' means storage capacity as defined in point 28 of Article 2 of Regulation (EC) No 715/2009, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**;

(18) 'technical capacity' means technical capacity as defined in point 18 of Article 2 of Regulation (EC) No 715/2009, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**;

(19) 'firm capacity' means firm capacity as defined in point 16 of Article 2 of Regulation (EC) No 715/2009, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**;

(20) 'interruptible capacity' means interruptible capacity as defined in point 13 of Article 2 of Regulation (EC) No 715/2009, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**;

(21) 'LNG facility capacity' means LNG facility capacity as defined in point 24 of Article 2 of Regulation (EC) No 715/2009, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**;

(22) 'LNG facility' means LNG facility as defined in point 11 of Article 2 of Directive 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**;

(23) 'storage facility' means storage facility as defined in point 9 of Article 2 of Directive 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**;

(24) 'system' means system as defined in point 13 of Article 2 of Directive 2009/73/EC, **as adapted**

² Not applicable according to Article 4(2)a of Ministerial Council Decision 2021/15/MC-EnC

³ Not applicable according to Article 4(2)a of Ministerial Council Decision 2021/15/MC-EnC

and adopted by Ministerial Council Decision 2011/02/MC-EnC;

(25) 'system user' means system user as defined in point 23 of Article 2 of Directive 2009/73/EC, as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC;

(26) 'ancillary services' means ancillary services as defined in point 14 of Article 2 of Directive 2009/73/EC, as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC.

(27) 'Security of Supply Coordination Group' is the group established by Procedural Act 2008/02/MC-EnC of 11 December 2008, as amended by Procedural Act 2021/03/MC-EnC.⁴

Article 3

Responsibility for the security of gas supply⁵

1. The security of gas supply shall be the shared responsibility of natural gas undertakings, **Contracting Parties**, in particular through their competent authorities, and the **Energy Community Secretariat**, within their respective areas of activity and competence.

2. Each **Contracting Party** shall designate a competent authority. The competent authorities shall cooperate with each other in the implementation of this Regulation. **Contracting Parties** may allow the competent authority to delegate specific tasks set out in this Regulation to other bodies. Where competent authorities delegate the task of declaring any of the crisis levels referred to in Article 11(1), they shall do so only to a public authority, a transmission system operator or a distribution system operator. Delegated tasks shall be performed under the supervision of the competent authority and shall be specified in the preventive action plan and in the emergency plan.

3. Each **Contracting Party** shall, without delay, notify the **Energy Community Secretariat**, and make public, the name of its competent authority and any changes thereto.

4. When implementing the measures provided for in this Regulation, the competent authority shall establish the roles and responsibilities of the different actors concerned in such a way as to ensure a **two-level** approach which involves, first, the relevant natural gas undertakings, electricity undertakings where appropriate, and industry, and **second, Contracting Parties** at national level <...>.

5. The **Energy Community Secretariat** shall coordinate the action of the competent authorities, pursuant to this Regulation, inter alia, through the **Security of Supply Coordination Group**.

6. <...>

7. <...>

8. <...>⁶

⁴ The text displayed here corresponds to Article 4(2)b of Ministerial Council Decision 2021/15/MC-EnC

⁵ The text displayed here corresponds to Article 4(3) of Ministerial Council Decision 2021/15/MC-En

⁶ Not applicable according to Article 4(3)c of Ministerial Council Decision 2021/15/MC-EnC

Article 4

Security of Supply Coordination Group⁷

1. <...>⁸
2. The **Security of Supply Coordination Group** shall be consulted and shall assist the **Energy Community Secretariat** in particular on the following issues:
 - (a) the security of gas supply, at any time and more specifically in the event of an emergency;
 - (b) all information relevant to the security of gas supply at national <...> level;
 - (c) best practices and possible guidelines to all the parties concerned;
 - (d) the level of the security of gas supply, benchmarks and assessment methodologies;
 - (e) national <...> scenarios and testing the levels of preparedness;
 - (f) the assessment of the preventive action plans and the emergency plans, the coherence across the various plans, and the implementation of the measures provided for therein;
 - (g) the coordination of measures to deal with the Energy Community Contracting Parties <...>;
 - (h) assistance needed by the most affected **Contracting Parties**.
3. The **Energy Community Secretariat** shall convene the **Security of Supply Coordination Group** on a regular basis and shall share the information received from the competent authorities whilst preserving the confidentiality of commercially sensitive information.
4. The **Energy Community Secretariat** may convene the **Security of Supply Coordination Group** in a setting which is restricted to the representatives of the **Contracting Parties** and in particular of their competent authorities. The **Energy Community Secretariat** shall convene the **Security of Supply Coordination Group** in this restricted setting if so requested by one or more of the representatives of the **Contracting Parties** and in particular of their competent authorities. <...>

Article 5

Infrastructure standard⁹

1. Each **Contracting Party** or, where a **Contracting Party** so provides, its competent authority shall ensure that the necessary measures are taken so that in the event of a disruption of the single largest gas infrastructure, the technical capacity of the remaining infrastructure, determined in accordance with the $N - 1$ formula as set out in point 2 of Annex II, is able, without prejudice to paragraph 2 of this Article, to satisfy total gas demand of the calculated area during a day of exceptionally high gas demand occurring with a statistical probability of once in 20 years. This shall be done taking into account gas consumption trends, the long-term impact of energy efficiency measures and the utilisation rates of existing infrastructure. The obligation set out in the first subparagraph of this paragraph shall be without prejudice to the responsibility of the transmission system operators to make the corresponding investments and to the obligations of transmission system operators as laid down in Regulation (EC) No 715/2009 and Directive 2009/73/EC

⁷ The text displayed here corresponds to Article 4(4) of Ministerial Council Decision 2021/15/MC-EnC

⁸ Not applicable according to Article 4(4)a of Ministerial Council Decision 2021/15/MC-EnC

⁹ The text displayed here corresponds to Article 4(5) of Ministerial Council Decision 2021/15/MC-EnC

as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC.

2. The obligation to ensure that the remaining infrastructure has the technical capacity to satisfy total gas demand, as referred to in paragraph 1 of this Article, shall also be considered to be fulfilled where the competent authority demonstrates in the preventive action plan that a disruption of gas supply may be sufficiently compensated for, in a timely manner, by appropriate market-based demand-side measures. For that purpose, the $N - 1$ formula shall be calculated as set out in point 4 of Annex II.

3. <...>¹⁰

4. The transmission system operators shall enable permanent physical capacity to transport gas in both directions ('bi-directional capacity') on all interconnections between **Contracting Parties, except for existing interconnectors included in Annex III.**

<...>

5. <...>¹¹

6. National regulatory authorities shall take into account the efficiently incurred costs of fulfilling the obligation set out in paragraph 1 of this Article and the costs of enabling bi-directional capacity so as to grant appropriate incentives when fixing or approving, in a transparent and detailed manner, the tariffs or methodologies in accordance with Article 13 of Regulation (EC) No 715/2009 and Article 41(8) of Directive 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC.**

7. In so far as an investment for enabling or enhancing bi-directional capacity is not required by the market but is considered to be necessary for the security of gas supply purposes and where that investment incurs costs in more than one **Contracting Party** or in one **Contracting Party** for the benefit of another **Contracting Party**, the national regulatory authorities of all **Contracting Parties** concerned shall take a coordinated decision on cost allocation before any investment decision is taken. The cost allocation shall take into account the principles described and the elements contained in Article 12(4) of Regulation (EU) No 347/2013, **as adapted and adopted by Ministerial Council Decision 2015/09/MC-EnC** in particular the proportion of the benefits of the infrastructure investments for the increase of the security of gas supply of the **Contracting Parties** concerned as well as investments already made in the infrastructure in question. The cost allocation shall not unduly distort competition and the effective functioning of the **single market** and shall seek to avoid any undue distortive effect on the market.

8. The competent authority shall ensure that any new transmission infrastructure contributes to the security of gas supply through the development of a well-connected network, including, where appropriate, by means of a sufficient number of cross-border entry and exit points relative to market demand and the risks identified.

The competent authority shall assess in the risk assessment whether, with an integrated perspective on gas and electricity systems, internal bottlenecks exist and national entry capacity and infrastructure, in particular transmission networks, are capable of adapting the national and cross-border gas flows to the scenario of disruption of the single largest gas infrastructure **at national level <...>** identified in the risk assessment.

9. By way of exception from paragraph 1 of this Article, and subject to the conditions laid down in this paragraph, **Bosnia and Herzegovina and Georgia** shall not be bound by, but shall endeavour to meet, the obligation set out in that paragraph, while ensuring the gas supplies to protected customers in accordance with Article 6.

¹⁰ Not applicable according to Article 4(5)a of Ministerial Council Decision 2021/15/MC-EnC

¹¹ Not applicable according to Article 4(5)c of Ministerial Council Decision 2021/15/MC-EnC

<...>

The exception for Georgia shall cease to apply once it has:

- (a) at least one interconnector with other Parties and**
- (b) gas storage facilities or an LNG facility on its territory.**

The exception shall cease to apply to Bosnia and Herzegovina, once it has:

- (a) gas transit to other Parties and**
- (b) More than 5 % of total primary energy consumption from gas.**

Bosnia and Herzegovina and Georgia shall inform the **Energy Community Secretariat** of any change affecting the conditions laid down in this paragraph. The exception laid down in this paragraph shall cease to apply where at least one of those conditions is no longer fulfilled.

As part of the national risk assessment carried out in accordance with Article 7(3) **Bosnia and Herzegovina and Georgia** shall describe the situation with respect to the respective conditions laid down in this paragraph and the prospects for compliance with the obligation in paragraph 1 of this Article, taking into account the economic impact of meeting the infrastructure standard and the gas market development. On the basis of the information provided in the national risk assessment and if the respective conditions laid down in this paragraph are still met, the **Ministerial Council, upon a proposal by the Energy Community Secretariat and acting in accordance with Article 83 of the Treaty** may decide that the exception can continue to apply for four more years. In the event of a positive decision, the procedure set out in this subparagraph shall be repeated after four years.

Article 6

Gas supply standard¹²

1. The competent authority shall require the natural gas undertakings that it identifies, to take measures to ensure the gas supply to the protected customers of the **Contracting Party** in each of the following cases:

- a) extreme temperatures during a 7-day peak period occurring with a statistical probability of once in 20 years;
- b) any period of 30 days of exceptionally high gas demand, occurring with a statistical probability of once in 20 years;
- c) for a period of 30 days in the case of disruption of the single largest gas infrastructure under average winter conditions.

By **26 February 2022**, each **Contracting Party** shall notify to the **Energy Community Secretariat** its definition of protected customers, the annual gas consumption volumes of the protected customers and the percentage that those consumption volumes represent of the total annual final gas consumption in that **Contracting Party**. Where a **Contracting Party** includes in its definition of protected customers the categories referred to in point (5)(a) or (b) of Article 2, it shall specify the gas consumption volumes corresponding to customers belonging to those categories and the percentage that each of those groups of customers represents in total annual final gas consumption.

The competent authority shall identify the natural gas undertakings referred to in the first subparagraph

¹² The text displayed here corresponds to Article 4(6) of Ministerial Council Decision 2021/15/MC-EnC

of this paragraph and shall specify them in the preventive action plan.

Any new non-market-based measures envisaged to ensure the gas supply standard shall comply with the procedure established in Article 9(4) to (9).

Contracting Parties may comply with the obligation laid down in the first subparagraph through the implementation of energy efficiency measures or by replacing the gas with a different source of energy, inter alia, renewable energy sources, to the extent that the same level of protection is achieved.

2. Any increased gas supply standard beyond the 30-day period referred to in points (b) and (c) of paragraph 1 or any additional obligation imposed for reasons of security of gas supply shall be based on the risk assessment, shall be reflected in the preventive action plan and shall:

(a) comply with Article 8(1);

(b) not impact negatively on the ability of any other **Contracting Party** to supply gas to its protected customers in accordance with this Article in the event of a national <...> emergency.

(c) <...>. ¹³

The **Energy Community Secretariat** may require a justification showing compliance of any measure referred to in the first subparagraph with the conditions laid down therein. Such a justification shall be made public by the competent authority of the **Contracting Party** that introduces the measure.

Any new non-market-based measure pursuant to the first subparagraph of this paragraph, adopted on or after **the entry into force of this Regulation** shall comply with the procedure established in Article 9(4) to (9).

3. After the expiry of the periods laid down by the competent authority in accordance with paragraphs 1 and 2, or under more severe conditions than those laid down in paragraph 1, the competent authority and natural gas undertakings shall endeavour to maintain, as far as possible, the gas supply, in particular to protected customers.

4. The obligations imposed on natural gas undertakings for the fulfilment of the gas supply standards laid down in this Article shall be non-discriminatory and shall not impose an undue burden on those undertakings.

5. <...>¹⁴. The competent authorities shall not require the gas supply standards laid down in this Article to be met based on infrastructure located only within their territory.

6. The competent authorities shall ensure that conditions for supplies to protected customers are established without prejudice to the proper functioning of the **single** energy market and at a price respecting the market value of the supplies.

¹³ Not applicable according to Article 4(6)c of Ministerial Council Decision 2021/15/MC-EnC

¹⁴ Not applicable according to Article 4(6)d of Ministerial Council Decision 2021/15/MC-EnC

Article 7

Risk assessment¹⁵

1. <...>

2. <...>¹⁶

3. The competent authority of each **Contracting Party** shall make a national risk assessment ('national risk assessment') of all relevant risks affecting the security of gas supply. <...>

4. The risk assessments referred to in paragraphs 2 and 3 of this Article shall be carried out, as relevant, by:

(a) using the standards specified in Articles 5 and 6. The risk assessment shall describe the calculation of the $N - 1$ formula at national level <...>. The risk assessment shall also include assumptions used, including where applicable those for the calculation of $N-1$ formula at regional level, and the data necessary for such calculation. The calculation of the $N - 1$ formula at national level shall be accompanied by a simulation of disruption of the single largest gas infrastructure using hydraulic modelling for the national territory as well as by a calculation of the $N - 1$ formula considering the level of gas in storages at 30 % and 100 % of the maximum working volume;

(b) taking into account all relevant national and transnational circumstances, in particular market size, network configuration, actual flows, including outflows from the **Contracting Parties** concerned, the possibility of physical gas flows in both directions including the potential need for consequent reinforcement of the transmission system, the presence of production and storage **or LNG terminal** and the role of gas in the energy mixes, in particular with respect to district heating and electricity generation and for the operation of industries, and safety and gas quality considerations;

(c) running various scenarios of exceptionally high demand for gas and disruption of gas supply, taking into account the history, probability, season, frequency and duration of their occurrence and assessing their likely consequences, such as:

(i) disruption of the infrastructure relevant to the security of gas supply, in particular transmission infrastructure, storages or LNG terminals, including the largest gas infrastructure identified for the calculation of $N - 1$ formula; and

(ii) disruption of supplies from third-country suppliers, as well as, where appropriate, geopolitical risks;

(d) identifying the interaction and correlation of risks with other **Contracting Parties**, as appropriate, including, as regards interconnections, cross-border supplies, cross-border access to storage **or LNG** facilities and bi-directional capacity;

(e) taking into account risks relating to the control of infrastructure relevant to the security of gas supply to the extent that they may involve, inter alia, risks of underinvestment, undermining diversification, misuse of existing infrastructure or an infringement of **Energy Community** law;

(f) taking into account the maximal interconnection capacity of each border entry and exit point and various filling levels for storage.

5. The national risk assessments shall be prepared in accordance with the relevant template set out in Annex V. If necessary, **Contracting Parties** may include additional information. <...>

¹⁵ The text displayed here corresponds to Article 4(7) of Ministerial Council Decision 2021/15/MC-EnC

¹⁶ Not applicable according to Article 4(7)a of Ministerial Council Decision 2021/15/MC-EnC

6. Natural gas undertakings, industrial gas customers, the relevant organisations representing the interests of household and industrial gas customers as well as **Contracting Parties** and, where they are not the competent authorities, the national regulatory authorities, shall cooperate with the competent authorities and provide them upon request with all necessary information for the common and national risk assessments.

7. By **1 January 2024 Contracting Parties** shall notify to the **Energy Community Secretariat** the national risk assessments. The risk assessments shall be updated every four years thereafter unless circumstances warrant more frequent updates. The risk assessments shall take account of progress made in investments needed to cope with the infrastructure standard defined in Article 5 and of country-specific difficulties encountered in the implementation of new alternative solutions. They shall also build on the experience acquired through the simulation of the emergency plans contained in Article 10(3).

Article 8

Establishment of preventive action plans and emergency plans¹⁷

1. The measures to ensure the security of gas supply contained in a preventive action plan and an emergency plan shall be clearly defined, transparent, proportionate, non-discriminatory and verifiable, shall not unduly distort competition or the effective functioning of the **single** market in gas and shall not endanger the security of gas supply of **other Contracting Parties <...>**.

2. The competent authority of each **Contracting Party** shall, after consulting the natural gas undertakings, the relevant organisations representing the interests of household and industrial gas customers, including electricity producers, electricity transmission system operators, and, where it is not the competent authority, the national regulatory authority, establish:

(a) a preventive action plan containing the measures needed to remove or mitigate the risks identified, including the effects of energy efficiency and demand-side measures in the **<...>** national risk assessments and in accordance with Article 9;

(b) an emergency plan containing the measures to be taken to remove or mitigate the impact of a disruption of gas supply in accordance with Article 10.

3. <...>¹⁸.

4. The competent authorities shall report regularly to **the Security of Supply Coordination Group** on the progress achieved on the preparation and adoption of the preventive action plans and the emergency plans.

The competent authorities shall ensure the regular monitoring of the implementation of the preventive action plan and the emergency plan.

The preventive action plan and the emergency plan shall be developed in accordance with the templates contained in Annexes VI and VII. <...>

5. <...>

6. <...>¹⁹

7. The preventive action plans and the emergency plans shall be made public and notified to the **Energy Community Secretariat** by **1 May 2024**. The **Energy Community Secretariat** shall inform **the**

¹⁷ The text displayed here corresponds to Article 4(8) of Ministerial Council Decision 2021/15/MC-EnC

¹⁸ Not applicable according to Article 4(8)b of Ministerial Council Decision 2021/15/MC-EnC

¹⁹ Not applicable according to Article 4(8)d of Ministerial Council Decision 2021/15/MC-EnC

Security of Supply Coordination Group about the notification of the plans and publish them on **the Energy Community's** website.

Within four months of the notification by the competent authorities, the **Energy Community Secretariat** shall assess the plans taking into account the views expressed in **the Security of Supply Coordination Group**.

8. The **Energy Community Secretariat** shall issue an opinion to the competent authority with the recommendation to review a preventive action plan or an emergency plan if one or more of the following applies:

- (a) it is not effective to mitigate the risks as identified in the risk assessment;
- (b) it is inconsistent with the risk scenarios assessed or with the plans of another **Contracting Party**;
- (c) it does not comply with the requirement laid down in paragraph 1 not unduly to distort competition or the effective functioning of the **single** market;
- (d) it does not comply with the provisions of this Regulation or other provisions of **Energy Community** law.

9. Within three months of notification of the **Energy Community Secretariat's** opinion referred to in paragraph 8, the competent authority concerned shall notify the amended preventive action plan or the emergency plan to the **Energy Community Secretariat**, or shall inform the **Energy Community Secretariat** of the reasons for which it disagrees with the recommendations.

In the event of disagreement related to elements referred to in paragraph 8, the **Energy Community Secretariat** may, within four months of the reply of the competent authority, withdraw its request or convene the competent authority and, where the **Energy Community Secretariat** considers it to be necessary, the **Security of Supply Coordination Group**, in order to consider the issue. The **Energy Community Secretariat** shall set out its detailed reasons for requesting any amendments to the preventive action plan or the emergency plan. The competent authority concerned shall take full account of the detailed reasons of the **Energy Community Secretariat**.

Where applicable, the competent authority concerned shall without delay amend and make the amended preventive action plan or emergency plan public.

Where the final position of the competent authority concerned diverges from the **Energy Community Secretariat's** detailed reasons that competent authority shall provide and make public, together with its position and the **Energy Community Secretariat's** detailed reasons, the justification underlying its position within two months of receipt of the detailed reasons of the **Energy Community Secretariat**.

10. For non-market-based measures adopted on or after **entry into force of the Regulation**, the procedure set out in Article 9(4), (6), (8) and (9) shall apply.

11. The confidentiality of commercially sensitive information shall be preserved.

12. Preventive action plans and emergency plans developed **before entry in the force of this Regulation**, shall remain in force until the preventive action plans and the emergency plans referred to in paragraph 1 of this Article are established for the first time.

Article 9

Content of preventive action plans²⁰

1. The preventive action plan shall contain:

(a) the results of the risk assessment and a summary of the scenarios considered, as referred to in point (c) of Article 7(4);

(b) the definition of protected customers and the information described in the second subparagraph of Article 6(1);

(c) the measures, volumes and capacities needed to fulfil the infrastructure and gas supply standards laid down in Articles 5 and 6, including, where applicable, the extent to which demand-side measures can sufficiently compensate, in a timely manner, for a disruption of gas supply as referred to in Article 5(2), <...> the necessary gas volumes per category of protected customers and per scenario as referred to in Article 6(1), and any increased gas supply standard including any justification showing compliance with the conditions laid down in Article 6(2) <...>;

(d) obligations imposed on natural gas undertakings, electricity undertakings where appropriate, and other relevant bodies likely to have an impact on the security of gas supply, such as obligations for the safe operation of the gas system;

(e) other preventive measures designed to address the risks identified in the risk assessment, such as those relating to the need to enhance interconnections between neighbouring **Contracting Parties**, to further improve energy efficiency, to reduce gas demand and the possibility to diversify gas routes and sources of gas supply and the regional utilisation of existing storage and LNG capacities, if appropriate, in order to maintain gas supply to all customers as far as possible;

(f) information on the economic impact, effectiveness and efficiency of the measures contained in the plan, including the obligations referred to in point (k);

(g) a description of the effects of the measures contained in the plan on the functioning of the **single** energy market as well as national markets, including the obligations referred to in point (k);

(h) a description of the impact of the measures on the environment and on customers;

(i) the mechanisms to be used for cooperation with other Contracting Parties, including the mechanisms for preparing and implementing preventive action plans and emergency plans;

(j) information on existing and future interconnections and infrastructure, including those providing access to the single market, cross-border flows, cross-border access to storage and LNG facilities and the bi-directional capacity, in particular in the event of an emergency;

(k) information on all public service obligations that relate to the security of gas supply.

Critical information relating to points (a), (c) and (d) of the first subparagraph which, if revealed, could endanger the security of gas supply, may be excluded.

2. <...>²¹

3. The preventive action plan shall be based primarily on market-based measures and shall not put an undue burden on natural gas undertakings, or negatively impact on the functioning of the **single** market in gas.

²⁰ The text displayed here corresponds to Article 4(9) of Ministerial Council Decision 2021/15/MC-EnC

²¹ Not applicable according to Article 4(9)b of Ministerial Council Decision 2021/15/MC-EnC

4. **Contracting Parties**, and in particular their competent authorities, shall ensure that all preventive non-market-based measures, such as those referred to in Annex VIII, adopted on or after **entry into force of the Regulation**, irrespective of whether they are part of the preventive action plan or adopted subsequently, comply with the criteria laid down in the first subparagraph of Article 6(2).

5. The competent authority shall make public any measure referred to in paragraph 4 which has not yet been included in the preventive action plan, and shall notify to the **Energy Community Secretariat** the description of any such measure and of its impact on the national gas market and, to the extent possible, on the gas markets of other **Contracting Parties**.

6. If the **Energy Community Secretariat** doubts whether a measure referred to in paragraph 4 of this Article complies with the criteria laid down in the first subparagraph of Article 6(2) it shall request from the **Contracting Party** concerned the notification of an impact assessment.

7. An impact assessment pursuant to paragraph 6 shall cover at least the following:

(a) the potential impact on the development of the national gas market and competition at national level;

(b) the potential impact on the **single** gas market;

(c) the potential impact on the security of gas supply of neighbouring **Contracting Parties**, in particular for those measures that could reduce the liquidity in regional markets or restrict flows to neighbouring **Contracting Parties**;

(d) the costs and benefits, assessed against alternative market-based-measures;

(e) an assessment of necessity and proportionality in comparison with possible market-based measures;

(f) an appreciation whether the measure ensures equal possibilities for all market participants;

(g) a phase-out strategy, the expected duration of the envisaged measure and an appropriate review calendar.

8. The analysis referred to in points (a) and (b) shall be carried out by the national regulatory authority. The impact assessment shall be made public by the competent authority and shall be notified to the **Energy Community Secretariat**.

Where the **Energy Community Secretariat** considers, based on the impact assessment that the measure is likely to endanger the security of gas supply of other **Contracting Parties** <...> it shall **issue an opinion** within four months of notification of the impact assessment requiring, to the extent necessary, the amendment or withdrawal of the measure.

The adopted measure shall enter into force only when it <...> has been amended in accordance with the **Energy Community Secretariat's opinion**.

The four-month period shall begin on the day following receipt of a complete notification. The four-month period may be extended with the consent of both the **Energy Community Secretariat** and the competent authority.

9. Where the **Energy Community Secretariat** considers, based on the impact assessment, that the measure does not comply with the criteria laid down in the first paragraph of Article 6(2), <...> the procedure set out in Article 8 <...> (9) shall apply.

<...>

10. Article 8(9) shall apply to any measure subject to paragraphs 6 to 9 of this Article.

11. The preventive action plan shall be updated every four years after **1 May 2024** or more frequently if the circumstances so warrant or at the **Energy Community Secretariat's** request. The updated plan shall reflect the updated risk assessment and the results of the tests carried out in accordance with Article 10(3). Article 8 shall apply to the updated plan.

Article 10

Content of emergency plans²²

1. The emergency plan shall:

- (a) build upon the crisis levels referred to in Article 11(1);
- (b) define the role and responsibilities of natural gas undertakings, transmission system operators for electricity if relevant and of industrial gas customers including relevant electricity producers, taking account of the different extent to which they are affected in the event of a disruption of gas supply, and their interaction with the competent authorities and where appropriate with the national regulatory authorities at each of the crisis levels referred to in Article 11(1);
- (c) define the role and responsibilities of the competent authorities and of the other bodies to which tasks have been delegated as referred to in Article 3(2) at each of the crisis levels referred to in Article 11(1);
- (d) ensure that natural gas undertakings and industrial gas customers including relevant electricity producers are given sufficient opportunity to respond to the crisis levels referred to in Article 11(1);
- (e) identify, if appropriate, the measures and actions to be taken to mitigate the potential impact of a disruption of gas supply on district heating and the supply of electricity generated from gas, including through an integrated view of energy systems operations across electricity and gas if relevant;
- (f) establish detailed procedures and measures to be followed for the crisis levels referred to in Article 11(1), including the corresponding schemes on information flows;
- (g) designate a crisis manager and define its role;
- (h) identify the contribution of market-based measures for coping with the situation at alert level and mitigating the situation at emergency level;
- (i) identify the contribution of non-market-based measures planned or to be implemented for the emergency level, and assess the degree to which the use of such non-market-based measures is necessary to cope with a crisis. The effects of the non-market-based measures shall be assessed and procedures for their implementation defined. Non-market-based measures are to be used only when market-based mechanisms alone can no longer ensure supplies, in particular to protected customers <...> ;
- (j) describe the mechanisms used to cooperate with other **Contracting Parties** for the crisis levels referred to in Article 11(1) and information exchange arrangements between the competent authorities;
- (k) detail the reporting obligations imposed on natural gas undertakings and, where appropriate, electricity undertakings at alert and emergency levels;
- (l) describe the technical or legal arrangements in place to prevent undue gas consumption of customers who are connected to a gas distribution or transmission network but not protected customers;
- (m) <...>;**

²² The text displayed here corresponds to Article 4(10) of Ministerial Council Decision 2021/15/MC-EnC

(n) <...>²³

(o) establish a list of predefined actions to make gas available in the event of an emergency, including commercial agreements between the parties involved in such actions and the compensation mechanisms for natural gas undertakings where appropriate, taking due account of the confidentiality of sensitive data. <...>.

In order to prevent undue gas consumption during an emergency, as referred to in point (l) of the first subparagraph, or during the application of the measures referred to in Article 11(3) <...>, the competent authority of the **Contracting Party** concerned shall inform customers who are not protected customers that they are required to cease or reduce their gas consumption without creating technically unsafe situations.

2. The emergency plan shall be updated every four years after **1 May 2024** or more frequently if circumstances so warrant or at the **Energy Community Secretariat's** request. The updated plan shall reflect the updated risk assessment and the results of the tests carried out in accordance with paragraph 3 of this Article. Article 8(4) to (11) shall apply to the updated plan.

3. The measures, actions and procedures contained in the emergency plan shall be tested at least once between its four-year updates referred to in paragraph 2. In order to test the emergency plan, the competent authority shall simulate high and medium impact scenarios and responses in real time in accordance with that emergency plan. The results of the tests shall be presented at the **Security of Supply Coordination Group** by the competent authority.

4. The emergency plan shall ensure that cross-border access to infrastructure in accordance with Regulation (EC) No 715/2009, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**, is maintained as far as technically and safely possible in the event of an emergency and shall not introduce any measure unduly restricting the flow of gas across borders.

Article 11

Declaration of a crisis

1. There shall be the following three crisis levels:

(a) early warning level ('early warning'): where there is concrete, serious and reliable information that an event which is likely to result in significant deterioration of the gas supply situation may occur and is likely to lead to the alert or the emergency level being triggered; the early warning level may be activated by an early warning mechanism;

(b) alert level ('alert'): where a disruption of gas supply or exceptionally high gas demand which results in significant deterioration of the gas supply situation occurs but the market is still able to manage that disruption or demand without the need to resort to non-market-based measures;

(c) emergency level ('emergency'): where there is exceptionally high gas demand, significant disruption of gas supply or other significant deterioration of the gas supply situation and all relevant market-based measures have been implemented but the gas supply is insufficient to meet the remaining gas demand so that non-market-based measures have to be additionally introduced with a view, in particular, to safeguarding gas supplies to protected customers in accordance with Article 6.

²³ Not applicable according to Article 4(10)a of Ministerial Council Decision 2021/15/MC-EnC

2. When the competent authority declares one of the crisis levels referred to in paragraph 1, it shall immediately inform the **Energy Community Secretariat** as well as the competent authorities of the **Contracting Parties** with which the **Contracting Party** of that competent authority is directly connected and provide them with all the necessary information, in particular with information on the action it intends to take <...>.

3. <...>²⁴

4. When the competent authority declares an emergency it shall follow the pre-defined action as set out in its emergency plan and shall immediately inform the **Energy Community Secretariat** <...> and the competent authorities of the **Contracting Parties** with which the **Contracting Party** of that competent authority is directly connected in particular of the action it intends to take. In duly justified exceptional circumstances, the competent authority may take action deviating from the emergency plan. The competent authority shall immediately inform the **Energy Community Secretariat** and <...> the competent authorities of the **Contracting Parties** with which the **Contracting Party** of that competent authority is directly connected, of any such action and shall provide a justification for the deviation.

5. The transmission system operator shall ensure that when an emergency is declared in a neighbouring **Contracting Party**, capacity at interconnection points to that **Contracting Party**, irrespective of whether firm or interruptible, and whether it has been booked before or during the emergency, has priority over competing capacity at exit points into storage facilities. The system user of the prioritised capacity shall promptly pay fair compensation to the system user of the firm capacity for the financial loss incurred as a result of prioritisation including a proportionate reimbursement for the cost of the firm capacity being interrupted. The process of determining and paying the compensation shall not affect the implementation of the priority rule.

6. The **Contracting Parties** and, in particular, the competent authorities shall ensure that:

- (a) no measures are introduced which unduly restrict the flow of gas within the **single** market at any time;
- (b) no measures are introduced that are likely seriously to endanger the gas supply situation in another **Contracting Party**; and

(c) cross-border access to infrastructure in accordance with Regulation (EC) No 715/2009, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC²⁵**, is maintained as far as technically and safely possible, in accordance with the emergency plan.

7. During an emergency and on reasonable grounds, upon a request of the relevant electricity or gas transmission system operator a **Contracting Party** may decide to prioritise the gas supply to certain critical gas-fired power plants over the gas supply to certain categories of protected customers, if the lack of gas supply to such critical gas-fired power plants either:

- (a) could result in severe damage in the functioning of the electricity system; or
- (b) would hamper the production and/or transportation of gas. **Contracting Parties** shall base any such measure on the risk assessment.

Critical gas-fired power plants as referred to in the first subparagraph shall be clearly identified together with the possible gas volumes that would be subject to such a measure and included in the regional chapters of the preventive action plans and emergency plans. Their identification shall be carried out in close cooperation with transmission system operators of the electricity system and the gas system of the **Contracting Party** concerned.

²⁴ Not applicable according to Article 4(11)b of Ministerial Council Decision 2021/15/MC-EnC

²⁵ The text displayed here corresponds to Article 4(11)d of Ministerial Council Decision 2021/15/MC-EnC

8. The **Energy Community Secretariat** shall verify, as soon as possible, but in any case within five days of receiving the information referred to in paragraph 2 from the competent authority, whether the declaration of an emergency is justified in accordance with point (c) of paragraph 1 and whether the measures taken follow as closely as possible the actions listed in the emergency plan and are not imposing an undue burden on natural gas undertakings and are in accordance with paragraph 6. The **Energy Community Secretariat** may, at the request of another competent authority, natural gas undertakings or on its own initiative, request the competent authority to modify the measures where they are contrary to the conditions referred to in the first sentence of this paragraph. The **Energy Community Secretariat** may also request the competent authority to declare an end to the emergency where it concludes that the declaration of an emergency is not or is no longer justified in accordance with point (c) of paragraph 1.

Within three days of notification of the **Energy Community Secretariat** request, the competent authority shall modify the measures and shall notify the **Energy Community Secretariat** thereof, or shall inform the **Energy Community Secretariat** of the reasons for which it disagrees with the request. In the latter case, the **Energy Community Secretariat** may, within three days of being informed, amend or withdraw its request or, in order to consider the issue, convene the competent authority or, where appropriate, the competent authorities concerned, and, where the **Energy Community Secretariat** considers it to be necessary, the **Security of Supply Coordination Group**. The **Energy Community Secretariat** shall set out its detailed reasons for requesting any modification to the action. The competent authority shall take full account of the position of the **Energy Community Secretariat**. Where the final decision of the competent authority diverges from the **Energy Community Secretariat** position, the competent authority shall provide the reasons underlying such decision.

9. When the competent authority declares an end to one of the crisis levels referred to in paragraph 1, it shall inform the **Energy Community Secretariat** as well as the competent authorities of the **Contracting Parties** with which the **Contracting Party** of that competent authority is directly connected.

Article 12

<...>²⁶

Article 13

<...>²⁷

26 Not applicable according to Article 4(16) of Ministerial Council Decision 2021/15/MC-EnC

27 Not applicable according to Article 4(16) of Ministerial Council Decision 2021/15/MC-EnC

Article 14**Information exchange²⁸**

1. Where a **Contracting Party** has declared one of the crisis levels referred to in Article 11(1), the natural gas undertakings concerned shall make available, on a daily basis, in particular the following information to the competent authority of the **Contracting Party** concerned:

- (a) the daily gas demand and gas supply forecasts for the following three days, in million cubic meters per day (mcm/d);
- (b) the daily flow of gas at all cross-border entry and exit points as well as at all points connecting a production facility, a storage facility or an LNG terminal to the network, in million cubic meters per day (mcm/d);
- (c) the period, expressed in days, for which it is expected that supply of gas to protected customers can be ensured.

2. <...>²⁹

3. After an emergency, the competent authority referred to in paragraph 1 shall, as soon as possible and at the latest six weeks after the lifting of the emergency, provide the **Energy Community Secretariat** with a detailed assessment of the emergency and the effectiveness of the measures implemented, including an assessment of the economic impact of the emergency, the impact on the electricity sector and the assistance provided to or received from, <...> the **Contracting Parties**. Such assessment shall be made available to the **Security of Supply Coordination Group** and shall be reflected in the updates of the preventive action plans and the emergency plans.

The **Energy Community Secretariat** shall analyse the assessments of the competent authorities and shall inform the **Contracting Parties**, the **Ministerial Council** and the **Security of Supply Coordination Group**, of the results of its analysis in an aggregated form.

4. In duly justified circumstances irrespective of a declaration of an emergency, the competent authority of the most affected **Contracting Party** may require natural gas undertakings to provide the information referred to in paragraph 1 or additional information necessary to assess the overall situation of the gas supply in the **Contracting Party** or other Member States and **Contracting Parties**, including contractual information, other than price information. The **Energy Community Secretariat** may request from the **Contracting Party**'s competent authorities the information provided by natural gas undertakings under this paragraph, provided that the same information has not been transmitted already to the **Energy Community Secretariat**.

5. <...>³⁰

6. In order for the competent authorities and the **Energy Community Secretariat** to assess the security of gas supply situation at national <...> level, each natural gas undertaking shall notify:

- (a) to the competent authority concerned the following details of gas supply contracts with a cross-border dimension and a duration of more than one year which it has concluded to procure gas:
 - (ii) contract duration;
 - (iii) yearly contracted volumes;

²⁸ The text displayed here corresponds to Article 4(12) of Ministerial Council Decision 2021/15/MC-EnC

²⁹ Not applicable according to Article 4(12)a of Ministerial Council Decision 2021/15/MC-EnC

³⁰ Not applicable according to Article 4(12)a of Ministerial Council Decision 2021/15/MC-EnC

(iv) contracted maximum daily volumes in the event of an alert or emergency;

(v) contracted delivery points;

(vi) minimum daily and monthly gas volumes;

(vii) conditions for the suspension of gas deliveries.

(viii) an indication whether the contract individually or cumulatively with its contracts with the same supplier or its affiliates is equivalent to or exceeds the threshold of 28 % as referred to in point (b) of paragraph 6 in the most affected **Contracting Party**.

(b) to the competent authority of the most affected **Contracting Party** immediately after their conclusion or modification its gas supply contracts with a duration of more than one year, concluded or modified on or after **entry into force of the Regulation** that individually or cumulatively with its contracts with the same supplier or its affiliates is equivalent to 28 % or more of yearly gas consumption in **Contracting Party** to be calculated on the basis of the most recent available data. In addition, by **1 January 2024** natural gas undertakings shall notify the competent authority of all existing contracts fulfilling the same conditions. The notification obligation shall not cover price information and shall not apply to the modifications related only to the gas price. The notification obligation shall also apply to all commercial agreements that are relevant for the execution of the gas supply contract excluding price information.

The competent authority, shall notify the data listed in point (a) of the first subparagraph to the **Energy Community Secretariat** in an anonymised form. In the event of new contracts being concluded or changes being made to existing contracts, the whole set of data shall be notified by the end of September of the relevant year. Where the competent authority has doubts whether a given contract obtained under point (b) of the first subparagraph puts the security of gas supply of a **Contracting Party**, it shall notify the contract to **Energy Community Secretariat**.

7. In circumstances duly justified by the need to guarantee transparency of key gas supply contracts relevant to the security of gas supply, and where the competent authority of the most affected **Contracting Party** or the **Energy Community Secretariat** considers that a gas supply contract may jeopardise the security of gas supply of a **Contracting Party <...>** the competent authority of the **Contracting Party** or the **Energy Community Secretariat** may request the natural gas undertaking to provide the contract, excluding price information, for the assessment of its impact on the security of gas supply. The request shall be reasoned and may cover also details of any other commercial agreements that are relevant for the execution of the gas supply contract excluding price information. The justification shall include the proportionality of the administrative burden involved.

8. The competent authorities that receive information on the basis of point (b) of paragraph 6 or paragraph 7 of this Article shall assess the received information for security of gas supply purposes within three months and submit the results of their assessment to the **Energy Community Secretariat**.

9. The competent authority shall take into account the information received under this Article in the preparation of the risk assessment, preventive action plan and emergency plan or their respective updates. The **Energy Community Secretariat** may adopt an opinion proposing to the competent authority to amend the risk assessments or plans on the basis of the information received under this Article. The competent authority concerned shall review the risk assessment and the plans concerned by the request in accordance with the procedure set out in Article 8(9).

10. By **1 July 2024** the **Contracting Parties** shall lay down the rules on penalties applicable to infringe-

ments by natural gas undertakings of paragraph 6 or 7 of this Article and shall take all measures necessary to ensure that they are implemented. The penalties provided for shall be effective, proportionate and dissuasive.

11. For the purpose of this Article, “the most affected **Contracting Party**” shall mean a **Contracting Party** where a contract party of a given contract has the most of its sales of gas or customers located.

12. All contracts or contractual information received on the basis of paragraphs 6 and 7 as well as the respective assessments by the competent authorities or the **Energy Community Secretariat** shall remain confidential. The competent authorities and the **Energy Community Secretariat** shall ensure full confidentiality.

Article 15

Professional secrecy

1. Any commercially sensitive information received, exchanged or transmitted pursuant to Article 14(4) to (8), and Article 18 excluding the results of the assessments referred to in Article 14(3) and (5) shall be confidential and subject to the conditions of professional secrecy laid down in this Article.

2. The obligation of professional secrecy shall apply to the following persons who receive confidential information in accordance with this Regulation:

(a) persons who work or who have worked for the **Energy Community Secretariat**;

(b) auditors and experts instructed by the **Energy Community Secretariat**;

(c) persons who work or who have worked for the competent authorities and the national regulatory authorities or for other relevant authorities;

(d) auditors and experts instructed by competent authorities and national regulatory authorities or by other relevant authorities.

3. Without prejudice to cases covered by criminal law, the other provisions of this Regulation or other relevant **Energy Community or national** law, confidential information received by the persons referred to in paragraph 2 in the course of their duties may not be divulged to any other person or authority, except in summary or aggregate form such that an individual market participant or market place cannot be identified.

4. Without prejudice to cases covered by criminal law, the **Energy Community Secretariat**, the competent authorities and the national regulatory authorities, bodies or persons which receive confidential information pursuant to this Regulation may use confidential information only in the performance of their duties and for the exercise of their functions. Other authorities, bodies or persons may use that information for the purpose for which it was provided to them or in the context of administrative or judicial proceedings specifically related to the exercise of their functions.

Article 16

<...>³¹

³¹ Not applicable according to Article 4(16) of Ministerial Council Decision 2021/15/MC-EnC

Article 17**Monitoring by the Energy Community Secretariat³²**

The **Energy Community Secretariat** shall carry out continuous monitoring of security of gas supply measures **in the Contracting Parties** and report regularly to the **Security of Supply Coordination Group, the Permanent High Level Group and the Ministerial Council**.

<...>

Article 18**Notifications**

The risk assessment, the preventive action plans, the emergency plans and all other documents shall be notified to the **Energy Community Secretariat** electronically.

All correspondence in connection with a notification shall be transmitted electronically.

Article 19

<...>³³

Article 20**Derogation³⁴**

1. This Regulation shall not apply to **Kosovo*³⁵ and Montenegro** for as long as no gas is supplied on their respective territories. For **Kosovo* and Montenegro** the obligations laid down in, and the choices those **Contracting Parties** are entitled to make pursuant to, the following provisions shall be fulfilled and made within the specified time calculated from the date when gas is first supplied on their respective territories:

- (a) for point 5 of Article 2, Article 3(2), Article 7(5) and point (a) of Article 14(6): 12 months;
- (b) for Article 6(1): 18 months;
- (c) for Article 8(7): 24 months;
- (d) for Article 5(4): 36 months;
- (e) for Article 5(1): 48 months.

In order to fulfil the obligation contained in Article 5(1), **Kosovo* and Montenegro** may apply the provisions contained in Article 5(2), including by using non-market-based demand-side measures.

2. <...>

3. <...>.

³² The text displayed here corresponds to Article 4(14) of Ministerial Council Decision 2021/15/MC-EnC

³³ Not applicable according to Article 4(16) of Ministerial Council Decision 2021/15/MC-EnC

³⁴ The text displayed here corresponds to Article 4(15) of Ministerial Council Decision 2021/15/MC-EnC

³⁵ Through this Regulation, this designation is without prejudice to position on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo

Article 21

Repeal³⁶

Decision No 2007/06/MC-EnC of 18 December 2007 on the implementation of Directive 2005/89/EC, Directive 2004/67/EC and Regulation (EC) No 1775/2005 is repealed.

Article 22

Entry into force³⁷

This Regulation shall enter into force **on the day of its adoption.**

It is addressed to the Contracting Parties and the institutions of the Energy Community.

<...>

Article 23

Review³⁸

The functioning of the rules and procedures established by this Regulation shall be reviewed by the Energy Community Secretariat by 2024. Taking into account the review, the European Commission may propose amendments including steps further integrating the Contracting Parties into the security of supply and solidarity mechanisms applicable within the European Union.

³⁶ The text displayed here corresponds to Article 5 of Ministerial Council Decision 2021/15/MC-EnC

³⁷ The text displayed here corresponds to Article 6 of Ministerial Council Decision 2021/15/MC-EnC

³⁸ The text displayed here corresponds to Article 4(17) of Ministerial Council Decision 2021/15/MC-EnC

ANNEX I

<...>³⁹

³⁹ Not applicable according to Article 4(23) of Ministerial Council Decision 2021/15/MC-EnC

ANNEX II

Calculation of the N – 1 formula

1. Definition of the N – 1 formula

The N – 1 formula describes the ability of the technical capacity of the gas infrastructure to satisfy total gas demand in the calculated area in the event of disruption of the single largest gas infrastructure during a day of exceptionally high gas demand occurring with a statistical probability of once in 20 years.

Gas infrastructure shall cover the gas transmission network including interconnections, as well as production, LNG and storage facilities connected to the calculated area.

The technical capacity of all remaining available gas infrastructure in the event of disruption of the single largest gas infrastructure shall be at least equal to the sum of the total daily gas demand of the calculated area during a day of exceptionally high gas demand occurring with a statistical probability of once in 20 years.

The results of the N – 1 formula, as calculated below, shall be at least equal to 100 %.

2. Calculation method of the N – 1 formula

$$N - 1 [\%] = \frac{EP_m + P_m + S_m + LNG_m - I_m}{D_{max}} \times 100, \quad N - 1 \geq 100\%$$

The parameters used for the calculation shall be clearly described and justified.

For the calculation of the EP_m , a detailed list of the entry points and their individual capacity shall be provided.

3. Definitions of the parameters of the N – 1 formula

‘Calculated area’ means a geographical area for which the N – 1 formula is calculated, as determined by the competent authority.

Demand-side definition

‘ D_{max} ’ means the total daily gas demand (in mcm/d) of the calculated area during a day of exceptionally high gas demand occurring with a statistical probability of once in 20 years.

Supply-side definitions

‘ EP_m ’: technical capacity of entry points (in mcm/d), other than production, LNG and storage facilities covered by P_m , LNG_m and S_m , means the sum of the technical capacity of all border entry points capable of supplying gas to the calculated area.

‘ P_m ’: maximal technical production capability (in mcm/d) means the sum of the maximal technical daily production capability of all gas production facilities which can be delivered to the entry points in the calculated area.

‘ S_m ’: maximal technical storage deliverability (in mcm/d) means the sum of the maximal technical daily withdrawal capacity of all storage facilities which can be delivered to the entry points of the calculated area, taking into account their respective physical characteristics.

'LNGm': maximal technical LNG facility capacity (in mcm/d) means the sum of the maximal technical daily send-out capacities at all LNG facilities in the calculated area, taking into account critical elements like offloading, ancillary services, temporary storage and re-gasification of LNG as well as technical send-out capacity to the system.

'Im' means the technical capacity of the single largest gas infrastructure (in mcm/d) with the highest capacity to supply the calculated area. When several gas infrastructures are connected to a common upstream or downstream gas infrastructure and cannot be separately operated, they shall be considered as one single gas infrastructure.

4. Calculation of the N – 1 formula using demand-side measures

$$N - 1 [\%] = \frac{EPm + Pm + Sm + LNGm - Im}{Dmax - Deff} \times 100, \quad N - 1 \geq 100\%$$

Demand-side definition

'Deff' means the part (in mcm/d) of Dmax that in the case of a disruption of gas supply can be sufficiently and timely covered with market-based demand-side measures in accordance with point (c) of Article 9(1) and Article 5(2).

5. <...>⁴⁰

⁴⁰ Not applicable according to Article 4(18) of Ministerial Council Decision 2021/15/MC-EnC

ANNEX III

Permanent bi-directional capacity⁴¹

1. For the execution of the provisions set out in this Annex the national regulatory authority may act as the competent authority if so decided by the **Contracting Party**.

Interconnectors in operation on the date when this Regulation has entered into force between Serbia and Bosnia and Herzegovina are exempted from obligations to enable permanent physical capacity to transport gas in both directions for permanent bi-directional capacity concerning the reverse direction ('physical reverse flow capacity') according to this Regulation.

2. To enable or enhance bi-directional capacity on an interconnection or to obtain or prolong an exemption from that obligation, transmission system operators on both sides of the interconnection shall submit to their competent authorities ('competent authorities concerned') and to their regulatory authorities ('regulatory authorities concerned') after consulting with all transmission system operators potentially concerned:

(a) a proposal to enable permanent physical capacity to transport gas in both directions for permanent bi-directional capacity concerning the reverse direction ('physical reverse flow capacity'); or

(b) a request for an exemption from the obligation to enable bi-directional capacity.

The transmission system operators shall endeavour to submit a joint proposal or request for exemption. In the case of a proposal to enable bi-directional capacity, the transmission system operators may make a substantiated proposal for a cross-border cost allocation. Such submission shall take place no later than **1 February 2024** for all interconnections that existed on **25 November 2021**, and after completing the feasibility study phase but before the start of detailed technical design phase for new interconnections.

3. Upon receipt of the proposal or the exemption request the competent authorities concerned shall without delay consult the competent authorities and, where they are not the competent authorities, the national regulatory authorities, of the **Contracting Party** that could, in accordance with the risk assessment, benefit from the reverse flow capacity, the **Energy Community Regulatory Board and the Energy Community Secretariat** on the proposal or the exemption request. The authorities consulted may issue an opinion within four months of receipt of the consultation request.

4. The regulatory authorities concerned shall within six months upon receipt of the joint proposal, pursuant to Article 5(6) and (7), after consulting the project promoters concerned, take coordinated decisions on the cross-border allocation of investment costs to be borne by each transmission system operator of the project. Where the regulatory authorities concerned have not reached an agreement within that deadline, they shall inform the competent authorities concerned without delay.

5. The competent authorities concerned shall on the basis of the risk assessment, the information listed in Article 5(5) of this Regulation, the opinions received following the consultation in accordance with point 3 of this Annex and taking into account the security of gas supply and the contribution to the **single** gas market take a coordinated decision. That coordinated decision shall be taken within two months. The period of two months shall start to run after the four-month period allowed for the opinions referred to under point 3 of this Annex, unless all opinions have been received before, or after the six-month period referred to in point 4 of this Annex for regulatory authorities concerned to adopt a coordinated decision.

⁴¹ The text displayed here corresponds to Article 4(19) of Ministerial Council Decision 2021/15/MC-EnC

The coordinated decision shall:

(a) accept the proposal for bi-directional capacity. Such decision shall contain a cost benefit analysis, a timeline for implementation and the arrangements for its subsequent use and be accompanied by the coordinated decision on the cross-border cost allocation referred to in point 4 and prepared by the regulatory authorities concerned;

(b) grant **an exemption** or prolong a temporary exemption for a maximum period of four years, if the cost-benefit analysis included in the decision shows that the reverse flow capacity would not enhance the security of gas supply of any relevant **Contracting Party** or if the investment costs would significantly outweigh the prospective benefits for the security of gas supply; or

require the transmission system operators to amend and resubmit their proposal or exemption request within a maximum period of four months.

6. The competent authorities concerned shall submit the coordinated decision without delay to the competent authorities and national regulatory authorities who have submitted an opinion in accordance with point 3, the regulatory authorities concerned, the **Energy Community Regulatory Board and the Energy Community Secretariat**

7. Within two months of receipt of the coordinated decision, the competent authorities referred to in point 6 may present their objections to the coordinated decision and submit them to the competent authorities concerned that adopted it, the **Energy Community Regulatory Board and the Energy Community Secretariat**. The objections shall be limited to facts and assessment, in particular cross-border cost allocation that was not subject of consultation in accordance with point 3.

8. Within three months of receipt of the coordinated decision in accordance with point 6, the **Energy Community Regulatory Board** shall issue an opinion on the elements of the coordinated decision taking into account any possible objection and submit the opinion to all competent authorities concerned and the competent authorities referred to in point 6 and to the **Energy Community Secretariat**.

9. Within four months of receipt of the opinion issued by the **Energy Community Regulatory Board** pursuant to point 8 the **Energy Community Secretariat** may adopt an **opinion** requesting modifications of the coordinated decision. Any such **opinion of the Energy Community Secretariat** shall be taken on the basis of: the criteria set out in point 5, the reasons for the decision of the authorities concerned and the opinion of the **Energy Community Regulatory Board**. The competent authorities concerned shall **take utmost account of the opinion of the Energy Community Secretariat** by amending their decision within a period of four weeks.

10. If the competent authorities concerned were not able to adopt a coordinated decision within the deadline set out in point 5 or if the regulatory authorities concerned could not reach an agreement on the cost allocation within the deadline set out in point 4, the competent authorities concerned shall inform the **Energy Community Regulatory Board and the Energy Community Secretariat** at the latest on the day of the expiry of the deadline. Within four months of receipt of that information, **the Energy Community Secretariat** after possible consultation with the **Energy Community Regulatory Board**, shall **issue an opinion** covering all elements of a coordinated decision listed in point 5 with the exception of a cross-border cost allocation and submit that **opinion to** the competent authorities concerned **and** the **Energy Community Regulatory Board**.

11. If the **Energy Community Secretariat's opinion** pursuant to point 10 of this Annex, requires bi-directional capacity, the **Energy Community Regulatory Board** shall adopt a decision covering the

cross-border cost allocation in line with Article 5(7) of this Regulation within three months of receipt of the **Energy Community Secretariat's opinion**. Before taking such a decision, the **Energy Community Regulatory Board** shall consult the regulatory authorities concerned and the transmission system operators. The three-month period may be extended by an additional period of two months where the **Energy Community Regulatory Board** has to request additional information. The additional period shall begin on the day following receipt of the complete information.

12. The **Energy Community Regulatory Board and the Energy Community Secretariat shall consult each other before taking decisions or issuing opinions in accordance with the previous paragraphs. These authorities, as well as** the competent authorities, the national regulatory authorities and the transmission system operators shall preserve the confidentiality of commercially sensitive information.

13. <...>⁴²

42 Not applicable according to Article 4(19)h of Ministerial Council Decision 2021/15/MC-EnC

ANNEX IV

<...>⁴³

43 Not applicable according to Article 4(23) of Ministerial Council Decision 2021/15/MC-EnC

ANNEX V

Template for the national risk assessment

General information

Name of the competent authority responsible for the preparation of the present risk assessment⁴⁴.

1. Description of the system

1.1.

<...>⁴⁵

1.2. Provide a brief description of the gas system of the **Contracting Party** covering:

- (a) the main gas consumption figures: annual final gas consumption (bcm) and breakdown by type of customers, peak demand (mcm/d);
- (b) a description of the functioning of the gas system at national level, including infrastructure (to the extent not covered by point 1.1(b)). If applicable, include L-gas system;
- (c) the identification of the key infrastructure relevant for the security of gas supply;
- (d) a breakdown, to the extent possible, at national level of gas import sources per country of origin;
- (e) a description of the role of storage and include:
 - (i) the storage capacity (total and working) compared to heating season demand;
 - (ii) the maximal daily withdrawal capacity at different filling levels (ideally with full storages and end-of-season levels);
- (f) a description of the role of domestic production and include:
 - (i) the volume of production with regard to the annual final gas consumption;
 - (ii) the maximal daily production capacity;
- (g) a description of the role of gas in the electricity production (e.g. importance, role as a back-up for renewables), including gas-fired generating capacity (total (MWe) and as percentage of the total generating capacity) and cogeneration (total (MWe) and as percentage of the total generating capacity).

2. Infrastructure standard (Article 5)

Describe how the infrastructure standard is complied with, including the main values used for the N – 1 formula and alternative options for its compliance (with directly connected **Contracting Parties**, demand-side measures) and the existing bidirectional capacities, as follows:

- (a) N – 1 formula
 - (i) the identification of the single largest gas infrastructure;
 - (ii) the calculation of the N – 1 formula at national level;

⁴⁴ Where this task has been delegated by the competent authority, indicate the name of the body/(ies) responsible for the presentation of the present risk assessment on its behalf

⁴⁵ Not applicable according to Article 4(20)a of Ministerial Council Decision 2021/15/MC-EnC

(iii) a description of the values used for all elements in the $N - 1$ formula, including intermediate values used for their calculation (e.g. for EP_m indicate the capacity of all entry points considered under this parameter);

(iv) an indication of the methodologies used, if any, for the calculation of parameters in the $N - 1$ formula (e.g. D_{max}) (use annexes for detailed explanations);

(v) an explanation of the results of the calculation of the $N - 1$ formula considering the level of storages at 30 % and 100 % of the maximum working volume;

(vi) an explanation of the main results of the simulation of the $N - 1$ formula using a hydraulic model;

(vii) if so decided by the **Contracting Party**, a calculation of the $N - 1$ formula using demand-side measures:

- calculation of the $N - 1$ formula in accordance with point 2 of Annex II,

- description of the values used for all elements in the $N - 1$ formula, including intermediate figures used for the calculation (if different to the figures described under point 2(a)(iii)),

- indicate the methodologies used, if any, for the calculation of parameters in the $N - 1$ formula (e.g. D_{max}) (use annexes for detailed explanations),

explain the market-based demand-side measures adopted/to be adopted to compensate a disruption of gas supply and its expected impact (D_{eff});

(viii) <...>⁴⁶

(b) bi-directional capacity

(i) indicate the interconnection points equipped with bidirectional capacity and the maximal capacity of bi-directional flows;

(ii) indicate the arrangements governing the use of the reverse flow capacity (e.g. interruptible capacity);

(iii) indicate interconnection points where an exemption has been granted in accordance with Article 5(4), the duration of the exemption and the grounds on which it was granted.

3. Identification of risks

Describe the risk factors which could have negative impact on the security of gas supply in the **Contracting Party**, their likelihood and consequences.

Non-exhaustive list of types of risk factors that have to be included in the assessment only if applicable according to the competent authority:

(a) political

- gas disruption from third countries because of different reasons,

- political unrest (either in country of origin or in transit country),

- war/civil war (either in country of origin or in transit country),

- terrorism;

(b) technological

- explosion/fires,

⁴⁶ Not applicable according to Article 4(20)b of Ministerial Council Decision 2021/15/MC-EnC

- fires (internal to a given facility),
 - leakages,
 - lack of adequate maintenance,
 - equipment malfunction (failure to start, failure during working time, etc.),
 - lack of electricity (or other energy source),
 - ICT failure (hardware or software failure, internet, SCADA problems, etc.),
 - cyber-attack,
 - impact due to excavation works (digging, piling), ground works, etc.;
- (c) commercial /market / financial
- agreements with third-country suppliers,
 - commercial dispute,
 - control of infrastructure relevant for the security of gas supply by third-country entities, which may imply, among others, risks of underinvestment, undermining diversification or non-respect of **Energy Community** law,
 - price volatility,
 - underinvestment,
 - sudden, unexpected peak demand,
 - other risks which could lead to structural underperformance;
- (d) social
- strikes (in different related sectors, such as the gas sector, ports, transport, etc.),
 - sabotage,
 - vandalism,
 - theft;
- (e) natural
- earthquakes,
 - landslides,
 - floods (heavy rain, river),
 - storms (sea),
 - avalanches,
 - extreme weather conditions,
 - fires (external to the facility, like nearby forests, grassland, etc.).

Analysis

- (a) identify the relevant risk factors for the **Contracting Party**, including their likelihood and impact;
- (b) describe the criteria used to determine whether a system is exposed to high/unacceptable risks;
- (c) set a list of relevant risk scenarios in accordance with the risk factors and their likelihood and describe

how the selection was made.

4. Risk analysis and assessment

Analyse the set of relevant risk scenarios identified under point 3. In the simulation of risk scenarios include the existing security of gas supply measures, such as the infrastructure standard calculated using the N – 1 formula as set out in point 2 of Annex II, and the gas supply standard. Per risk scenario:

- (a) describe in detail the risk scenario, including all assumptions and, if applicable, the underlying methodologies for their calculation;
- (b) describe in detail the results of the simulation carried out, including a quantification of the impact (e.g. volumes of unserved gas, the socioeconomic impact, the impact on district heating, the impact on electricity generation).

5. <...> ⁴⁷

⁴⁷ Not applicable according to Article 4(20)c of Ministerial Council Decision 2021/15/MC-EnC

ANNEX VI

Template for preventive action plan⁴⁸

General information

- <...>

- Name of the competent authority responsible for the preparation of the plan⁴⁹

1. Description of the system

1.1. <...>

1.2. Provide a brief description of the gas system per **Contracting Party**, covering:

(a) the main gas consumption figures: annual final gas consumption (bcm) and breakdown by type of customers, peak demand (mcm/d);

(b) a description of the functioning of the gas system at national level, including infrastructure (to the extent not covered by point 1.1(b));

(c) the identification of the key infrastructure relevant for the security of supply;

(d) a breakdown, to the extent possible, at national level of gas import sources per country of origin;

(e) a description of the role of storage in the **Contracting Party** and include:

the storage capacity (total and working) compared to heating season demand;

the maximal daily withdrawal capacity at different filling levels (ideally with full storages and end-of-season levels);

(f) a description of the role of domestic production and include:

the volume of production with regard to the annual final gas consumption;

the maximal daily production capacity;

(g) a description of the role of gas in the electricity production (e.g. importance, role as a back-up for renewables), including gas-fired generating capacity (total (MWe) and as percentage of the total generating capacity) and cogeneration (total (MWe) and as percentage of the total generating capacity);

(h) a description of the role of energy efficiency measures and their effect on annual final gas consumption.

2. Summary of the risk assessment

Describe briefly the results of the <...> national risk assessment carried out in accordance with Article 7, including:

(a) a list of the scenarios assessed and a brief description of the assumptions applied for each one as well as the risks/shortcomings identified;

(b) the main conclusions of the risk assessment.

⁴⁸ The text displayed here corresponds to Article 4(21) of Ministerial Council Decision 2021/15/MC-EnC

⁴⁹ When this task has been delegated by any competent authority, indicate the name of the body/(ies) responsible for the preparation of this plan on its behalf

3. Infrastructure standard (Article 5)

Describe how the infrastructure standard is complied with, including the main values used for the $N - 1$ formula and alternative options for its compliance (with neighbouring **Contracting Parties**, demand-side measures) and the existing bidirectional capacities, as follows:

3.1. <...>

3.2. National level

(a) $N - 1$ formula

- (i) the identification of the single largest gas infrastructure;
- (ii) the calculation of the $N - 1$ formula at national level;
- (iii) a description of the values used for all elements in the $N - 1$ formula, including intermediate values used for the calculation (e.g. for EP_m indicate the capacity of all entry points considered under this parameter);
- (iv) an indication of the methodologies used, if any, for the calculation of parameters in the $N - 1$ formula (e.g. D_{max}) (use annexes for detailed explanations);
- (v) if so decided by the **Contracting Party**, calculation of the $N - 1$ formula using demand-side measures:
 - the calculation of the $N - 1$ formula in accordance with point 2 of Annex II,
 - a description of the values used for all elements in the $N - 1$ formula, including intermediate figures used for the calculation (if different to the figures described under point 3(a)(iii) of this Annex),
 - an indication of the methodologies used, if any, for the calculation of parameters in the $N - 1$ formula (e.g. D_{max}) (use annexes for detailed explanations),
 - an explanation of the market-based demand-side measures adopted/to be adopted to compensate a disruption of gas supply and its expected impact ($Deff$);
- (vi) <...>

(b) bi-directional capacity

- (i) indicate the interconnection points equipped with bidirectional capacity and the maximal capacity of bi-directional flows;
- (ii) indicate the arrangements governing the use of the reverse flow capacity (e.g. interruptible capacity);
- (iii) indicate interconnection points where an exemption has been granted in accordance with Article 5(4), the duration of the exemption and the grounds on which it was granted.

4. Compliance with the supply standard (Article 6)

Describe the measures adopted in order to comply with the supply standard as well as with any increased supply standard or additional obligation imposed for reasons of security of gas supply:

- (a) definition of protected customers applied, including categories of customers covered and their annual gas consumption (per category, net value and percentage of the national annual final gas consumption);
- (b) gas volumes needed to comply with the supply standard in accordance with the scenarios described in the first subparagraph of Article 6(1);

(c) capacity needed to comply with the supply standard in accordance with the scenarios described in the first sub paragraph of Article 6(1);

(d) measure(s) in place to comply with the supply standard:

- (i) a description of the measure(s);
- (ii) addressees;
- (iii) where it exists, describe any *ex ante* monitoring system for the compliance with the supply standard;
- (iv) sanctions regime, if applicable;
- (v) describe, per measure:
 - the economic impact, effectiveness and efficiency of the measure,
 - the impact of the measure on the environment,
 - impact of the measures on consumer,
- (vi) where non-market-based measures are applied (per measure):
 - justify why the measure is necessary (i.e. why security of supply cannot be achieved via market-based measures alone),
 - justify why the measure is proportionate (i.e. why the non-market-based measure is the least restrictive means to achieve the intended effect),
 - provide an analysis of the impact of such measure:
 - (1) on other **Contracting Parties' security of supply**;
 - (2) on the national market;
 - (3) on the **single** market;
- (vii) where measures introduced on or after **30th November 2021** please provide a short summary of the impact assessment or a link to the public impact assessment of the measure(s) carried out in accordance with Article 9(4);

(e) if applicable, describe any increased supply standard or additional obligation imposed for reasons of security of gas supply:

- (i) a description of the measure(s);
- (ii) the mechanism to reduce it to usual values in a spirit of solidarity <...>;
- (iii) if applicable, describe any new increased supply standard or additional obligation imposed for reasons of security of gas supply adopted on or after **30th November 2021**;
- (iv) addressees;
- (v) affected gas volumes and capacities;
- (vi) indicate how that measure complies with the conditions laid down in Article 6(2).

5. Preventive measures

Describe the preventive measures in place or to be adopted:

(a) describe each of the preventive measures adopted per identified risk in accordance with the risk assessment, including a description of:

- (i) their national or regional dimension;
- (ii) their economic impact, effectiveness and efficiency;
- (iii) their impact on customers. Where appropriate, include:

- measures to enhance interconnections between neighbouring **Contracting Parties**,
- measures to diversify gas routes and sources of supply,
- measures to protect key infrastructure relevant for the security of supply in relation to control by third- country entities (including, where relevant, general or sector-specific investment screening laws, special rights for certain shareholders, etc.);

(b) <...>

(c) where non-market-based measures are applied (per measure):

- (i) justify why the measure is necessary (i.e. why the security of supply cannot be achieved via market-based measures alone);
- (ii) justify why the measure is proportionate (i.e. why the non-market-based measure is the least restrictive means to achieve the intended effect);
- (iii) provide an analysis of the impact of such measure:
 - justify why the measure is necessary (i.e. why the security of supply cannot be achieved via market-based measures alone),
 - justify why the measure is proportionate (i.e. why the non-market-based measure is the least restrictive means to achieve the intended effect),
 - provide an analysis of the impact of such measure:
 - (1) on other **Contracting Parties'** security of supply;
 - (2) on the national market;
 - (3) on the **single** market;
 - (4) explain the extent to which efficiency measures, including on the demand side, have been considered to increase the security of supply;
 - (5) explain the extent to which renewable energy sources have been considered to increase the security of supply.

6. Other measures and obligations (e.g. safety operation of the system)

Describe other measures and obligations that have been imposed on natural gas undertakings and other relevant bodies likely to have an impact on the security of gas supply, such as obligations for the safe operation of the system, including who would be affected by that obligation as well as the gas volumes covered. Explain precisely when and how those measures would apply.

7. Infrastructure projects

(a) describe future infrastructure projects, including Projects of **Energy Community Interests**, including an estimated timing for their deployment, capacities and estimated impact on the security of gas supply;

b) <...>

8. Public service obligations related to the security of supply

Indicate the existing public service obligations related to the security of supply and briefly describe them (use annexes for more detailed information). Explain clearly who has to comply with such obligations and how. If applicable, describe how and when those public service obligations would be triggered.

9. Stakeholder consultations

In accordance with Article 8(2) of this Regulation, describe the mechanism used for and the results of the consultations carried out, for the development of the plan as well as the emergency plan, with:

- (a) gas undertakings;
- (b) relevant organisations representing the interests of households;
- (c) relevant organisations representing the interests of industrial gas customers, including electricity producers;
- (d) national regulatory authority.

10. <...>

11.1. <...>

11.2. Mechanisms developed for cooperation

Describe the mechanisms used for the cooperation among the **Contracting Parties <...>**, including for developing cross-border measures in the preventive action plan and the emergency plan.

<...>

11.3. <...>

ANNEX VII

Template for emergency plan

General information

Name of the competent authority responsible for the preparation of the present plan⁵⁰

1. Definition of crisis levels

(a) indicate the body responsible for the declaration of each crisis level and the procedures to follow in each case for such declarations;

(b) where they exist, include here indicators or parameters used to consider whether an event may result in a significant deterioration of the supply situation and to decide upon the declaration of a certain crisis level.

2. Measures to be adopted per crisis level

2.1. Early Warning

Describe the measures to be applied at this stage, indicating, per measure:

- (i) a brief description of the measure and main actors involved;
- (ii) describe the procedure to follow, if applicable;
- (iii) indicate the expected contribution of the measure to cope with the impact of any event or prepare ahead of its appearance;
- (iv) describe the flows of information among the actors involved.

2.2. Alert Level

(a) describe the measures to be applied at this stage, indicating, per measure:

- (i) a brief description of the measure and main actors involved;
- (ii) describe the procedure to follow, if applicable;
- (iii) indicate the expected contribution of the measure to cope with the situation at alert level;
- (iv) describe the flows of information among the actors involved;

(b) describe the reporting obligations imposed on natural gas undertakings at alert level.

2.3. Emergency Level

(a) establish a list of predefined actions on the supply and demand side to make gas available in the event of an emergency, including commercial agreements between the parties involved in such actions and the compensation mechanisms for natural gas undertakings where appropriate;

(b) describe the market-based measures to be applied at this stage, indicating, per measure:

- (i) a brief description of the measure and main actors involved;
- (ii) describe the flows of information among the actors involved;

⁵⁰ Where this task has been delegated by any competent authority, please indicate the name of the body/(ies) responsible for the preparation of this plan on its behalf

(c) describe the non-market-based measures planned or to be implemented for the emergency level, indicating, per measure:

- (i) a brief description of the measure and main actors involved;
- (ii) provide an assessment of the necessity of such measure in order to cope with a crisis, including the degree of its use;
- (iii) describe in detail the procedure to implement the measure (e.g. what would trigger the introduction of this measure, who would take the decision);
- (iv) indicate the expected contribution of the measure to mitigate the situation at emergency level as a complement to market-based measures;
- (v) assess other effects of the measure;
- (vi) justify the compliance of the measure with the conditions laid down in Article 11(6);
- (vii) describe the flows of information among the actors involved;

(d) describe reporting obligations imposed on natural gas undertakings.

3. Specific measures for the electricity and district heating

(a) district heating

- (i) briefly indicate the likely impact of a disruption of gas supply in the district heating sector;
- (ii) indicate measures and actions to be taken to mitigate the potential impact of a disruption of gas supply on district heating. Alternatively, indicate why the adoption of specific measures is not appropriate;

(b) supply of electricity generated from gas

- (i) briefly indicate the likely impact of a disruption of gas supply in the electricity sector;
- (ii) indicate measures and actions to be taken to mitigate the potential impact of a disruption of gas supply on the electricity sector. Alternatively, indicate why the adoption of specific measures is not appropriate;
- (iii) indicate the mechanisms/existing provisions to ensure appropriate coordination, including exchange of information, between main actors in the gas and electricity sectors, in particular transmission system operators at different crisis levels.

4. Crisis manager or team

Indicate who the crisis manager is and define its role.

5. Roles and responsibilities of different actors

(a) per crisis level, define the roles and responsibilities, including interactions with the competent authorities and, where appropriate, with the national regulatory authority, of:

- (i) natural gas undertakings;
- (ii) industrial customers;
- (iii) relevant electricity producers;

(b) per crisis level, define the role and responsibilities of the competent authorities and the bodies to which tasks have been delegated.

6. Measures regarding undue consumption by customers who are not protected customers

Describe measures in place to prevent to the extent possible and without endangering the safe and reliable operation of the gas system or creating unsafe situations, the consumption by customers who are not protected customers of gas supply intended for protected customers during an emergency. Indicate the nature of the measure (administrative, technical, etc.), main actors and the procedures to follow.

7. Emergency tests

(a) indicate the calendar for the real time response simulations of emergency situations;

(b) indicate actors involved, procedures and concrete high and medium impact scenarios simulated.

For the updates of the emergency plan: describe briefly the tests carried out since the last emergency plan was presented and the main results. Indicate which measures have been adopted as a result of those tests.

8. <...>⁵¹

⁵¹ Not applicable according to Article 4(22) of Ministerial Council Decision 2021/15/MC-EnC

ANNEX VIII

List of non-market-based security of gas supply measures

In developing the preventive action plan and the emergency plan the competent authority shall consider the contribution of the following indicative and non-exhaustive list of measures only in the event of an emergency:

(a) supply-side measures:

- use of strategic gas storage,
- enforced use of stocks of alternative fuels (e.g. in accordance with Council Directive 2009/119/EC⁵²),
- enforced use of electricity generated from sources other than gas,
- enforced increase of gas production levels,
- enforced storage withdrawal;

(b) demand-side measures:

- various steps of compulsory demand reduction including:
 - enforced fuel switching,
 - enforced utilisation of interruptible contracts, where not fully utilised as part of market-based measures,
 - enforced firm load shedding.

⁵² Council Directive 2009/119/EC of 14 September 2009 imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products (OJ L 265, 9.10.2009, p. 9) **as adopted by Ministerial Council Decisions 2008/03/EnC-MC and 2012/03/EnC-MC, and in accordance with Recommendation 2018/02/EnC-MC**

PART II

ACQUIS COMMUNAUTAIRE

OIL



DIRECTIVE 2009/119/EC of 14 September 2009 imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products

Incorporated and adapted by Ministerial Council Decision 2012/03/MC-EnC of 18 October 2012 on the implementation of Council Directive 2009/119/EC in the Energy Community.

*The adaptations made by Ministerial Council Decisions 2021/14/MC-EnC and 2012/03/MC-EnC are highlighted in **bold and blue**.*

Article 1

Objective

This Directive lays down rules aimed at ensuring a high level of security of oil supply in the Community through reliable and transparent mechanisms based on solidarity amongst Member States¹, maintaining minimum stocks of crude oil and/or petroleum products and putting in place the necessary procedural means to deal with a serious shortage.

Article 2

Definitions

For the purposes of this Directive:

- (a) "reference year" means the calendar year of the consumption or of the net import data used to calculate either the stocks to be held or the stocks actually held at a given time;
- (b) "additives" means non-hydrocarbon compounds added to or blended with a product to modify its properties;
- (c) "biofuel" means liquid or gaseous fuel for transport produced from biomass, "biomass" being the biodegradable fraction of products, waste and residues from agriculture (including vegetable and animal substances), forestry and related industries, as well as the biodegradable fraction of industrial and municipal waste;
- (d) "inland consumption" means the total quantities, calculated according to Annex II, delivered within a country for both energy and non-energy use; this aggregate includes deliveries to the transformation sector and deliveries to industry, transport, households and other sectors for "final" consumption; it also includes the own consumption of the energy sector (except refinery fuel);
- (e) "effective international decision to release stocks" means any decision in force taken by the Governing Board of the International Energy Agency to make crude oil or petroleum products available to the market by a release of its members' stocks and/or additional measures;
- (f) "central stockholding entity" (CSE) means the body or service upon which powers may be conferred to act to acquire, maintain or sell oil stocks, including emergency stocks and specific stocks;
- (g) "major supply disruption" means a substantial and sudden drop in the supply of crude oil or petroleum

¹ Decision 2012/03/MC-EnC incorporating this Directive is addressed to the Contracting Parties.

products to the Community or to a Member State, irrespective of whether or not it has led to an effective international decision to release stocks;

(h) "international marine bunkers" has the meaning given in Section 2.1 of Annex A to Regulation (EC) No 1099/2008;

(i) "oil stocks" means stocks of the energy products listed in the first paragraph of Section 3.1 of Annex C to Regulation (EC) No 1099/2008;

(j) "emergency stocks" means the oil stocks that each Member State is required to maintain pursuant to Article 3;

(k) "commercial stocks" means those oil stocks held by economic operators which are not a requirement under this Directive;

(l) "specific stocks" means oil stocks that meet the criteria set out in Article 9;

(m) "physical accessibility" means arrangements for locating and transporting stocks to ensure their release or effective delivery to end users and markets within time frames and conditions conducive to alleviating the supply problems which may have arisen.

The definitions set out in this Article may be clarified or amended in accordance with the regulatory procedure referred to in Article 23(2).

Article 3

Emergency stocks - Calculating stockholding obligations

1. Member States shall adopt such laws, regulations or administrative provisions as may be appropriate in order to ensure, by 31 December 2012, that the total oil stocks maintained at all times within the Community for their benefit correspond, at the very least, to 90 days of average daily net imports or 61 days of average daily inland consumption, whichever of the two quantities is greater.

2. The average daily net imports to be taken into account shall be calculated on the basis of the crude oil equivalent of imports during the previous calendar year, determined in accordance with the method and procedures set out in Annex I.

The average daily inland consumption to be taken into account shall be calculated on the basis of the crude oil equivalent of inland consumption during the previous calendar year, established and calculated in accordance with the method and procedures set out in Annex II.

3. However, notwithstanding paragraph 2, the daily averages of net imports and inland consumption, as referred to in that paragraph, shall be determined, as regards the period from 1 January to 31 March of each calendar year, on the basis of the quantities imported or consumed during the last year but one before the calendar year in question.

4. The methods and procedures for calculating stockholding obligations, as referred to in this Article, may be amended in accordance with the regulatory procedure referred to in Article 23(2).

Article 4

Calculating stock levels

1. The levels of stocks held shall be calculated using the methods set out in Annex III. When calculating stock levels for each category held pursuant to Article 9, those methods shall apply only to the products in the category in question.
2. The levels of stocks held at a given time shall be calculated using data from the reference year determined in accordance with the rules set out in Article 3.
3. Any oil stocks may be included simultaneously in both the calculation of a Member State's emergency stocks and the calculation of its specific stocks provided that those oil stocks satisfy all the conditions laid down in this Directive for both types of stocks.
4. The methods and procedures for calculating stock levels, as referred to in paragraphs 1 and 2, may be amended in accordance with the regulatory procedure referred to in Article 23(2). In particular, it may prove necessary and beneficial to amend those methods and procedures, including the application of the reduction provided for in Annex III, in order to ensure coherence with IEA practice.

Article 5

Availability of stocks

1. At all times, Member States shall ensure that emergency stocks and specific stocks are available and physically accessible for the purposes of this Directive. They shall establish arrangements for the identification, accounting and control of those stocks so as to allow them to be verified at any time. This requirement also applies to any emergency stocks and specific stocks that are commingled with other stocks held by economic operators.

Member States shall take all necessary measures to prevent all obstacles and encumbrances that could hamper the availability of emergency stocks and specific stocks. Each Member State may set limits or additional conditions on the possibility of its emergency stocks and specific stocks being held outside its territory.

2. Where there is reason to implement the emergency procedures provided for in Article 20, Member States shall prohibit, and refrain from taking, any measure hindering the transfer, use or release of emergency stocks or specific stocks held within their territory on behalf of another Member State.

Article 6

Register of emergency stocks - Annual report

1. Each Member State shall keep a continually updated and detailed register of all emergency stocks held for its benefit which do not constitute specific stocks. That register shall contain, in particular, information needed to pinpoint the depot, refinery or storage facility where the stocks in question are located, as well as the quantities involved, the owner of the stocks and their nature, with reference to the categories identified in the first paragraph of Section 3.1 of Annex C to Regulation (EC) No 1099/2008.

2. By 15 March each year, each Contracting Party shall send the Secretariat a summary copy of the stock register referred to in paragraph 1 showing at least the quantities and nature of the emergency stocks included in the register on the last day of the preceding calendar year.²

3. Member States shall also send the Commission a full copy of the register within 15 days of a request by the Commission; in this copy sensitive data relating to the location of stocks may be withheld. Such requests may be made no later than 5 years after the date to which the requested data relate, and may not bear upon data relating to any period preceding 1 January 2013.

Article 7

Central stockholding entities

1. Member States may set up CSEs.

No Member State may set up more than one CSE or any other similar body. A Member State may set up its CSE at any location within the Community.

Where a Member State sets up a CSE, it shall take the form of a body or service without profit objective and acting in the general interest and shall not be considered to be an economic operator within the meaning of this Directive.

2. The main purpose of the CSE shall be to acquire, maintain and sell oil stocks for the purposes of this Directive or for the purpose of complying with international agreements concerning the maintenance of oil stocks. It is the only body or service upon which powers may be conferred to acquire or sell specific stocks.

3. CSEs or Member States may, for a specified period, delegate tasks relating to the management of emergency stocks and, with the exception of sale and acquisition, of specific stocks, but only to:

(a) another Member State within whose territory such stocks are located or the CSE set up by that Member State. Tasks thus delegated may not be subdelegated to other Member States or to CSEs set up by them. The Member State that set up the CSE, as well as each Member State within whose territory the stocks will be held, has the right to make the delegation conditional upon its authorisation;

(b) economic operators. Tasks thus delegated may not be subdelegated. Where such a delegation, or any change or extension to that delegation, involves tasks relating to the management of emergency and specific stocks held in another Member State, it must be authorised in advance both by the Member State on whose account the stocks are held and by all Member States within whose territories the stocks will be held.

4. Each Member State having a CSE shall require it, for the purposes of Article 8(1) and (2), to publish:

(a) on an ongoing basis, full information, broken down by product category, on the stock volumes that it can undertake to maintain for economic operators, or, where appropriate, interested CSEs;

(b) at least 7 months in advance, the conditions subject to which it is willing to provide services related to maintaining the stocks for economic operators. The conditions under which services may be provided, including conditions relating to scheduling, may also be determined by competent national authorities or following a competitive procedure intended to determine the best bid among operators or, where appropriate, interested CSEs.

CSEs shall accept such delegations under objective, transparent and non-discriminatory conditions. Pay-

² The text displayed here corresponds to Article 6 of Ministerial Council Decision 2021/14/MC-Enc

ments by the operators for the services of the CSE shall not exceed the full costs of the services rendered and may not be required until the stocks are constituted. The CSE may make its acceptance of a delegation conditional upon the operator's provision of a guarantee or some other form of security.

Article 8

Economic operators

1. Each Member State shall ensure that any economic operator on which it imposes stockholding obligations in order to fulfil its obligations under Article 3 is given the right to delegate those obligations at least in part and at the choice of the economic operator, but only to:

- (a) the CSE of the Member State on whose account such stocks are held;
- (b) one or more other CSEs which have in advance declared themselves willing to hold such stocks, provided that such delegations have been authorised in advance both by the Member State on whose account such stocks are held and by all Member States within whose territories the stocks will be held;
- (c) other economic operators which have surplus stocks or available stockholding capacity outside of the territory of the Member State on whose account the stocks are held within the Community, provided that such delegation has been authorised in advance both by the Member State on whose account such stocks are held and by all Member States within whose territories the stocks will be held; and/or
- (d) other economic operators which have surplus stocks or available stockholding capacity within the territory of the Member State on whose account the stocks are held, provided that such delegation has been communicated in advance to the Member State. Member States may impose limits or conditions on such delegations.

Obligations delegated in accordance with points (c) and (d) may not be subdelegated. Any change to or extension of a delegation referred to in points (b) and (c) shall only take effect if authorised in advance by all Member States which authorised the delegation. Any change to or extension of a delegation referred to in point (d) shall be treated as a new delegation.

2. Each Member State may restrict the delegation rights of the economic operators on which it imposes or has imposed stockholding obligations.

However, where such restrictions limit the delegation rights of an economic operator to amounts corresponding to less than 10% of the stockholding obligation imposed on it, the Member State shall ensure that it has set up a CSE that is required to accept delegations in respect of the amount needed to safeguard the right of an economic operator to delegate at least 10% of the stockholding obligation imposed on it. The minimum percentage referred to in this paragraph shall be increased from 10% to 30% by 31 December 2017.

3. Notwithstanding the provisions of paragraphs 1 and 2, a Member State may impose an obligation on an economic operator to delegate at least part of its stockholding obligation to the CSE of the Member State.

4. Member States shall take the necessary measures to inform economic operators of the modalities to be used to calculate the stockholding obligations imposed on them no later than 200 days prior to the start of the period to which the obligation in question relates. Economic operators shall exercise their right to delegate stockholding obligations to CSEs no later than 170 days prior to the start of the period to which

the obligation in question relates.

Where economic operators are informed less than 200 days before the start of the period to which the stockholding obligation relates, they may exercise their right to delegate that obligation at any time.

Article 9

Specific stocks

1. Each Member State may undertake to maintain a minimum level of oil stocks, calculated in terms of number of days of consumption, in accordance with the conditions set out in this Article.

Specific stocks shall be owned by the Member State or the CSE set up by it and shall be maintained on the territory of the Community.

2. Specific stocks can only be composed of one or more of the following product categories, as defined in Section 4 of Annex B to Regulation (EC) No 1099/2008:

- Ethane
- LPG
- Motor gasoline
- Aviation gasoline
- Gasoline-type jet fuel (naphtha-type jet fuel or JP4)
- Kerosene-type jet fuel
- Other kerosene
- Gas/diesel oil (distillate fuel oil)
- Fuel oil (high sulphur content and low sulphur content)
- White spirit and SBP
- Lubricants
- Bitumen
- Paraffin waxes
- Petroleum coke

3. Petroleum products constituting specific stocks shall be identified by each Member State on the basis of the categories listed in paragraph 2. Member States shall ensure that, for the reference year determined in accordance with the rules set out in Article 3 and concerning the products included in the categories used, the crude oil equivalent of quantities consumed in the Member State is at least equal to 75% of inland consumption calculated using the method set out in Annex II.

For each of the categories chosen by the Member State, the specific stocks it undertakes to maintain shall correspond to a given number of days of average daily consumption measured on the basis of their crude oil equivalent during the reference year determined in accordance with the rules set out in Article 3.

The crude oil equivalents referred to in the first and second subparagraphs are calculated by multiplying by a factor of 1.2 the sum of the aggregate "observed gross inland deliveries", as defined in Section 3.2.1 of Annex C to Regulation (EC) No 1099/2008, for the products included in the categories used or concerned.

International marine bunkers are not included in the calculation.

4. Each Member State that has decided to maintain specific stocks shall send the Commission a notice to be published in the Official Journal of the European Union, specifying the level of such stocks that it has undertaken to maintain and the duration of such undertaking which shall be at least 1 year. The notified minimum level shall apply equally to all categories of specific stocks used by the Member State.

The Member State shall ensure that such stocks are held the full length of the notified period without prejudice to the right of the Member State to undergo temporary reductions due solely to individual stock replacement operations.

The list of categories used by a Member State shall remain in effect for at least 1 year and may be amended only with effect on the first day of a calendar month.

5. Each Member State that has not made a commitment for the full length of a given calendar year to maintain at least 30 days of specific stocks shall ensure that at least one-third of their stockholding obligation is held in the form of products composed in accordance with paragraphs 2 and 3.

A Member State for which less than 30 days of specific stocks are held shall draw up an annual report analysing the measures taken by its national authorities to ensure and verify the availability and physical accessibility of its emergency stocks as referred to in Article 5 and shall document in the same report arrangements made to allow the Member State to control the use of these stocks in case of oil supply disruptions. That report shall be sent to the Commission by the end of the first month of the calendar year to which it relates.

Article 10

Managing specific stocks

1. Each Member State shall keep a continually updated and detailed register of all specific stocks held within its territory. That register shall contain, in particular, all information needed to pinpoint the exact location of the stocks in question.

Member States shall also send the Commission a copy of the register within 15 days of a request by the Commission. In this copy, sensitive data relating to the location of stocks may be withheld. Such requests may be made no later than 5 years after the date to which the requested data relate.

2. Where specific stocks are commingled with other oil stocks, Member States or their CSEs shall make the necessary arrangements to prevent those commingled products from being moved, to the extent of the proportion constituting specific stocks, without prior written authorisation by the owner of the specific stocks and by the authorities of, or the CSE established by, the Member State in whose territory the stocks are located.

3. Member States shall take the necessary measures to confer unconditional immunity from enforcement action on all specific stocks maintained or transported within their territory, irrespective of whether those stocks are owned by them or by other Member States.

Article 11

The effect of delegations

The delegations referred to in Articles 7 and 8 shall in no way alter the obligations incumbent upon each Member State pursuant to this Directive.

Article 12

Statistical summaries of stocks covered by Article 3

1. With regard to the levels of stocks to be held pursuant to Article 3, each Member State shall draw up statistical summaries and submit them to the Commission in accordance with the rules set out in Annex IV³.
2. The rules for drawing up the summaries referred to in paragraph 1, their scope, content and frequency and the deadlines for their submission may be amended in accordance with the regulatory procedure referred to in Article 23(2). The rules for submitting those summaries to the Commission may also be amended in accordance with the regulatory procedure referred to in Article 23(2).
3. Member States may not include quantities of crude oil or petroleum products which are subject to a seizure order or enforcement action in their statistical summaries of emergency stocks. This also applies to stocks owned by companies that are bankrupt or have entered into an arrangement with creditors.

Article 13

Statistical summaries of specific stocks

1. Each Member State concerned shall draw up and submit to the Commission a statistical summary, for each product category, showing the specific stocks existing on the last day of each calendar month and specifying the quantities and the number of days of average consumption in the reference year which those stocks represent. If some of those specific stocks are held outside a Member State's territory, it shall provide details of the stocks maintained in or by the various Member States and CSEs concerned. It shall also provide a detailed indication of whether it owns all of those stocks or whether they are owned, in whole or in part, by its CSE.
2. Each Member State concerned shall also draw up and submit to the Commission a summary of the specific stocks located within its territory and owned by other Member States or CSEs, showing the stocks existing on the last day of each calendar month and broken down into the product categories identified pursuant to Article 9(4). In that summary, the Member State shall also indicate, in each case, the Member State or CSE concerned and the quantities involved.
3. The statistical summaries referred to in paragraphs 1 and 2 shall be submitted during the calendar month following that to which they relate.
4. Copies of the statistical summaries shall also be sent immediately upon request by the Commission. Such requests may be made no later than 5 years after the date to which the data in question relate.

³ Pursuant to the Ministerial Council General Policy Guideline on a Roadmap on Implementation of the Certain Deadlines of the Directive 2009/119/EC, all Contracting Parties are invited to: a) "Begin regular monthly participation in the submissions of the JODI Oil Questionnaire before 1 January 2018. b) Communicate to the Secretariat by 31 March 2018 the proposed legal basis and Action Plan for collecting all oil data necessary to submit the Monthly Oil Statistics (MOS) Questionnaire".

5. The scope, content and frequency of the statistical summaries and the deadlines for their submission may be amended in accordance with the regulatory procedure referred to in Article 23(2). The rules for submitting those summaries to the Commission may also be amended in accordance with the regulatory procedure referred to in Article 23(2).

Article 14

Summaries of commercial stocks

1. Member States shall send the Commission a monthly statistical summary of the levels of commercial stocks held within their national territory. When doing so, they shall ensure that sensitive data are protected and shall abstain from mentioning the names of the owners of the stocks concerned.
2. Using aggregate levels, the Commission shall publish a monthly statistical summary of the commercial stocks in the Community on the basis of the summaries submitted by the Member States.
3. The rules for submitting and publishing the statistical summaries, as well as for their frequency, may be amended in accordance with the regulatory procedure referred to in Article 23(2).

Article 15

Data processing

The Commission shall be responsible for developing, hosting, managing and maintaining the IT resources needed to receive, store and carry out any processing of the data provided in the statistical summaries, all other information submitted by Member States or gathered by the Commission pursuant to this Directive and any data on oil stocks gathered pursuant to Regulation (EC) No 1099/2008 and needed for the purpose of drawing up the summaries required by this Directive.

Article 16

Biofuels and additives

1. When calculating stockholding obligations under Articles 3 and 9 biofuels and additives shall be taken into account only where they have been blended with the petroleum products concerned.
2. When calculating the stock levels actually maintained, biofuels and additives shall be taken into account when:
 - (a) they have been blended with petroleum products concerned; or
 - (b) they are stored on the territory of the Member State concerned, provided that the Member State has adopted rules ensuring that they are to be blended with petroleum products held pursuant to stockholding requirements set out in this Directive and that they are to be used in transportation.
3. The rules for taking biofuels and additives into account when calculating stockholding obligations and stock levels, as laid down in paragraph 1 and 2, may be amended in accordance with the regulatory procedure referred to in Article 23(2).

Article 17

Coordination Group for oil and petroleum products

1. A Coordination Group for oil and petroleum products is hereby set up (hereinafter the “Coordination Group”). The Coordination Group is a consultative Group that shall contribute to analysing the situation within the Community with regard to security of supply for oil and petroleum products and facilitate the coordination and implementation of measures in that field.
2. The Coordination Group shall be made up of representatives of the Member States. It shall be chaired by the Commission. Representative bodies from the sector concerned may take part in the work of the Coordination Group at the invitation of the Commission.

Article 18

Reviews of emergency preparedness and stockholding

1. The Commission may, in coordination with Member States, carry out reviews to verify their emergency preparedness and, if considered appropriate by the Commission, related stockholding. When preparing for such reviews, the Commission shall take into account efforts undertaken by other institutions and international organisations and consult the Coordination Group.
2. The Coordination Group may agree on the participation of authorised agents and representatives of other Member States in the reviews. Designated national officials of the reviewed Member State may accompany the persons performing the review. Within 1 week following the announcement of a review referred to in paragraph 1, any Member State concerned that has not provided the Commission with sensitive data relating to the location of stocks pursuant Articles 6 and 9 shall place this information at the disposal of the Commission’s employees or authorised agents.
3. Member States shall ensure that their authorities and those responsible for maintaining and managing emergency and specific stocks agree to inspections and provide assistance to the persons authorised by the Commission to perform those reviews. Member States shall in particular ensure that these persons are granted the right to consult all documents and registers relating to the stocks and have right of access to all sites on which stocks are held and to all related documents.
4. The outcome of reviews carried out pursuant to this Article shall be notified to the Member State reviewed and may be forwarded to the Coordination Group.
5. Member States and the Commission shall ensure that officials, agents and other persons working under Commission supervision and members of the Coordination Group may not disclose any information which has been gathered or exchanged pursuant to this Article and which, by its nature, is covered by professional secrecy, such as the identity of the owners of stocks.
6. The objectives of the reviews referred to in paragraph 1 may not include the processing of personal data. Any personal data found or uncovered during those reviews may not be gathered or taken into consideration and, if gathered accidentally, shall be destroyed immediately.
7. Member States shall take the necessary measures to ensure that all data, records, summaries and documents relating to emergency stocks and specific stocks are kept for a period of at least 5 years.

Article 19

Protection of individuals with regard to the processing of data

This Directive is without prejudice to, and in no way affects, the level of protection of individuals with regard to the processing of personal data under the provisions of Community and national law and, in particular, does not alter Member States' obligations with regard to the processing of personal data, as laid down by Directive 95/46/EC, or the obligations incumbent upon Community institutions and bodies under Regulation (EC) No 45/2001 with regard to the processing of personal data by them in the course of their duties.

Article 20

Emergency procedures

1. Member States shall ensure that they have procedures in place and take such measures as may be necessary, in order to enable their competent authorities to release quickly, effectively and transparently some or all of their emergency stocks and specific stocks in the event of a major supply disruption, and to impose general or specific restrictions on consumption in line with the estimated shortages, *inter alia*, by allocating petroleum products to certain groups of users on a priority basis.

2. Member States shall at all times have contingency plans to be implemented in the event of a major supply disruption and shall provide for organisational measures to be taken to allow those plans to be implemented. Upon request, Member States shall inform the Commission of their contingency plans and the corresponding organisational arrangements.

3. In the event of an effective international decision to release stocks affecting one or more Member States:

(a) the Member States concerned may use their emergency stocks and specific stocks to fulfil their international obligations under that decision. Any Member State so doing shall notify the Commission immediately, so that the Commission can call a meeting of the Coordination Group or consult its members by electronic means to assess, in particular, the impact of that release;

(b) the Commission should recommend to Member States to release some or all of their emergency stocks and specific stocks or to take other measures of equivalent effect as considered appropriate. The Commission may act only after consulting the Coordination Group.

4. In the absence of an effective international decision to release stocks but when difficulties arise in the supply of crude oil or petroleum products to the Community or to a Member State, the Commission shall inform the IEA where applicable, and coordinate with it as appropriate, and arrange a consultation of the Coordination Group as soon as possible, either at the request of a Member State or on its own initiative. When a consultation of the Coordination Group is requested by a Member State, it shall be arranged within 4 days of the request at most, unless the Member State agrees to a longer period. On the basis of the results of the examination of the situation by the Coordination Group, the Commission shall determine whether a major supply disruption has occurred.

If a major supply disruption is deemed to have occurred, the Commission shall authorise the release of some or all of the quantities of emergency stocks and specific stocks that have been put forward for that purpose by the Member States concerned.

5. Member States may release emergency and specific stocks below the compulsory minimum level set by this Directive in amounts immediately necessary for an initial response in cases of particular urgency or in order to meet local crises. In the event of such release, Member States shall inform the Commission immediately of the amount released. The Commission shall transmit this information to the members of the Coordination Group.

6. Where paragraphs 3, 4 or 5 are applied, Member States may temporarily hold stocks at levels lower than those stipulated in this Directive. In that case, the Commission shall determine, on the basis of the results of the consultation of the Coordination Group and, where applicable, in coordination with the IEA, and notably by taking into account the situation on the international oil and petroleum products markets, a reasonable time frame within which Member States must bring their stocks back up to the minimum required levels.

7. Decisions taken by the Commission by virtue of this Article shall be without prejudice to any other international obligations on the Member States concerned.

Article 21

Penalties

Member States shall lay down the rules on penalties applicable to infringements of the national provisions adopted pursuant to this Directive and shall take such measures as may be necessary to ensure that they are applied. Such penalties shall be effective, proportionate and dissuasive. The Member States shall notify those provisions to the Commission by 31 December 2012 and shall notify it without delay of any subsequent amendment affecting them.

Article 22

Review

The Secretariat shall monitor and review the preparation of the implementation of Directive 2009/119/EC in the Contracting Parties and shall submit an annual progress report to the Ministerial Council, the first of which shall be submitted in 2013.⁴

Article 23

Committee procedure

1. The Commission shall be assisted by a Committee.
2. Where reference is made to this paragraph, Articles 5 and 7 of Decision 1999/468/EC shall apply.

Article 24

Repeal

⁴ The text displayed here corresponds to Article 3 of Ministerial Council Decision 2012/03/MC.



Article 25

Transposition

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 1 January 2023⁶.

By derogation from the first subparagraph, Member States that are not members of the IEA by 31 December 2012 and cover their inland consumption of petroleum products fully by imports shall bring into force the laws, regulations and administrative provisions necessary to comply with Article 3(1) of this Directive by 31 December 2014. Until those Member States have brought into force such measures, they shall maintain oil stocks corresponding to 81 days of average daily net imports.

When Member States adopt measures, they shall contain a reference to this Directive or shall be accompanied by such reference on the occasion of their official publication. The methods of making such a reference shall be laid down by the Member States.

2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

Article 26

Entry into force

This Decision entered into force on 18 October 2012.⁷

Article 27

Addressees

This Directive is addressed to the Member States.

⁵ Not applicable according to Ministerial Council Decision 2012/03/MC.

⁶ The date displayed here corresponds to Article 3 of Ministerial Council Decision 2012/03/MC. Pursuant to the Ministerial Council General Policy Guideline on a Roadmap on Implementation of the Certain Deadlines of the Directive 2009/119/ EC, 'the Contracting Parties are invited to communicate to the Secretariat by 31 March 2017 the text of the main provisions of the draft national law which they intend to adopt to transpose Directive 2009/119/EC and the Action Plan on the Establishment of Oil Stocks. All Contracting Parties are invited bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 31 December 2017'.

⁷ The text displayed here corresponds to Article 4 of Ministerial Council Decision 2012/03/MC.

ANNEX I

METHOD FOR CALCULATING THE CRUDE OIL EQUIVALENT OF IMPORTS OF PETROLEUM PRODUCTS

The crude oil equivalent of imports of petroleum products, as referred to in Article 3, must be calculated using the following method:

The crude oil equivalent of imports of petroleum products is obtained by calculating the sum of the net imports of crude oil, NGL, refinery feedstocks and other hydrocarbons as defined in Section 4 of Annex B to Regulation (EC) No 1099/2008, adjusting the result to take account of any stock changes, deducting 4% for naphtha yield (or, if the average naphtha yield within the national territory is greater than 7%, deducting the net actual consumption of naphtha or the average naphtha yield) and adding this to the net imports of all other petroleum products excluding naphtha, also adjusted to take account of stock changes and multiplied by a factor of 1.065.

International marine bunkers are not included in the calculation.

ANNEX II

METHOD FOR CALCULATING THE CRUDE OIL EQUIVALENT OF INLAND CONSUMPTION

For the purpose of Article 3, the crude oil equivalent of inland consumption must be calculated using the following method:

Inland consumption is the sum of the aggregate “observed gross inland deliveries”, as defined in Section 3.2.1 of Annex C to Regulation (EC) No 1099/2008, of the following products only: motor gasoline, aviation gasoline, gasoline-type jet fuel (naphtha-type jet fuel or JP4), kerosene-type jet fuel, other kerosene, gas/diesel oil (distillate fuel oil) and fuel oil (high sulphur content and low sulphur content) as defined in Section 4 of Annex B to Regulation (EC) No 1099/2008.

International marine bunkers are not included in the calculation.

The crude oil equivalent of inland consumption is calculated by multiplying by a factor of 1.2.

ANNEX III

METHODS FOR CALCULATING THE LEVEL OF STOCKS HELD

The following methods must be used to calculate stock levels:

Without prejudice to the case addressed in Article 4(3), no quantity may be counted as stock more than once.

Crude oil stocks are reduced by 4%, which corresponds to the average naphtha yield.

Stocks of naphtha and petroleum products for international marine bunkers are not included.

Other petroleum products are included in the stock count using one of the two methods set out below. Member States must continue to use the method they have chosen throughout the whole calendar year in question.

Member States may:

(a) include all other stocks of the petroleum products identified in the first paragraph of Section 3.1 of Annex C to Regulation (EC) No 1099/2008 and calculate the crude oil equivalent by multiplying the quantities by a factor of 1.065; or

(b) include stocks of only the following products: motor gasoline, aviation gasoline, gasoline-type jet fuel (naphtha-type jet fuel or JP4), kerosene-type jet fuel, other kerosene, gas/diesel oil (distillate fuel oil) and fuel oil (high sulphur content and low sulphur content) and calculate the crude oil equivalent by multiplying the quantities by a factor of 1.2.

The calculation may include quantities held:

- in refinery tanks,
- in bulk terminals,
- in pipeline tankage,
- in barges,
- in intercoastal tankers,
- in oil tankers in port,
- in inland ship bunkers,
- in storage tank bottoms,
- as working stocks,
- by large consumers as required by law or otherwise controlled by governments.

However, those quantities except for any held in refinery tanks, in pipeline tankage or in bulk terminals, may not be included when calculating levels of specific stocks where such stocks are calculated separately from emergency stocks.

The calculation may never include:

- (a) crude oil not yet produced;
- (b) quantities held:
 - in pipelines,
 - in rail tank cars,

- in seagoing ships' bunkers,
- in service stations and retail stores,
- by other consumers,
- in tankers at sea,
- as military stocks.

When calculating their stocks, Member States must reduce the quantities of stocks calculated as set out above by 10%. That reduction applies to all quantities included in a given calculation.

However, no 10% reduction is to be applied when calculating the level of specific stocks or the levels of the different categories of specific stocks where those stocks or categories are considered separately from the emergency stocks, particularly with a view to verifying compliance with the minimum levels laid down by Article 9.

ANNEX IV

RULES FOR THE PREPARATION AND SUBMISSION TO THE COMMISSION OF STATISTICAL SUMMARIES OF STOCKS TO BE HELD PURSUANT TO ARTICLE 3

Each Member State must draw up and submit to the Commission, on a monthly basis, a definitive statistical summary of the level of stocks actually held on the last day of the calendar month, calculated either on the basis of the number of days of net oil imports or on the basis of the number of days of inland oil consumption, in accordance with Article 3. The statistical summary must provide precise details of why the calculation is based on the number of days of imports or, conversely, on the number of days of consumption and must specify which of the calculation methods set out in Annex III was used.

If some of the stocks included when calculating the level of stocks held pursuant to Article 3 are held outside national territory, each summary shall give details of the stocks held by the various Member States and CSEs concerned on the last day of the period to which it relates. In its summary, each Member State must also indicate, in each case, whether the stocks are being held pursuant to a delegation request made by one or more economic operators or whether they are being held at its request or at the request of its CSE.

For any stocks held by a Member State within its territory on behalf of other Member States or CSEs, that Member State must draw up and submit to the Commission a summary showing the stocks existing on the last day of each calendar month, broken down by product category. In that summary, the Member State must also indicate, in particular, the Member State or CSE concerned and the quantities involved in each case.

The statistical summaries referred to in this Annex must be submitted to the Commission within 55 days of the end of the month to which they relate. Those same summaries must also be submitted within 2 months of a request by the Commission. Such requests may be made no later than 5 years after the date to which the data relate.



PART II

ACQUIS COMMUNAUTAIRE

INFRASTRUCTURE



REGULATION (EU) 347/2013 of 17 April 2013 on guidelines for trans-European energy infrastructure

Incorporated and adapted by Ministerial Council Decision 2015/09/MC-EnC of 16 October 2015 on the implementation of Regulation (EU) 347/2013 on guidelines for trans-European energy infrastructure.

The adaptations made by Decisions 2015/09/MC-EnC and 2021/11/MC-EnC are highlighted in bold and blue.

CHAPTER I GENERAL PROVISIONS

Article 1

Subject matter and scope

1. **This Regulation lays down guidelines for the timely development and interoperability of projects of Energy Community Interest.**

2. In particular, this Regulation:

(a) **addresses the identification of projects of Energy Community interest falling under energy infrastructure categories in electricity, gas and oil as well as the thematic area 'smart grid deployment' set out in Annex I (,energy infrastructure categories and area');**

(b) facilitates the timely implementation of projects of **Energy Community** interest by streamlining, coordinating more closely, and accelerating permit granting processes and by enhancing public participation;

(c) provides rules and guidance for the cross-border allocation of costs and risk-related incentives for projects of **Energy Community** interest;

(d) **determines the conditions for eligibility of projects of Energy Community interest for Union technical and financial assistance from the Instrument for Pre-Accession Assistance (IPA) and the Neighbourhood Investment Facility.**

Article 2

Definitions

For the purpose of this Regulation, in addition to the definitions provided for in Directives 2009/28/EC, 2009/72/EC and 2009/73/EC, Regulations (EC) No 713/2009, (EC) No 714/2009, and (EC) No 715/2009, the following definitions shall apply:

1. **'energy infrastructure' means any physical equipment or facility under the energy infrastructure categories which is located within the Contracting Parties or linking Contracting Parties, or linking Contracting Parties and Member States;**

2. 'comprehensive decision' means the decision or set of decisions taken by a **Contracting Party** authority

or authorities not including courts or tribunals, that determines whether or not a project promoter is to be granted authorisation to build the energy infrastructure to realise a project without prejudice to any decision taken in the context of an administrative appeal procedure;

3. 'project' means one or several lines, pipelines, facilities, equipments or installations falling under the energy infrastructure categories;

4. **'project of Energy Community interest' means a project necessary to implement the energy infrastructure and which is part of the list of projects of Energy Community interest referred to in Article 3;**

5. 'energy infrastructure bottleneck' means limitation of physical flows in an energy system due to insufficient transmission capacity, which includes *inter alia* the absence of infrastructure;

6. 'project promoter' means one of the following:

(a) a TSO, distribution system operator or other operator or investor developing a project of **Energy Community** interest;

(b) where there are several TSOs, distribution system operators, other operators, investors, or any group thereof, the entity with legal personality under the applicable national law, which has been designated by contractual arrangement between them and which has the capacity to undertake legal obligations and assume financial liability on behalf of the parties to the contractual arrangement;

7. 'smart grid' means an electricity network that can integrate in a cost efficient manner the behaviour and actions of all users connected to it, including generators, consumers and those that both generate and consume, in order to ensure an economically efficient and sustainable power system with low losses and high levels of quality, security of supply and safety;

8. 'works' means the purchase, supply and deployment of components, systems and services including software, the carrying out of development and construction and installation activities relating to a project, the acceptance of installations and the launching of a project;

9. 'studies' means activities needed to prepare project implementation, such as preparatory, feasibility, evaluation, testing and validation studies, including software, and any other technical support measure including prior action to define and develop a project and decide on its financing, such as reconnaissance of the sites concerned and preparation of the financial package;

10. 'national regulatory authority' means a national regulatory authority designated in accordance with Article 35(1) of Directive 2009/72/EC or Article 39(1) of Directive 2009/73/EC, as **incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC;**

11. 'commissioning' means the process of bringing a project into operation once it has been constructed.

CHAPTER II

PROJECTS OF ENERGY COMMUNITY INTEREST

Article 3

List of projects of Energy Community interest

1. **This Regulation establishes two Groups as set out in Annex II.1. The membership of each Group shall be based on the categories as set out in Annex I. Decision-making powers in the Groups shall be restricted to the Parties to the Treaty who shall, for those purposes, be referred to as the decision-making body of the Groups.**
2. Each Group shall adopt its own rules of procedure, having regard to the provisions set out in **Annex II.**
3. **The decision-making body of each Group shall adopt a preliminary list of proposed projects of Energy Community interest drawn up according to the process set out in Annex II.2, according to their fulfilment of the criteria set out in Article 4.**

When a Group draws up its **preliminary** list:

- (a) each individual proposal for a project of **Energy Community** interest shall require the approval of the **Contracting Parties** or Member States, to whose territory the project relates; if a **Contracting Party** or a Member State decides not to give its approval, it shall present its substantiated reasons for doing so to the Group concerned;
- (b) it shall take into account advice from the **Energy Community Secretariat** that is aimed at having a manageable total number of projects of **Energy Community** interest.

4. **The Ministerial Council shall establish the list of projects of Energy Community interest ('Energy Community list') by way of a Decision under Title III of the Treaty.**

In exercising its power, the **Ministerial Council** shall ensure that the **Energy Community** list is established every two years, on the basis of the **preliminary** lists adopted by the decision-making bodies of the Groups as established in **Annex II.1(2)**, following the procedure set out in paragraph 3 of this Article.

By derogation from the previous subparagraph, the adoption of the Energy Community list every two years is suspended, pending the adoption by the European Union of a new Regulation repealing and replacing Regulation (EU) No 347/2013 and its subsequent incorporation and adaptation, where relevant, in the Energy Community acquis communautaire. Until the establishment of a new list of Projects of Energy Community Interest ("Energy Community list"), the lists annexed to Decision 2020/04/MC-EnC and Recommendation 2020/01/MC-EnC on Projects of Mutual Interest between Contracting Parties and Member States of the European Union shall remain valid.¹

The next Energy Community list following the one adopted by the Ministerial Council on 24 October 2013 shall be adopted by 31 December 2016.

5. The **Ministerial Council** shall, when adopting the **Energy Community** list on the basis of the **preliminary** lists:
 - (a) ensure that only those projects that fulfil the criteria referred to in Article 4 are included;

¹ The text displayed here corresponds to Article 1 of the Ministerial Council Decision 2021/11/MC-EnC

(b) ensure cross-regional consistency, taking into account the opinion of the **Regulatory Board** as referred to in **Annex II.2(10)**;

(c) **take into account any opinions of Contracting Parties and Member States concerned, as referred to in Annex II.2(7); and**

(d) aim for a manageable total number of projects of **Energy Community** interest on the **Energy Community** list.

6. Projects of **Energy Community** interest included on the **Energy Community** list pursuant to paragraph 4 of this Article **shall be submitted with the view to become** an integral part of the relevant regional investment plans under Article 12 of Regulations (EC) No 714/2009 and (EC) No 715/2009 and of the relevant national 10-year network development plans under Article 22 of Directives 2009/72/EC and 2009/73/EC and other national infrastructure plans concerned, as appropriate. Those projects shall be conferred the highest possible priority within each of those plans.

Article 4

Criteria for projects of Energy Community interest

1. Projects of **Energy Community** interest shall meet the following general criteria:

(a) **the project falls in at least one of the energy infrastructure categories and area as described in Annex I;**

(b) the potential overall benefits of the project, assessed according to the respective specific criteria in paragraph 2, outweigh its costs, including in the longer term; and

(c) the project meets any of the following criteria:

(i) **involves at least two Contracting Parties or a Contracting Party and a Member State by directly crossing the border of two or more Contracting Parties, or of one Contracting Party and one or more Member States;**

(ii) is located on the territory of one **Contracting Party** and has a significant cross-border impact as set out in **Annex III.1**;

(iii) <...>²

2. The following specific criteria shall apply to projects of **Energy Community** interest falling within specific energy infrastructure categories:

(a) for electricity transmission and storage projects falling under the energy infrastructure categories set out in **Annex I.1(a), (b) and (c)**, the project is to contribute significantly to at least one of the following specific criteria:

(i) market integration <...> and reducing energy infrastructure bottlenecks; competition and system flexibility;

(ii) sustainability, *inter alia* through the integration of renewable energy into the grid and the transmission of renewable generation to major consumption centres and storage sites;

(iii) security of supply, *inter alia* through interoperability, appropriate connections and secure and reliable system operation;

² Not applicable according to Article 8(1)(a)(c) of Ministerial Council Decision 2015/09/MC-EnC.

(b) for gas projects falling under the energy infrastructure categories set out in **Annex I.2**, the project is to contribute significantly to at least one of the following specific criteria:

- (i) market integration <...> and reducing energy infrastructure bottlenecks; interoperability and system flexibility;
- (ii) security of supply, *inter alia* through appropriate connections and diversification of supply sources, supplying counterparts and routes;
- (iii) competition, *inter alia* through diversification of supply sources, supplying counterparts and routes;
- (iv) sustainability, *inter alia* through reducing emissions, supporting intermittent renewable generation and enhancing deployment of renewable gas;

(c) for electricity smart grid projects falling under the energy infrastructure category set out in **Annex I.1(d)**, the project is to contribute significantly to all of the following specific criteria:

- (i) integration and involvement of network users with new technical requirements with regard to their electricity supply and demand;
- (ii) efficiency and interoperability of electricity transmission and distribution in day-to-day network operation;
- (iii) network security, system control and quality of supply;
- (iv) optimised planning of future cost-efficient network investments;
- (v) market functioning and customer services;
- (vi) involvement of users in the management of their energy usage;

(d) for oil transport projects falling under the energy infrastructure categories set out in **Annex I.3**, the project is to contribute significantly to all of the following specific criteria:

- (i) security of supply reducing single supply source or route dependency;
- (ii) efficient and sustainable use of resources through mitigation of environmental risks;
- (iii) interoperability;

(e) <...>³

3. For projects falling under the energy infrastructure categories set out in **Annex I.1** to 3, the criteria listed in this Article shall be assessed in accordance with the indicators set out in **Annex III.2** to 5.

4. In order to facilitate the assessing of all projects that could be eligible as projects of **Energy Community** interest and that could be included in a **preliminary** list, each Group shall assess each **project's benefits** in a transparent and objective manner. Each Group shall determine its assessment method on the basis of the aggregated contribution to the criteria referred to in paragraph 2; this assessment shall lead to a ranking of projects for internal use of the Group. Neither the **preliminary** list nor the **Energy Community** list shall contain any ranking, nor shall the ranking be used for any subsequent purpose except as described in **Annex II.2(12)**.

When assessing projects, each Group shall furthermore give due consideration to:

- (a) the urgency of each proposed project in order to meet the Union energy policy targets of market integration and competition, sustainability and security of supply;
- (b) the number of **Contracting Parties and Member States** affected by each project, whilst ensuring

³ Not applicable according to Article 8(2) of Ministerial Council Decision 2015/09/MC-EnC.

equal opportunities for projects involving peripheral **Contracting Parties and Member States**;

(c) the contribution of each project to territorial cohesion; and

(d) complementarity with regard to other proposed projects.

For smart grids projects falling under the energy infrastructure category set out in **Annex I.1(d)**, ranking shall be carried out for those projects that affect the same two **Contracting Parties**, and due consideration shall also be given to the number of users affected by the project, the annual energy consumption and the share of generation from non-dispatchable resources in the area covered by these users.

5.⁴ **When the project directly crosses the border of one or more Contracting Parties and one or more Member States, in order to be considered to be a project of Energy Community interest, it shall be first granted a status of project of the common interest within the European Union.**

6.⁵ **Project that directly crosses the border of one or more Contracting Parties and one or more Member States which is not granted a status of project of the common interest within the European Union may be developed on voluntary basis as a project of Mutual Interest.**

Article 5

Implementation and monitoring

1. Project promoters shall draw up an implementation plan for projects of **Energy Community** interest, including a timetable for each of the following:

(a) feasibility and design studies;

(b) approval by the national regulatory authority or by any other authority concerned;

(c) construction and commissioning;

(d) the permit granting schedule referred to in Article 10(4)(b).

2. TSOs, distribution system operators and other operators shall co-operate with each other in order to facilitate the development of projects of **Energy Community** interest in their area.

3. The **Energy Community Secretariat** and the Groups concerned shall monitor the progress achieved in implementing the projects of **Energy Community** interest and, if necessary, make recommendations to facilitate the implementation of projects of **Energy Community** interest. The Groups may request that additional information be provided in accordance with paragraphs 4, 5 and 6, convene meetings with the relevant parties and invite the **Energy Community Secretariat** to verify the information provided on site.

4. By 31 March of each year following the year of inclusion of a project of **Energy Community** interest on the **Energy Community** list pursuant to Article 3, project promoters shall submit an annual report, for each project falling under the categories set out in **Annex I.1** and 2, to the competent authority referred to in Article 8 and either to the **Regulatory Board** or, for projects falling under the categories set out in **Annex I.3**, to the respective Group. That report shall give details of:

(a) the progress achieved in the development, construction and commissioning of the project, in particular with regard to permit granting and consultation procedures;

(b) where relevant, delays compared to the implementation plan, the reasons for such delays and other

⁴ The text displayed here corresponds to Article 8(4) of Ministerial Council Decision 2015/09/MC-Enc.

⁵ The text displayed here corresponds to Article 8(4) of Ministerial Council Decision 2015/09/MC-Enc.

difficulties encountered;

(c) where relevant, a revised plan aiming at overcoming the delays.

5. Within three months of the receipt of the annual reports referred to in paragraph 4 of this Article, the **Energy Community Secretariat** shall submit to the Groups a consolidated report for the projects of Energy Community interest falling under the categories set out in **Annex I.1** and 2, evaluating the progress achieved and make, where appropriate, recommendations on how to overcome the delays and difficulties encountered. <...>

6. Each year, the competent authorities referred to in Article 8 shall report to the respective Group on the progress and, where relevant, on delays in the implementation of projects of **Energy Community** interest located on their respective territory with regard to the permit granting processes, and on the reasons for such delays.

7. If the commissioning of a project of **Energy Community** interest is delayed compared to the implementation plan, other than for overriding reasons beyond the control of the project promoter:

(a) **in so far as measures referred to in Article 22(7)(a), (b) or (c) of Directives 2009/72/EC and 2009/73/EC, as incorporated and adapted by the Ministerial Council Decision 2011/02/MCEnC, are applicable according to respective national laws, national regulatory authorities shall ensure that the investment is carried out;**

(b) if the measures of national regulatory authorities according to point (a) are not applicable, the project promoter shall choose a third party to finance or construct all or part of the project. The project promoter shall do so before the delay compared to the date of commissioning in the implementation plan exceeds two years;

(c) if a third party is not chosen according to point (b), the **Contracting Party** or, when the **Contracting Party** has so provided, the national regulatory authority may, within two months of the expiry of the period referred to in point (b), designate a third party to finance or construct the project which the project promoter shall accept;

(d) <...>⁶

(d) when **point (c)** is applied, the system operator in whose area the investment is located shall provide the implementing operators or investors or third party with all the information needed to realise the investment, shall connect new assets to the transmission network and shall generally make its best efforts to facilitate the implementation of the investment and the secure, reliable and efficient operation and maintenance of the project of **Energy Community** interest.

8. A project of **Energy Community** interest may be removed from the **Energy Community** list according to the procedure set out in Article 3(4) if its inclusion in that list was based on incorrect information which was a determining factor for that inclusion, or the project does not comply with **Energy Community** law.

9. Projects which are no longer on the **Energy Community** list shall lose all rights and obligations linked to the status of project of **Energy Community** interest arising from this Regulation.

However, a project which is no longer on the **Energy Community** list but for which an application file has been accepted for examination by the competent authority shall maintain the rights and obligations arising from Chapter III, except where the project is no longer on the list for the reasons set out in paragraph 8.

10. <...>⁷

⁶ Not applicable according to Article 9(3)(b) of Ministerial Council Decision 2015/09/MC-EnC.

⁷ Not applicable according to Article 9(4) of Ministerial Council Decision 2015/09/MC-EnC.

Article 6**PECI coordinators**

1. Where a project of **Energy Community** interest encounters significant implementation difficulties, the **Energy Community Secretariat may propose and Permanent High Level Group may designate in agreement with Contracting Parties and Member States** concerned, a **PECI** coordinator for a period of up to one year renewable twice.

2. The **PECI** coordinator shall:

(a) promote the projects, for which he has been designated **PECI** coordinator and the cross-border dialogue between the project promoters and all concerned stakeholders;

(b) assist all parties as necessary in consulting concerned stakeholders and obtaining necessary permits for the projects;

(c) if appropriate, advise project promoters on the financing of the project;

(d) ensure that appropriate support and strategic direction by the **Contracting Parties** concerned are provided for the preparation and implementation of the projects;

(e) submit every year, and if appropriate, upon completion of their mandate, a report to the **Energy Community Secretariat** on the progress of the projects and on any difficulties and obstacles which are likely to significantly delay the commissioning date of the projects. **The Secretariat shall transmit the report to the Permanent High Level Group and the Groups concerned. The Permanent High Level Group may bring the report also to the attention of the Ministerial Council.**

3. The **PECI** coordinator shall be chosen on the basis of his experience with regard to the specific tasks assigned to him for the projects concerned.

4. The decision designating the **PECI** coordinator shall specify the terms of reference, detailing the duration of the mandate, the specific tasks and corresponding deadlines, and the methodology to be followed. The coordination effort shall be proportionate to the complexity and estimated costs of the projects.

5. The **Contracting Parties** concerned shall fully cooperate with the **PECI** coordinator in his execution of the tasks referred to in paragraphs 2 and 4.

CHAPTER III**PERMIT GRANTING AND PUBLIC PARTICIPATION****Article 7****'Priority status' of projects of Energy Community interest**

1. The adoption of the **Energy Community** list shall establish, for the purposes of any decisions issued in the permit granting process, the necessity of these projects from an energy policy perspective, without prejudice to the exact location, routing or technology of the project.

2. For the purpose of ensuring efficient administrative processing of the application files related to projects of **Energy Community** interest, project promoters and all authorities concerned shall ensure that the

most rapid treatment legally possible is given to these files.

3. Where such status exists in national law, projects of **Energy Community** interest shall be allocated the status of the highest national significance possible and be treated as such in permit granting processes and if national law so provides, in spatial planning including those relating to environmental assessments, in the manner such treatment is provided for in national law applicable to the corresponding type of energy infrastructure.

4. <...>⁸

4. Contracting Parties shall assess, taking due account of the guidance **issued by the Commission under Article 7(4) of the Regulation (EU) No 347/2013**, which measures to streamline the environmental assessment procedures and to ensure their coherent application are possible, and shall inform the **Energy Community Secretariat** of the result.

5. By **4 years** from the date of issue of the guidance referred to in paragraph 4, **Contracting Parties** shall take the non-legislative measures that they have identified under **paragraph 4**.

6. By **5 years** from the date of issue of the guidance referred to in paragraph 4, **Contracting Parties** shall take the legislative measures that they have identified under **paragraph 4**. These measures shall be without prejudice to obligations resulting from **Energy Community** law.

7. With regard to the environmental impacts addressed in Article 6(4) of Directive 92/43/ EEC and Article 4(7) of Directive 2000/60/EC, to the extent applicable to a Contracting Party under bilateral arrangements with the European Union, projects of **Energy Community** interest shall be considered as being of public interest from an energy policy perspective, and may be considered as being of overriding public interest, provided that all the conditions set out in these Directives are fulfilled.

<...>

Article 8

Organisation of the permit granting process

1. By **30 June 2017**, each **Contracting Party** shall designate one national competent authority which shall be responsible for facilitating and coordinating the permit granting process for projects of **Energy Community** interest.

2. The responsibility of the competent authority referred to in paragraph 1 and/or the tasks related to it may be delegated to, or carried out by, another authority, per project of **Energy Community** interest or per particular category of projects of **Energy Community** interest, provided that:

(a) the competent authority notifies the **Energy Community Secretariat** of that delegation and the information therein is published by either the competent authority or the project promoter on the website referred to in Article 9(7);

(b) only one authority is responsible per project of **Energy Community** interest, is the sole point of contact for the project promoter in the process leading to the comprehensive decision for a given project of **Energy Community** interest, and coordinates the submission of all relevant documents and information. The competent authority may retain the responsibility to establish time limits, without prejudice to the time limits set in accordance with Article 10.

⁸ Not applicable according to Article 11(1) of Ministerial Council Decision 2015/09/MC-Enc.

3. Without prejudice to relevant requirements under international and **Energy Community** law, the competent authority shall take actions to facilitate the issuing of the comprehensive decision. The comprehensive decision shall be issued within the time limit referred to in Article 10(1) and (2) and according to one of the following schemes:

(a) integrated scheme: the comprehensive decision shall be issued by the competent authority and shall be the sole legally binding decision resulting from the statutory permit granting procedure. Where other authorities are concerned by the project, they may, in accordance with national law, give their opinion as input to the procedure, which shall be taken into account by the competent authority;

(b) coordinated scheme: the comprehensive decision comprises multiple individual legally binding decisions issued by several authorities concerned, which shall be coordinated by the competent authority. The competent authority may establish a working group where all concerned authorities are represented in order to draw up a permit granting schedule in accordance with Article 10(4)(b), and to monitor and coordinate its implementation. The competent authority shall, in consultation with the other authorities concerned, where applicable in accordance with national law, and without prejudice to time limits set in accordance with Article 10, establish on a case-by-case basis a reasonable time limit within which the individual decisions shall be issued. The competent authority may take an individual decision on behalf of another national authority concerned, if the decision by that authority is not delivered within the time limit and if the delay cannot be adequately justified; or, where provided under national law, and to the extent that this is compatible with **Energy Community** law, the competent authority may consider that another national authority concerned has either given its approval or refusal for the project if the decision by that authority is not delivered within the time limit. Where provided under national law, the competent authority may disregard an individual decision of another national authority concerned if it considers that the decision is not sufficiently substantiated with regard to the underlying evidence presented by the national authority concerned; when doing so, the competent authority shall ensure that the relevant requirements under international and **Energy Community** law are respected and shall duly justify its decision;

(c) collaborative scheme: the comprehensive decision shall be coordinated by the competent authority. The competent authority shall, in consultation with the other authorities concerned, where applicable in accordance with national law, and without prejudice to time limits set in accordance with Article 10, establish on a case-by-case basis a reasonable time limit within which the individual decisions shall be issued. It shall monitor compliance with the time limits by the authorities concerned.

If an individual decision by an authority concerned is not expected to be delivered within the time limit, that authority shall inform the competent authority without delay and include a justification for the delay. Subsequently, the competent authority shall reset the time limit within which that individual decision shall be issued, whilst still complying with the overall time limits set in accordance with Article 10.

Acknowledging the national specificities in planning and permit granting processes, **Contracting Parties** may choose among the three schemes referred to in points (a), (b) and (c) of the first subparagraph to facilitate and coordinate their procedures and shall opt to implement the most effective scheme. Where a **Contracting Party** chooses the collaborative scheme, it shall inform the **Energy Community Secretariat** of its reasons therefor. The **Energy Community Secretariat** shall undertake an evaluation of the effectiveness of the schemes in the report referred to in Article 17.

4. **Contracting Party** may apply different schemes as set out in paragraph 3 to onshore and offshore projects of **Energy Community** interest.

5. If a project of **Energy Community** interest requires decisions to be taken in two or more Contracting Parties, the respective competent authorities shall take all necessary steps for efficient and effective cooperation and coordination among themselves, including as regards the provisions referred to in Article 10(4). **Contracting Parties** shall endeavour to provide for joint procedures, particularly with regard to the assessment of environmental impacts.

6.⁹ If a project of Energy Community interest requires decisions to be taken in one or more Contracting Parties and one or more Member States, the respective competent authorities are encouraged to take all necessary steps for efficient and effective cooperation and coordination among themselves, including as regards the provisions referred to in Article 10(4). Contracting Parties and Member States concerned are encouraged to provide for joint procedures, particularly with regard to the assessment of environmental impacts.

Article 9

Transparency and public participation

1. By **31 December 2017**, the **Contracting Party** or competent authority shall, where applicable in collaboration with other authorities concerned, publish a manual of procedures for the permit granting process applicable to projects of **Energy Community** interest. The manual shall be updated as necessary and made available to the public. The manual shall at least include the information specified in **Annex V.1**.

The manual shall not be legally binding, but it may refer to or quote relevant legal provisions.

2. Without prejudice to any requirements under the Aarhus and Espoo Conventions and relevant **Energy Community** law, all parties involved in the permit granting process shall follow the principles for public participation set out in of **Annex V.3**.

3. The project promoter shall, within an indicative period of three months of the start of the permit granting process pursuant to Article 10(1)(a), draw up and submit a concept for public participation to the competent authority, following the process outlined in the manual referred to in paragraph 1 and in line with the guidelines set out in **Annex V**. The competent authority shall request modifications or approve the concept for public participation within three months; in so doing, the competent authority shall take into consideration any form of public participation and consultation that took place before the start of the permit granting process, to the extent that such public participation and consultation has fulfilled the requirements of this Article.

Where the project promoter intends to make significant changes to an approved concept, it shall inform the competent authority thereof. In that case the competent authority may request modifications.

4. At least one public consultation shall be carried out by the project promoter, or, where required by national law, by the competent authority, before submission of the final and complete application file to the competent authority pursuant to Article 10(1)(a). This shall be without prejudice to any public consultation to be carried out after submission of the request for development consent according to Article 6(2) of Directive 2011/92/EU. The public consultation shall inform stakeholders referred to in **Annex V.3(a)** about the project at an early stage and shall help to identify the most suitable location or trajectory and the relevant issues to be addressed in the application file. The minimum requirements applicable to this public consultation are specified in **Annex V.5**.

⁹ The text displayed here corresponds to Article 12(2) of Ministerial Council Decision 2015/09/MC-Enc.

The project promoter shall prepare a report summarising the results of activities related to the participation of the public prior to the submission of the application file, including those activities that took place before the start of the permit granting process. The project promoter shall submit that report together with the application file to the competent authority. Due account shall be taken of these results in the comprehensive decision.

5. For projects crossing the border of two or more **Contracting Parties**, the public consultations pursuant to paragraph 4 in each of the **Contracting Parties** concerned shall take place within a period of no more than two months from the date on which the first public consultation started.

For projects crossing the border of two or more Contracting Parties, or one or more Contracting Parties and one or more Member States, the public consultations pursuant to paragraph 4 in each of the Contracting Parties and the Member States concerned may take place within a period of no more than two months from the date on which the first public consultation started.¹⁰

6. For projects likely to have significant adverse cross-border impacts in one or more neighbouring **Contracting Parties or** Member States, where Article 7 of Directive 2011/92/EU and the Espoo Convention are applicable, the relevant information shall be made available to the competent authority of the neighbouring **Contracting Parties or** Member States. The competent authority of the neighbouring **Contracting Parties or** Member States shall indicate, in the notification process where appropriate, whether it, or any other authority concerned, wishes to participate in the relevant public consultation procedures.

7. The project promoter, or, where national law so provides, the competent authority, shall establish and regularly update a website with relevant information about the project of **Energy Community** interest, which shall be linked to the **Energy Community** website and which shall meet the requirements specified in **Annex V.6**. Commercially sensitive information shall be kept confidential.

Project promoters shall also publish relevant information by other appropriate information means to which the public has open access.

Article 10

Duration and implementation of the permit granting process

1. The permit granting process shall consist of two procedures:

(a) The pre-application procedure, covering the period between the start of the permit granting process and the acceptance of the submitted application file by the competent authority, shall take place within an indicative period of two years.

This procedure shall include the preparation of any environmental reports to be prepared by the project promoters.

For the purpose of establishing the start of the permit granting process, the project promoters shall notify the project to the competent authority of the **Contracting Parties** concerned in written form, and shall include a reasonably detailed outline of the project. No later than three months following the receipt of the notification, the competent authority shall, including on behalf of other authorities concerned, acknowledge or, if it considers the project as not mature enough to enter the permit granting process, reject the notification in written form. In the event of a rejection, the competent authority shall justify its decision, including on behalf

¹⁰ The text displayed here corresponds to Article 13(2) of Ministerial Council Decision 2015/09/MC-Enc.

of other authorities concerned. The date of signature of the acknowledgement of the notification by the competent authority shall serve as the start of the permit granting process. Where **two or more Contracting Parties, and/or Member States are concerned**, the date of the acceptance of the last notification by the competent authority concerned shall serve as the date of the start of the permit granting process.

(b) The statutory permit granting procedure, covering the period from the date of acceptance of the submitted application file until the comprehensive decision is taken, shall not exceed one year and six months. **Contracting Parties** may set an earlier date for the time-limit, if considered appropriate.

2. The combined duration of the two procedures referred to in paragraph 1 shall not exceed a period of three years and six months. However, where the competent authority considers that one or both of the two procedures of the permit granting process will not be completed before the time limits as set out in paragraph 1, it may decide, before their expiry and on a case by case basis, to extend one or both of those time limits by a maximum of nine months for both procedures combined.

In that case, the competent authority shall inform the Group concerned and present to the Group concerned the measures taken or to be taken to conclude the permit granting process with the least possible delay. The Group may request the competent authority to report regularly on progress achieved in this regard.

3. In **Contracting Parties** where the determination of a route or location undertaken solely for the specific purpose of a planned project, <...> cannot be included in the process leading to the comprehensive decision, the corresponding decision shall be taken within a separate period of six months, starting on the date of submission of the final and complete application documents by the promoter.

In that case, the extension period referred to in paragraph 2 shall be reduced to six months, including for the procedure referred to in this paragraph.

4. The pre-application procedure shall comprise the following steps:

(a) upon the acknowledgement of the notification pursuant to paragraph 1(a), the competent authority shall identify, in close cooperation with the other authorities concerned, and where appropriate on the basis of a proposal by the project promoter, the scope of material and level of detail of information to be submitted by the project promoter, as part of the application file, to apply for the comprehensive decision. The checklist referred to in **Annex V.1(e)** shall serve as a basis for this identification;

(b) the competent authority shall draw up, in close cooperation with the project promoter and other authorities concerned and taking into account the results of the activities carried out under point (a), a detailed schedule for the permit granting process in line with the guidelines set out in **Annex V.(2)**;

For projects crossing the border between two or more **Contracting Parties**, the competent authorities of the **Contracting Parties** concerned shall prepare a joint schedule, in which they endeavour to align their timetables;

For projects crossing the border between one or more Contracting Parties and one or more Member States, the competent authorities of the Contracting Parties and Member States concerned are encouraged to prepare a joint schedule, in which they endeavour to align their timetables;¹¹

(c) upon receipt of the draft application file, the competent authority shall, if necessary, and including on behalf of other authorities concerned, make further requests regarding missing information to be submitted by the project promoter, which may only address subjects identified under point (a). Within three months

¹¹ The text displayed here corresponds to Article 14(3) of Ministerial Council Decision 2015/09/MC-Enc.

of the submission of the missing information, the competent authority shall accept for examination the application in written form. Requests for additional information may only be made if they are justified by new circumstances.

5. The project promoter shall ensure the completeness and adequate quality of the application file and seek the competent authority's opinion on this as early as possible during the pre-application procedure. The project promoter shall cooperate fully with the competent authority to meet deadlines and comply with the detailed schedule as defined in paragraph 4(b).

6. The time limits laid down in this Article shall be without prejudice to obligations arising from international and **Energy Community** law, and without prejudice to administrative appeal procedures and judicial remedies before a court or tribunal.

CHAPTER IV REGULATORY TREATMENT

Article 11

Energy system wide cost-benefit analysis

1. The methodologies published by the European Network of Transmission System Operators (ENTSO) for Electricity and the ENTSO for Gas respectively under Article 11 of Regulation (EU) No 347/2013 shall be applied for projects falling under the categories set out in Annex I.(1) and (2).

2. <...>

3. <...>

4. <...>

5. <...>

6. <...>¹²

2. By **30 June 2018**, national regulatory authorities cooperating in the framework of the **Regulatory Board** shall establish and make publicly available a set of indicators and corresponding reference values for the comparison of unit investment costs for comparable projects of the infrastructure categories included in **Annex I.1** and 2. **Those reference values may be used by the project promoters for the cost-benefit analyses carried out for their projects.**

A set of indicators and corresponding reference values for the comparison of unit investment costs, referred to in first subparagraph shall be consistent with those established under Article 11 (7) of Regulation (EU) No 347/2013. The Agency is invited to include in a set of indicators and corresponding reference values, established under that Article, unit investment costs submitted by national regulatory authorities from Contracting Parties.¹³

3. The Secretariat shall prepare and submit for endorsement to the Permanent High Level Group an electricity and gas market and network model including both electricity transmis-

¹² Paragraphs 2, 3, 4, 5 and 6 are not applicable according to Article 15(2) of Ministerial Council Decision 2015/09/MCEnC.

¹³ The text displayed here corresponds to Article 15(3)(c) of Ministerial Council Decision 2015/09/MC-EnC.

sion infrastructure, and gas transmission infrastructure as well as storage and LNG facilities, covering the energy infrastructure in the Energy Community, and drawn up in line with the principles laid down in Annex IV. These models shall be in line with those proposed by ENTSO E and ENTSO G under Article 11(8) of Regulation (EU) No 347/2013.

Article 12

Enabling investments with cross-border impacts

1. The efficiently incurred investment costs, which excludes maintenance costs, related to a project of Energy Community interest falling under the categories set out in Annex I.(1) and Annex I.(2), and concerning only Contracting Parties, shall be borne by the relevant TSO or the project promoters of the transmission infrastructure of the Contracting Parties to which the project provides a net positive impact, and, to the extent not covered by congestion rents or other charges, be paid for by network users through tariffs for network access in that or those Contracting Parties.

The efficiently incurred investment costs, which excludes maintenance costs, related to a project of Energy Community interest falling under the categories set out in Annex I.(1) and Annex I.(2), and concerning Member States and Contracting Parties, may be borne by the relevant TSO or the project promoters of the transmission infrastructure of the Contracting Parties and Member States, to which the project provides a net positive impact, and, to the extent not covered by congestion rents or other charges, be paid for by network users through tariffs for network access in that or those Contracting Parties and Member States concerned.¹⁴

2. For a project of Energy Community interest falling under the categories set out in Annex I.1(a), and (c) and Annex I.2, paragraph 1 shall apply only if at least one project promoter requests the relevant national authorities to apply this Article for all or parts of the costs of the project. For a project of Energy Community interest falling under the categories set out in Annex I.2, paragraph 1 shall apply only where an assessment of market demand has already been carried out and indicated that the efficiently incurred investment costs cannot be expected to be covered by the tariffs.

Where a project has several project promoters, the relevant national regulatory authorities shall without delay request all project promoters to submit the investment request jointly in accordance with paragraph 3.

3. For a project of Energy Community interest to which paragraph 1 applies, the project promoters shall keep all concerned national regulatory authorities regularly informed, at least once per year, and until the project is commissioned, of the progress of that project and the identification of costs and impacts associated with it.

As soon as such a project has reached sufficient maturity, the project promoters, after having consulted the TSOs from the Contracting Parties and Member States concerned to which the project provides a significant net positive impact, shall submit an investment request. That investment request shall include a request for a cross-border cost allocation and shall be submitted to all the national regulatory authorities concerned, accompanied by the following:

¹⁴ The text displayed here corresponds to Article 16(1)(b) of Ministerial Council Decision 2015/09/MC-EnC.

(a) a project-specific cost-benefit analysis consistent with the methodology drawn up pursuant to Article 11 and taking into account benefits beyond the borders of the **Contracting Party and Member State concerned**;

(b) a business plan evaluating the financial viability of the project, including the chosen financing solution, and, for a project of **Energy Community** interest falling under the category referred to in **Annex I.2**, the results of market testing; and

(c) if the project promoters agree, a substantiated proposal for a cross-border cost allocation.

If a project is promoted by several project promoters, they shall submit their investment request jointly.

For projects included in the Energy Community list approved by the Ministerial Council in 2013, project promoters shall submit their investment request by 30 September 2016. A copy of each investment request shall be transmitted for information without delay by the national regulatory authorities to the Regulatory Board on receipt.

The national regulatory authorities and the **Regulatory Board** shall preserve the confidentiality of commercially sensitive information.

4. Within six months of the date on which the last investment request was received by the national regulatory authorities concerned, the national regulatory authorities shall, after consulting the project promoters concerned, take coordinated decisions on the allocation of investment costs to be borne by each system operator for the project, as well as their inclusion in tariffs. The national regulatory authorities may decide to allocate only part of the costs, or may decide to allocate costs among a package of several projects of **Energy Community** interest.

When allocating the costs, the national regulatory authorities shall take into account actual or estimated:

– congestion rents or other charges,

– **revenues stemming from the inter-transmission system operator compensation mechanism established under Article 13 of Regulation (EC) No 714/2009, as incorporated and adapted by the Ministerial Council Decision 2011/02/MC-EnC and by Decision 2013/01/ PHLG.**

In deciding to allocate costs across borders, the economic, social and environmental costs and benefits of the projects in **the Contracting Parties and Member States concerned** and the possible need for financial support shall be taken into account.

In deciding to allocate costs across borders, the relevant national regulatory authorities, in consultation with the TSOs concerned, shall seek a mutual agreement based on, but not limited to, the information specified in paragraph 3(a) and (b).

If a project of **Energy Community** interest mitigates negative externalities, such as loop flows, and that project of **Energy Community** interest is implemented in the **Contracting Party or the Member State** at the origin of the negative externality, such mitigation shall not be regarded as a cross-border benefit and shall therefore not constitute a basis for allocating costs to **the TSO of the Contracting Parties and Member States affected** by those negative externalities.

5. National regulatory authorities shall, based on the cross-border cost allocation as referred to in paragraph 4 of this Article, take into account actual costs incurred by a TSO or other project promoter as a result of the investments when fixing or approving tariffs in accordance with Article 37(1)(a) of Directive 2009/72/EC and Article 41(1)(a) of Directive 2009/73/EC as incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC, insofar as these

costs correspond to those of an efficient and structurally comparable operator.

The cost allocation decision shall be notified, without delay, by the national regulatory authorities **to the Regulatory Board and the Agency**, together with all the relevant information with respect to the decision. In particular, the information shall contain detailed reasons on the basis of which costs were allocated **among Contracting Parties, and Member States concerned**, such as the following:

- (a) an evaluation of the identified impacts, including concerning network tariffs, on each of **the concerned Contracting Parties and Member States**;
- (b) an evaluation of the business plan referred to in paragraph 3(b);
- (c) regional or Union-wide positive externalities, which the project would generate;
- (d) the result of the consultation of the project promoters concerned. The cost allocation decision shall be published.

6. Where the national regulatory authorities concerned have not reached an agreement on the investment request within six months of the date on which the request was received by the last of the national regulatory authorities concerned, they **shall inform the Regulatory Board, the Energy Community Secretariat and the Commission without delay**.

In this case or upon a joint request from the national regulatory authorities concerned, the decision on the investment request including cross-border cost allocation referred to in paragraph 3 as well as the way the cost of the investments are reflected in the tariffs shall be taken by the **Regulatory Board** within three months of the date of referral to the **Regulatory Board**.

Before taking such a decision, the **Regulatory Board shall consult the Energy Community Secretariat, the national regulatory authorities concerned** and the project promoters. The threemonth period referred to in the second subparagraph may be extended by an additional period of two months where further information is sought by the **Regulatory Board**. That additional period shall begin on the day following receipt of the complete information.

The cost allocation decision shall be published. **Procedure referred to in this paragraph shall be applicable to projects having cross-border impacts only between Contracting Parties. Issues concerning allocation of costs across borders between Member States and Contracting Parties shall be deemed to be solved only by means of mutual agreement.**

7. A copy of all cost allocation decisions, together with all the relevant information with respect to each decision, shall be notified, without delay, by the **Regulatory Board** to the **Energy Community Secretariat**. That information may be submitted in aggregate form. The **Energy Community Secretariat** shall preserve the confidentiality of commercially sensitive information.

8. **This cost allocation decision shall not affect the right of TSOs to apply and national regulatory authorities to approve charges for access to networks in accordance with Article 32 of Directive 2009/72/EC and of Directive 2009/73/EC, Article 14 of Regulation (EC) No 714/2009, and Article 13 of Regulation (EC) No 715/2009, as incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC.**

9. This Article shall not apply to projects of **Energy Community** interest having received:

- (a) **an exemption from Articles 32, 33, 34 and Article 41(6), (8) and (10) of Directive 2009/73/EC pursuant to Article 36 of Directive 2009/73/EC, as incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC;**

- (b) **an exemption from Article 16(6) of Regulation (EC) No 714/2009 or an exemption from Article 32 and Article 37(6) and (10) of Directive 2009/72/EC pursuant to Article 17 of Regulation (EC) No 714/2009, as incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC;**
- (c) an exemption under Article 22 of Directive 2003/55/EC; or
- (d) an exemption under Article 7 of Regulation (EC) No 1228/2003.

Article 13

Incentives

1. Where a project promoter incurs higher risks for the development, construction, operation or maintenance of a project of **Energy Community** interest falling under the categories set out in **Annex I.1(a), and (c)** and **Annex I.2**, compared to the risks normally incurred by a comparable infrastructure project, **Contracting Parties** and national regulatory authorities shall ensure that appropriate incentives are granted to that project in accordance with Article 37(8) of Directive 2009/72/EC, Article 41(8) of Directive 2009/73/EC, Article 14 of Regulation (EC) No 714/2009, and Article 13 of Regulation (EC) No 715/2009, **as incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC.**

The first subparagraph shall not apply where the project of **Energy Community** interest has received:

- (a) an exemption from Articles 32, 33, 34 and Article 41(6), (8) and (10) of Directive 2009/73/EC pursuant to Article 36 of Directive 2009/73/EC, **as incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC;**
- (b) an exemption from Article 16(6) of Regulation (EC) No 714/2009 or an exemption from Article 32 and Article 37(6) and (10) of Directive 2009/72/EC pursuant to Article 17 of Regulation (EC) No 714/2009, as incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC;
- (c) an exemption under Article 22 of Directive 2003/55/EC; or
- (d) an exemption under Article 7 of Regulation (EC) No 1228/2003.

2. The decision of the national regulatory authorities for granting the incentives referred to in paragraph 1 shall consider the results of the cost-benefit analysis on the basis of the methodology drawn up pursuant to Article 11 and in particular the regional or **Energy Community**-wide positive externalities generated by the project. The national regulatory authorities shall further analyse the specific risks incurred by the project promoters, the risk mitigation measures taken and the justification of this risk profile in view of the net positive impact provided by the project, when compared to a lower-risk alternative. Eligible risks shall notably include risks related to new transmission technologies, both onshore and offshore, risks related to under-recovery of costs and development risks.

3. The incentive granted by the decision shall take account of the specific nature of the risk incurred and may cover *inter alia*:

- (a) the rules for anticipatory investment; or
- (b) the rules for recognition of efficiently incurred costs before commissioning of the project; or
- (c) the rules for providing additional return on the capital invested for the project; or
- (d) the any other measure deemed necessary and appropriate.

4. By **30 June 2017**, each national regulatory authority shall submit to the **Regulatory Board** its methodology and the criteria used to evaluate investments in electricity and gas infrastructure projects and the higher risks incurred by them, where available.

5. Good practices and recommendations referred to in Article 13 of the Regulation (EU) 347/2013 shall be applied accordingly.

6. By **31 December 2017**, each national regulatory authority shall publish its methodology and the criteria used to evaluate investments in electricity and gas infrastructure projects and the higher risks incurred by them.

7. Where the measures referred to in paragraphs 5 and 6 are not sufficient to ensure the timely implementation of projects of Energy Community interest, the Commission guidelines referred to in Article 13 paragraph 7 of the Regulation (EU) 347/2013 shall be applied accordingly.

CHAPTER V FINANCING

Article 14

Eligibility of projects for Union technical and financial assistance

1. **Projects of Energy Community interest falling under the categories set out in Annex I.(1), (2) are eligible for Union technical and financial assistance in the form of grants for studies and financial instruments from the Instrument for Pre-Accession Assistance (IPA) and the Neighbourhood Investment Facility.**

2. **Projects of Energy Community interest falling under the categories set out in Annex I.(1) and (2), except for hydro-pumped electricity storage projects, are also eligible for financial assistance in the form of grants for works from the Instrument for Pre-Accession Assistance (IPA) and the Neighbourhood Investment Facility if they fulfil all of the following criteria:**

(a) the project specific cost-benefit analysis pursuant to Article 12(3)(a) provides evidence concerning the existence of significant positive externalities, such as security of supply, solidarity or innovation;

(b) the project has received a cross-border cost allocation decision pursuant to Article 12; or, for projects of **Energy Community** interest falling under the category set out in **Annex I.1(b)** and that therefore do not receive a cross-border cost allocation decision, the project shall aim to provide services across borders, bring technological innovation and ensure the safety of cross-border grid operation;

(c) the project is commercially not viable according to the business plan and other assessments carried out, notably by possible investors or creditors or the national regulatory authority. The decision on incentives and its justification referred to in Article 13(2) shall be taken into account when assessing the project's commercial viability.

3. Projects of **Energy Community** interest carried out in accordance with the procedure referred to in Article 5(7)(d) shall also be eligible for Union financial assistance in the form of grants for works if they fulfil the criteria set out in paragraph 2 of this Article.

4.<...>¹⁵

¹⁵ Not applicable according to Article 18(3) of Ministerial Council Decision 2015/09/MC-Enc.

Article 15**Guidance for the award criteria of Union technical and financial assistance**

The specific criteria set out in Article 4(2) and the parameters set out in Article 4(4) shall also fulfil the role of objectives for the purpose of establishing award criteria for Union technical and financial assistance from the Instrument for Pre-Accession Assistance (IPA) and the Neighbourhood Investment Facility.

Article 16**Exercise of the delegation**

<...>¹⁶

**CHAPTER VI
FINAL PROVISIONS****Article 17****Reporting and evaluation**

Not later than **2018**, the **Energy Community Secretariat** shall publish a report on the implementation of projects of **Energy Community** interest and submit it to the **Ministerial Council**. This report shall provide an evaluation of:

- (a) the progress achieved for the planning, development, construction and commissioning of projects of **Energy Community** interest selected pursuant to Article 3, and, where relevant, delays in implementation and other difficulties encountered;
- (b) the funds engaged and disbursed by the Union for projects of **Energy Community** interest, compared to the total value of funded projects of **Energy Community** interest;
- (c) for the electricity and gas sectors, the evolution of the interconnection level **between Contracting Parties, and with Member States concerned**, the corresponding evolution of energy prices, as well as the number of network system failure events, their causes and related economic cost;
- (d) permit granting and public participation, in particular:
 - (i) the average and maximum total duration of permit granting processes for projects of **Energy Community** interest, including the duration of each step of the pre-application procedure, compared to the timing foreseen by the initial major milestones referred to in Article 10(4);
 - (ii) the level of opposition faced by projects of **Energy Community** interest (notably number of written objections during the public consultation process, number of legal recourse actions);
 - (iii) an overview of best and innovative practices with regard to stakeholder involvement and mitigation of environmental impact during permit granting processes and project implementation;

¹⁶ Not applicable according to Article 20 of Ministerial Council Decision 2015/09/MC-EnC.

- (iv) the effectiveness of the schemes foreseen in Article 8(3) regarding compliance with the time limits set under Article 10;
- (e) regulatory treatment, in particular:
 - (i) the number of projects of **Energy Community** interest having been granted a cross-border cost allocation decision pursuant to Article 12;
 - (ii) the number and type of projects of **Energy Community** interest having received specific incentives pursuant to Article 13;
- (f) **the effectiveness of this Regulation in contributing to the goals for market integration by 2016 and 2017, to the Treaty objectives and Contracting Parties' targets for renewable energy and energy efficiency, as stipulated in Energy Community law and endorsed in the Energy Strategy.**

Article 18

Information and publicity

The **Energy Community Secretariat** shall establish by six months **after the date of adoption of the first Energy Community list** an infrastructure transparency platform easily accessible to the general public, including via the internet. This platform shall contain the following information:

- (a) general, updated information, including geographic information, for each project of **Energy Community** interest;
- (b) the implementation plan as set out in Article 5(1) for each project of Energy Community interest;
- (c) the main results of the cost-benefit analysis on the basis of the methodology drawn up pursuant Article 11 for the projects of **Energy Community** interest concerned, except for any commercially sensitive information;
- (d) the **Energy Community** list;
- (e) the funds allocated and disbursed by the Union for each project of **Energy Community** interest.

Article 19

Transitional provisions

1. For projects of **Energy Community** interest in the permit granting process for which a project promoter has submitted an application file before 16 October 2016, the provisions of Chapter III shall not apply.
2. As regards the next **Energy Community** list following the one adopted by the Ministerial Council on 24 October 2013, articles of this Regulation which do not require the Contracting Parties to implement domestic transposition measures, may be applied from the day of the adoption of this Regulation by the Ministerial Council.

Article 20

Amendments to Regulation (EC) No 713/2009

<...>

Article 21

Amendments to Regulation (EC) No 714/2009

<...>

Article 22

Amendments to Regulation (EC) No 715/2009

<...>

Article 23

Repeal

<...>¹⁷

Article 24

Entry into force

This Regulation shall enter into force upon adoption by the Ministerial Council. This Regulation shall be implemented by the Contracting Parties within the deadlines specified in the adapted Regulation. Domestic transposition measures shall be notified to the Secretariat within these deadlines.

Implementation of the energy acquis

1. Each Contracting Party shall bring into force the laws, regulations and administrative provisions necessary to comply with Regulation (EU) No 347/2013, as adapted by this Decision, by 31 December 2016. They shall forthwith inform the Energy Community Secretariat thereof.

The Contracting Parties shall apply those measures from 1 January 2017.

2. The Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by this Decision.¹⁸

¹⁷ Articles 20, 21, 22, and 23 are not applicable according to Article 24 of Ministerial Council Decision 2015/09/MC-EnC.

¹⁸ The text displayed here corresponds to Article 3 of Decision 2015/09/MC-EnC.

Reporting

- 1. The Secretariat shall monitor and review the application of this Decision in the Contracting Parties.**
- 2. The Secretariat shall present a report to the Ministerial Council for the first time by 30 November 2016, and thereafter on an annual basis, summarising the opinions issued by the Secretariat in application of the acts referred to in Article 1, as adapted by this Decision.¹⁹**

¹⁹ The text displayed here corresponds to Article 28 of Decision 2015/09/MC-EnC.

ANNEX I

ENERGY INFRASTRUCTURE CATEGORIES AND AREA

The energy infrastructure categories to be developed are the following:

(1) concerning electricity:

(a) high-voltage overhead transmission lines, if they have been designed for a voltage of 220 kV or more, and underground and submarine transmission cables, if they have been designed for a voltage of 150 kV or more;

(b) <...>²⁰

(b) electricity storage facilities used for storing electricity on a permanent or temporary basis in above-ground or underground infrastructure or geological sites, provided they are directly connected to high-voltage transmission lines designed for a voltage of 110 kV or more;

(c) any equipment or installation essential for the systems defined in (a) **and** (b) to operate safely, securely and efficiently, including protection, monitoring and control systems at all voltage levels and substations;

(d) any equipment or installation, both at transmission and medium voltage distribution level, aiming at two-way digital communication, real-time or close to real-time, interactive and intelligent monitoring and management of electricity generation, transmission, distribution and consumption within an electricity network in view of developing a network efficiently integrating the behaviour and actions of all users connected to it generators, consumers and those that do both in order to ensure an economically efficient, sustainable electricity system with low losses and high quality and security of supply and safety;

(2) concerning gas:

(a) transmission pipelines for the transport of natural gas and bio gas that form part of a network which mainly contains high-pressure pipelines, excluding high-pressure pipelines used for upstream or local distribution of natural gas;

(b) underground storage facilities connected to the above-mentioned high-pressure gas pipelines;

(c) reception, storage and regasification or decompression facilities for liquefied natural gas (LNG) or compressed natural gas (CNG);

(d) any equipment or installation essential for the system to operate safely, securely and efficiently or to enable bi-directional capacity, including compressor stations;

(3) concerning oil:

(a) pipelines used to transport crude oil;

(b) pumping stations and storage facilities necessary for the operation of crude oil pipelines;

(c) any equipment or installation essential for the system in question to operate properly, securely and efficiently, including protection, monitoring and control systems and reverse-flow devices;

(4) <...>²¹

²⁰ Not applicable according to Article 26(2)(a)(ii) of Ministerial Council Decision 2015/09/MC-EnC.

²¹ Not applicable according to Article 26(2)(a)(ii) of Ministerial Council Decision 2015/09/MC-EnC.

The priority thematic area to be developed:

Smart grids deployment: adoption of smart grid technologies across the Energy Community to efficiently integrate the behaviour and actions of all users connected to the electricity network, in particular the generation of large amounts of electricity from renewable or distributed energy sources and demand response by consumers.²²

²² The text displayed here corresponds to Article 26(2)(a)(iii) of Ministerial Council Decision 2015/09/MC-EnC.

ANNEX II

PRELIMINARY LISTS OF PROJECTS OF ENERGY COMMUNITY INTEREST

1. RULES FOR GROUPS

(1) **For electricity projects falling under the categories set out in Annex I.(1) (a), (b) and (c), the Group includes representatives of the Contracting Parties and Member States concerned, the Commission, national regulatory authorities, TSOs, as well as the Energy Community Secretariat, and upon invitation the ENTSO for Electricity. For gas projects falling under the categories set out in Annex I.(2) (a), (b) and (c), the Group includes representatives of the Contracting Parties and Member States concerned, the Commission, national regulatory authorities, TSOs, as well as the Energy Community Secretariat, and upon the invitation the ENTSO for Gas. For oil transport projects falling under the categories set out in Annex I.(3) (a), (b) and (c), the same Group shall be used as for gas projects, and in addition it will include, project promoters concerned.**

(2) The decision-making bodies of the Groups may merge. All Groups or decision-making bodies shall meet together, when relevant, to discuss matters common to all Groups; such matters may include issues relevant to cross-regional consistency or the number of proposed projects included on the draft **preliminary** lists at risk of becoming unmanageable.

(3) Each Group shall organise its work in line with regional cooperation efforts pursuant Article 6 of Directive 2009/72/EC, Article 7 of Directive 2009/73/EC, Article 12 of Regulation (EC) No 714/2009, and Article 12 of Regulation (EC) No 715/2009, **as incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC**, and other existing regional cooperation structures.

(4) Each Group shall invite, promoters of a project potentially eligible for selection as a project of **Energy Community** interest as well as representatives of national administrations, of regulatory authorities, and TSOs from <...> the member countries of the European Economic Area and the European Free Trade Association, representatives from the Energy Community institutions and bodies, countries covered by the European Neighbourhood policy and countries, with which the Union has established specific energy cooperation **as well as European Union institutions**. The decision to invite third country-representatives shall be based on consensus.

(5) Each Group shall consult the organisations representing relevant stakeholders and, if deemed appropriate, stakeholders directly including producers, distribution system operators, suppliers, consumers, and organisations for environmental protection. The Group may organise hearings or consultations, where relevant for the accomplishments of its tasks.

(6) The internal rules, an updated list of member organisations, regularly updated information on the progress of work, meeting agendas, as well as final conclusions and decisions of each Group shall be published by the **Energy Community Secretariat** on the transparency platform referred to in Article 18.

(7) The **Energy Community Secretariat** shall strive for consistency between the different Groups.

<...>

2. PROCESS FOR ESTABLISHING PRELIMINARY LISTS

(1) Promoters of a project potentially eligible for selection as a project of **Energy Community** interest wanting to obtain the status of projects of **Energy Community** interest shall submit an application for selection as project of **Energy Community** interest to the Group that includes:

an assessment of their projects with regard to the contribution to **implementing the objectives of the Energy Community, as set in the Treaty, Energy Community law and the Energy Strategy of the Energy Community,**

an analysis of the fulfilment of the relevant criteria defined in Article 4,

for projects having reached a sufficient degree of maturity, a project-specific cost-benefit analysis

<...> based on the methodologies developed by the ENTSO for electricity or the ENTSO for gas pursuant to Article 11, and

any other relevant information for the evaluation of the project.

(2) All recipients shall preserve the confidentiality of commercially sensitive information.

(3) After adoption of the first **Energy Community** list, for all subsequent **Energy Community** lists adopted, proposed electricity transmission and storage projects falling under the categories set out in **Annex I.1(a), and (c)** shall be part of the latest available 10-year network development plan for electricity, developed by the ENTSO for Electricity pursuant Article 8 of Regulation (EC) No 714/2009, **with the exception of those located in a Contracting Party the TSO of which is not a member of ENTSO E. For those, the relevant projects shall be part of national ten year network development plans.**

(4) After adoption of the first Energy Community list, for all subsequent Energy Community lists adopted, proposed gas infrastructure projects falling under the categories set out in Annex I.2 shall be part of the latest available 10-year network development plan for gas, developed by the ENTSO for Gas pursuant Article 8 of Regulation (EC) No 715/2009, with the exception of those located in a Contracting Party the TSO of which is not a member of ENTSO G. For those, the relevant projects shall be part of national ten year network development plans.

(5) <...>

(6) <...>²³

(5) For proposed projects falling under the categories set out in **Annex I.1** and 2, national regulatory authorities, and if necessary the **Regulatory Board**, shall, where possible in the context of regional cooperation (Article 6 of Directive 2009/72/EC, Article 7 of Directive 2009/73/EC, **as incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC**), check the consistent application of the criteria/ cost-benefit analysis methodology and evaluate their cross-border relevance. They shall present their assessment to the Group.

(6) For proposed oil transport projects falling under the categories set out in **Annex I.3**, the **Energy Community Secretariat** shall evaluate the application of the criteria set out in Article 4.

<...>

(7) Each **Contracting Party or the Member State** to whose territory a proposed project does not relate, but on which the proposed project may have a potential net positive impact or a potential significant effect, such as on the environment or on the operation of the energy infrastructure on its territory, may present

²³ Points (5) and (6) are not applicable according to Article 26(3)(b)(iv) of Ministerial Council Decision 2015/09/MC-EnC.

an opinion to the Group specifying its concerns.

(8) The decision-making body of the Group shall examine, **at the request of a Contracting Party or the Member State concerned**, the substantiated reasons presented by a **Contracting Party** pursuant to Article 3(3) for not approving a project of **Energy Community** interest related to its territory.

(9) The Group shall meet to examine and rank the proposed projects taking into account the assessment of the regulators, or the assessment of the **Energy Community Secretariat** for oil transport projects.

(10) The draft **preliminary** lists of proposed projects falling under the categories set out in **Annex I.1** and 2 drawn up by the Groups, together with any opinions as specified in point (7), **shall be submitted to the Energy Community Secretariat, the Regulatory Board and the Agency** six months before the adoption date of the **Energy Community** list. The draft **preliminary** lists and the accompanying opinions shall be assessed by the **Regulatory Board** within three months of the date of receipt. **The Regulatory Board seeking cooperation with the Agency and with the support of the Energy Community Secretariat shall provide an opinion on the draft preliminary lists, in particular on the consistent application of the criteria and cost-benefit analysis.**

<...>

(11) Within one month of the date of receipt of the **Regulatory Board's** opinion, the decision-making body of each Group shall adopt its final **preliminary** list, respecting the provisions set out in Article 3(3), based on the Groups' proposal and taking into account the opinion of the **Regulatory Board** and the assessment of the national regulatory authorities submitted in accordance with point (5), or the assessment of the **Energy Community Secretariat** for oil transport projects proposed in accordance with point (6). The Groups shall submit the final preliminary lists to the **Energy Community Secretariat**, together with any opinions as specified in point (7).

(12) If, based on the **preliminary** lists received, and after having taken into account the **Regulatory Board** opinion, the total number of proposed projects of **Energy Community** interest on the **Energy Community** list would exceed a manageable number, **the Permanent High Level Group shall consider**, after having consulted each Group concerned, not to include in the **Energy Community** list projects that were ranked lowest by the Group concerned according to the ranking established pursuant to Article 4(4).

ANNEX III

RULES AND INDICATORS CONCERNING CRITERIA FOR PROJECTS OF ENERGY COMMUNITY INTEREST

(1) A project with significant cross-border impact is a project on the territory of a **Contracting Party**, which fulfils the following conditions:

(a) for electricity transmission, the project increases the grid transfer capacity, or the capacity available for commercial flows, at the border of that **Contracting Party with one or several other Contracting Parties and/or Member States**, or at any other relevant cross-section of the same transmission corridor having the effect of increasing this cross-border grid transfer capacity, by at least 500 Megawatt compared to the situation without commissioning of the project;

(b) for electricity storage, the project provides at least 225 MW installed capacity and has a storage capacity that allows a net annual electricity generation of 250 Gigawatt-hours/year;

(c) for gas transmission, the project concerns investment in reverse flow capacities or changes the capability to transmit gas across the **borders of the Contracting Parties and/or Member States** concerned by at least 10% compared to the situation prior to the commissioning of the project;

(d) for gas storage or liquefied/compressed natural gas, the project aims at supplying directly or indirectly **at least two Contracting Parties, and/or one or more Member States** or at fulfilling the infrastructure standard (N-1 rule) at regional level in accordance with Article 6(3) of Regulation (EU) No 994/2010 of the European Parliament and of the Council, **once incorporated in the Energy Community**;

(e) for smart grids, the project is designed for equipments and installations at high-voltage and medium-voltage level designed for a voltage of 10 kV or more. It involves transmission and distribution system operators from at least two **Contracting Parties**, which cover at least 50 000 users that generate or consume electricity or do both in a consumption area of at least 300 Gigawatt-hours/year, of which at least 20% originate from renewable resources that are variable in nature.

(2) Concerning projects falling under the categories set out in Annex I.1(a) to (c), the criteria listed in Article 4 shall be evaluated as follows:

(a) Market integration, competition and system flexibility shall be measured in line with the analysis made in the latest available Union-wide 10-year network development plan in electricity, notably by:

calculating, for cross-border projects, the impact on the grid transfer capability in both power flow directions, measured in terms of amount of power (in megawatt), and their contribution to reaching the minimum interconnection capacity of 10% installed production capacity or, for projects with significant cross-border impact, the impact on grid transfer capability at borders **between relevant Contracting Parties and/or with Member States, or within relevant Contracting Parties** and on demand-supply balancing and network operations in relevant **Contracting Parties**,

assessing the impact, for the area of analysis as defined in Annex IV.6, in terms of energy system-wide generation and transmission costs and evolution and convergence of market prices provided by a project under different planning scenarios, notably taking into account the variations induced on the merit order.

(b) Transmission of renewable energy generation to major consumption centres and storage sites shall be measured in line with the analysis made in the latest available 10-year network development plan in electricity, notably by:

for electricity transmission, by estimating the amount of generation capacity from renewable energy sources (by technology, in megawatts), which is connected and transmitted due to the project, compared to the amount of planned total generation capacity from these types of renewable energy sources in the concerned **Contracting Party** in 2020 according to the national renewable energy action plans as defined in Article 4 of Directive 2009/28/EC, **as incorporated and adapted by Ministerial Council Decision 2012/04/MC-EnC**,

for electricity storage, by comparing new capacity provided by the project with total existing capacity for the same storage technology in the area of analysis as defined in Annex IV.6.

(c) Security of supply, interoperability and secure system operation shall be measured in line with the analysis made in the latest available 10-year network development plan in electricity, notably by assessing the impact of the project on the loss of load expectation for the area of analysis as defined in **Annex IV.6** in terms of generation and transmission adequacy for a set of characteristic load periods, taking into account expected changes in climate-related extreme weather events and their impact on infrastructure resilience. Where applicable, the impact of the project on independent and reliable control of system operation and services shall be measured.

(3) Concerning projects falling under the categories set out in **Annex I.2**, the criteria listed in Article 4 shall be evaluated as follows:

(a) Market integration and interoperability shall be measured by calculating the additional value of the project to the integration of market areas and price convergence, to the overall flexibility of the system, including the capacity level offered for reverse flows under various scenarios.

(b) Competition shall be measured on the basis of diversification, including the facilitation of access to indigenous sources of supply, taking into account, successively: diversification of sources; diversification of counterparts; diversification of routes; the impact of new capacity on the Herfindahl-Hirschmann index (HHI) calculated at capacity level for the area of analysis as defined in **Annex IV.6**.

(c) Security of gas supply shall be measured by calculating the additional value of the project to the short and long-term resilience of the Union's gas system and to enhancing the remaining flexibility of the system to cope with supply disruptions to **Contracting Parties** under various scenarios as well as the additional capacity provided by the project measured in relation to the infrastructure standard (N-1 rule) at regional level in accordance with Article 6(3) of Regulation (EU) No 994/2010, **once incorporated in the Energy Community**.

(d) Sustainability shall be measured as the contribution of a project to reduce emissions, to support the back-up of renewable electricity generation or power-to-gas and biogas transportation, taking into account expected changes in climatic conditions.

(4) Concerning projects falling under the category set out in **Annex I.1(d)**, each function listed in Article 4 shall be evaluated against the following criteria:

(a) Level of sustainability: This criterion shall be measured by assessing the reduction of greenhouse gas emissions, and the environmental impact of electricity grid infrastructure.

(b) Capacity of transmission and distribution grids to connect and bring electricity from and to users: This criterion shall be measured by estimating the installed capacity of distributed energy resources in distribution networks, the allowable maximum injection of electricity without congestion risks in transmission networks, and the energy not withdrawn from renewable sources due to congestion or security risks.

(c) Network connectivity and access to all categories of network users: This criterion shall be measured by assessing the methods adopted to calculate charges and tariffs, as well as their structure, for generators, consumers and those that do both, and the operational flexibility provided for dynamic balancing of electricity in the network.

(d) Security and quality of supply: This criterion shall be measured by assessing the ratio of reliably available generation capacity and peak demand, the share of electricity generated from renewable sources, the stability of the electricity system, the duration and frequency of interruptions per customer, including climate related disruptions, and the voltage quality performance.

(e) Efficiency and service quality in electricity supply and grid operation: This criterion shall be measured by assessing the level of losses in transmission and in distribution networks, the ratio between minimum and maximum electricity demand within a defined time period, the demand side participation in electricity markets and in energy efficiency measures, the percentage utilisation (i.e. average loading) of electricity network components, the availability of network components (related to planned and unplanned maintenance) and its impact on network performances, and the actual availability of network capacity with respect to its standard value.

(f) Contribution to cross-border electricity markets by load-flow control to alleviate loop-flows and increase interconnection capacities: This criterion shall be estimated by assessing the ratio between interconnection capacity of a **Contracting Party** and its electricity demand, the exploitation of interconnection capacities, and the congestion rents across interconnections.

(5) Concerning oil transport projects falling under the categories set out in **Annex I.3**, the criteria listed in Article 4 shall be evaluated as follows:

(a) Security of oil supply shall be measured by assessing the additional value of the new capacity offered by a project for the short and long-term resilience of the system and the remaining flexibility of the system to cope with supply disruptions under various scenarios.

(b) Interoperability shall be measured by assessing to what extent the project improves the operation of the oil network, in particular by providing the possibility of reverse flows.

(c) Efficient and sustainable use of resources shall be measured by assessing the extent to which the project makes use of already existing infrastructure and contributes to minimising environmental and climate change burden and risks.

ANNEX IV

ENERGY SYSTEM-WIDE COST-BENEFIT ANALYSIS

The methodology for a harmonised energy system-wide cost-benefit analysis for projects of **Energy Community** interest shall satisfy the following principles laid down in this Annex.

(1) The methodology shall be based on a common input data set representing the Union's electricity and gas systems in the years $n+5$, $n+10$, $n+15$, and $n+20$, where n is the year in which the analysis is performed. This data set shall comprise at least:

(a) in electricity: scenarios for demand, generation capacities by fuel type (biomass, geothermal, hydro, gas, nuclear, oil, solid fuels, wind, solar photovoltaic, concentrated solar, other renewable technologies) and their geographical location, fuel prices (including biomass, coal, gas and oil), carbon dioxide prices, the composition of the transmission and, if relevant, the distribution network, and its evolution, taking into account all new significant generation (including capacity equipped for capturing carbon dioxide), storage and transmission projects for which a final investment decision has been taken and that are due to be commissioned by the end of year $n+5$;

(b) in gas: scenarios for demand, imports, fuel prices (including coal, gas and oil), carbon dioxide prices, the composition of the transmission network and its evolution, taking into account all new projects for which a final investment decision has been taken and that are due to be commissioned by the end of year $n+5$.

(2) The data set shall reflect Union and national law in force at the date of analysis. The data sets used for electricity and gas respectively shall be compatible, notably with regard to assumptions on prices and volumes in each market. The data set shall be elaborated after formally consulting **Contracting Parties** and the organisations representing all relevant stakeholders. The **Energy Community Secretariat** and the **Regulatory Board** shall ensure access to the required commercial data from third parties when applicable.

(3) The methodology shall give guidance for the development and use of network and market modelling necessary for the costbenefit analysis.

(4) The cost-benefit analysis shall be based on a harmonised evaluation of costs and benefits for the different categories of projects analysed and cover at least the period of time referred to in point (1).

(5) The cost-benefit analysis shall at least take into account the following costs: capital expenditure, operational and maintenance expenditure over the technical lifecycle of the project and decommissioning and waste management costs, where relevant. The methodology shall give guidance on discount rates to be used for the calculations.

(6) <...>

(7) <...>

(8) <...>

(9) <...>²⁴

(6) The methodology shall define the analysis to be carried out, based on the relevant input data set, by determining the impacts with and without each project. The area for the analysis of an individual project shall cover all **Contracting Parties and Member States, on whose territory the project shall be built, all directly neighbouring Contracting Parties and Member States and all other Contracting Parties and Member States significantly impacted by the project.**

²⁴ Points (6), (7), (8) and (9) are not applicable according to Article 26(5)(a) of Ministerial Council Decision 2015/09/MC-EnC.

(7) The analysis shall identify the **Contracting Parties and Member States** on which the project has net positive impacts (beneficiaries) and those **Contracting Parties and Member States** on which the project has a net negative impact (cost bearers). Each cost-benefit analysis shall include sensitivity analyses concerning the input data set, the commissioning date of different projects in the same area of analysis and other relevant parameters.

(8) Transmission, storage system and compressed and liquefied natural gas terminal operators and distribution system operators shall exchange the information necessary for the elaboration of the methodology, including the relevant network and market modelling. Any transmission or distribution system operator collecting information on behalf of other transmission or distribution system operators shall give back to the participating transmission and distribution system operators the results of the collection of data.

(9) For the common electricity and gas market and network model set out in **paragraph 3** of Article 11, the input data set referred to in point (1) shall cover the years $n+10$, $n+20$ and $n+30$ and the model shall allow for a full assessment of economic, social and environmental impacts, notably including external costs such as those related to greenhouse gas and conventional air pollutant emissions or security of supply.

ANNEX V

GUIDELINES FOR TRANSPARENCY AND PUBLIC PARTICIPATION

(1) The manual of procedures referred to in Article 9(1) shall at least specify:

- (a) the relevant law upon which decisions and opinions are based for the different types of relevant projects of **Energy Community** interest, including environmental law;
- (b) the relevant decisions and opinions to be obtained;
- (c) the names and contact details of the Competent Authority, other authorities and major stakeholders concerned;
- (d) the work flow, outlining each stage in the process, including an indicative time frame and a concise overview of the decision-making process;
- (e) information about the scope, structure and level of detail of documents to be submitted with the application for decisions, including a checklist;
- (f) the stages and means for the general public to participate in the process.

(2) The detailed schedule referred to in Article 10(4)(b) shall specify as a minimum the following:

- (a) the decisions and opinions to be obtained;
- (b) the authorities, stakeholders, and the public likely to be concerned;
- (c) the individual stages of the procedure and their duration;
- (d) major milestones to be accomplished and their deadlines in view of the comprehensive decision to be taken;
- (e) the resources planned by the authorities and possible additional resource needs.

(3) To increase public participation in the permit granting process and ensure in advance information and dialogue with the public, the following principles shall be applied:

(a) The stakeholders affected by a project of **Energy Community** interest, including relevant national, regional and local authorities, landowners and citizens living in the vicinity of the project, the general public and their associations, organisations or groups, shall be extensively informed and consulted at an early stage, when potential concerns by the public can still be taken into account and in an open and transparent manner. Where relevant, the competent authority shall actively support the activities undertaken by the project promoter.

(b) Competent authorities shall ensure that public consultation procedures for projects of **Energy Community** interest are grouped together where possible. Each public consultation shall cover all subject matters relevant to the particular stage of the procedure, and one subject matter relevant to the particular stage of the procedure shall not be addressed in more than one public consultation; however, one public consultation may take place in more than one geographical location. The subject matters addressed by a public consultation shall be clearly indicated in the notification of the public consultation.

(c) Comments and objections shall be admissible from the beginning of the public consultation until the expiry of the deadline only.

(4) The concept for public participation shall at least include information about:

- (a) the stakeholders concerned and addressed;

- (b) the measures envisaged, including proposed general locations and dates of dedicated meetings;
 - (c) the timeline;
 - (d) the human resources allocated to the respective tasks.
- (5) In the context of the public consultation to be carried out before submission of the application file, the relevant parties shall at least:
- (a) publish an information leaflet of no more than 15 pages, giving, in a clear and concise manner, an overview of the purpose and preliminary timetable of the project, the national grid development plan, alternative routes considered, expected impacts, including of cross-border nature, and possible mitigation measures, which shall be published prior to the start of the consultation; The information leaflet shall furthermore list the web addresses of the transparency platform referred to in Article 18 and of the manual of procedures referred to in point (1);
 - (b) inform all stakeholders affected about the project through the website referred to in Article 9(7) and other appropriate information means;
 - (c) invite in written form relevant affected stakeholders to dedicated meetings, during which concerns shall be discussed.
- (6) The project website shall make available as a minimum the following:
- (a) the information leaflet referred to in point (5);
 - (b) a non-technical and regularly updated summary of no more than 50 pages reflecting the current status of the project and clearly indicating, in case of updates, changes to previous versions;
 - (c) the project and public consultation planning, clearly indicating dates and locations for public consultations and hearings and the envisaged subject matters relevant for those hearings;
 - (d) contact details in view of obtaining the full set of application documents;
 - (e) contact details in view of conveying comments and objections during public consultations.



PART II

ACQUIS COMMUNAUTAIRE

ENVIRONMENT



DIRECTIVE 2011/92/EU of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment

Incorporated and adapted by Ministerial Council Decision 2016/12/MC-EnC of 14 October 2016 on adapting and implementing Directive 2011/92/EU and amending the Treaty establishing the Energy Community.

*The adaptations made by Ministerial Council Decision 2016/12/MC-EnC are highlighted in **bold and blue**, the changes to Directive 2011/92/EU introduced by Directive 2014/52/EU are highlighted **in bold**.*

Article 1

1. This Directive shall apply to the assessment of the environmental effects of those public and private projects which are likely to have significant effects on the environment.

2. For the purposes of this Directive, the following definitions shall apply:

(a) 'project' means:

- the execution of construction works or of other installations or schemes,
- other interventions in the natural surroundings and landscape including those involving the extraction of mineral resources;

(b) 'developer' means the applicant for authorisation for a private project or the public authority which initiates a project;

(c) 'development consent' means the decision of the competent authority or authorities which entitles the developer to proceed with the project;

(d) 'public' means one or more natural or legal persons and, in accordance with national legislation or practice, their associations, organisations or groups;

(e) 'public concerned' means the public affected or likely to be affected by, or having an interest in, the environmental decision-making procedures referred to in Article 2(2). For the purposes of this definition, non-governmental organisations promoting environmental protection and meeting any requirements under national law shall be deemed to have an interest;

(f) 'competent authority or authorities' means that authority or those authorities which the **Contracting Parties** designate as responsible for performing the duties arising from this Directive.

(g) '**environmental impact assessment**' means a process consisting of:

(i) the preparation of an environmental impact assessment report by the developer, as referred to in Article 5(1) and (2);

(ii) the carrying out of consultations as referred to in Article 6 and, where relevant, Article 7;

(iii) the examination by the competent authority of the information presented in the environmental impact assessment report and any supplementary information provided, where necessary, by the developer in accordance with Article 5(3), and any relevant information received through the consultations under Articles 6 and 7;

(iv) the reasoned conclusion by the competent authority on the significant effects of the project on the environment, taking into account the results of the examination referred to in point (iii) and, where appropriate, its own supplementary examination; and

(v) the integration of the competent authority's reasoned conclusion into any of the decisions referred to in Article 8a.

3. **Contracting Parties** may decide, on a case-by-case basis if so provided under national law, not to apply this Directive to projects, **or parts of projects, having defence as their sole purpose, or to projects having the response to civil emergencies as their sole purpose**, if they deem that such application would have an adverse effect on those purposes.

Article 2

1. **Contracting Parties** shall adopt all measures necessary to ensure that, before **development** consent is given, projects likely to have significant effects on the environment by virtue, *inter alia*, of their nature, size or location are made subject to a requirement for development consent and an assessment with regard to their effects **on the environment**. Those projects are defined in Article 4.

2. The environmental impact assessment may be integrated into the existing procedures for **development** consent to projects in the **Contracting Parties**, or, failing this, into other procedures or into procedures to be established to comply with the aims of this Directive.

3. **In the case of projects for which the obligation to carry out assessments of the effects on the environment arises simultaneously from this Directive and from Council Directive 92/43/EEC and/or Directive 2009/147/EC of the European Parliament and the Council, Contracting Parties shall, where appropriate, ensure that coordinated and/or joint procedures fulfilling the requirements of that Union legislation are provided for.**

In the case of projects for which the obligation to carry out assessments of the effects on the environment arises simultaneously from this Directive and Union legislation other than the Directives listed in the first subparagraph, Contracting Parties may provide for coordinated and/or joint procedures.

Under the coordinated procedure referred to in the first and second subparagraphs, Contracting Parties shall endeavour to coordinate the various individual assessments of the environmental impact of a particular project, required by the relevant Union legislation, by designating an authority for this purpose, without prejudice to any provisions to the contrary contained in other relevant Union legislation.

Under the joint procedure referred to in the first and second subparagraphs, Contracting Parties shall endeavour to provide for a single assessment of the environmental impact of a particular project required by the relevant Union legislation, without prejudice to any provisions to the contrary contained in other relevant Union legislation.

The Secretariat shall provide guidance regarding the setting up of any coordinated or joint procedures for projects that are simultaneously subject to assessments under this Directive and Directives 92/43/EEC, 2000/60/EC, 2009/147/EC or 2010/75/EU.

4. Without prejudice to Article 7, **Contracting Parties** may, in exceptional cases, exempt a specific

project from the provisions laid down in this Directive, **where the application of those provisions would result in adversely affecting the purpose of the project, provided the objectives of this Directive are met.**

In that event, the **Contracting Parties** shall:

- (a) consider whether another form of assessment would be appropriate;
- (b) make available to the public concerned the information obtained under other forms of assessment referred to in point (a), the information relating to the decision granting exemption and the reasons for granting it;
- (c) inform the **Secretariat**, prior to granting consent, of the reasons justifying the exemption granted, and provide it with the information made available, where applicable, to their own nationals.

The **Secretariat** shall immediately forward the documents received to the other **Contracting Parties**.

The **Secretariat** shall report annually to the European Parliament and to the Council on the application of this paragraph.

5. Without prejudice to Article 7, in cases where a project is adopted by a specific act of national legislation, Contracting Parties may exempt that project from the provisions relating to public consultation laid down in this Directive, provided the objectives of this Directive are met. Contracting Parties shall inform the Secretariat of any application of the exemption referred to in the first subparagraph every two years from 16 May 2017.

Article 3

The environmental impact assessment shall identify, describe and assess in an appropriate manner, in the light of each individual case and in accordance with Articles 4 to 12, the direct and **significant indirect** effects of a project on the following factors:

- (a) population and human health;**
- (b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC;**
- (c) land, soil, water, air and climate;**
- (d) material assets, cultural heritage and the landscape;
- (e) the interaction between the factors referred to in points (a) to (d).

2. The effects referred to in paragraph 1 on the factors set out therein shall include the expected effects deriving from the vulnerability of the project to risks of major accidents and/or disasters that are relevant to the project concerned.

Article 4

1. Subject to Article 2(4), projects listed in Annex I shall be made subject to an assessment in accordance with Articles 5 to 10.

2. Subject to Article 2(4), for projects listed in Annex II, **Contracting Parties** shall determine whether the project shall be made subject to an assessment in accordance with Articles 5 to 10. **Contracting Parties** shall make that determination through:

(a) a case-by-case examination; or

(b) thresholds or criteria set by the **Contracting Party**.

Contracting Parties may decide to apply both procedures referred to in points (a) and (b).

3. Where a case-by-case examination is carried out or thresholds or criteria are set for the purpose of paragraph 2, the relevant selection criteria set out in Annex III shall be taken into account. **Contracting Parties may set thresholds or criteria to determine when projects need not undergo either the determination under paragraphs 4 and 5 or an environmental impact assessment, and/or thresholds or criteria to determine when projects shall in any case be made subject to an environmental impact assessment without undergoing a determination set out under paragraphs 4 and 5.**

4. Where **Contracting Parties** decide to require a determination for projects listed in Annex II, the developer shall provide information on the characteristics of the project and its likely significant effects on the environment. The detailed list of information to be provided is specified in Annex IIA. The developer shall take into account, where relevant, the available results of other relevant assessments of the effects on the environment carried out pursuant to Union legislation other than this Directive. The developer may also provide a description of any features of the project and/or measures envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment.

5. The competent authority shall make its determination, on the basis of the information provided by the developer in accordance with paragraph 4 taking into account, where relevant, the results of preliminary verifications or assessments of the effects on the environment carried out pursuant to Union legislation other than this Directive. The determination shall be made available to the public and:

(a) where it is decided that an environmental impact assessment is required, state the main reasons for requiring such assessment with reference to the relevant criteria listed in Annex III; or

(b) where it is decided that an environmental impact assessment is not required, state the main reasons for not requiring such assessment with reference to the relevant criteria listed in Annex III, and, where proposed by the developer, state any features of the project and/or measures envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment.

6. **Contracting Parties** shall ensure that the competent authority makes its determination as soon as possible and within a period of time not exceeding 90 days from the date on which the developer has submitted all the information required pursuant to paragraph 4. In exceptional cases, for instance relating to the nature, complexity, location or size of the project,

the competent authority may extend that deadline to make its determination; in that event, the competent authority shall inform the developer in writing of the reasons justifying the extension and of the date when its determination is expected.

Article 5

1. Where an environmental impact assessment is required, the developer shall prepare and submit an environmental impact assessment report. The information to be provided by the developer shall include at least:

- (a)** a description of the project comprising information on the site, design, size **and other relevant features** of the project;
- (b)** a description of the likely significant effects of the project on the environment;
- (c)** a description of the **features of the project and/or** measures envisaged in order to avoid, **prevent** or reduce and, if possible, **offset likely** significant adverse effects **on the environment**;
- (d)** a description of the reasonable alternatives studied by the developer, **which are relevant to the project and its specific characteristics**, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment;
- (e)** a non-technical summary of the information referred to in points (a) to (d); **and**
- (f)** any additional information specified in Annex IV relevant to the specific characteristics of a particular project or type of project and to the environmental features likely to be affected.

Where an opinion is issued pursuant to paragraph 2, the environmental impact assessment report shall be based on that opinion, and include the information that may reasonably be required for reaching a reasoned conclusion on the significant effects of the project on the environment, taking into account current knowledge and methods of assessment. The developer shall, with a view to avoiding duplication of assessments, take into account the available results of other relevant assessments under Union or national legislation, in preparing the environmental impact assessment report.

2. Where requested by the developer, the competent authority, taking into account the information provided by the developer **in particular on the specific characteristics of the project, including its location and technical capacity, and its likely impact on the environment**, shall issue an opinion on the scope and level of detail of the information to be included by the developer in the environmental impact assessment report in accordance with paragraph 1 of this Article. The competent authority shall consult the authorities referred to in Article 6(1) before it gives its opinion.

Contracting Parties may also require the competent authorities to give an opinion as referred to in the first subparagraph, irrespective of whether the developer so requests.

3. In order to ensure the completeness and quality of the environmental impact assessment report:

- (a)** the developer shall ensure that the environmental impact assessment report is prepared by competent experts;
- (b)** the competent authority shall ensure that it has, or has access as necessary to, sufficient

expertise to examine the environmental impact assessment report; and

(c) where necessary, the competent authority shall seek from the developer supplementary information, in accordance with Annex IV, which is directly relevant to reaching the reasoned conclusion on the significant effects of the project on the environment.

4. **Contracting Parties** shall, if necessary, ensure that any authorities holding relevant information, with particular reference to Article 3, make this information available to the developer.

Article 6

1. **Contracting Parties** shall take the measures necessary to ensure that the authorities likely to be concerned by the project by reason of their specific environmental responsibilities **or local and regional competences** are given an opportunity to express their opinion on the information supplied by the developer and on the request for development consent, **taking into account, where appropriate, the cases referred to in Article 8a(3)**. To that end, Contracting Parties shall designate the authorities to be consulted, either in general terms or on a case-by-case basis. The information gathered pursuant to Article 5 shall be forwarded to those authorities. Detailed arrangements for consultation shall be laid down by the **Contracting Parties**.

2. **In order to ensure the effective participation of the public concerned in the decision-making procedures, the public shall be informed electronically** or by public notices or by other appropriate means, of the following matters early in the environmental decision-making procedures referred to in Article 2(2) and, at the latest, as soon as information can reasonably be provided:

- (a) the request for development consent;
- (b) the fact that the project is subject to an environmental impact assessment procedure and, where relevant, the fact that Article 7 applies;
- (c) details of the competent authorities responsible for taking the decision, those from which relevant information can be obtained, those to which comments or questions can be submitted, and details of the time schedule for transmitting comments or questions;
- (d) the nature of possible decisions or, where there is one, the draft decision;
- (e) an indication of the availability of the information gathered pursuant to Article 5;
- (f) an indication of the times and places at which, and the means by which, the relevant information will be made available;
- (g) details of the arrangements for public participation made pursuant to paragraph 5 of this Article.

3. **Contracting Parties** shall ensure that, within reasonable time-frames, the following is made available to the public concerned:

- (a) any information gathered pursuant to Article 5;
- (b) in accordance with national legislation, the main reports and advice issued to the competent authority or authorities at the time when the public concerned is informed in accordance with paragraph 2 of this Article;
- (c) in accordance with the provisions of Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information other than that referred to in paragraph

2 of this Article which is relevant for the decision in accordance with Article 8 of this Directive and which only becomes available after the time the public concerned was informed in accordance with paragraph 2 of this Article.

4. The public concerned shall be given early and effective opportunities to participate in the environmental decision-making procedures referred to in Article 2(2) and shall, for that purpose, be entitled to express comments and opinions when all options are open to the competent authority or authorities before the decision on the request for development consent is taken.

5. The detailed arrangements for informing the public for example by bill posting within a certain radius or publication in local newspapers, and for consulting the public concerned, for example by written submissions or by way of a public inquiry, shall be determined by the **Contracting Parties. Contracting Parties shall take the necessary measures to ensure that the relevant information is electronically accessible to the public, through at least a central portal or easily accessible points of access, at the appropriate administrative level.**

6. Reasonable time-frames for the different phases shall be provided **for**, allowing sufficient time for:

(a) informing the authorities referred to in paragraph 1 and the public; and

(b) the authorities referred to in paragraph 1 and the public concerned to prepare and participate effectively in the environmental decision-making, subject to the provisions of this Article.

7. The time-frames for consulting the public concerned on the environmental impact assessment report referred to in Article 5(1) shall not be shorter than 30 days.

Article 4 of Decision 2016/12/MC-EnC

In case of projects of Energy Community interest, the Contracting Party in whose territory the project is intended to be carried out shall send the following information to the Secretariat as soon as possible and no later than when informing its own public:

(a) a description of the project, together with any available information on its impacts on the environment;

(b) information on the nature of the decision which may be taken for authorisation of the project.

The Secretariat shall ensure that the environmental impact assessments of the projects referred to in paragraph 1 of this Article fulfil the requirements of Directive 2011/92/EU as amended by Directive 2014/52/EU.

Article 7

1. Where a **Contracting Party** is aware that a project is likely to have significant effects on the environment in another **Contracting Party** or where a **Contracting Party** likely to be significantly affected so requests, the **Contracting Party** in whose territory the project is intended to be carried out shall send to the affected **Contracting Party** as soon as possible and no later than when informing its own public, *inter alia*:

- (a) a description of the project, together with any available information on its possible transboundary impact;
- (b) information on the nature of the decision which may be taken.

The **Contracting Party** in whose territory the project is intended to be carried out shall give the other **Contracting Party** a reasonable time in which to indicate whether it wishes to participate in the environmental decision-making procedures referred to in Article 2(2), and may include the information referred to in paragraph 2 of this Article.

2. If a **Contracting Party** which receives information pursuant to paragraph 1 indicates that it intends to participate in the environmental decision-making procedures referred to in Article 2(2), the **Contracting Party** in whose territory the project is intended to be carried out shall, if it has not already done so, send to the affected **Contracting Party** the information required to be given pursuant to Article 6(2) and made available pursuant to points (a) and (b) of Article 6(3).

3. The **Contracting Parties** concerned, each insofar as it is concerned, shall also:

(a) arrange for the information referred to in paragraphs 1 and 2 to be made available, within a reasonable time, to the authorities referred to in Article 6(1) and the public concerned in the territory of the **Contracting Party** likely to be significantly affected; and

(b) ensure that the authorities referred to in Article 6(1) and the public concerned are given an opportunity, before development consent for the project is granted, to forward their opinion within a reasonable time on the information supplied to the competent authority in the **Contracting Party** in whose territory the project is intended to be carried out.

4. The **Contracting Parties** concerned shall enter into consultations regarding, *inter alia*, the potential transboundary effects of the project and the measures envisaged to reduce or eliminate such effects and shall agree on a reasonable time-frame for the duration of the consultation period.

Such consultations may be conducted through an appropriate joint body.

5. The detailed arrangements for implementing **paragraph 1 to 4** of this Article, **including the establishment of time-frames for consultations, shall** be determined by the **Contracting Parties** concerned, **on the basis of the arrangements and time-frames referred to in Article 6(5) to (7)**, and shall be such as to enable the public concerned in the territory of the affected **Contracting Party** to participate effectively in the environmental decision-making procedures referred to in Article 2(2) for the project.

Article 8

The results of consultations and the information gathered pursuant to Articles 5 to 7 **shall be duly** taken into **account** in the development consent procedure.

Article 8a

1. The decision to grant development consent shall incorporate at least the following information:

(a) the reasoned conclusion referred to in Article 1(2)(g)(iv);

(b) any environmental conditions attached to the decision, a description of any features of the project and/or measures envisaged to avoid, prevent or reduce and, if possible, offset significant adverse effects on the environment as well as, where appropriate, monitoring measures.

2. The decision to refuse development consent shall state the main reasons for the refusal.

3. In the event **Contracting Parties** make use of the procedures referred to in Article 2(2) other than the procedures for development consent, the requirements of paragraphs 1 and 2 of this Article, as appropriate, shall be deemed to be fulfilled when any decision issued in the context of those procedures contains the information referred to in those paragraphs and there are mechanisms in place which enable the fulfilment of the requirements of paragraph 6 of this Article.

4. In accordance with the requirements referred to in paragraph 1(b), **Contracting Parties** shall ensure that the features of the project and/or measures envisaged to avoid, prevent or reduce and, if possible, offset significant adverse effects on the environment are implemented by the developer, and shall determine the procedures regarding the monitoring of significant adverse effects on the environment.

The type of parameters to be monitored and the duration of the monitoring shall be proportionate to the nature, location and size of the project and the significance of its effects on the environment.

Existing monitoring arrangements resulting from Union legislation other than this Directive and from national legislation may be used if appropriate, with a view to avoiding duplication of monitoring.

5. **Contracting Parties** shall ensure that the competent authority takes any of the decisions referred to in paragraphs 1 to 3 within a reasonable period of time.

6. The competent authority shall be satisfied that the reasoned conclusion referred to in Article 1(2)(g)(iv), or any of the decisions referred to in paragraph 3 of this Article, is still up to date when taking a decision to grant development consent. To that effect, **Contracting Parties** may set time-frames for the validity of the reasoned conclusion referred to in Article 1(2)(g)(iv) or any of the decisions referred to in paragraph 3 of this Article.

Article 9

1. When a decision to grant or refuse development consent has been taken, the competent authority or authorities shall **promptly** inform the public **and the authorities referred to in Article 6(1)** thereof, in accordance with the **national** procedures, and shall **ensure that the** following information **is available to the public and to the authorities referred to in Article 6(1), taking into account, where**

appropriate, the cases referred to in Article 8a(3):

- (a) the content of the decision and any conditions attached thereto as referred to in Article 8a(1) and (2);
- (b) the main reasons and considerations on which the decision is based, including information about the public participation process. **This also includes the summary of the results of the consultations and the information gathered pursuant to Articles 5 to 7 and how those results have been incorporated or otherwise addressed, in particular the comments received from the affected Contracting Party referred to in Article 7.**

2. The competent authority or authorities shall inform any **Contracting Party** which has been consulted pursuant to Article 7, forwarding to it the information referred to in paragraph 1 of this Article.

The consulted **Contracting Parties** shall ensure that that information is made available in an appropriate manner to the public concerned in their own territory.

Article 9a

Contracting Parties shall ensure that the competent authority or authorities perform the duties arising from this Directive in an objective manner and do not find themselves in a situation giving rise to a conflict of interest.

Where the competent authority is also the developer, **Contracting Parties** shall at least implement, within their organisation of administrative competences, an appropriate separation between conflicting functions when performing the duties arising from this Directive.

Article 10

Without prejudice to Directive 2003/4/EC, the provisions of this Directive shall not affect the obligation on the competent authorities to respect the limitations imposed by national laws, regulations and administrative provisions and accepted legal practices with regard to commercial and industrial confidentiality, including intellectual property, and the safeguarding of the public interest.

Where Article 7 applies, the transmission of information to another **Contracting Party** and the receipt of information by another **Contracting Party** shall be subject to the limitations in force in the **Contracting Party** in which the project is proposed.

Article 10a

Contracting Parties shall lay down rules on penalties applicable to infringements of the national provisions adopted pursuant to this Directive. The penalties thus provided for shall be effective, proportionate and dissuasive.

Article 11

1. **Contracting Parties** shall ensure that, in accordance with the relevant national legal system, members of the public concerned:

(a) having a sufficient interest, or alternatively;

(b) maintaining the impairment of a right, where administrative procedural law of a **Contracting Party** requires this as a precondition;

have access to a review procedure before a court of law or another independent and impartial body established by law to challenge the substantive or procedural legality of decisions, acts or omissions subject to the public participation provisions of this Directive.

2. **Contracting Parties** shall determine at what stage the decisions, acts or omissions may be challenged.

3. What constitutes a sufficient interest and impairment of a right shall be determined by the **Contracting Parties**, consistently with the objective of giving the public concerned wide access to justice. To that end, the interest of any non-governmental organisation meeting the requirements referred to in Article 1(2) shall be deemed sufficient for the purpose of point (a) of paragraph 1 of this Article. Such organisations shall also be deemed to have rights capable of being impaired for the purpose of point (b) of paragraph 1 of this Article.

4. The provisions of this Article shall not exclude the possibility of a preliminary review procedure before an administrative authority and shall not affect the requirement of exhaustion of administrative review procedures prior to recourse to judicial review procedures, where such a requirement exists under national law.

Any such procedure shall be fair, equitable, timely and not prohibitively expensive.

5. In order to further the effectiveness of the provisions of this Article, **Contracting Parties** shall ensure that practical information is made available to the public on access to administrative and judicial review procedures.

Article 12

1. The **Contracting Parties** and the **Secretariat** shall exchange information on the experience gained in applying this Directive.

2. **In particular, every six years from 16 May 2017 Contracting Parties shall inform the Secretariat, where such data are available, of:**

(a) the number of projects referred to in Annexes I and II made subject to an environmental impact assessment in accordance with Articles 5 to 10;

(b) the breakdown of environmental impact assessments according to the project categories set out in Annexes I and II;

(c) the number of projects referred to in Annex II made subject to a determination in accordance with Article 4(2);

(d) the average duration of the environmental impact assessment process;

(e) general estimates on the average direct costs of environmental impact assessments, including the impact from the application of this Directive to SMEs.

3. On the basis of that exchange of information, the **Secretariat** shall if necessary submit additional proposals to the European Parliament and to the Council, with a view to ensuring that this Directive is applied in a sufficiently coordinated manner.

Article 13

Contracting Parties shall communicate to the **Secretariat** the texts of the provisions of national law which they adopt in the field covered by this Directive.

Article 14

Directive 85/337/EEC, as amended by the Directives listed in Annex V, Part A, is repealed, without prejudice to the obligations of the **Contracting Parties** relating to the time limits for transposition into national law of the Directives set out in Annex V, Part B.

References to the repealed Directive shall be construed as references to this Directive and shall be read in accordance with the correlation table in Annex VI.

Article 15

Contracting Parties shall bring into force the laws, regulations and administrative provisions necessary to comply with Directive 2011/92/EU as amended by Directive 2014/52/EU by 1 January 2019 with the exception of the provisions referring to Directives not covered by Article 16 of the Treaty establishing the Energy Community.^{1, 2}

Article 16

This Directive is addressed to the **Contracting Parties**.

¹ The text displayed here corresponds to Article 2(1) of Decision 2016/12/MC-EnC.ž

² The Accession Protocol of Georgia to the Energy Community Treaty refers to Directive 85/337/EEC and sets deadlines thereto. Directive 85/337/EEC was repealed by Decision 2016/12/MC-EnC adapting and implementing Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment. Without prejudice to commitments under EU-Georgia Association Agreement the date for the implementation of the entire Directive is 1 September 2017.

ANNEX I

PROJECTS REFERRED TO IN ARTICLE 4(1)

1. Crude-oil refineries (excluding undertakings manufacturing only lubricants from crude oil) and installations for the gasification and liquefaction of 500 tonnes or more of coal or bituminous shale per day.
2. (a) Thermal power stations and other combustion installations with a heat output of 300 megawatts or more;

(b) Nuclear power stations and other nuclear reactors including the dismantling or decommissioning of such power stations or reactors³ (except research installations for the production and conversion of fissionable and fertile materials, whose maximum power does not exceed 1 kilowatt continuous thermal load).
3. (a) Installations for the reprocessing of irradiated nuclear fuel;

(b) Installations designed:

 - (i) for the production or enrichment of nuclear fuel;
 - (ii) for the processing of irradiated nuclear fuel or high-level radioactive waste;
 - (iii) for the final disposal of irradiated nuclear fuel;
 - (iv) solely for the final disposal of radioactive waste;
 - (v) solely for the storage (planned for more than 10 years) of irradiated nuclear fuels or radioactive waste in a different site than the production site.
4. (a) Integrated works for the initial smelting of cast iron and steel;

(b) Installations for the production of non-ferrous crude metals from ore, concentrates or secondary raw materials by metallurgical, chemical or electrolytic processes.
5. Installations for the extraction of asbestos and for the processing and transformation of asbestos and products containing asbestos: for asbestos-cement products, with an annual production of more than 20 000 tonnes of finished products, for friction material, with an annual production of more than 50 tonnes of finished products, and for other uses of asbestos, utilisation of more than 200 tonnes per year.
6. Integrated chemical installations, i.e. those installations for the manufacture on an industrial scale of substances using chemical conversion processes, in which several units are juxtaposed and are functionally linked to one another and which are:
 - (a) for the production of basic organic chemicals;
 - (b) for the production of basic inorganic chemicals;
 - (c) for the production of phosphorous-, nitrogenor potassium-based fertilisers (simple or compound fertilisers);
 - (d) for the production of basic plant health products and of biocides;
 - (e) for the production of basic pharmaceutical products using a chemical or biological process;
 - (f) for the production of explosives.

³ Nuclear power stations and other nuclear reactors cease to be such an installation when all nuclear fuel and other radioactively contaminated elements have been removed permanently from the installation site.

7. (a) Construction of lines for long-distance railway traffic and of airports⁴ with a basic runway length of 2 100 m or more;

(b) Construction of motorways and express roads⁵;

(c) Construction of a new road of four or more lanes, or realignment and/or widening of an existing road of two lanes or less so as to provide four or more lanes, where such new road or realigned and/or widened section of road would be 10 km or more in a continuous length.

8. (a) Inland waterways and ports for inland-waterway traffic which permit the passage of vessels of over 1 350 tonnes;

(b) Trading ports, piers for loading and unloading connected to land and outside ports (excluding ferry piers) which can take vessels of over 1 350 tonnes.

9. Waste disposal installations for the incineration, chemical treatment as defined in Annex I to Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste under heading D9, or landfill of hazardous waste, as defined in point 2 of Article 3 of that Directive.

10. Waste disposal installations for the incineration or chemical treatment as defined in Annex I to Directive 2008/98/EC under heading D9 of non-hazardous waste with a capacity exceeding 100 tonnes per day.

11. Groundwater abstraction or artificial groundwater recharge schemes where the annual volume of water abstracted or recharged is equivalent to or exceeds 10 million cubic metres.

12. (a) Works for the transfer of water resources between river basins where that transfer aims at preventing possible shortages of water and where the amount of water transferred exceeds 100 million cubic metres/year;

(b) In all other cases, works for the transfer of water resources between river basins where the multi-annual average flow of the basin of abstraction exceeds 2 000 million cubic metres/year and where the amount of water transferred exceeds 5% of that flow.

In both cases transfers of piped drinking water are excluded.

13. Waste water treatment plants with a capacity exceeding 150 000 population equivalent as defined in point 6 of Article 2 of Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment.

14. Extraction of petroleum and natural gas for commercial purposes where the amount extracted exceeds 500 tonnes/day in the case of petroleum and 500 000 cubic metres/day in the case of gas.

15. Dams and other installations designed for the holding back or permanent storage of water, where a new or additional amount of water held back or stored exceeds 10 million cubic metres.

16. Pipelines with a diameter of more than 800 mm and a length of more than 40 km:

(a) for the transport of gas, oil, chemicals;

(b) for the transport of carbon dioxide (CO₂) streams for the purposes of geological storage, including associated booster stations.

17. Installations for the intensive rearing of poultry or pigs with more than:

(a) 85 000 places for broilers, 60 000 places for hens;

⁴ For the purposes of this Directive, 'airport' means an airport which complies with the definition in the 1944 Chicago Convention setting up the International Civil Aviation Organisation (Annex 14).

⁵ For the purposes of this Directive, 'express road' means a road which complies with the definition in the European Agreement on Main International Traffic Arteries of 15 November 1975.

(b) 3 000 places for production pigs (over 30 kg); or

(c) 900 places for sows.

18. Industrial plants for the production of:

(a) pulp from timber or similar fibrous materials;

(b) paper and board with a production capacity exceeding 200 tonnes per day.

19. Quarries and open-cast mining where the surface of the site exceeds 25 hectares, or peat extraction, where the surface of the site exceeds 150 hectares.

20. Construction of overhead electrical power lines with a voltage of 220 kV or more and a length of more than 15 km.

21. Installations for storage of petroleum, petrochemical, or chemical products with a capacity of 200 000 tonnes or more.

22. Storage sites pursuant to Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide.

23. Installations for the capture of CO₂ streams for the purposes of geological storage pursuant to Directive 2009/31/EC from installations covered by this Annex, or where the total yearly capture of CO₂ is 1,5 megatonnes or more.

24. Any change to or extension of projects listed in this Annex where such a change or extension in itself meets the thresholds, if any, set out in this Annex.

ANNEX II

PROJECTS REFERRED TO IN ARTICLE 4(2)

1. AGRICULTURE, SILVICULTURE AND AQUACULTURE

- (a) Projects for the restructuring of rural land holdings;
- (b) Projects for the use of uncultivated land or semi-natural areas for intensive agricultural purposes;
- (c) Water management projects for agriculture, including irrigation and land drainage projects;
- (d) Initial afforestation and deforestation for the purposes of conversion to another type of land use;
- (e) Intensive livestock installations (projects not included in Annex I);
- (f) Intensive fish farming;
- (g) Reclamation of land from the sea.

2. EXTRACTIVE INDUSTRY

- (a) Quarries, open-cast mining and peat extraction (projects not included in Annex I);
- (b) Underground mining;
- (c) Extraction of minerals by marine or fluvial dredging;
- (d) Deep drillings, in particular:
 - (i) geothermal drilling;
 - (ii) drilling for the storage of nuclear waste material;
 - (iii) drilling for water supplies;

with the exception of drillings for investigating the stability of the soil;

- (e) Surface industrial installations for the extraction of coal, petroleum, natural gas and ores, as well as bituminous shale.

3. ENERGY INDUSTRY

- (a) Industrial installations for the production of electricity, steam and hot water (projects not included in Annex I);
- (b) Industrial installations for carrying gas, steam and hot water; transmission of electrical energy by overhead cables (projects not included in Annex I);
- (c) Surface storage of natural gas;
- (d) Underground storage of combustible gases;
- (e) Surface storage of fossil fuels;
- (f) Industrial briquetting of coal and lignite;
- (g) Installations for the processing and storage of radioactive waste (unless included in Annex I);
- (h) Installations for hydroelectric energy production;
- (i) Installations for the harnessing of wind power for energy production (wind farms);
- (j) Installations for the capture of CO₂ streams for the purposes of geological storage pursuant to Directive 2009/31/EC from installations not covered by Annex I to this Directive.

4. PRODUCTION AND PROCESSING OF METALS

- (a) Installations for the production of pig iron or steel (primary or secondary fusion) including continuous casting;
- (b) Installations for the processing of ferrous metals:
 - (i) hot-rolling mills;
 - (ii) smitheries with hammers;
 - (iii) application of protective fused metal coats;
- (c) Ferrous metal foundries;
- (d) Installations for the smelting, including the alloyage, of non-ferrous metals, excluding precious metals, including recovered products (refining, foundry casting, etc.);
- (e) Installations for surface treatment of metals and plastic materials using an electrolytic or chemical process;
- (f) Manufacture and assembly of motor vehicles and manufacture of motor-vehicle engines;
- (g) Shipyards;
- (h) Installations for the construction and repair of aircraft;
- (i) Manufacture of railway equipment;
- (j) Swaging by explosives;
- (k) Installations for the roasting and sintering of metallic ores.

5. MINERAL INDUSTRY

- (a) Coke ovens (dry coal distillation);
- (b) Installations for the manufacture of cement;
- (c) Installations for the production of asbestos and the manufacture of asbestos products (projects not included in Annex I);
- (d) Installations for the manufacture of glass including glass fibre;
- (e) Installations for smelting mineral substances including the production of mineral fibres;
- (f) Manufacture of ceramic products by burning, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain.

6. CHEMICAL INDUSTRY (PROJECTS NOT INCLUDED IN ANNEX I)

- (a) Treatment of intermediate products and production of chemicals;
- (b) Production of pesticides and pharmaceutical products, paint and varnishes, elastomers and peroxides;
- (c) Storage facilities for petroleum, petrochemical and chemical products.

7. FOOD INDUSTRY

- (a) Manufacture of vegetable and animal oils and fats;
- (b) Packing and canning of animal and vegetable products;
- (c) Manufacture of dairy products;
- (d) Brewing and malting;

- (e) Confectionery and syrup manufacture;
- (f) Installations for the slaughter of animals;
- (g) Industrial starch manufacturing installations;
- (h) Fish-meal and fish-oil factories;
- (i) Sugar factories.

8. TEXTILE, LEATHER, WOOD AND PAPER INDUSTRIES

- (a) Industrial plants for the production of paper and board (projects not included in Annex I);
- (b) Plants for the pre-treatment (operations such as washing, bleaching, mercerisation) or dyeing of fibres or textiles;
- (c) Plants for the tanning of hides and skins;
- (d) Cellulose-processing and production installations.

9. RUBBER INDUSTRY

Manufacture and treatment of elastomer-based products.

10. INFRASTRUCTURE PROJECTS

- (a) Industrial estate development projects;
- (b) Urban development projects, including the construction of shopping centres and car parks;
- (c) Construction of railways and intermodal transshipment facilities, and of intermodal terminals (projects not included in Annex I);
- (d) Construction of airfields (projects not included in Annex I);
- (e) Construction of roads, harbours and port installations, including fishing harbours (projects not included in Annex I);
- (f) Inland-waterway construction not included in Annex I, canalisation and flood-relief works;
- (g) Dams and other installations designed to hold water or store it on a long-term basis (projects not included in Annex I);
- (h) Tramways, elevated and underground railways, suspended lines or similar lines of a particular type, used exclusively or mainly for passenger transport;
- (i) Oil and gas pipeline installations and pipelines for the transport of CO₂ streams for the purposes of geological storage (projects not included in Annex I);
- (j) Installations of long-distance aqueducts;
- (k) Coastal work to combat erosion and maritime works capable of altering the coast through the construction, for example, of dykes, moles, jetties and other sea defence works, excluding the maintenance and reconstruction of such works;
- (l) Groundwater abstraction and artificial groundwater recharge schemes not included in Annex I;
- (m) Works for the transfer of water resources between river basins not included in Annex I.

11. OTHER PROJECTS

- (a) Permanent racing and test tracks for motorised vehicles;
- (b) Installations for the disposal of waste (projects not included in Annex I);

- (c) Waste-water treatment plants (projects not included in Annex I);
- (d) Sludge-deposition sites;
- (e) Storage of scrap iron, including scrap vehicles;
- (f) Test benches for engines, turbines or reactors;
- (g) Installations for the manufacture of artificial mineral fibres;
- (h) Installations for the recovery or destruction of explosive substances;
- (i) Knackers' yards.

12. TOURISM AND LEISURE

- (a) Ski runs, ski lifts and cable cars and associated developments;
- (b) Marinas;
- (c) Holiday villages and hotel complexes outside urban areas and associated developments;
- (d) Permanent campsites and caravan sites;
- (e) Theme parks.

13. (a) Any change or extension of projects listed in Annex I or this Annex, already authorised, executed or in the process of being executed, which may have significant adverse effects on the environment (change or extension not included in Annex I);

(b) Projects in Annex I, undertaken exclusively or mainly for the development and testing of new methods or products and not used for more than two years.

ANNEX II.A
INFORMATION REFERRED TO IN ARTICLE 4(4)
(INFORMATION TO BE PROVIDED BY THE DEVELOPER ON THE PROJECTS
LISTED IN ANNEX II)

1. A description of the project, including in particular:

(a) a description of the physical characteristics of the whole project and, where relevant, of demolition works;

(b) a description of the location of the project, with particular regard to the environmental sensitivity of geographical areas likely to be affected.

2. A description of the aspects of the environment likely to be significantly affected by the project.

3. A description of any likely significant effects, to the extent of the information available on such effects, of the project on the environment resulting from:

(a) the expected residues and emissions and the production of waste, where relevant;

(b) the use of natural resources, in particular soil, land, water and biodiversity.

4. The criteria of Annex III shall be taken into account, where relevant, when compiling the information in accordance with points 1 to 3.

ANNEX III

SELECTION CRITERIA REFERRED TO IN ARTICLE 4(3)

(CRITERIA TO DETERMINE WHETHER THE PROJECTS LISTED IN ANNEX II SHOULD BE SUBJECT TO AN ENVIRONMENTAL IMPACT ASSESSMENT)

1. CHARACTERISTICS OF PROJECTS

The characteristics of projects must be considered, **with particular regard** to:

- (a) the size **and design** of the **whole** project;
- (b) the cumulation with other **existing and/or approved** projects;
- (c) the use of natural resources, **in particular land, soil, water and biodiversity**;
- (d) the production of waste;
- (e) pollution and nuisances;
- (f) the risk of **major accidents and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge**;
- (g) the risks to human health (for example due to water contamination or air pollution).**

2. LOCATION OF PROJECTS

The environmental sensitivity of geographical areas likely to be affected by projects must be considered, **with particular regard** to:

- (a) the existing **and approved** land use;
- (b) the relative abundance, **availability**, quality and regenerative capacity of natural resources **(including soil, land, water and biodiversity)** in the **area and its underground**;
- (c) the absorption capacity of the natural environment, paying particular attention to the following areas:
 - (i) wetlands, **riparian areas, river mouths**;
 - (ii) coastal zones **and the marine environment**;
 - (iii) mountain and forest areas;
 - (iv) nature reserves and parks;
 - (v) areas classified or protected under **national** legislation; **Natura 2000 areas designated by Contracting Parties pursuant to Directive 92/43/EEC and Directive 2009/147/EC**;
 - (vi) areas in which **there has already been a failure to meet** the environmental quality standards laid down in Union legislation **and relevant to the project, or in which it is considered that there is such a failure**;
 - (vii) densely populated areas;
 - (viii) landscapes of historical, cultural or archaeological significance.

3. TYPE AND CHARACTERISTICS OF THE POTENTIAL IMPACT

The **likely** significant effects of projects **on the environment** must be considered in relation to criteria set out in points 1 and 2 **of this Annex, with regard to the impact of the project on the factors specified in Article 3(1), taking into account**:

- (a) the **magnitude and spatial** extent of the impact (**for example** geographical area and size of the **population likely to be affected**);
- (b) the **nature** of the impact;
- (c) the transboundary nature of the impact;
- (d) the **intensity** and complexity of the impact;
- (e) the probability of the impact;
- (f) the expected onset**, duration, frequency and reversibility of the impact;
- (g) the cumulation of the impact with the impact of other existing and/or approved projects;**
- (h) the possibility of effectively reducing the impact.**

ANNEX IV

INFORMATION REFERRED TO IN ARTICLE 5(1)

(INFORMATION FOR THE ENVIRONMENTAL IMPACT ASSESSMENT REPORT)

1. A description of the project, including in particular:

(a) a description of the location of the project;

(b) a description of the physical characteristics of the whole project, **including, where relevant, requisite demolition works**, and the land-use requirements during the construction and operational phases;

(c) a description of the main characteristics of the **operational phase of the project (in particular any production process)**, for instance, **energy demand and energy used**, nature and quantity of the materials **and natural resources (including water, land, soil and biodiversity)** used;

(d) an estimate, by type and quantity, of expected residues and emissions **(such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation) and quantities and types of waste produced during the construction and operation phases.**

2. **A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics**, and an indication of the main reasons for selecting the chosen option, **including a comparison of the environmental effects.**

3. A description of the aspects of the **current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the project as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.**

4. A description of the factors **specified in Article 3(1)** likely to be significantly affected by the project: population, **human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.**

5. A description of the likely significant effects of the project on the environment resulting from, *inter alia*:

(a) the **construction and** existence of the project, including, where relevant, demolition works;

(b) the use of natural resources, **in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;**

(c) the emission of pollutants, **noise, vibration, light, heat and radiation**, the creation of nuisances, and the disposal and recovery of waste;

(d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters);

(e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance

likely to be affected or the use of natural resources;

(f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;

(g) the technologies and the substances used.

The description of the likely significant effects on the factors specified in Article 3(1) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the project. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the project.

6. A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.

7. A description of the measures envisaged to **avoid**, prevent, reduce or, if possible, offset any **identified** significant adverse effects on the environment **and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis)**. That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.

8. A description of the expected significant adverse effects of the project on the environment deriving from the vulnerability of the project to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to Union legislation such as Directive 2012/18/ EU of the European Parliament and of the Council or Council Directive 2009/71/Euratom or relevant assessments carried out pursuant to national legislation may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.

9. A non-technical summary of the information provided under points 1 to 8.

10. A reference list detailing the sources used for the descriptions and assessments included in the report.

ANNEX V

<...>



DIRECTIVE (EU) 2016/802 of 11 May 2016 relating to a reduction in the sulphur content of certain liquid fuels (codification)

Incorporated and adapted by Ministerial Council Decision 2016/15/MC-EnC of 14 October 2016 on amending the Treaty establishing the Energy Community and adapting and implementing Directive (EU) 2016/802 of the European Parliament and of the Council and Commission Implementing Decision (EU) 2015/253.

Commission Implementing Decision (EU) 2015/253 laying down the rules concerning the sampling and reporting under Council Directive 1999/32/EC as regards the sulphur content of marine fuels, while being part of the Energy Community environmental acquis, is not displayed in the present Legal Framework.

*The adaptations made by Ministerial Council Decision 2016/15/MC-EnC are highlighted in **bold and blue**, the changes to Directive 1999/32/EC introduced by Directive (EU) 2016/802/EU are highlighted in **bold**.*

Article 1

Purpose and scope

1. The purpose of this Directive is to reduce the emissions of sulphur dioxide resulting from the combustion of certain types of liquid fuels and thereby to reduce the harmful effects of such emissions on man and the environment.

2. Reductions in emissions of sulphur dioxide resulting from the combustion of certain petroleum-derived liquid fuels shall be achieved by imposing limits on the sulphur content of such fuels as a condition for their use within **Contracting Parties'** territory, territorial seas and exclusive economic zones or pollution control zones.

The limitations on the sulphur content of certain petroleum-derived liquid fuels as laid down in this Directive shall not, however, apply to:

- (a) fuels intended for the purposes of research and testing;
- (b) fuels intended for processing prior to final combustion;
- (c) fuels to be processed in the refining industry;
- (d) <...>¹
- (e) fuels used by warships and other vessels on military service. However, each **Contracting Party** shall endeavour to ensure, by the adoption of appropriate measures not impairing the operations or operational capability of such ships, that the ships act in a manner consistent, so far as is reasonable and practical, with this Directive;
- (f) any use of fuels in a vessel necessary for the specific purpose of securing the safety of a ship or saving life at sea;

¹ According to point (a) of Article 2(1) of Decision 2016/15/MC-EnC, point (d) of Article 1(2) shall not be applicable in the Energy Community.

(g) any use of fuels in a ship necessitated by damage sustained by it or its equipment, provided that all reasonable measures are taken after the occurrence of the damage to prevent or minimise excess emissions and that measures are taken as soon as possible to repair the damage. This shall not apply if the owner or master acted either with intent to cause damage, or recklessly;

(h) without prejudice to Article 5, fuels used on board vessels employing emission abatement methods in accordance with Articles 8 and 10.

Article 2

Definitions

For the purpose of this Directive **the following definitions shall apply:**

(a) 'heavy fuel oil' means:

(i) any petroleum-derived liquid fuel, excluding marine fuel, falling within CN codes 2710 19 51 to 2710 19 68, 2710 20 31, 2710 20 35 **or** 2710 20 39; or

(ii) any petroleum-derived liquid fuel, other than gas oil as defined in point (b) **and other than marine fuels as defined in points (c), (d) and (e)**, which, by reason of its distillation limits, falls within the category of heavy oils intended for use as fuel and of which less than 65% by volume (including losses) distils at 250 °C by the ASTM D86 method. If the distillation cannot be determined by the ASTM D86 method, the petroleum product is likewise categorised as a heavy fuel oil;

(b) 'gas oil' means:

(i) any petroleum-derived liquid fuel, excluding marine fuel, falling within CN codes 2710 19 25, 2710 19 29, 2710 19 47, 2710 19 48, 2710 20 17 or 2710 20 19; or

(ii) any petroleum-derived liquid fuel, excluding marine fuel, of which less than 65% by volume (including losses) distils at 250 °C and of which at least 85% by volume (including losses) distils at 350 °C by the ASTM D86 method. Diesel fuels as defined in point 2 of Article 2 of Directive 98/70/EC of the European Parliament and of the Council are excluded from this definition. Fuels used in non-road mobile machinery and agricultural tractors are also excluded from this definition;

(c) 'marine fuel' means any petroleum-derived liquid fuel intended for use or in use on board a vessel, including those fuels defined in ISO 8217. It includes any petroleum-derived liquid fuel in use on board inland waterway vessels or recreational craft, as defined respectively in Article 2 of Directive 97/68/EC of the European Parliament and of the Council and Article 1(3) of Directive 94/25/EC of the European Parliament and of the Council, when such vessels are at sea;

(d) 'marine diesel oil' means any marine fuel as defined for DMB grade in Table I of ISO 8217 with the exception of the reference to the sulphur content;

(e) 'marine gas oil' means any marine fuel as defined for DMX, DMA and DMZ grades in Table I of ISO 8217 with the exception of the reference to the sulphur content;

(f) 'MARPOL' means the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto;

(g) 'Annex VI to MARPOL' means the annex, entitled 'Regulations for the Prevention of Air Pollution from Ships', which the Protocol of 1997 added to MARPOL;

(h) **'SO_x Emission Control Areas'** means sea areas defined as such by the International Maritime Organisation (IMO) under Annex VI to MARPOL;

(i) **'passenger ships'** means ships that carry more than 12 passengers, where a passenger is every person other than:

(i) the master and the members of the crew or other person employed or engaged in any capacity on board a ship on the business of that ship; and

(ii) a child under 1 year of age;

(j) **'regular services'** means a series of passenger ship crossings operated so as to serve traffic between the same two or more ports, or a series of voyages from and to the same port without intermediate calls, either:

(i) according to a published timetable; or

(ii) **with crossings so regular or frequent that they constitute a recognisable schedule;**

(k) **'warship'** means a ship belonging to the armed forces of a State, bearing the external marks distinguishing such ships of its nationality, under the command of an officer duly commissioned by the government of the State and whose name appears in the appropriate service list or its equivalent, and manned by a crew which is under regular armed forces discipline;

(l) **'ships at berth'** means ships which are securely moored or anchored in a Community port while they are loading, unloading or hotelling, including the time spent when not engaged in cargo operations;

(m) **'placing on the market'** means supplying or making available to third persons, against payment or free of charge, anywhere within Contracting Parties' jurisdictions, marine fuels for on-board combustion. It excludes supplying or making available marine fuels for export in ships' cargo tanks;

(n) <...>²

(o) **'emission abatement method'** means any fitting, material, appliance or apparatus to be fitted in a ship or other procedure, alternative fuel, or compliance method, used as an alternative to low sulphur marine fuel meeting the requirements set out in this Directive, that is verifiable, quantifiable and enforceable;

(p) **'ASTM method'** means the methods laid down by the American Society for Testing and Materials in the 1976 edition of standard definitions and specifications for petroleum and lubricating products;

(q) **'combustion plant'** means any technical apparatus in which fuels are oxidised in order to use the heat generated.

Article 3

Maximum sulphur content of heavy fuel oil

1. **Contracting Parties** shall <...> ensure that <...> heavy fuel oils are not used within their territory if their sulphur content exceeds 1,00% by mass.

² Not applicable in accordance with Article 2(1)(e) of Decision 2016/15/MC-EnC.

2. <...> **Until 31 December 2027**, subject to appropriate monitoring of emissions by competent authorities, paragraph 1 shall not apply to heavy fuel oils used:

(a) in combustion plants which fall within the scope of **Directive 2001/80/EC**, which are **subject to Article 4(1) or (2) or point (a) of Article 4(3) of that Directive** and which comply with the emission limits for sulphur dioxide for such plants as set out **in that Directive**;

(b) in combustion plants which fall within the scope of Directive 2001/80/EC, which are subject to point (b) of Article 4(3) and Article 4(6) of that Directive and the monthly average sulphur dioxide emissions of which do not exceed 1 700 mg/Nm³ at an oxygen content in the flue gas of 3% by volume on a dry basis;

(c) in combustion plants which do not fall under points (a) or (b), and the **monthly average** sulphur dioxide emissions of which do not exceed 1 700 mg/Nm³ at an oxygen content in the flue gas of 3% by volume on a dry basis;

(d) for combustion in refineries, where the monthly average of emissions of sulphur dioxide averaged over all combustion plants in the refinery, irrespective of the type of fuel or fuel combination used, but excluding plants which fall under points (a) and (b), **gas turbines and gas engines**, does not exceed 1 700 mg/Nm³ at an oxygen content in the flue gas of 3% by volume on a dry basis.

3. As from 1 January 2028, subject to appropriate monitoring of emissions by competent authorities, paragraph 1 shall not apply to heavy fuel oils used:

(a) in combustion plants which fall within the scope of **Chapter III of Directive 2010/75/EU**, and which comply with the emission limits for sulphur dioxide for such plants as set out in **Annex V to that Directive or, where those emission limit values are not applicable in accordance with that Directive, for which the monthly average sulphur dioxide emissions does not exceed 1 700 mg/Nm³ at an oxygen content in the flue gas of 3% by volume on a dry basis;**

(b) in combustion plants which do not fall under point (a), and the monthly average sulphur dioxide emissions of which does not exceed 1 700 mg/Nm³ at an oxygen content in the flue gas of 3% by volume on a dry basis;

(c) for combustion in refineries, where the monthly average of emissions of sulphur dioxide averaged over all combustion plants in the refinery, irrespective of the type of fuel or fuel combination used, but excluding plants falling under point (a), gas turbines and gas engines, does not exceed 1 700 mg/Nm³ at an oxygen content in the flue gas of 3% by volume on a dry basis.

Contracting Parties shall take the necessary measures to ensure that no combustion plant using heavy fuel oil with a sulphur concentration greater than that referred to in paragraph 1 is operated without a permit issued by a competent authority, which specifies the emission limits.

Article 4

Maximum sulphur content in gas oil

Contracting Parties shall <...> ensure that gas oils <...> are not used within their territory <...> if their sulphur content exceeds 0,10% by mass.

Article 5**Maximum sulphur content in marine fuel**

Contracting Parties shall ensure that marine fuels are not used within their territory if their sulphur content exceeds 3,50% by mass, except for fuels supplied to ships using emission abatement methods subject to Article 8 operating in closed mode.

Article 6

Maximum sulphur content of marine fuels used in territorial seas, exclusive economic zones and pollution control zones of **Contracting Parties**, including SO_x Emission Control Areas, and by passenger ships operating on regular services to or from **Community** ports

1. **Contracting Parties** shall take all necessary measures to ensure that marine fuels are not used in the areas of their territorial seas, exclusive economic zones and pollution control zones if the sulphur content of those fuels by mass exceeds:

(a) 3,50% as from 1 January 2018, without prejudice to commitments of certain **Contracting Parties** under Annex VI to the International Convention for the Prevention of Pollution from Ships (MARPOL)³;

(b) 0,50% as from 1 January 2020. This paragraph shall apply to all vessels of all flags, including vessels whose journey began outside of the **Community**, without prejudice to paragraphs 2 and 5 of this Article and Article 7.

2. **Contracting Parties** shall take all necessary measures to ensure that marine fuels are not used in the areas of their territorial seas, exclusive economic zones and pollution control zones falling within SO_x Emission Control Areas if the sulphur content of those fuels by mass exceeds:

(a) <...>⁴

(b) 0,10% as from 1 January 2015, in accordance with Article 6(3).⁵

This paragraph shall apply to all vessels of all flags, including vessels whose journey began outside the **Community**.

The **Secretariat** shall have due regard to any future changes to the requirements pursuant to Annex VI to MARPOL applicable within SO_x Emission Control Areas, and, where appropriate, without undue delay make any relevant proposals with a view to amending this Directive accordingly.

3. The application date for paragraph 2 for any new sea areas, including ports, designated by the IMO as SO_x Emission Control Areas in accordance with Regulation 14(3)(b) of Annex VI to MARPOL shall be 12 months after the date of entry into force of the designation.

4. **Contracting Parties** shall be responsible for the enforcement of paragraph 2 at least in respect of:

- vessels flying their flag, and

³ The text displayed here corresponds to point (d) of Article 2(1) of Decision 2016/15/MC-EnC.

⁴ Not applicable in accordance with Article 2(1)(a) of Decision 2016/15/MC-EnC.

⁵ The text displayed here corresponds to point (f) of Article 2(1) of Decision 2016/15/MC-EnC.

- in the case of **Contracting Parties** bordering SO_x Emission Control Areas, vessels of all flags while in their ports.

Contracting Parties may also take additional enforcement action in respect of other vessels in accordance with international maritime law.

5. **Contracting Parties** shall take all necessary measures to ensure that marine fuels are not used in their territorial seas, exclusive economic zones and pollution control zones falling outside SO_x Emission Control Areas by passenger ships operating on regular services to or from any **Community** port if the sulphur content of those fuels exceeds 1,50% by mass until 1 January 2020.

Contracting Parties shall be responsible for the enforcement of this requirement at least in respect of vessels flying their flag and vessels of all flags while in their ports.

6. **Contracting Parties** shall require the correct completion of ships' logbooks, including fuel-changeover operations.

7. **Contracting Parties** shall endeavour to ensure the availability of marine fuels which comply with this Directive and inform the **Secretariat** of the availability of such marine fuels in its ports and terminals.

8. If a ship is found by a **Contracting Party** not to be in compliance with the standards for marine fuels which comply with this Directive, the competent authority of the **Contracting Party** is entitled to require the ship to:

- (a) present a record of the actions taken to attempt to achieve compliance; and
- (b) provide evidence that it attempted to purchase marine fuel which complies with this Directive in accordance with its voyage plan and, if it was not made available where planned, that attempts were made to locate alternative sources for such marine fuel and that, despite best efforts to obtain marine fuel which complies with this Directive, no such marine fuel was made available for purchase.

The ship shall not be required to deviate from its intended voyage or to delay unduly the voyage in order to achieve compliance.

If a ship provides the information referred to in the first subparagraph, the **Contracting Party** concerned shall take into account all relevant circumstances and the evidence presented to determine the appropriate action to take, including not taking control measures.

A ship shall notify its flag State and the competent authority of the relevant port of destination when it cannot purchase marine fuel which complies with this Directive.

A port State shall notify the **Secretariat** when a ship has presented evidence of the non-availability of marine fuels which comply with this Directive.

9. **Contracting Parties** shall, in accordance with Regulation 18 of Annex VI to MARPOL:

- (a) maintain a publicly available register of local suppliers of marine fuel;
- (b) ensure that the sulphur content of all marine fuels sold in their territory is documented by the supplier on a bunker delivery note, accompanied by a sealed sample signed by the representative of the receiving ship;
- (c) take action against marine fuel suppliers that have been found to deliver fuel that does

not comply with the specification stated on the bunker delivery note;

(d) ensure that remedial action is taken to bring any non-compliant marine fuel discovered into compliance.

10. **Contracting Parties** shall ensure that marine diesel oils are not placed on the market in their territory if the sulphur content of those marine diesel oils exceeds 1,50% by mass.

Article 7

Maximum sulphur content of marine fuels used by ships at berth in **Community** ports

1. **Contracting Parties** shall take all necessary measures to ensure that ships at berth in **Community** ports do not use marine fuels with a sulphur content exceeding 0,10% by mass, allowing sufficient time for the crew to complete any necessary fuel-changeover operation as soon as possible after arrival at berth and as late as possible before departure.

Contracting Parties shall require the time of any fuel-changeover operation to be recorded in ships' logbooks.

2. Paragraph 1 shall not apply:

(a) whenever, according to published timetables, ships are due to be at berth for less than two hours;

(b) to ships which switch off all engines and use shore-side electricity while at berth in ports.

3. **Contracting Parties** shall ensure that marine gas oils are not placed on the market in their territory if the sulphur content of those marine gas oils exceeds 0,10% by mass.

Article 8

Emission abatement methods

1. **Contracting Parties** shall allow the use of emission abatement methods by ships of all flags in their ports, territorial seas, exclusive economic zones and pollution control zones, as an alternative to using marine fuels that meet the requirements of Articles 6 and 7, subject to paragraphs 2 and 4 of this Article.

2. Ships using the emission abatement methods referred to in paragraph 1 shall continuously achieve reductions of sulphur dioxide emissions that are at least equivalent to the reductions that would be achieved by using marine fuels that meet the requirements of Articles 6 and 7. Equivalent emission values shall be determined in accordance with Annex I.

3. **Contracting Parties** shall, as an alternative solution for reducing emissions, encourage the use of onshore power supply systems by docked vessels.

4. The emission abatement methods referred to in paragraph 1 shall comply with the criteria specified in the instruments referred to in Annex II.

5. <...>⁶

⁶ Not applicable in accordance with Article 2(1)(g) of Decision 2016/15/MC-EnC.

Article 9

Approval of emission abatement methods for use on board ships flying the flag of a Contracting Party

1. Emission abatement methods falling within the scope of Directive 96/98/EC shall be approved in accordance with that Directive.
2. Emission abatement methods not covered by paragraph 1 of this Article shall be approved in accordance with the procedure referred to in Article 3(2) of Regulation (EC) No 2099/2002, taking into account:
 - (a) guidelines developed by the IMO;
 - (b) the results of any trials conducted under Article 10;
 - (c) effects on the environment, including achievable emission reductions, and impacts on ecosystems in enclosed ports, harbours and estuaries; and
 - (d) the feasibility of monitoring and verification.

Article 10

Trials of new emission abatement methods

Contracting Parties may, in cooperation with other **Contracting Parties**, as appropriate, approve trials of ship emission abatement methods on vessels flying their flag, or in sea areas within their jurisdiction. During those trials, the use of marine fuels meeting the requirements of Articles 6 and 7 shall not be mandatory, provided that all of the following conditions are fulfilled:

- (a) the **Secretariat** and any port State concerned are notified in writing at least 6 months before trials begin;
- (b) permits for trials do not exceed 18 months in duration;
- (c) all ships involved install tamper-proof equipment for the continuous monitoring of funnel gas emissions and use it throughout the trial period;
- (d) all ships involved achieve emission reductions which are at least equivalent to those which would be achieved through the sulphur limits for fuels specified in this Directive;
- (e) there are proper waste management systems in place for any waste generated by the emission abatement methods throughout the trial period;
- (f) there is an assessment of impacts on the marine environment, particularly ecosystems in enclosed ports, harbours and estuaries throughout the trial period; and
- (g) full results are provided to the **Secretariat** and are made publicly available within 6 months of the end of the trials.

Article 11**Financial measures**

Contracting Parties may adopt financial measures in favour of operators affected by this Directive where such financial measures are in accordance with State aid rules applicable and to be adopted in this area.

Article 12**Change in the supply of fuels**

If, as a result of a sudden change in the supply of crude oil, petroleum products or other hydrocarbons, it becomes difficult for a **Contracting Party** to apply the limits on the maximum sulphur content referred to in Articles 3 and 4, that **Contracting Party** shall inform the **Secretariat** thereof. The **Secretariat** may authorise a higher limit to be applicable within the territory of that **Contracting Party** for a period not exceeding 6 months. It shall notify the **Ministerial Council** and the **Contracting Parties of its decision**. Any **Contracting Party** may refer that decision to the **Ministerial Council** within 1 month. The Ministerial Council, acting by a qualified majority, may adopt a different decision within 2 months.

Article 13**Sampling and analysis**

1. **Contracting Parties** shall take all necessary measures to check by sampling that the sulphur content of fuels used complies with Articles 3 to 7. The sampling shall commence <...> on the date on which the relevant limit for maximum sulphur content in the fuel comes into force. It shall be carried out **periodically** with sufficient frequency and **quantities such that** the samples are representative of the fuel examined, **and in the case of marine fuel, of the fuel being used by vessels while in relevant sea areas and ports. The samples shall be analysed without undue delay.**

2. **The following means of sampling, analysis and inspection of marine fuel shall be used:**

(a) **inspection of ships' logbooks and bunker delivery notes; and**

(b) **as appropriate, the following means of sampling and analysis:**

(i) **sampling of the marine fuel for on-board combustion while being delivered to ships, in accordance with the Guidelines for the sampling of fuel oil for determination of compliance with the revised Annex VI to MARPOL, adopted on 17 July 2009 by Resolution 182(59) of the Marine Environment Protection Committee (MEPC) of the IMO, and analysis of its sulphur content; or**

(ii) **sampling and analysis of the sulphur content of marine fuel for on-board combustion contained in tanks, where technically and economically feasible, and in sealed bunker samples on board ships.**

3. The reference method adopted for determining the sulphur content shall be ISO method 8754 (2003)

or EN ISO 14596:2007.

In order to determine whether marine fuel delivered to, and used on board, ships is compliant with the sulphur limits required by Articles 4 to 7, the fuel verification procedure set out in Appendix VI to Annex VI to MARPOL shall be used.

4. <...>⁷

Article 14

Reporting and review

1. Each year by 30 June, **Contracting Parties** shall, on the basis of the results of the sampling, analysis and inspections carried out in accordance with Article 13, submit a report to the **Secretariat** on the compliance with the sulphur standards set out in this Directive for the preceding year.

On the basis of the reports received in accordance with the first subparagraph of this paragraph and the notifications regarding the non-availability of marine fuel which complies with this Directive submitted by **Contracting Parties** in accordance with the fifth subparagraph of Article 6(8), the **Secretariat** shall, within 12 months of the date referred to in the first subparagraph of this paragraph, draw up and publish a report on the implementation of this Directive. The **Secretariat** shall evaluate the need for further strengthening of the relevant provisions of this Directive and make any appropriate legislative proposals to that effect.

2. By 31 December 2013, the **Secretariat** shall submit a report to the European Parliament and to the **Ministerial Council** which shall be accompanied, if appropriate, by legislative proposals. The **Secretariat** shall consider in its report the potential for reducing air pollution taking into account, *inter alia*: annual reports submitted in accordance with paragraphs 1 and 3; observed air quality and acidification; fuel costs; potential economic impact and observed modal shift; and progress in reducing emissions from ships.

3. <...>⁸

Article 15

Adaptation to scientific and technical progress

The **Secretariat** shall be empowered to adopt delegated acts in accordance with Article 16 concerning the adaptations of points (a) to (e) and (p) of Article 2, point (b)(i) of Article 13(2) and Article 13(3) to scientific and technical progress. Such adaptations shall not result in any direct changes to the scope of this Directive or to sulphur limits for fuels specified in this Directive.

Article 16

Exercise of the delegation

<...>

⁷ Not applicable in accordance with Article 2(1)(g) of Decision 2016/15/MC-EnC.

⁸ Not applicable in accordance with Article 2(1)(g) of Decision 2016/15/MC-EnC.

Article 17**Committee procedure**

<...>

Article 18**Penalties**

Contracting Parties shall determine the penalties applicable to breaches of the national provisions adopted pursuant to this Directive.

The penalties determined shall be effective, proportionate and dissuasive and may include fines calculated in such a way as to ensure that the fines at least deprive those responsible of the economic benefits derived from the infringement of the national provisions as referred to in the first paragraph and that those fines gradually increase for repeated infringements.

Article 19**Repeal**

1. Contracting Parties shall bring into force the laws, regulations and administrative provisions necessary to comply with Article 1(2), Article 2, Article 3(3), Articles 5 to 11, 13, 14 and 15 of Directive (EU) 2016/802 by 30 June 2018 at the latest and with Decision (EU) 2015/253 by 1 January 2018 at the latest.⁹ They shall forthwith communicate to the Energy Community Secretariat the text of those provisions.

When Contracting Parties adopt those provisions, they shall contain a reference to this Decision, Directive (EU) 2016/802 and Decision (EU) 2015/253 or be accompanied by such a reference on the occasion of their official publication. They shall also include a statement that references in existing laws, regulations and administrative provisions to Directive 93/12/EEC shall be construed as references to Directive (EU) 2016/802. Contracting Parties shall determine how such reference is to be made and how that statement is to be formulated.

2. Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by this Decision, Directive (EU) 2016/802 and Decision (EU) 2015/253.¹⁰

⁹ Directive 1999/32/EC was applicable in the Energy Community until 30 June 2018, Contracting Parties were obliged to bring into force the laws, regulations and administrative provisions necessary to comply with that Directive until 31 December 2011 (in accordance with their Accession Protocols, 1 January 2012 for Ukraine, 31 December 2014 for Moldova and 1 September 2021 for Georgia).

¹⁰ The text displayed here corresponds to Article 4 of Decision 2016/15/MC-EnC.

Article 20
Entry into force

This Decision shall enter into force on the date of its adoption.¹¹

Article 21
Addressees

This Decision is addressed to the Contracting Parties of the Treaty establishing the Energy Community.¹²

¹³ The text displayed here corresponds to Article 5 of Decision 2016/15/MC-EnC.

¹² The text displayed here corresponds to Article 6 of Decision 2016/15/MC-EnC.

ANNEX I

EQUIVALENT EMISSION VALUES FOR EMISSION ABATEMENT METHODS AS REFERRED TO IN ARTICLE 8(2)

Marine fuel sulphur limits referred to in Articles 6 and 7 of this Directive and Regulations 14.1 and 14.4 of Annex VI to MARPOL and corresponding emission values referred to in Article 8(2):

Marine fuel Sulphur Content (% m/m)	Ratio Emission SO₂ (ppm)/CO₂ (% v/v)
3,50	151,7
1,50	65,0
1,00	43,3
0,50	21,7
0,10	4,3

Note:

- the use of the Ratio Emissions limits is only applicable when using petroleum-based distillate or residual fuel oils,
- in justified cases where the CO₂ concentration is reduced by the exhaust gas cleaning (EGC) unit, the CO₂ concentration may be measured at the EGC unit inlet, provided that the correctness of such a methodology can be clearly demonstrated.

ANNEX II

CRITERIA FOR THE USE OF EMISSION ABATEMENT METHODS AS REFERRED TO IN ARTICLE 8(4)

The emission abatement methods referred to in Article 8 shall comply at least with the criteria specified in the following instruments, as applicable:

Emission abatement method	Criteria for use
Mixture of marine fuel and boil-off gas	Commission Decision 2010/769/EU. ¹³
Exhaust gas cleaning systems	Resolution MEPC.184(59) adopted on 17 July 2009 Washwater resulting from exhaust gas cleaning systems which make use of chemicals, additives, preparations and relevant chemicals created <i>in situ</i> , referred to in point 10.1.6.1 of Resolution MEPC.184(59), shall not be discharged into the sea, including enclosed ports, harbours and estuaries, unless it is demonstrated by the ship operator that such washwater discharge has no significant negative impacts on and does not pose risks to human health and the environment. If the chemical used is caustic soda it is sufficient that the washwater meets the criteria set out in Resolution MEPC.184(59) and its pH does not exceed 8,0.
Biofuels	Use of biofuels as defined in Directive 2009/28/EC of the European Parliament and of the Council ¹⁴ that comply with the relevant CEN and ISO standards. The mixtures of biofuels and marine fuels shall comply with the sulphur standards set out in Article 5, Article 6(1), (2) and (5) and Article 7 of this Directive.

¹³ Commission Decision 2010/769/EU of 13 December 2010 on the establishment of criteria for the use by liquefied natural gas carriers of technological methods as an alternative to using low sulphur marine fuels meeting the requirements of Article 4b of Council Directive 1999/32/EC relating to a reduction in the sulphur content of certain liquid fuels as amended by Directive 2005/33/EC of the European Parliament and of the Council on the sulphur content of marine fuels (OJ L328, 14.12.2010, p. 15).

¹⁴ Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC (OJ L140, 5.6.2009, p. 16).



DIRECTIVE 2001/80/EC of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants

Adapted by Ministerial Council Decision 2013/05/MC-EnC of 24 October 2013 on the implementation of Directive 2001/80/EC of the European Parliament and of the Council of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants.¹

*The adaptations made by Ministerial Council Decision 2013/05/MC-EnC are highlighted in **bold and blue**.*

Article 1

This Directive shall apply to combustion plants, the rated thermal input of which is equal to or greater than 50 MW, irrespective of the type of fuel used (solid, liquid or gaseous).

Article 2

For the purpose of this Directive:

1. "emission" means the discharge of substances from the combustion plant into the air;
2. "waste gases" means gaseous discharges containing solid, liquid or gaseous emissions; their volumetric flow rates shall be expressed in cubic metres per hour at standard temperature (273 K) and pressure (101,3 kPa) after correction for the water vapour content, hereinafter referred to as (Nm³/h);
3. "emission limit value" means the permissible quantity of a substance contained in the waste gases from the combustion plant which may be discharged into the air during a given period; it shall be calculated in terms of mass per volume of the waste gases expressed in mg/Nm³, assuming an oxygen content by volume in the waste gas of 3% in the case of liquid and gaseous fuels, 6% in the case of solid fuels and 15% in the case of gas turbines;
4. "rate of desulphurisation" means the ratio of the quantity of sulphur which is not emitted into the air at the combustion plant site over a given period to the quantity of sulphur contained in the fuel which is introduced into the combustion plant facilities and which is used over the same period;
5. "operator" means any natural or legal person who operates the combustion plant, or who has or has been delegated decisive economic power over it;
6. "fuel" means any solid, liquid or gaseous combustible material used to fire the combustion plant with the exception of waste covered by Council Directive 89/369/EEC of 8 June 1989 on the prevention of air pollution from new municipal waste incineration plants, Council Directive 89/429/EEC of 21 June 1989 on the reduction of air pollution from existing municipal waste incineration plants, and Council Directive 94/67/EC of 16 December 1994 concerning the incineration of hazardous waste or any subsequent Community act repealing and replacing one or more of these Directives;

¹ Ministerial Council Decision 2013/05/MC-EnC was subsequently amended by Ministerial Council Decision 2015/07/ C-EnC on amending Decision D/2013/05/MC-EnC of 24 October 2013 on the implementation of Directive 2001/80/EC of the European Parliament and of the Council on the limitation of emissions of certain pollutants into the air from large combustion plants and on amending Annex II of the Energy Community Treaty.

7. "combustion plant" means any technical apparatus in which fuels are oxidised in order to use the heat thus generated.

This Directive shall apply only to combustion plants designed for production of energy with the exception of those which make direct use of the products of combustion in manufacturing processes. In particular, this Directive shall not apply to the following combustion plants:

- (a) plants in which the products of combustion are used for the direct heating, drying, or any other treatment of objects or materials e.g. reheating furnaces, furnaces for heat treatment;
- (b) post-combustion plants i.e. any technical apparatus designed to purify the waste gases by combustion which is not operated as an independent combustion plant;
- (c) facilities for the regeneration of catalytic cracking catalysts;
- (d) facilities for the conversion of hydrogen sulphide into sulphur;
- (e) reactors used in the chemical industry;
- (f) coke battery furnaces;
- (g) cowpers;
- (h) any technical apparatus used in the propulsion of a vehicle, ship or aircraft;
- (i) gas turbines used on offshore platforms;
- (j) gas turbines licensed before 27 November 2002 or which in the view of the competent authority are the subject of a full request for a licence before 27 November 2002 provided that the plant is put into operation no later than 27 November 2003 without prejudice to Article 7(1) and Annex VIII(A) and (B);

Plants powered by diesel, petrol and gas engines shall not be covered by this Directive.

Where two or more separate new plants are installed in such a way that, taking technical and economic factors into account, their waste gases could, in the judgement of the competent authorities, be discharged through a common stack, the combination formed by such plants shall be regarded as a single unit;

8. "multi-fuel firing unit" means any combustion plant which may be fired simultaneously or alternately by two or more types of fuel;

9. "new plant" means any combustion plant for which the original construction licence or, in the absence of such a procedure, the original operating licence was granted on or after **1 July 1992**;

10. "existing plant" means any combustion plant for which the original construction licence or, in the absence of such a procedure, the original operating licence was granted before **1 July 1992**;

11. "biomass" means products consisting of any whole or part of a vegetable matter from agriculture or forestry which can be used as a fuel for the purpose of recovering its energy content and the following waste used as a fuel:

- (a) vegetable waste from agriculture and forestry;
- (b) vegetable waste from the food processing industry, if the heat generated is recovered;
- (c) fibrous vegetable waste from virgin pulp production and from production of paper from pulp, if it is co-incinerated at the place of production and the heat generated is recovered;
- (d) cork waste;
- (e) wood waste with the exception of wood waste which may contain halogenated organic compounds or

heavy metals as a result of treatment with wood preservatives or coating, and which includes in particular such wood waste originating from construction and demolition waste;

12. “gas turbine” means any rotating machine which converts thermal energy into mechanical work, consisting mainly of a compressor, a thermal device in which fuel is oxidised in order to heat the working fluid, and a turbine.

13. “Outermost Regions” means the French Overseas Departments with regard to France, the Azores and Madeira with regard to Portugal and the Canary Islands with regard to Spain.

Article 3

1. Not later than 1 July 1990 **Contracting Parties** shall draw up appropriate programmes for the progressive reduction of total annual emissions from existing plants. The programmes shall set out the timetables and the implementing procedures.

2. In accordance with the programmes mentioned in paragraph 1, **Contracting Parties** shall continue to comply with the emission ceilings and with the corresponding percentage reductions laid down for sulphur dioxide in Annex I, columns 1 to 6, and for oxides of nitrogen in Annex II, columns 1 to 4, by the dates specified in those Annexes, until the implementation of the provisions of Article 4 that apply to existing plants.

3. When the programmes are being carried out, **Contracting Parties** shall also determine the total annual emissions in accordance with Annex VIII(C).

4. If a substantial and unexpected change in energy demand or in the availability of certain fuels or certain generating installations creates serious technical difficulties for the implementation by a **Contracting Party** of its programme drawn up under paragraph 1, the **Secretariat** shall, at the request of the **Contracting Party** concerned and taking into account the terms of the request, take a decision to modify, for that Contracting Party, the emission ceilings and/or the dates set out in Annexes I and II and communicate its decision to the Council and to the **Contracting Parties**. Any **Contracting Party** may within three months refer the decision of the **Secretariat** to the Council. The Council, acting by a qualified majority, may within three months take a different decision.

Article 4

1. Without prejudice to Article 17 **Contracting Parties** shall take appropriate measures to ensure that all licences for the construction or, in the absence of such a procedure, for the operation of new plants which in the view of the competent authority are the subject of a full request for a licence before 27 November 2002, provided that the plant is put into operation no later than 27 November 2003 contain conditions relating to compliance with the emission limit values laid down in part A of Annexes III to VII in respect of sulphur dioxide, nitrogen oxides and dust.

2. **Contracting Parties** shall take appropriate measures to ensure that all licences for the construction or, in the absence of such a procedure, for the operation of new plants, other than those covered by paragraph 1, contain conditions relating to compliance with the emission limit values laid down in part B

of Annexes III to VII in respect of sulphur dioxide, nitrogen oxides and dust.

3. Without prejudice to Directive 96/61/EC and Council Directive 96/62/EC of 27 September 1996 on ambient air quality assessment and management, **Contracting Parties** shall, by **1 January 2018** at the latest, achieve significant emission reductions by:

(a) taking appropriate measures to ensure that all licences for the operation of existing plants contain conditions relating to compliance with the emission limit values established for new plants referred to in paragraph 1; or

(b) ensuring that existing plants are subject to the national emission reduction plan referred to in paragraph 6; and, where appropriate, applying Articles 5, 7 and 8.

4. With the exception of plants for which a date of closure prior to 1 January 2018 has been agreed by the authorities via bilateral agreements with the European Union or other international organisations, existing plants may be exempted from compliance with the emission limit values referred to in paragraph 3 and from their inclusion in the national emission reduction plan on the following conditions:

(a) the operator of an existing plant undertakes, in a written declaration submitted by 31 December 2015 at the latest to the competent authority, not to operate the plant for more than 20 000 operational hours starting from 1 January 2018 and ending no later than 31 December 2023;

(b) the Ministerial Council, in the form of a decision and following a verification by the Secretariat that the above conditions are met, authorizes this exemption in the form of a decision approved by the majority of its members including a vote in favour by the European Union.

The operator is required to submit each year to the competent authority a record of the used and unused time allowed for the plants' remaining operational life. Contracting Parties are required to submit each year a summary of these reports to the Secretariat.

From the point in time when the plant has been operating for 20 000 hours since 1 January 2018 and in any case from 1 January 2024 onwards, the plant shall not be operated further unless it meets the emission limit values set out in Part 2 of Annex V to Directive 2010/75/ EU.²

5. **Contracting Parties** may require compliance with emission limit values and time limits for implementation which are more stringent than those set out in paragraphs 1, 2, 3 and 4 and in Article

10. They may include other pollutants, and they may impose additional requirements or adaptation of plant to technical progress.

6. **Contracting Parties** may, without prejudice to this Directive and Directive 96/61/EC, and taking into consideration the costs and benefits as well as their obligations under Directive 2001/81/EC of the European Parliament and of the Council of 23 October 2001 on national emission ceilings for certain atmospheric pollutants and Directive 96/62/EC, define and implement a national emission reduction plan for existing plants, taking into account, *inter alia*, compliance with the ceilings as set out in Annexes I and II.

The national emission reduction plan shall reduce the total annual emissions of nitrogen oxides (NO_x), sulphur dioxide (SO₂) and dust from existing plants to the levels that would have been achieved by applying the emission limit values referred to in paragraph 3 to the existing plants in operation in the year **2012**, (including those existing plants undergoing a rehabilitation plan in **2012**, approved by the competent authority,

² The text displayed here corresponds to Article 4 of Decision 2013/05/MC-EnC.

to meet emission reductions required by national legislation) on the basis of each plant's actual annual operating time, fuel used and thermal input, averaged over the last five years of operation up to and including **2012**.

The closure of a plant included in the national emission reduction plan shall not result in an increase in the total annual emissions from the remaining plants covered by the plan.

The national emission reduction plan may under no circumstances exempt a plant from the provisions laid down in relevant Community legislation, including *inter alia* Directive 96/61/EC.

The following conditions shall apply to national emission reduction plans:

(a) the plan shall comprise objectives and related targets, measures and timetables for reaching these objectives and targets, and a monitoring mechanism;

(b) **Contracting Parties** shall communicate their national emission reduction plan to the **Secretariat** no later than **31 December 2015**;

(c) within **nine** months of the communication referred to in point (b) the **Secretariat** shall evaluate whether or not the plan meets the requirements of this paragraph. When the **Secretariat** considers that this is not the case, it shall inform the **Contracting Party** and within the subsequent three months the **Contracting Party** shall communicate any measures it has taken in order to ensure that the requirements of this paragraph are met;

(d) the **Secretariat** shall, no later than 27 November 2002, develop guidelines to assist **Contracting Parties** in the preparation of their plans.

National emission reduction plans shall be in use up to 31 December 2027 at the latest.

The ceilings for the year 2018 shall be calculated on the basis of the applicable emission limit values at the time of submission of the plan as set out in Part A to Annexes III to VII to Directive 2001/80/EC or, where applicable, on the basis of the rates of desulphurisation set out in Annex III to Directive 2001/80/EC. In the case of gas turbines, the emission limit values for nitrogen oxides set out for such plants in Part B of Annex VI to Directive 2001/80/EC shall be used.

The ceilings for the year 2023 shall be calculated on the basis of the applicable emission limit values in that year set out in Part A to Annexes III to VII to Directive 2001/80/EC or, where applicable, on the basis of the rates of desulphurisation set out in Annex III to Directive 2001/80/EC. In the case of gas turbines, the emission limit values for nitrogen oxides set out for such plants in Part B of Annex VI to Directive 2001/80/EC shall be used. The ceilings for the years 2019 to 2022 shall be set providing a linear trend between the ceilings of 2018 and 2023.

The ceilings for the year 2026 and 2027 shall be calculated on the basis of the relevant emission limit values set out in Part 1 of Annex V to Directive 2010/75/EU or, where applicable, the relevant rates of desulphurisation set out in Part 5 of Annex V to Directive 2010/75/EU. The ceilings for the years 2024 and 2025 shall be set providing a linear decrease of the ceilings between 2023 and 2026.³

³ The text displayed here corresponds to Article 5(4) of Decision 2013/05/MC-EnC. According to Article 2 of Decision 2015/07/MC-EnC, "As regards Ukraine, <...> [a] national emission reduction plan shall be in use up to 31 December 2028 at the latest for SO₂ and dust and up to 31 December 2033 for NO_x."

The ceilings for the 2018 shall not be higher than the emissions for the year 2012 from the plants concerned, while taking into account all emission reduction measures that are foreseen to be realised by 2018.

The ceilings for the year 2028 for SO₂ and dust and the ceiling for the year 2033 for NO_x shall be calculated on the basis of the relevant emission limit values set out in Part 1 of Annex V to Directive 2010/75/EU or, where applicable, the relevant rates of desulphurisation set out in Part 5 of Annex V to Directive 2010/75/EU.

The ceilings for the intermediate years shall be set providing a linear decrease of the ceilings between 2018 on the one hand, and 2028 (for SO₂ and dust) or 2033 (for NO_x) on the other."

7. Not later than 31 December 2004 and in the light of progress towards protecting human health and attaining the Community's environmental objectives for acidification and for air quality pursuant to Directive 96/62/EC, the **Secretariat** shall submit a report to the European Parliament and the Council in which it shall assess:

- (a) the need for further measures;
- (b) the amounts of heavy metals emitted by large combustion plants;
- (c) the cost-effectiveness and costs and advantages of further emission reductions in the combustion plants sector in **Contracting Parties** compared to other sectors;
- (d) the technical and economic feasibility of such emission reductions;
- (e) the effects of both the standards set for the large combustion plants sector including the provisions for indigenous solid fuels, and the competition situation in the energy market, on the environment and the internal market;
- (f) any national emission reduction plans provided by **Contracting Parties** in accordance with paragraph 6.

The **Secretariat** shall include in its report an appropriate proposal of possible end dates or of lower limit values for the derogation contained in footnote 2 to Annex VI(A).

8. The report referred to in paragraph 7 shall, as appropriate, be accompanied by related proposals, having regard to Directive 96/61/EC.

Article 5

By way of derogation from Annex III:

1. Plants, of a rated thermal input equal to or greater than 400 MW, which do not operate more than the following numbers of hours a year (rolling average over a period of five years),

- until 31 December 2015, 2000 hours;
- from 1 January 2016, 1500 hours;

shall be subject to a limit value for sulphur dioxide emissions of 800 mg/Nm³.

This provision shall not apply to new plants for which the licence is granted pursuant to Article 4(2).

2. Until 31 December 1999, the Kingdom of Spain may authorise new power plants with a rated thermal input equal to or greater than 500 MW burning indigenous or imported solid fuels, commissioned before the end of 2005 and complying with the following requirements:

- (a) in the case of imported solid fuels, a sulphur dioxide emission limit value of 800 mg/Nm³;
- (b) in the case of indigenous solid fuels, at least a 60% rate of desulphurisation,

provided that the total authorised capacity of such plants to which this derogation applies does not exceed:

- 2000 MWe in the case of plants burning indigenous solid fuels;
- in the case of plants burning imported solid fuels either 7500 or 50% of all the new capacity of all plants burning solid fuels authorised up to 31 December 1999, whichever is the lower.

Article 6

In the case of new plants for which the licence is granted pursuant to Article 4(2) or plants covered by Article 10, Contracting Parties shall ensure that the technical and economic feasibility of providing for the combined generation of heat and power is examined. Where this feasibility is confirmed, bearing in mind the market and the distribution situation, installations shall be developed accordingly.

Article 7

1. Contracting Parties shall ensure that provision is made in the licences or permits referred to in Article 4 for procedures relating to malfunction or breakdown of the abatement equipment. In case of a breakdown the competent authority shall in particular require the operator to reduce or close down operations if a return to normal operation is not achieved within 24 hours, or to operate the plant using low polluting fuels. In any case the competent authority shall be notified within 48 hours. In no circumstances shall the cumulative duration of unabated operation in any twelve-month period exceed 120 hours. The competent authority may allow exceptions to the limits of 24 hours and 120 hours above in cases where, in their judgement:

- (a) there is an overriding need to maintain energy supplies, or
- (b) the plant with the breakdown would be replaced for a limited period by another plant which would cause an overall increase in emissions.

2. The competent authority may allow a suspension for a maximum of six months from the obligation to comply with the emission limit values provided for in Article 4 for sulphur dioxide in respect of a plant which to this end normally uses low-sulphur fuel, in cases where the operator is unable to comply with these limit values because of an interruption in the supply of low-sulphur fuel resulting from a serious shortage. The **Secretariat** shall immediately be informed of such cases.

3. The competent authority may allow a derogation from the obligation to comply with the emission limit values provided for in Article 4 in cases where a plant which normally uses only gaseous fuel, and which would otherwise need to be equipped with a waste gas purification facility, has to resort exceptionally, and for a period not exceeding 10 days except where there is an overriding need to maintain energy supplies, to the use of other fuels because of a sudden interruption in the supply of gas. The competent authority shall immediately be informed of each specific case as it arises. **Contracting Parties** shall inform the **Secretariat** immediately of the cases referred to in this paragraph.

Article 8

1. In the case of plants with a multi-firing unit involving the simultaneous use of two or more fuels, when granting the licence referred to in Articles 4(1) or 4(2), and in the case of such plants covered by Articles 4(3) or 10, the competent authority shall set the emission limit values as follows:

- (a) firstly by taking the emission limit value relevant for each individual fuel and pollutant corresponding to the rated thermal input of the combustion plant as given in Annexes III to VII,
- (b) secondly by determining fuel-weighted emission limit values, which are obtained by multiplying the

above individual emission limit value by the thermal input delivered by each fuel, the product of multiplication being divided by the sum of the thermal inputs delivered by all fuels,

(c) thirdly by aggregating the fuel-weighted limit values.

2. In multi-firing units using the distillation and conversion residues from crude-oil refining for own consumption, alone or with other fuels, the provisions for the fuel with the highest emission limit value (determinative fuel) shall apply, notwithstanding paragraph 1 above, if during the operation of the combustion plant the proportion contributed by that fuel to the sum of the thermal inputs delivered by all fuels is at least 50%.

Where the proportion of the determinative fuel is lower than 50%, the emission limit value is determined on a pro rata basis of the heat input supplied by the individual fuels in relation to the sum of the thermal inputs delivered by all fuels as follows:

(a) firstly by taking the emission limit value relevant for each individual fuel and pollutant corresponding to the rated heat input of the combustion plant as given in Annexes III to VII,

(b) secondly by calculating the emission limit value of the determinative fuel (fuel with the highest emission limit value according to Annexes III to VII and, in the case of two fuels having the same emission limit value, the fuel with the higher thermal input); this value is obtained by multiplying the emission limit value laid down in Annexes III to VII for that fuel by a factor of two, and subtracting from this product the emission limit value of the fuel with the lowest emission limit value,

(c) thirdly by determining the fuel-weighted emission limit values, which are obtained by multiplying the calculated fuel emission limit value by the thermal input of the determinative fuel and the other individual emission limit values by the thermal input delivered by each fuel, the product of multiplication being divided by the sum of the thermal inputs delivered by all fuels,

(d) fourthly by aggregating the fuel-weighted emission limit values.

3. As an alternative to paragraph 2, the following average emission limit values for sulphur dioxide may be applied (irrespective of the fuel combination used):

(a) for plants referred to in Article 4(1) and (3): 1000 mg/Nm³, averaged over all such plants within the refinery;

(b) for new plants referred to in Article 4(2): 600 mg/Nm³, averaged over all such plants within the refinery, with the exception of gas turbines.

The competent authorities shall ensure that the application of this provision does not lead to an increase in emissions from existing plants.

4. In the case of plants with a multi-firing unit involving the alternative use of two or more fuels, when granting the licence referred to in Article 4(1) and (2), and in the case of such plants covered by Articles 4(3) or 10, the emission limit values set out in Annexes III to VII corresponding to each fuel used shall be applied.

Article 9

Waste gases from combustion plants shall be discharged in controlled fashion by means of a stack. The licence referred to in Article 4 and licences for combustion plants covered by Article 10 shall lay down the discharge conditions. The competent authority shall in particular ensure that the stack height is calculated in such a way as to safeguard health and the environment.

Article 10

Where a combustion plant is extended by at least 50 MW, the emission limit values as set in part B of Annexes III to VII shall apply to the new part of the plant and shall be fixed in relation to the thermal capacity of the entire plant. This provision shall not apply in the cases referred to in Article 8(2) and (3).

Where the operator of a combustion plant is envisaging a change according to Articles 2(10)(b) and 12(2) of Directive 96/61/EC, the emission limit values as set out in part B of Annexes III to VII in respect of sulphur dioxide, nitrogen oxides and dust shall apply.

Article 11

In the case of construction of combustion plants which are likely to have significant effects on the environment in another **Contracting Party**, the **Contracting Parties** shall ensure that all appropriate information and consultation takes place, in accordance with Article 7 of Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment.

Article 12

Contracting Parties shall take the necessary measures to ensure the monitoring, in accordance with Annex VIII(A), of emissions from the combustion plants covered by this Directive and of all other values required for the implementation of this Directive. **Contracting Parties** may require that such monitoring shall be carried out at the operator's expense.

Article 13

Contracting Parties shall take appropriate measures to ensure that the operator informs the competent authorities within reasonable time limits about the results of the continuous measurements, the checking of the measuring equipment, the individual measurements and all other measurements carried out in order to assess compliance with this Directive.

Article 14

1. In the event of continuous measurements, the emission limit values set out in part A of Annexes III to VII shall be regarded as having been complied with if the evaluation of the results indicates, for operating hours within a calendar year, that:

(a) none of the calendar monthly mean values exceeds the emission limit values; and

(b) in the case of:

(i) sulphur dioxide and dust: 97% of all the 48 hourly mean values do not exceed 110% of the emis-

sion limit values,

(ii) nitrogen oxides: 95% of all the 48 hourly mean values do not exceed 110% of the emission limit values.

The periods referred to in Article 7 as well as start-up and shut-down periods shall be disregarded.

2. In cases where only discontinuous measurements or other appropriate procedures for determination are required, the emission limit values set out in Annexes III to VII shall be regarded as having been complied with if the results of each of the series of measurements or of the other procedures defined and determined according to the rules laid down by the competent authorities do not exceed the emission limit values.

3. In the cases referred to in Article 5(2) and (3), the rates of desulphurisation shall be regarded as having been complied with if the evaluation of measurements carried out pursuant to Annex VIII, point A.3, indicates that all of the calendar monthly mean values or all of the rolling monthly mean values achieve the required desulphurisation rates.

The periods referred to in Article 7 as well as start-up and shut-down periods shall be disregarded.

4. For new plants for which the licence is granted pursuant to Article 4(2), the emission limit values shall be regarded, for operating hours within a calendar year, as complied with if:

- (a) no validated daily average value exceeds the relevant figures set out in part B of Annexes III to VII, and
- (b) 95% of all the validated hourly average values over the year do not exceed 200% of the relevant figures set out in part B of Annexes III to VII.

The "validated average values" are determined as set out in point A.6 of Annex VIII.

The periods referred to in Article 7 as well as start up and shut down periods shall be disregarded.

Article 15

1. **Contracting Parties** shall, not later than 31 December 1990, inform the **Secretariat** of the programmes drawn up in accordance with Article 3(1).

At the latest one year after the end of the different phases for reduction of emissions from existing plants, the **Contracting Parties** shall forward to the **Secretariat** a summary report on the results of the implementation of the programmes.

An intermediate report is required as well in the middle of each phase.

2. The reports referred to in paragraph 1 shall provide an overall view of:

- (a) all the combustion plants covered by this Directive,
- (b) emissions of sulphur dioxide, and oxides of nitrogen expressed in tonnes per annum and as concentrations of these substances in the waste gases,
- (c) measures already taken or envisaged with a view to reducing emissions, and of changes in the choice of fuel used,
- (d) changes in the method of operation already made or envisaged,
- (e) definitive closures of combustion plants already effected or envisaged, and
- (f) where appropriate, the emission limit values imposed in the programmes in respect of existing plants.

When determining the annual emissions and concentrations of pollutants in the waste gases, **Contracting Parties** shall take account of Articles 12, 13 and 14.

3. **Contracting Parties** applying Article 5 or the provisions of the Nota Bene in Annex III or the footnotes in Annex VI(A) shall report thereon annually to the **Secretariat**.

Article 16

The Contracting Parties shall determine the penalties applicable to breaches of the national provisions adopted pursuant to this Directive. The penalties thus provided for shall be effective, proportionate and dissuasive.

Article 17

1. Directive 88/609/EEC shall be repealed with effect from 27 November 2002, without prejudice to paragraph 2 or to the obligations of **Contracting Parties** concerning the time limits for transposition and application of that Directive listed in Annex IX hereto.

2. In the case of new plants licensed before 27 November 2002 Article 4(1) of this Directive, Article 4(1), Article 5(2), Article 6, Article 15(3), Annexes III, VI, VIII and point A.2 of Annex IX to Directive 88/609/EEC as amended by Directive 94/66/EC shall remain in effect until 1 January 2008 after which they shall be repealed.

3. References to Directive 88/609/EEC shall be construed as references to this Directive and shall be read in accordance with the correlation table in Annex X hereto.

Article 18

1. **Contracting Parties** shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive before 31 December 2017.^{4,5} They shall forthwith inform the **Secretariat** thereof.

When **Contracting Parties** adopt these provisions, they shall contain a reference to this Directive or shall be accompanied by such reference on the occasion of their official publication. The methods of making such reference shall be laid down by **Contracting Parties**.

2. For existing plant, and for new plant for which a licence is granted pursuant to Article 4(1), the provisions of point A.2 of Annex VIII shall be applied from 27 November 2004.

3. **Contracting Parties** shall communicate to the Secretariat the texts of the provisions of national law which they adopt in the field covered by this Directive.

⁴ The text displayed here corresponds to point 3 of Annex II of the Energy Community Treaty.

⁵ In accordance with the Accession Protocol, the corresponding date for Georgia is 31 December 2018.

Article 19

This Decision shall enter into force upon its adoption by the Ministerial Council.⁶

Article 20

This Directive is addressed to the **Contracting Parties**.

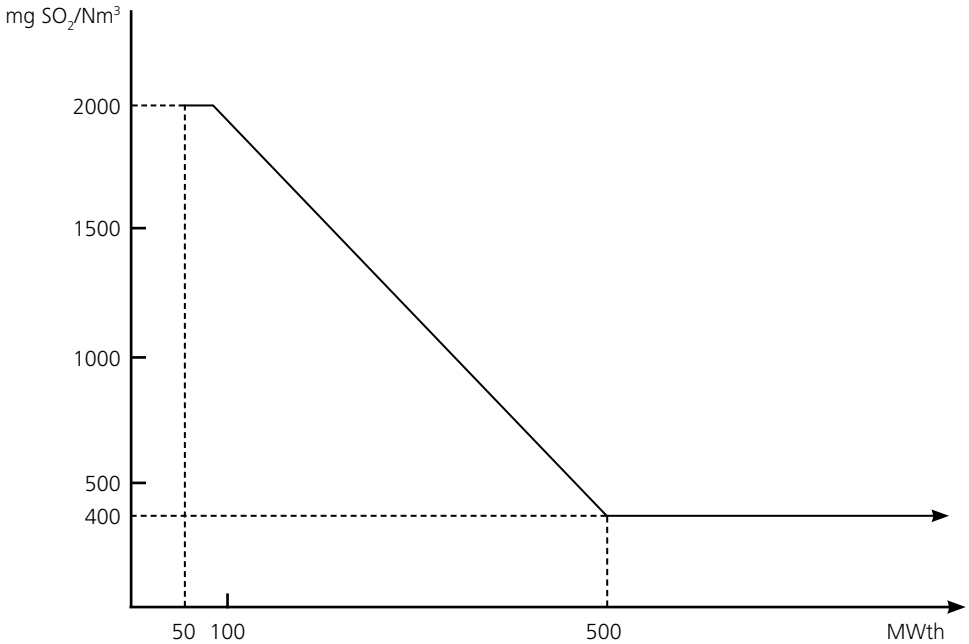
⁶ The text displayed here corresponds to Article 8 of Decision 2013/05/MC-EnC.

ANNEX III

EMISSION LIMIT VALUES FOR SO₂

Solid fuel

A. SO₂ emission limit values expressed in mg/Nm³ (O content 6%) to be applied by new and existing plants pursuant to Article 4(1) and 4(3) respectively:



NB Where the emission limit values above cannot be met due to the characteristics of the fuel, a rate of desulphurisation of at least 60% shall be achieved in the case of plants with a rated thermal input of less than or equal to 100 MW_{th}, 75% for plants greater than 100 MW_{th} and less than or equal to 300 MW_{th} and 90% for plants greater than 300 MW_{th}. For plants greater than 500 MW_{th}, a desulphurisation rate of at least 94% shall apply or of at least 92% where a contract for the fitting of flue gas desulphurisation or lime injection equipment has been entered into, and work on its installation has commenced, before 1 January 2001.

B. SO₂ emission limit values expressed in mg/Nm³ (O content 6%) to be applied by new plants pursuant to Article 4(2) with the exception of gas turbines.

Type of fuel	50 to 100 MWth	50 to 100 MWth	> 300 MWth
Biomass	200	200	200
General case	850	200 ⁽¹⁾	200

⁽¹⁾ Except in the case of the 'Outermost Regions' where 850 to 200 mg/Nm³ (linear decrease) shall apply.

NB Where the emission limit values above cannot be met due to the characteristics of the fuel, installations shall achieve 300 mg/Nm³ SO₂, or a rate of desulphurisation of at least 92% shall be achieved in the case of plants with a rated thermal input of less than or equal to 300 MWth and in the case of plants with a rated thermal input greater than 300 MWth a rate of desulphurisation of at least 95% together with a maximum permissible emission limit value of 400 mg/Nm³ shall apply.

ANNEX I

CEILINGS AND REDUCTION TARGETS FOR EMISSIONS OF SO₂ FROM EXISTING PLANTS^{1,2}

	0	1	2	3	4	5	6	7	8	9
Member State	SO ₂ emissions by large combustion plants 1980 ktonnes	Emission ceiling (ktonnes/year)			% reduction over 1980 emissions			% reduction over adjusted 1980 emissions		
		Phase 1	Phase 2	Phase 3	Phase 1	Phase 2	Phase 3	Phase 1	Phase 2	Phase 3
		1993	1998	2003	1993	1998	2003	1993	1998	2003
Belgium	530	318	212	159	- 40	- 60	- 70	- 40	- 60	- 70
Denmark	323	213	141	106	- 34	- 56	- 67	- 40	- 60	- 70
Germany	2225	1335	890	668	- 40	- 60	- 70	- 40	- 60	- 70
Greece	303	320	320	320	+ 6	+ 6	+ 6	- 45	- 45	- 45
Spain	2290	2290	1730	1440	0	- 24	- 37	- 21	- 40	- 50
France	1910	1146	764	573	- 40	- 60	- 70	- 40	- 60	- 70
Ireland	99	124	124	124	+ 25	+ 25	+ 25	- 29	- 29	- 29
Italy	2450	1800	1500	900	- 27	- 39	- 63	- 40	- 50	- 70
Luxembourg	30	1.8	1.5	1.5	- 40	- 50	- 60	- 40	- 50	- 50
Netherlands	299	180	120	90	- 40	- 60	- 70	- 40	- 60	- 70
Portugal	115	232	270	206	+ 102	+ 135	+ 79	- 25	- 13	- 34
United Kingdom	3883	3106	2330	1553	- 20	- 40	- 60	- 20	- 40	- 60
Austria	90	54	36	27	- 40	- 60	- 70	- 40	- 60	- 70
Finland	171	102	68	51	- 40	- 60	- 70	- 40	- 60	- 70
Sweden	112	67	45	34	- 40	- 60	- 70	- 40	- 60	- 70

¹ Additional emissions may arise from capacity authorised on or after 1 July 1987.

² Emissions coming from combustion plants authorised before 1 July 1987 but not yet in operation before that date and which have not been taken into account in establishing the emission ceilings fixed by this Annex shall either comply with the requirements established by this Directive for new plants or be accounted for in the overall emissions from existing plants that must not exceed the ceilings fixed in this Annex.

ANNEX II
CEILINGS AND REDUCTION TARGETS FOR EMISSIONS OF NO_x
FROM EXISTING PLANTS^{1,2}

Member State	0	1	2	4	5	7	8
	NO _x emissions (as NO ₂) by large combustion plants 1980 ktonnes	NO _x emission ceilings (ktonnes/year)		% reduction over 1980 emissions		% reduction over adjusted 1980 emissions	
		Phase 1 1993(*)	Phase 2 1998	Phase 1 1993(*)	Phase 2 1998	Phase 1 1993(*)	Phase 2 1998
Belgium	110	88	66	- 20	- 40	- 20	- 40
Denmark	124	121	81	- 3	- 35	- 10	- 40
Germany	870	696	522	- 20	- 40	- 20	- 40
Greece	36	70	70	+ 94	+ 94	0	0
Spain	366	368	277	+ 1	- 24	- 20	- 40
France	400	320	240	- 20	- 40	- 20	- 40
Ireland	28	50	50	+ 79	+ 79	0	0
Italy	580	570	428	- 2	- 26	- 20	- 40
Luxembourg	3	2.4	1.8	- 20	- 40	- 20	- 40
Netherlands	122	98	73	- 20	- 40	- 20	- 40
Portugal	23	59	64	+ 157	+ 178	- 8	0
United Kingdom	1016	864	711	- 15	- 30	- 15	- 30
Austria	19	15	11	- 20	- 40	- 20	- 40
Finland	81	65	48	- 20	- 40	- 20	- 40
Sweden	31	25	19	- 20	- 40	- 20	- 40

(*) Member States may for technical reasons delay for up to two years the phase 1 date for reduction in NO emissions by notifying the Commission within one month of the notification of the Directive.

¹ Additional emissions may arise from capacity authorised on or after 1 July 1987.

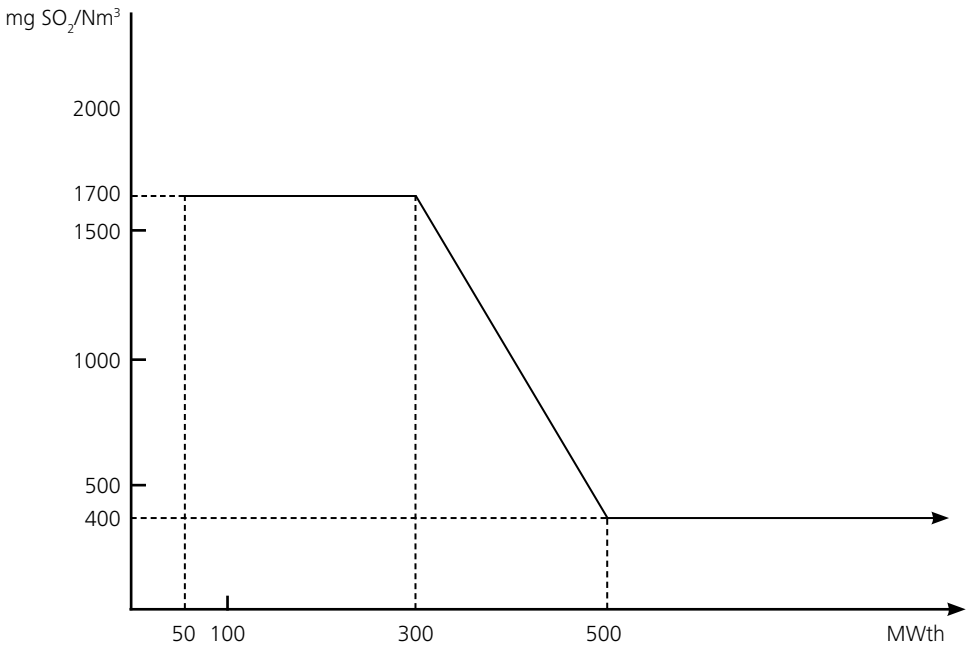
² Emissions coming from combustion plants authorised before 1 July 1987 but not yet in operation before that date and which have not been taken into account in establishing the emission ceilings fixed by this Annex shall either comply with the requirements established by this Directive for new plants or be accounted for in the overall emissions from existing plants that must not exceed the ceilings fixed in this Annex.

ANNEX IV

EMISSION LIMIT VALUES FOR SO₂

Liquid fuels

A. SO₂ emission limit values expressed in mg/Nm³ (O₂ content 3%) to be applied by new and existing plants pursuant to Article 4(1) and 4(3), respectively:



B. SO₂ emission limit values expressed in mg/Nm³ (O₂ content 3%) to be applied by new plants pursuant to Article 4(2) with the exception of gas turbines

50 to 100 MWth	100 to 300 MWth	> 300 MWth
850	400 to 200 (linear decrease) ⁽¹⁾	200

⁽¹⁾ Except in the case of the 'Outermost Regions' where 850 to 200 mg/Nm³ (linear decrease) shall apply.

In the case of two installations with a rated thermal input of 250 MWth on Crete and Rhodos to be licensed before 31 December 2007 the emission limit value of 1700 mg/Nm³ shall apply.

ANNEX V

EMISSION LIMIT VALUES FOR SO₂

Gaseous fuels

A. SO₂ emission limit values expressed in mg/Nm³ (O₂ content 3%) to be applied by new and existing plants pursuant to Article 4(1) and 4(3), respectively:

Type of fuel	Limit values (mg/Nm ³)
Gaseous fuels in general	35
Liquefied gas	5
Low caloric gases from gasification of refinery residues coke oven gas, blast-furnace gas	800
Gas from gasification of coal	(1)

⁽¹⁾ The Council will fix the emission limit values applicable to such gas at a later stage on the basis of proposals from the Commission to be made in the light of further technical experience.

B. SO₂ emission limit values expressed in mg/Nm³ (O₂ content 3%) to be applied by new plants pursuant to Article 4(2):

Gaseous fuels in general	35
Liquefied gas	5
Low calorific gases from coke oven	400
Low calorific gases from blast furnace	200

ANNEX VI

EMISSION LIMIT VALUES FOR NO_x (MEASURED AS NO₂)

A. NO_x emission limit values expressed in mg/Nm³ (O₂ content 6% for solid fuels, 3% for liquid and gaseous fuels) to be applied by new and existing plants pursuant to Article 4(1) and 4(3), respectively:

Type of fuel	Limit values ⁽¹⁾ (mg/Nm ³)
Solid ^{(2), (3)} : 50 to 500 MWth: >500 MWth	600 500
Solid ^{(2), (3)} : 50 to 500 MWth: >500 MWth	600 200
Liquid: 50 to 500 MWth: >500 MWth:	400 450
Gaseous: 50 to 500 MWth: >500 MWth:	300 200

⁽¹⁾ Except in the case of the 'Outermost Regions' where the following values shall apply:

Solid in general: 650

Solid with < 10% vol comps: 1300 Liquid: 450

Gaseous: 350

⁽²⁾ Until 31 December 2015 plants of a rated thermal input greater than 500 MW, which from 2008 onwards do not operate more than 2000 hours a year (rolling average over a period of five years), shall:

- in the case of plant licensed in accordance with Article 4(3)(a), be subject to a limit value for nitrogen oxide emissions (measured as NO₂) of 600 mg/Nm³;
- in the case of plant subject to a national plan under Article 4(6), have their contribution to the national plan assessed on the basis of a limit value of 600 mg/Nm³.

From 1 January 2016 such plants, which do not operate more than 1500 hours a year (rolling average over a period of five years), shall be subject to a limit value for nitrogen oxide emissions (measured as NO₂) of 450 mg/Nm³.

⁽³⁾ Until 1 January 2018 in the case of plants that in the 12 month period ending on 1 January 2001 operated on, and continue to operate on, solid fuels whose volatile content is less than 10%, 1200 mg/Nm³ shall apply.

B. NO_x emission limit values expressed in mg/Nm³ to be applied by new plants pursuant to Article 4(2) with the exception of gas turbines

Solid fuels (O₂ content 6%)

Type of fuel	50 to 100 MWth	100 to 300 MWth	> 300 MWth
Biomass	400	300	200
General case	400	200 ⁽¹⁾	200

⁽¹⁾ Except in the case of the 'Outermost Regions' where 300 mg/Nm³ (linear decrease) shall apply.

Liquid fuels (O₂ content 3%)

50 to 100 MWth	100 to 300 MWth	> 300 MWth
400	200 (1)	200

⁽¹⁾ Except in the case of the 'Outermost Regions' where 300 mg/Nm³ (linear decrease) shall apply.

In the case of two installations with a rated thermal input of 250 MWth on Crete and Rhodos to be licensed before 31 December 2007 the emission limit value of 400 mg/Nm³ shall apply.

Gaseous fuels (O₂ content 3%)

	50 to 300 MWth	> 300 MWth
50 to 300 MWth	> 300 MWth	200
Other gases	200	200

Gas Turbines

NO_x emission limit values expressed in mg/Nm³ (O content 15%) to be applied by a single gas turbine unit pursuant to Article 4(2) (the limit values apply only above 70% load):

	> 50 MWth (thermal input at ISO conditions)
Natural gas ⁽¹⁾	50 ⁽²⁾
Liquid fuels ⁽²⁾	120
Gaseous fuels (other than natural gas)	120

⁽¹⁾ Natural gas is naturally occurring methane with not more than 20% (by volume) of inerts and other constituents.

⁽²⁾ 75 mg/Nm³ in the following cases, where the efficiency of the gas turbine is determined at ISO base load conditions:

- gas turbines, used in combined heat and power systems having an overall efficiency greater than 75%;
- gas turbines used in combined cycle plants having an annual average overall electrical efficiency greater than 55%;
- gas turbines for mechanical drives.

For single cycle gas turbines not falling into any of the above categories, but having an efficiency greater than 35% - determined at ISO base load conditions - the emission limit value shall be 50*η/35 where η is the gas turbine efficiency expressed as a percentage (and at ISO base load conditions).

⁽³⁾ This emission limit value only applies to gas turbines firing light and middle distillates.

Gas turbines for emergency use that operate less than 500 hours per year are excluded from these limit values. The operator of such plants is required to submit each year to the competent authority a record of such used time.

ANNEX VII

EMISSION LIMIT VALUES FOR DUST

A. Dust emission limit values expressed in mg/Nm³ (O content 6% for solid fuels, 3% for liquid and gaseous fuels) to be applied by new and existing plants pursuant to Article 4(1) and 4(3), respectively:

Type of fuel	Rated thermal input (MW)	Emission limit values (mg/Nm ³)
Solid	≥ 500	50 ⁽²⁾
	< 500	100
Liquid (1)	all plants	50
Gaseous	all plants	5 as a rule 10 for blast furnace 50 for gases produced by the steel industry which can be used elsewhere

⁽¹⁾ A limit value of 100 mg/Nm³ may be applied to plants with a rated thermal input less than 500 MWth burning liquid fuel with an ash content of more than 0.06%.

⁽²⁾ A limit value of 100 mg/Nm³ may be applied to plants licensed pursuant to Article 4(3) with a rated thermal input greater than or equal to 500 MWth burning solid fuel with a heat content of less than 5800 kJ/kg (net calorific value), a moisture content greater than 45% by weight, a combined moisture and ash content greater than 60% by weight and a calcium oxide content greater than 10%.

B. Dust emission limit values expressed in mg/Nm³ to be applied by new plants, pursuant to Article 4(2) with the exception of gas turbines:

Solid fuels (O₂ content 6%)

50 to 100 MWth	> 100 MWth
50	30

Liquid fuels (O₂ content 3%)

50 to 100 MWth	> 100 MWth
50	30

In the case of two installations with a rated thermal input of 250 MWth on Crete and Rhodos to be licensed before 31 December 2007 the emission limit value of 50 mg/Nm³ shall apply.

Gaseous fuels (O₂ content 3%)

As a rule	5
For blast furnace	10
For gases produced by the steel industry which can be used elsewhere	30

ANNEX VIII

METHODS OF MEASUREMENT OF EMISSIONS

A. Procedures for measuring and evaluating emissions from combustion plants.

1. Until 27 November 2004

Concentrations of SO₂, dust, NO_x shall be measured continuously in the case of new plants for which a licence is granted pursuant to Article 4(1) with a rated thermal input of more than 300 MW. However, monitoring of SO₂ and dust may be confined to discontinuous measurements or other appropriate determination procedures in cases where such measurements or procedures, which must be verified and approved by the competent authorities, may be used to obtain concentration.

In the case of new plants for which a licence is granted pursuant to Article 4(1) not covered by the first subparagraph, the competent authorities may require continuous measurements of those three pollutants to be carried out where considered necessary. Where continuous measurements are not required, discontinuous measurements or appropriate determination procedures as approved by the competent authorities shall be used regularly to evaluate the quantity of the above-mentioned substances present in the emissions.

2. From 27 November 2002 and without prejudice to Article 18(2)

Competent authorities shall require continuous measurements of concentrations of SO₂, NO_x, and dust from waste gases from each combustion plant with a rated thermal input of 100 MW or more.

By way of derogation from the first subparagraph, continuous measurements may not be required in the following cases:

- for combustion plants with a life span of less than 10 000 operational hours;
- for SO₂ and dust from natural gas burning boilers or from gas turbines firing natural gas;
- for SO₂ from gas turbines or boilers firing oil with known sulphur content in cases where there is no desulphurisation equipment;
- for SO₂ from biomass firing boilers if the operator can prove that the SO₂ emissions can under no circumstances be higher than the prescribed emission limit values.

Where continuous measurements are not required, discontinuous measurements shall be required at least every six months. As an alternative, appropriate determination procedures, which must be verified and approved by the competent authorities, may be used to evaluate the quantity of the above mentioned pollutants present in the emissions. Such procedures shall use relevant CEN standards as soon as they are available. If CEN standards are not available ISO standards, national or international standards which will ensure the provision of data of an equivalent scientific quality shall apply.

3. In the case of plants which must comply with the desulphurisation rates fixed by Article 5(2) and Annex III, the requirements concerning SO₂ emission measurements established under paragraph 2 of this point shall apply. Moreover, the sulphur content of the fuel which is introduced into the combustion plant facilities must be regularly monitored.

4. The competent authorities shall be informed of substantial changes in the type of fuel used or in the mode of operation of the plant. They shall decide whether the monitoring requirements laid down in paragraph 2 are still adequate or require adaptation.

5. The continuous measurements carried out in compliance with paragraph 2 shall include the relevant process operation parameters of oxygen content, temperature, pressure and water vapour content. The continuous measurement of the water vapour content of the exhaust gases shall not be necessary, provided that the sampled exhaust gas is dried before the emissions are analysed.

Representative measurements, i.e. sampling and analysis, of relevant pollutants and process parameters as well as reference measurement methods to calibrate automated measurement systems shall be carried out in accordance with CEN standards as soon as they are available. If CEN standards are not available ISO standards, national or international standards which will ensure the provision of data of an equivalent scientific quality shall apply.

Continuous measuring systems shall be subject to control by means of parallel measurements with the reference methods at least every year.

6. The values of the 95% confidence intervals of a single measures results shall not exceed the following percentages of the emission limit values:

- Sulphur dioxide 20%
- Nitrogen oxides 20%
- Dust 30%

The validated hourly and daily average values shall be determined from the measured valid hourly average values after having subtracted the value of the confidence interval specified above.

Any day in which more than three hourly average values are invalid due to malfunction or maintenance of the continuous measurement system shall be invalidated. If more than ten days over a year are invalidated for such situations the competent authority shall require the operator to take adequate measures to improve the reliability of the continuous monitoring system.

B. Determination of total annual emissions of combustion plants

Contracting Parties shall establish, starting in 2018 and for each subsequent year, an inventory of SO₂, NO_x and dust emissions from all combustion plants with a rated thermal input of 50 MW or more. The competent authority shall obtain for each plant operated under the control of one operator at a given location the following data:

- **the total annual emissions of SO₂, NO_x and dust (as total suspended particles);**
- **the total annual amount of energy input, related to the net calorific value, broken down in terms of the five categories of fuel: biomass, other solid fuels, liquid fuels, natural gas, other gases.**

A summary of the results of this inventory that shows the emissions from refineries separately shall be communicated to the Secretariat every three years within twelve months from the end of the three-year period considered. The yearly plant-by-plant data shall be made available to the Secretariat upon request. The Secretariat shall make available to the Contracting Parties a summary of the comparison and evaluation of the national inventories within twelve months of receipt of the national inventories.

Contracting Parties implementing a national emission reduction plan in accordance with Article 4(6) shall report annually to the Secretariat the plant-by-plant fuel use and emission data for

all plants covered by the plan. With the aim of demonstrating progress in implementation, this report shall also include emission projections for scenarios taking into account ongoing investments for which financing is secured and a well-defined implementation timeline is drawn up.⁷

C. Determination of the total annual emissions of existing plants until and including 2003.

1. **Contracting Parties** shall establish, starting in 1990 and for each subsequent year until and including 2003, a complete emission inventory for existing plants covering SO₂ and NO_x:

- on a plant by plant basis for plants above 300 MWth and for refineries;
- on an overall basis for other combustion plants to which this Directive applies.

2. The methodology used for these inventories shall be consistent with that used to determine SO₂ and NO_x emissions from combustion plants in 1980.

3. The results of this inventory shall be communicated to the **Secretariat** in a conveniently aggregated form within nine months from the end of the year considered. The methodology used for establishing such emission inventories and the detailed base information shall be made available to the **Secretariat** at its request.

4. The **Secretariat** shall organise a systematic comparison of such national inventories and, if appropriate, shall submit proposals to the Council aiming at harmonising emission inventory methodologies, for the needs of an effective implementation of this Directive.

⁷ The text displayed here corresponds to Article 6 of Decision 2013/05/MC-EnC.



DIRECTIVE 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)^{1,2}

Incorporated and adapted by Ministerial Council Decision 2013/06/MC-EnC of 24 October 2013 on the implementation of Chapter III, Annex V, and Article 72(3)-(4) of Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) and amending Article 16 and Annex II of the Energy Community Treaty and adapted by Ministerial Council Decision 2015/06/MC-EnC of 16 October 2015 on the implementation of Chapter III, Annex V, and Article 72(3)-(4) of Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) for existing combustion plants and amending Annex II of the Energy Community Treaty.

*The adaptations made by Ministerial Council Decision 2013/06/MC-EnC are highlighted in **bold and blue**.*

CHAPTER III SPECIAL PROVISIONS FOR COMBUSTION PLANTS

Article 28

Scope

This Chapter shall apply to combustion plants, the total rated thermal input of which is equal to or greater than 50 MW, irrespective of the type of fuel used.

This Chapter shall not apply to the following combustion plants:

- (a) plants in which the products of combustion are used for the direct heating, drying, or any other treatment of objects or materials;
- (b) post-combustion plants designed to purify the waste gases by combustion which are not operated as independent combustion plants;
- (c) facilities for the regeneration of catalytic cracking catalysts;
- (d) facilities for the conversion of hydrogen sulphide into sulphur;
- (e) reactors used in the chemical industry;
- (f) coke battery furnaces;
- (g) cowpers;
- (h) any technical apparatus used in the propulsion of a vehicle, ship or aircraft;
- (i) gas turbines and gas engines used on offshore platforms;
- (j) plants which use any solid or liquid waste as a fuel other than waste referred to in point (b) of point 31 of Article 3.

¹ Since Ministerial Council Decision 2013/06/MC-EnC incorporated only Chapter III, Annex V, and Article 72(3)-(4) of Directive 2010/75/EU into the Energy Community acquis communautaire, only the text of those provisions are displayed here.

² Recommendation 2018/03/MC-EnC to prepare the implementation of Chapter II, Chapter IV and Annex VI of Directive 2010/75/EU has incorporated other parts of this Directive into the Energy Community acquis communautaire, albeit in a non-legally binding manner.

Article 29

Aggregation rules

1. Where the waste gases of two or more separate combustion plants are discharged through a common stack, the combination formed by such plants shall be considered as a single combustion plant and their capacities added for the purpose of calculating the total rated thermal input.
2. Where two or more separate combustion plants which have been granted a permit for the first time on or after 1 July 1987, or the operators of which have submitted a complete application for a permit on or after that date, are installed in such a way that, taking technical and economic factors into account, their waste gases could in the judgement of the competent authority, be discharged through a common stack, the combination formed by such plants shall be considered as a single combustion plant and their capacities added for the purpose of calculating the total rated thermal input.
3. For the purpose of calculating the total rated thermal input of a combination of combustion plants referred to in paragraphs 1 and 2, individual combustion plants with a rated thermal input below 15 MW shall not be considered.

Article 30

Emission limit values

1. Waste gases from combustion plants shall be discharged in a controlled way by means of a stack, containing one or more flues, the height of which is calculated in such a way as to safeguard human health and the environment.
2. All permits for installations containing combustion plants which have been granted a permit before **1 January 2018**³, or the operators of which have submitted a complete application for a permit before that date, provided that such plants are put into operation no later than **1 January 2019**, shall include conditions ensuring that emissions into air from these plants do not exceed the emission limit values set out in Part 1 of Annex V.
All permits for installations containing combustion plants which had been granted an exemption as referred to in Article 4(4) of Directive 2001/80/EC and which are in operation after **1 January 2024**⁴, shall include conditions ensuring that emissions into the air from these plants do not exceed the emission limit values set out in Part 2 of Annex V.
3. All permits for installations containing combustion plants not covered by paragraph 2 shall include conditions ensuring that emissions into the air from these plants do not exceed the emission limit values set out in Part 2 of Annex V.
4. The emission limit values set out in Parts 1 and 2 of Annex V as well as the minimum rates of desulphurisation set out in Part 5 of that Annex shall apply to the emissions of each common stack in relation to the total rated thermal input of the entire combustion plant. Where Annex V provides that emission limit values may be applied for a part of a combustion plant with a limited number of operating hours, those limit values shall apply to the emissions of that part of the plant, but shall be set in relation to the total

³ The text displayed here corresponds to Point 5 of Annex II of the Treaty.

⁴ Article 4(4) of Directive 2001/80/EC as amended by Article 4 of Decision 2013/05/MC-EnC.

rated thermal input of the entire combustion plant.

5. The competent authority may grant a derogation for a maximum of 6 months from the obligation to comply with the emission limit values provided for in paragraphs 2 and 3 for sulphur dioxide in respect of a combustion plant which to this end normally uses low-sulphur fuel, in cases where the operator is unable to comply with those limit values because of an interruption in the supply of low-sulphur fuel resulting from a serious shortage.

Member States⁵ shall immediately inform the Commission of any derogation granted under the first subparagraph.

6. The competent authority may grant a derogation from the obligation to comply with the emission limit values provided for in paragraphs 2 and 3 in cases where a combustion plant using only gaseous fuel has to resort exceptionally to the use of other fuels because of a sudden interruption in the supply of gas and for this reason would need to be equipped with a waste gas purification facility. The period for which such a derogation is granted shall not exceed 10 days except where there is an overriding need to maintain energy supplies.

The operator shall immediately inform the competent authority of each specific case referred to in the first subparagraph.

Member States shall inform the Commission immediately of any derogation granted under the first subparagraph.

7. Where a combustion plant is extended, the emission limit values set out in Part 2 of Annex V shall apply to the extended part of the plant affected by the change and shall be set in relation to the total rated thermal input of the entire combustion plant. In the case of a change to a combustion plant, which may have consequences for the environment and which affects a part of the plant with a rated thermal input of 50 MW or more, the emission limit values as set out in Part 2 of Annex V shall apply to the part of the plant which has changed in relation to the total rated thermal input of the entire combustion plant.

8. The emission limit values set out in Parts 1 and 2 of Annex V shall not apply to the following combustion plants:

- (a) diesel engines;
- (b) recovery boilers within installations for the production of pulp.

9. For the following combustion plants, on the basis of the best available techniques, the Commission shall review the need to establish Union-wide emission limit values and to amend the emission limit values set out in Annex V:

- (a) the combustion plants referred to in paragraph 8;
- (b) combustion plants within refineries firing the distillation and conversion residues from the refining of crude-oil for own consumption, alone or with other fuels, taking into account the specificity of the energy systems of refineries;
- (c) combustion plants firing gases other than natural gas;
- (d) combustion plants in chemical installations using liquid production residues as non-commercial fuel for own consumption.

The Commission shall, by 31 December 2013, report the results of this review to the European Parliament and to the Council accompanied, if appropriate, by a legislative proposal.

⁵ Decision 2013/06/MC-EnC incorporating this Directive is addressed to the Contracting Parties.

Article 31**Desulphurisation rate**

1. For combustion plants firing indigenous solid fuel, which cannot comply with the emission limit values for sulphur dioxide referred to in Article 30(2) and (3) due to the characteristics of this fuel, Member States may apply instead the minimum rates of desulphurisation set out in Part 5 of Annex V, in accordance with the compliance rules set out in Part 6 of that Annex and with prior validation by the competent authority of the technical report referred to in Article 72(4)(a).

2. For combustion plants firing indigenous solid fuel, which co-incinerate waste, and which cannot comply with the C_{proc} values for sulphur dioxide set out in points 3.1 or 3.2 of Part 4 of Annex VI due to the characteristics of the indigenous solid fuel, Member States may apply instead the minimum rates of desulphurisation set out in Part 5 of Annex V, in accordance with the compliance rules set out in Part 6 of that Annex. If Member States choose to apply this paragraph, C_{waste} as referred to in point 1 of Part 4 of Annex VI shall be equal to 0 mg/Nm³.

3. The Commission shall, by 31 December 2019, review the possibility of applying minimum rates of desulphurisation set out in Part 5 of Annex V, taking into account, in particular, the best available techniques and benefits obtained from reduced sulphur dioxide emissions.

Article 32**Transitional National Plan**<...>⁶**Article 33****Limited life time derogation**<...>⁷**Article 34****Small isolated systems**

1. Until 31 December 2019, combustion plants being, on 6 January 2011, part of a small isolated system may be exempted from compliance with the emission limit values referred to in Article 30(2) and the rates of desulphurisation referred to in Article 31, where applicable. Until 31 December 2019, the emission limit values set out in the permits of these combustion plants, pursuant in particular to the requirements of Directives 2001/80/EC and 2008/1/EC, shall at least be maintained.

⁶ Article 4(6) of Directive 2001/80/EC as amended by Decision 2013/05/MC-EnC applies.

⁷ Article 4(4) of Directive 2001/80/EC as amended by Decision 2013/05/MC-EnC applies.

2. Combustion plants with a total rated thermal input of more than 500 MW firing solid fuels, which were granted the first permit after 1 July 1987, shall comply with the emission limit values for nitrogen oxides set out in Part 1 of Annex V.

3. Where there are, on the territory of a Member State combustion plants covered by this Chapter that are part of a small isolated system, that Member State shall report to the Commission before 7 January 2013 a list of those combustion plants, the total annual energy consumption of the small isolated system and the amount of energy obtained through interconnection with other systems.

Article 35

District heating plants

1. Until 31 December 2022, a combustion plant may be exempted from compliance with the emission limit values referred to in Article 30(2) and the rates of desulphurisation referred to in Article 31 provided that the following conditions are fulfilled:

(a) the total rated thermal input of the combustion plant does not exceed 200 MW;

(b) the plant was granted a first permit before 27 November 2002 or the operator of that plant had submitted a complete application for a permit before that date, provided that it was put into operation no later than 27 November 2003;

(c) at least 50% of the useful heat production of the plant, as a rolling average over a period of 5 years, is delivered in the form of steam or hot water to a public network for district heating; and

(d) the emission limit values for sulphur dioxide, nitrogen oxides and dust set out in its permit applicable on 31 December 2015, pursuant in particular to the requirements of Directives 2001/80/EC and 2008/1/EC, are at least maintained until 31 December 2022.

2. At the latest on 1 January 2016, each Member State shall communicate to the Commission a list of any combustion plants to which paragraph 1 applies, including their total rated thermal input, the fuel types used and the applicable emission limit values for sulphur dioxide, nitrogen oxides and dust. In addition, Member States shall, for any combustion plants to which paragraph 1 applies and during the period mentioned in that paragraph, inform the Commission annually of the proportion of useful heat production of each plant which was delivered in the form of steam or hot water to a public network for district heating, expressed as a rolling average over the preceding 5 years.

Article 36

Geological storage of carbon dioxide

1. Member States shall ensure that operators of all combustion plants with a rated electrical output of 300 megawatts or more for which the original construction licence or, in the absence of such a procedure, the original operating licence is granted after the entry into force of Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide, have assessed whether the following conditions are met:

(a) suitable storage sites are available,

- (b) transport facilities are technically and economically feasible,
- (c) it is technically and economically feasible to retrofit for carbon dioxide capture.

2. If the conditions laid down in paragraph 1 are met, the competent authority shall ensure that suitable space on the installation site for the equipment necessary to capture and compress carbon dioxide is set aside. The competent authority shall determine whether the conditions are met on the basis of the assessment referred to in paragraph 1 and other available information, particularly concerning the protection of the environment and human health.

Article 37

Malfunction or breakdown of the abatement equipment

1. Member States shall ensure that provision is made in the permits for procedures relating to malfunction or breakdown of the abatement equipment.

2. In the case of a breakdown, the competent authority shall require the operator to reduce or close down operations if a return to normal operation is not achieved within 24 hours, or to operate the plant using low polluting fuels.

The operator shall notify the competent authority within 48 hours after the malfunction or breakdown of the abatement equipment.

The cumulative duration of unabated operation shall not exceed 120 hours in any 12-month period.

The competent authority may grant a derogation from the time limits set out in the first and third subparagraphs in one of the following cases:

- (a) there is an overriding need to maintain energy supplies;
- (b) the combustion plant with the breakdown would be replaced for a limited period by another plant which would cause an overall increase in emissions.

Article 38

Monitoring of emissions into air

1. Member States shall ensure that the monitoring of air polluting substances is carried out in accordance with Part 3 of Annex V.

2. The installation and functioning of the automated monitoring equipment shall be subject to control and to annual surveillance tests as set out in Part 3 of Annex V.

3. The competent authority shall determine the location of the sampling or measurement points to be used for the monitoring of emissions.

4. All monitoring results shall be recorded, processed and presented in such a way as to enable the competent authority to verify compliance with the operating conditions and emission limit values which are included in the permit.

Article 39**Compliance with emission limit values**

The emission limit values for air shall be regarded as being complied with if the conditions set out in Part 4 of Annex V are fulfilled.

Article 40**Multi-fuel firing combustion plants**

1. In the case of a multi-fuel firing combustion plant involving the simultaneous use of two or more fuels, the competent authority shall set the emission limit values in accordance with the following steps:

- (a) taking the emission limit value relevant for each individual fuel and pollutant corresponding to the total rated thermal input of the entire combustion plant as set out in Parts 1 and 2 of Annex V;
- (b) determining fuel-weighted emission limit values, which are obtained by multiplying the individual emission limit value referred to in point (a) by the thermal input delivered by each fuel, and dividing the product of multiplication by the sum of the thermal inputs delivered by all fuels,
- (c) aggregating the fuel-weighted emission limit values.

2. In the case of multi-fuel firing combustion plants covered by Article 30(2), which use the distillation and conversion residues from the refining of crude-oil for own consumption, alone or with other fuels, the following emission limit values may be applied instead of the emission limit values set according to paragraph 1:

- (a) where, during the operation of the combustion plant, the proportion contributed by the determinative fuel to the sum of the thermal inputs delivered by all fuels is 50% or more, the emission limit value set in Part 1 of Annex V for the determinative fuel;
- (b) where the proportion contributed by the determinative fuel to the sum of the thermal inputs delivered by all fuels is less than 50%, the emission limit value determined in accordance with the following steps:
 - (i) taking the emission limit values set out in Part 1 of Annex V for each of the fuels used, corresponding to the total rated thermal input of the combustion plant;
 - (ii) calculating the emission limit value of the determinative fuel by multiplying the emission limit value, determined for that fuel according to point (i), by a factor of two, and subtracting from this product the emission limit value of the fuel used with the lowest emission limit value as set out in Part 1 of Annex V, corresponding to the total rated thermal input of the combustion plant;
 - (iii) determining the fuel-weighted emission limit value for each fuel used by multiplying the emission limit value determined under points (i) and (ii) by the thermal input of the fuel concerned and by dividing the product of this multiplication by the sum of the thermal inputs delivered by all fuels;
 - (iv) aggregating the fuel-weighted emission limit values determined under point (iii).

3. In the case of multi-fuel firing combustion plants covered by Article 30(2), which use the distillation and conversion residues from the refining of crude-oil for own consumption, alone or with other fuels, the average emission limit values for sulphur dioxide set out in Part 7 of Annex V may be applied instead of

the emission limit values set according to paragraphs 1 or 2 of this Article.

Article 41

Implementing rules

Implementing rules shall be established concerning:

- (a) the determination of the start-up and shut-down periods referred to in point 27 of Article 3 and in point 1 of Part 4 of Annex V; and
- (b) the transitional national plans referred to in Article 32 and, in particular, the setting of emission ceilings and related monitoring and reporting.

Those implementing rules shall be adopted in accordance with the regulatory procedure referred to in Article 75(2). The Commission shall make appropriate proposals not later than 7 July 2011.

Article 72

Reporting by Member States⁸

<...>

3. For all combustion plants covered by Chapter III of this Directive, Member States shall, from **1 January 2018**⁹ establish an annual inventory of the sulphur dioxide, nitrogen oxides and dust emissions and energy input.

Taking into account the aggregation rules set out in Article 29, the competent authority shall obtain the following data for each combustion plant:

- (a) the total rated thermal input (MW) of the combustion plant;
- (b) the type of combustion plant: boiler, gas turbine, gas engine, diesel engine, other (specifying the type);
- (c) the date of the start of operation of the combustion plant;
- (d) the total annual emissions (tonnes per year) of sulphur dioxide, nitrogen oxides and dust (as total suspended particles);
- (e) the number of operating hours of the combustion plant;
- (f) the total annual amount of energy input, related to the net calorific value (TJ per year), broken down in terms of the following categories of fuel: coal, lignite, biomass, peat, other solid fuels (specifying the type), liquid fuels, natural gas, other gases (specifying the type).

The annual plant-by-plant data contained in these inventories shall be made available to the Commission upon request.

A summary of the inventories shall be made available to the Commission every 3 years within 12 months from the end of the three-year period considered. This summary shall show separately the data for combustion plants within refineries.

The Commission shall make available to the Member States and to the public a summary of the comparison

⁸ Decision 2013/06/MC-EnC incorporating this Directive is addressed to the Contracting Parties.

⁹ The text displayed here corresponds to Article 2(1) of Decision 2013/06/MC-EnC.

and evaluation of those inventories in accordance with Directive 2003/4/EC within 24 months from the end of the three-year period considered.

4. Member States shall, from **1 January 2018**¹⁰ report the following data annually to the Commission:

(a) for combustion plants to which Article 31 applies, the sulphur content of the indigenous solid fuel used and the rate of desulphurisation achieved, averaged over each month. For the first year where Article 31 is applied, the technical justification of the non-feasibility of complying with the emission limit values referred to in Article 30(2) and (3) shall also be reported; and

(b) for combustion plants which do not operate more than 1 500 operating hours per year as a rolling average over a period of 5 years, the number of operating hours per year.

<...>

Article 80

Transposition¹⁰

1. Each Contracting Party shall bring into force the laws, regulations and administrative provisions necessary to comply with Chapter III, Annex V and Article 72(3)-(4) of Directive 2010/75/EU by 1 January 2018.¹¹ They shall forthwith inform the Energy Community Secretariat thereof.

2. Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by the present Decision.

Article 83

Entry into force¹²

This Decision shall enter into force upon its adoption by the Ministerial Council.

Article 84

Addressees¹³

This Decision is addressed to the Contracting Parties.

¹⁰ The text displayed here corresponds to Article 2(1) of Decision 2013/06/MC-EnC.

¹¹ The text displayed here corresponds to Article 2 of Decision 2013/06/MC-EnC.

¹² In accordance with the Accession Protocol, the corresponding date for Georgia is 1 September 2018.

¹³ The text displayed here corresponds to Article 3 of Decision 2013/06/MC-EnC.

ANNEX V

TECHNICAL PROVISIONS RELATING TO COMBUSTION PLANTS

PART 1

Emission limit values for combustion plants referred to in Article 30(2)

1. All emission limit values shall be calculated at a temperature of 273,15 K, a pressure of 101,3 kPa and after correction for the water vapour content of the waste gases and at a standardised O₂ content of 6% for solid fuels, 3% for combustion plants, other than gas turbines and gas engines using liquid and gaseous fuels and 15% for gas turbines and gas engines.

2. Emission limit values (mg/Nm³) for SO₂ for combustion plants using solid or liquid fuels with the exception of gas turbines and gas engines

Total rated thermal input (MW)	Coal and lignite and other solid fuels	Biomass	Peat	Liquid fuels
50-100	400	200	300	350
100-300	250	200	300	250
> 300	200	200	200	200

Combustion plants, using solid fuels which were granted a permit before 27 November 2002 or the operators of which had submitted a complete application for a permit before that date, provided that the plant was put into operation no later than 27 November 2003, and which do not operate more than 1 500 operating hours per year as a rolling average over a period of 5 years, shall be subject to an emission limit value for SO₂ of 800 mg/Nm³.

Combustion plants using liquid fuels, which were granted a permit before 27 November 2002 or the operators of which had submitted a complete application for a permit before that date, provided that the plant was put into operation no later than 27 November 2003, and which do not operate more than 1 500 operating hours per year as a rolling average over a period of 5 years, shall be

subject to an emission limit value for SO₂ of 850 mg/Nm³ in case of plants with a total rated thermal input not exceeding 300 MW and of 400 mg/Nm³ in case of plants with a total rated thermal input greater than 300 MW.

A part of a combustion plant discharging its waste gases through one or more separate flues within a common stack, and which does not operate more than 1 500 operating hours per year as a rolling average over a period of 5 years, may be subject to the emission limit values set out in the preceding two paragraphs in relation to the total rated thermal input of the entire combustion plant. In such cases the emissions through each of those flues shall be monitored separately.

3. Emission limit values (mg/Nm³) for SO₂ for combustion plants using gaseous fuels with the exception of gas turbines and gas engines

In general	35
Liquefied gas	5
Low calorific gases from coke oven	400
Low calorific gases from blast furnace	200

Combustion plants, firing low calorific gases from gasification of refinery residues, which were granted a permit before 27 November 2002 or the operators of which had submitted a complete application for a permit before that date, provided that the plant was put into operation no later than 27 November 2003, shall be subject to an emission limit value for SO of 800 mg/Nm³.

4. Emission limit values (mg/Nm³) for NO for combustion plants using solid or liquid fuels with the exception of gas turbines and gas engines

Total rated thermal input (MW)	Coal and lignite and other solid fuels	Biomass and peat	Liquid fuels
50-100	300 450 in case of pulverised lignite combustion	300	450
100-300	200	250	200 ⁽¹⁾
> 300	200	200	150 ⁽¹⁾

⁽¹⁾ The emission limit value is 450 mg/Nm³ for the firing of distillation and conversion residues from the refining of crude-oil for own consumption in combustion plants with a total rated thermal input not exceeding 500 MW which were granted a permit before 27 November 2002 or the operators of which had submitted a complete application for a permit before that date, provided that the plant was put into operation no later than 27 November 2003.

Combustion plants in chemical installations using liquid production residues as non-commercial fuel for own consumption with a total rated thermal input not exceeding 500 MW which were granted a permit before 27 November 2002 or the operators of which had submitted a complete application for a permit before that date, provided that the plant was put into operation no later than 27 November 2003, shall be subject to an emission limit value for NO_x of 450 mg/Nm³.

Combustion plants using solid or liquid fuels with a total rated thermal input not exceeding 500 MW which were granted a permit before 27 November 2002 or the operators of which had submitted a complete application for a permit before that date, provided that the plant was put into operation no later than 27 November 2003, and which do not operate more than 1 500 operating hours per year as a rolling average over a period of 5 years, shall be subject to an emission limit value for NO_x of 450 mg/Nm³.

Combustion plants using solid fuels with a total rated thermal input greater than 500 MW, which were granted a permit before 1 July 1987 and which do not operate more than 1 500 operating hours per year as a rolling average over a period of 5 years, shall be subject to an emission limit value for NO_x of 450 mg/Nm³.

Combustion plants using liquid fuels, with a total rated thermal input greater than 500 MW which were granted a permit before 27 November 2002 or the operators of which had submitted a complete application for a permit before that date, provided that the plant was put into operation no later than 27 November 2003, and which do not operate more than 1 500 operating hours per year as a rolling average over a period of 5 years, shall be subject to an emission limit value for NO_x of 400 mg/Nm³.

A part of a combustion plant discharging its waste gases through one or more separate flues within a common stack, and which does not operate more than 1 500 operating hours per year as a rolling average over a period of 5 years, may be subject to the emission limit values set out in the preceding three paragraphs in relation to the total rated thermal input of the entire combustion plant. In such cases the emissions through each of those flues shall be monitored separately.

5. Gas turbines (including combined cycle gas turbines (CCGT)) using light and middle distillates as liquid

fuels shall be subject to an emission limit value for NO of 90 mg/Nm³ and for CO of 100 mg/Nm³.

Gas turbines for emergency use that operate less than 500 operating hours per year are not covered by the emission limit values set out in this point. The operator of such plants shall record the used operating hours.

6. Emission limit values (mg/Nm³) for NO and CO for gas fired combustion plants

	NO_x	CO
Combustion plants firing natural gas with the exception of gas turbines and gas engines	100	100
Combustion plants firing blast furnace gas, coke oven gas or low calorific gases from gasification of refinery residues, with the exception of gas turbines and gas engines	200 ⁽⁴⁾	–
Combustion plants firing other gases, with the exception of gas turbines and gas engines	200 ⁽⁴⁾	–
Gas turbines (including CCGT), using natural gas ⁽¹⁾ as fuel	50 ^{(2) (3)}	100
Gas turbines (including CCGT), using other gases as fuel	120	–
Gas engines	100	100

⁽¹⁾ Natural gas is naturally occurring methane with not more than 20% (by volume) of inerts and other constituents.

⁽²⁾ 75 mg/Nm³ in the following cases, where the efficiency of the gas turbine is determined at ISO base load conditions:

- (i) gas turbines, used in combined heat and power systems having an overall efficiency greater than 75%;
- (ii) gas turbines used in combined cycle plants having an annual average overall electrical efficiency greater than 55%;
- (iii) gas turbines for mechanical drives.

⁽³⁾ For single cycle gas turbines not falling into any of the categories mentioned under note (2), but having an efficiency greater than 35% – determined at ISO base load conditions – the emission limit value for NO_x shall be 50x /35 where x is the gas turbine efficiency at ISO base load conditions expressed as a percentage.

⁽⁴⁾ 300 mg/Nm³ for such combustion plants with a total rated thermal input not exceeding 500 MW which were granted a permit before 27 November 2002 or the operators of which had submitted a complete application for a permit before that date, provided that the plant was put into operation no later than 27 November 2003.

For gas turbines (including CCGT), the NO_x and CO emission limit values set out in the table contained in this point apply only above 70% load.

For gas turbines (including CCGT) which were granted a permit before 27 November 2002 or the operators of which had submitted a complete application for a permit before that date, provided that the plant was put into operation no later than 27 November 2003, and which do not operate more than 1 500 operating hours per year as a rolling average over a period of 5 years, the emission limit value for NO_x is 150 mg/Nm³ when firing natural gas and 200 mg/Nm³ when firing other gases or liquid fuels.

A part of a combustion plant discharging its waste gases through one or more separate flues within a common stack, and which does not operate more than 1 500 operating hours per year as a rolling average over a period of 5 years, may be subject to the emission limit values set out in the preceding paragraph in relation to the total rated thermal input of the entire combustion plant. In such cases the emissions through each of those flues shall be monitored separately.

Gas turbines and gas engines for emergency use that operate less than 500 operating hours per year are not covered by the emission limit values set out in this point. The operator of such plants shall record the used operating hours.

7. Emission limit values (mg/Nm³) for dust for combustion plants using solid or liquid fuels with the exception of gas turbines and gas engines

Total rated thermal input (MW)	Coal and lignite and other solid fuels	Biomass and peat	Liquid fuels (1)
50-100	30	30	30
100-300	25	20	25
> 300	20	20	20

⁽¹⁾ The emission limit value is 50 mg/Nm³ for the firing of distillation and conversion residues from the refining of crude oil for own consumption in combustion plants which were granted a permit before 27 November 2002 or the operators of which had submitted a complete application for a permit before that date, provided that the plant was put into operation no later than 27 November 2003.

8. Emission limit values (mg/Nm³) for dust for combustion plants using gaseous fuels with the exception of gas turbines and gas engines

In general	5
Blast furnace gas	10
Gases produced by the steel industry which can be used elsewhere	30

PART 2

Emission limit values for combustion plants referred to in Article 30(3)

1. All emission limit values shall be calculated at a temperature of 273,15 K, a pressure of 101,3 kPa and after correction for the water vapour content of the waste gases and at a standardised O₂ content of 6% for solid fuels, 3% for combustion plants other than gas turbines and gas engines using liquid and gaseous fuels and 15% for gas turbines and gas engines.

In case of combined cycle gas turbines with supplementary firing, the standardised O₂ content may be defined by the competent authority, taking into account the specific characteristics of the installation concerned.

2. Emission limit values (mg/Nm³) for SO₂ for combustion plants using solid or liquid fuels with the exception of gas turbines and gas engines

Total rated thermal input (MW)	Coal and lignite and other solid fuels	Biomass	Peat	Liquid fuels
50-100	400	200	300	350
100-300	200	200	300 250 in case of fluidised bed combustion	200
> 300	150 200 in case of circulating or pressurised fluidised bed combustion	150	150 200 in case of fluidised bed combustion	150

3. Emission limit values (mg/Nm³) for SO₂ for combustion plants using gaseous fuels with the exception of gas turbines and gas engines

In general	35
Liquefied gas	5
Low calorific gases from coke oven	400
Low calorific gases from blast furnace	200

4. Emission limit values (mg/Nm³) for NO_x for combustion plants using solid or liquid fuels with the exception of gas turbines and gas engines

Total rated thermal input (MW)	Coal and lignite and other solid fuels	Biomass and peat	Liquid fuels
50-100	300 400 in case of pulverised lignite combustion	250	300
100-300	200	200	150
> 300	150 200 in case of pulverised lignite combustion	150	100

5. Gas turbines (including CCGT) using light and middle distillates as liquid fuels shall be subject to an emission limit value for NO_x of 50 mg/Nm³ and for CO of 100 mg/Nm³

Gas turbines for emergency use that operate less than 500 operating hours per year are not covered by the emission limit values set out in this point. The operator of such plants shall record the used operating hours.

6. Emission limit values (mg/Nm³) for NO_x and CO for gas fired combustion plants

	NO _x	CO
Combustion plants other than gas turbines and gas engines	100	100
Gas turbines (including CCGT)	50 ⁽¹⁾	100
Gas engines	75	100

⁽¹⁾ For single cycle gas turbines having an efficiency greater than 35% – determined at ISO base load conditions – the emission limit value for NO_x shall be 50x/35 where x is the gas turbine efficiency at ISO base load conditions expressed as a percentage.

For gas turbines (including CCGT), the NO_x and CO emission limit values set out in this point apply only above 70% load.

Gas turbines and gas engines for emergency use that operate less than 500 operating hours per year are not covered by the emission limit values set out in this point. The operator of such plants shall record the used operating hours.

7. Emission limit values (mg/Nm³) for dust for combustion plants using solid or liquid fuels with the exception of gas turbines and gas engines

Total rated thermal input (MW)	
50-300	20
> 300	10 20 for biomass and peat

8. Emission limit values (mg/Nm³) for dust for combustion plants using gaseous fuels with the exception of gas turbines and gas engines

n general	5
Blast furnace gas	10
Gases produced by the steel industry which can be used elsewhere	30

PART 3

Emission monitoring

1. The concentrations of SO₂, NO_x and dust in waste gases from each combustion plant with a total rated thermal input of 100 MW or more shall be measured continuously.

The concentration of CO in waste gases from each combustion plant firing gaseous fuels with a total rated thermal input of 100 MW or more shall be measured continuously.

2. The competent authority may decide not to require the continuous measurements referred to in point 1 in the following cases:

(a) for combustion plants with a life span of less than 10 000 operational hours;

(b) for SO₂ and dust from combustion plants firing natural gas;

(c) for SO₂ from combustion plants firing oil with known sulphur content in cases where there is no waste gas desulphurisation equipment;

(d) for SO₂ from combustion plants firing biomass if the operator can prove that the SO₂ emissions can under no circumstances be higher than the prescribed emission limit values.

3. Where continuous measurements are not required, measurements of SO₂, NO_x, dust and, for gas fired plants, also of CO shall be required at least once every 6 months.

4. For combustion plants firing coal or lignite, the emissions of total mercury shall be measured at least once per year.

5. As an alternative to the measurements of SO₂ and NO_x referred to in point 3, other procedures, verified and approved by the competent authority, may be used to determine the SO₂ and NO_x emissions. Such procedures shall use relevant CEN standards or, if CEN standards are not available, ISO, national or other international standards which ensure the provision of data of an equivalent scientific quality.

6. The competent authority shall be informed of significant changes in the type of fuel used or in the mode of operation of the plant. The competent authority shall decide whether the monitoring requirements laid down in points 1 to 4 are still adequate or require adaptation.

7. The continuous measurements carried out in accordance with point 1 shall include the measurement of the oxygen content, temperature, pressure and water vapour content of the waste gases. The continuous measurement of the water vapour content of the waste gases shall not be necessary, provided that the sampled waste gas is dried before the emissions are analysed.

8. Sampling and analysis of relevant polluting substances and measurements of process parameters as well as the quality assurance of automated measuring systems and the reference measurement methods to calibrate those systems shall be carried out in accordance with CEN standards. If CEN standards are not available, ISO, national or other international standards which ensure the provision of data of an equivalent

scientific quality shall apply.

The automated measuring systems shall be subject to control by means of parallel measurements with the reference methods at least once per year.

The operator shall inform the competent authority about the results of the checking of the automated measuring systems.

9. At the emission limit value level, the values of the 95% confidence intervals of a single measured result shall not exceed the following percentages of the emission limit values:

Carbon monoxide	10%
Sulphur dioxide	20%
Nitrogen oxides	20%
Dust	30%

10. The validated hourly and daily average values shall be determined from the measured valid hourly average values after having subtracted the value of the confidence interval specified in point 9.

Any day in which more than three hourly average values are invalid due to malfunction or maintenance of the automated measuring system shall be invalidated. If more than 10 days over a year are invalidated for such situations the competent authority shall require the operator to take adequate measures to improve the reliability of the automated measuring system.

11. In the case of plants which must comply with the rates of desulphurisation referred to in Article 31, the sulphur content of the fuel which is fired in the combustion plant shall also be regularly monitored. The competent authorities shall be informed of substantial changes in the type of fuel used.

PART 4

Assessment of compliance with emission limit values

1. In the case of continuous measurements, the emission limit values set out in Parts 1 and 2 shall be regarded as having been complied with if the evaluation of the measurement results indicates, for operating hours within a calendar year, that all of the following conditions have been met:

- (a) no validated monthly average value exceeds the relevant emission limit values set out in Parts 1 and 2;
- (b) no validated daily average value exceeds 110% of the relevant emission limit values set out in Parts 1 and 2;
- (c) in cases of combustion plants composed only of boilers using coal with a total rated thermal input below 50 MW, no validated daily average value exceeds 150% of the relevant emission limit values set out in Parts 1 and 2,
- (d) 95% of all the validated hourly average values over the year do not exceed 200% of the relevant emission limit values set out in Parts 1 and 2.

The validated average values are determined as set out in point 10 of Part 3.

For the purpose of the calculation of the average emission values, the values measured during the periods referred to in Article 30(5) and (6) and Article 37 as well as during the start-up and shutdown periods shall be disregarded.

2. Where continuous measurements are not required, the emission limit values set out in Parts 1 and 2 shall be regarded as having been complied with if the results of each of the series of measurements or of the

other procedures defined and determined according to the rules laid down by the competent authorities do not exceed the emission limit values.

PART 5

Minimum rate of desulphurisation

1. Minimum rate of desulphurisation for combustion plants referred to in Article 30(2)

Total rated thermal input (MW)	Minimum rate of desulphurisation	
	Plants which were granted a permit before 27 November 2002 or the operators of which had submitted a complete application for a permit before that date, provided that the plant was put into operation no later than 27 November 2003	Other plants
50-100	80%	92%
100-300	90%	92%
> 300	96% ⁽¹⁾	96%

⁽¹⁾ For combustion plants firing oil shale, the minimum rate of desulphurisation is 95%.

2. Minimum rate of desulphurisation for combustion plants referred to in Article 30(3)

Total rated thermal input (MW)	Minimum rate of desulphurisation
50-100	93%
100-300	93%
> 300	97%

PART 6

Compliance with rate of desulphurisation

The minimum rates of desulphurisation set out in Part 5 of this Annex shall apply as a monthly average limit value.

PART 7

Average emission limit values for multi-fuel firing combustion plants within a refinery

Average emission limit values (mg/Nm³) for SO₂ for multi-fuel firing combustion plants within a refinery, with the exception of gas turbines and gas engines, which use the distillation and conversion residues from the refining of crude-oil for own consumption, alone or with other fuels:

(a) for combustion plants which were granted a permit before 27 November 2002 or the operators of which had submitted a complete application for a permit before that date, provided that the plant was put into operation no later than 27 November 2003: 1 000 mg/Nm³;

(b) for other combustion plants: 600 mg/Nm³.

These emission limit values shall be calculated at a temperature of 273,15 K, a pressure of 101,3 kPa and after correction for the water vapour content of the waste gases and at a standardised O₂ content of 6% for solid fuels and 3% for liquid and gaseous fuels.

DIRECTIVE 79/409/EEC of 2 April 1979 on the conservation of wild birds

Article 1

1. This Directive relates to the conservation of all species of naturally occurring birds in the wild state in the European territory of the Member States to which the Treaty applies. It covers the protection, management and control of these species and lays down rules for their exploitation.
2. It shall apply to birds, their eggs, nests and habitats.
3. This Directive shall not apply to Greenland.

Article 2

Member States shall take the requisite measures to maintain the population of the species referred to in Article 1 at a level which corresponds in particular to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements, or to adapt the population of these species to that level.

Article 3

1. In the light of the requirements referred to in Article 2, Member States shall take the requisite measures to preserve, maintain or re-establish a sufficient diversity and area of habitats for all the species of birds referred to in Article 1.
2. The preservation, maintenance and re-establishment of biotopes and habitats shall include primarily the following measures:
 - (a) creation of protected areas;
 - (b) upkeep and management in accordance with the ecological needs of habitats inside and outside the protected zones;
 - (c) re-establishment of destroyed biotopes;
 - (d) creation of biotopes.

Article 4

1. The species mentioned in Annex I shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution.
In this connection, account shall be taken of:
 - (a) species in danger of extinction;
 - (b) species vulnerable to specific changes in their habitat;
 - (c) species considered rare because of small populations or restricted local distribution;
 - (d) other species requiring particular attention for reasons of the specific nature of their habitat.

Trends and variations in population levels shall be taken into account as a background for evaluations.

Member States shall classify in particular the most suitable territories in number and size as special protection areas for the conservation of these species, taking into account their protection requirements in the geographical sea and land area where this Directive applies.

2. Member States shall take similar measures for regularly occurring migratory species not listed in Annex I, bearing in mind their need for protection in the geographical sea and land area where this Directive applies, as regards their breeding, moulting and wintering areas and staging posts along their migration routes. To this end, Member States shall pay particular attention to the protection of wetlands and particularly to wetlands of international importance.¹

3. Member States shall send the Commission all relevant information so that it may take appropriate initiatives with a view to the coordination necessary to ensure that the areas provided for in paragraphs 1 and 2 above form a coherent whole which meets the protection requirements of these species in the geographical sea and land area where this Directive applies.

4. In respect of the protection areas referred to in paragraphs 1 and 2 above, Member States shall take appropriate steps to avoid pollution or deterioration of habitats or any disturbances affecting the birds, in so far as these would be significant having regard to the objectives of this Article. Outside these protection areas, Member States shall also strive to avoid pollution or deterioration of habitats.

Article 5

Without prejudice to Articles 7 and 9, Member States shall take the requisite measures to establish a general system of protection for all species of birds referred to in Article 1, prohibiting in particular:

- (a) deliberate killing or capture by any method;
- (b) deliberate destruction of, or damage to, their nests and eggs or removal of their nests;
- (c) taking their eggs in the wild and keeping these eggs even if empty;
- (d) deliberate disturbance of these birds particularly during the period of breeding and rearing, in so far as disturbance would be significant having regard to the objectives of this Directive;
- (e) keeping birds of species the hunting and capture of which is prohibited.

Article 6

1. Without prejudice to the provisions of paragraphs 2 and 3, Member States shall prohibit, for all the bird species referred to in Article 1, the sale, transport for sale, keeping for sale and the offering for sale of live or dead birds and of any readily recognizable parts or derivatives of such birds.

2. The activities referred to in paragraph 1 shall not be prohibited in respect of the species referred to in Annex III/1, provided that the birds have been legally killed or captured or otherwise legally acquired.

3. Member States may, for the species listed in Annex III/2, allow within their territory the activities referred to in paragraph 1, making provision for certain restrictions, provided the birds have been legally killed or captured or otherwise legally acquired.

¹ According to Article 16(iv) of the Treaty, the *acquis communautaire* on environment includes Article 4(2) of Directive 79/409/EEC.

Member States wishing to grant such authorization shall first of all consult the Commission with a view to examining jointly with the latter whether the marketing of specimens of such species would result or could reasonably be expected to result in the population levels, geographical distribution or reproductive rate of the species being endangered throughout the Community. Should this examination prove that the intended authorization will, in the view of the Commission, result in any one of the aforementioned species being thus endangered or in the possibility of their being thus endangered, the Commission shall forward a reasoned recommendation to the Member State concerned stating its opposition to the marketing of the species in question. Should the Commission consider that no such risk exists, it will inform the Member State concerned accordingly.

The Commission's recommendation shall be published in the Official Journal of the European Communities. Member States granting authorization pursuant to this paragraph shall verify at regular intervals that the conditions governing the granting of such authorization continue to be fulfilled.

4. The Commission shall carry out studies on the biological status of the species listed in Annex III/3 and on the effects of marketing on such status.

It shall submit, at the latest four months before the time limit referred to in Article 18 (1) of this Directive, a report and its proposals to the Committee referred to in Article 16, with a view to a decision on the entry of such species in Annex III/2.

Pending this decision, the Member States may apply existing national rules to such species without prejudice to paragraph 3 hereof.

Article 7

1. Owing to their population level, geographical distribution and reproductive rate throughout the Community, the species listed in Annex II may be hunted under national legislation. Member States shall ensure that the hunting of these species does not jeopardize conservation efforts in their distribution area.

2. The species referred to in Annex II/1 may be hunted in the geographical sea and land area where this Directive applies.

3. The species referred to in Annex II/2 may be hunted only in the Member States in respect of which they are indicated.

4. Member States shall ensure that the practice of hunting, including falconry if practised, as carried on in accordance with the national measures in force, complies with the principles of wise use and ecologically balanced control of the species of birds concerned and that this practice is compatible as regards the population of these species, in particular migratory species, with the measures resulting from Article 2. They shall see in particular that the species to which hunting laws apply are not hunted during the rearing season nor during the various stages of reproduction. In the case of migratory species, they shall see in particular that the species to which hunting regulations apply are not hunted during their period of reproduction or during their return to their rearing grounds. Member States shall send the Commission all relevant information on the practical application of their hunting regulations.

Article 8

1. In respect of the hunting, capture or killing of birds under this Directive, Member States shall prohibit the use of all means, arrangements or methods used for the large-scale or non-selective capture or killing of birds or capable of causing the local disappearance of a species, in particular the use of those listed in Annex IV (a).
2. Moreover, Member States shall prohibit any hunting from the modes of transport and under the conditions mentioned in Annex IV (b).

Article 9

1. Member States may derogate from the provisions of Articles 5, 6, 7 and 8, where there is no other satisfactory solution, for the following reasons:
 - (a) - in the interests of public health and safety,
 - in the interests of air safety,
 - to prevent serious damage to crops, livestock, forests, fisheries and water,
 - for the protection of flora and fauna;
 - (b) for the purposes of research and teaching, of re-population, of re-introduction and for the breeding necessary for these purposes;
 - (c) to permit, under strictly supervised conditions and on a selective basis, the capture, keeping or other judicious use of certain birds in small numbers.
2. The derogations must specify:
 - the species which are subject to the derogations,
 - the means, arrangements or methods authorized for capture or killing,
 - the conditions of risk and the circumstances of time and place under which such derogations may be granted,
 - the authority empowered to declare that the required conditions obtain and to decide what means, arrangements or methods may be used, within what limits and by whom,
 - the controls which will be carried out.
3. Each year the Member States shall send a report to the Commission on the implementation of this Article.
4. On the basis of the information available to it, and in particular the information communicated to it pursuant to paragraph 3, the Commission shall at all times ensure that the consequences of these derogations are not incompatible with this Directive. It shall take appropriate steps to this end.

Article 10

1. Member States shall encourage research and any work required as a basis for the protection, management and use of the population of all species of bird referred to in Article 1.

2. Particular attention shall be paid to research and work on the subjects listed in Annex V. Member States shall send the Commission any information required to enable it to take appropriate measures for the coordination of the research and work referred to in this Article.

Article 11

Member States shall see that any introduction of species of bird which do not occur naturally in the wild state in the European territory of the Member States does not prejudice the local flora and fauna. In this connection they shall consult the Commission.

Article 12

1. Member States shall forward to the Commission every three years, starting from the date of expiry of the time limit referred to in Article 18(1), a report on the implementation of national provisions taken thereunder.

2. The Commission shall prepare every three years a composite report based on the information referred to in paragraph 1. That part of the draft report covering the information supplied by a Member State shall be forwarded to the authorities of the Member State in question for verification. The final version of the report shall be forwarded to the Member States.

Article 13

Application of the measures taken pursuant to this Directive may not lead to deterioration in the present situation as regards the conservation of species of birds referred to in Article 1.

Article 14

Member States may introduce stricter protective measures than those provided for under this Directive.

Article 15

Such amendments as are necessary for adapting Annexes I and V to this Directive to technical and scientific progress and the amendments referred to in the second paragraph of Article 6(4) shall be adopted in accordance with the procedure laid down in Article 17.

Article 16

1. For the purposes of the amendments referred to in Article 15 of this Directive, a Committee for the Adaptation to Technical and Scientific Progress (hereinafter called "the Committee"), consisting of rep-

representatives of the Member States and chaired by a representative of the Commission, is hereby set up.

2. The Committee shall draw up its rules of procedure.

Article 17

1. Where the procedure laid down in this Article is to be followed, matters shall be referred to the Committee by its chairman, either on his own initiative or at the request of the representative of a Member State.

2. The Commission representative shall submit to the Committee a draft of the measures to be taken. The Committee shall deliver its opinion on the draft within a time limit set by the chairman having regard to the urgency of the matter. It shall act by a majority of 41 votes, the votes of the Member States being weighted as provided in Article 148(2) of the Treaty. The chairman shall not vote.

3. (a) The Commission shall adopt the measures envisaged where they are in accordance with the opinion of the Committee.

(b) Where the measures envisaged are not in accordance with the opinion of the Committee, or if no opinion is delivered, the Commission shall without delay submit a proposal to the Council concerning the measures to be adopted. The Council shall act by a qualified majority.

(c) If, within three months of the proposal being submitted to it, the Council has not acted, the proposed measures shall be adopted by the Commission.

Article 18²

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive within two years of its notification. They shall forthwith inform the Commission thereof.

2. Member States shall communicate to the Commission the texts of the main provisions of national law which they adopt in the field governed by this Directive.

Article 19

This Directive is addressed to the Member States.

² Contracting Parties were obliged to bring into force the laws, regulations and administrative provisions necessary to comply with that Directive until 1 July 2006 (in accordance with their Accession Protocols, 30 December 2010 for Moldova, 1 January 2015 for Ukraine and 1 September 2019 for Georgia).

ANNEX I

1. *Gavia immer* | Great northern diver
2. *Calonectris diomedea* | Cory's shearwater
3. *Hydrobates pelagicus* | Storm petrel
4. *Oceanodroma leucorhoa* | Leach's petrel
5. *Phalacrocorax carbo sinensis* | Cormorant (continental race)
6. *Botaurus stellaris* | Bittern
7. *Nycticorax nycticorax* | Night heron
8. *Ardeola ralloides* | Squacco heron
9. *Egretta garzetta* | Little egret
10. *Egretta alba* | Great white heron
11. *Ardea purpurea* | Purple heron
12. *Ciconia nigra* | Black stork
13. *Ciconia ciconia* | White stork
14. *Plegadis falcinellus* | Glossy ibis
15. *Platalea leucorodia* | Spoonbill
16. *Phoenicopterus ruber* | Greater flamingo
17. *Cygnus colombianus bewickii*(*Cygnus bewickii*) | Bewick's swan
18. *Cygnus cygnus* | Whooper swan
19. *Anser albifrons flavirostris* | White-fronted goose (Greenland race)
20. *Branta leucopsis* | Barnacle goose
21. *Aythya nyroca* | White-eyed pochard
22. *Oxyura leucicephala* | White-headed duck
23. *Pernis apivorus* | Honey buzzard
24. *Milvus migrans* | Black kite
25. *Milvus milvus* | Kite
26. *Haliaeetus albicilla* | White-tailed eagle
27. *Gypaetus barbatus* | Bearded vulture
28. *Neophron percnopterus* | Egyptian vulture
29. *Gyps fulvus* | Griffon vulture
30. *Aegypius monachus* | Black vulture
31. *Circaetus gallicus* | Short-toed eagle
32. *Circus aeruginosus* | Marsh harrier
33. *Circus cyaneus* | Hen harrier

34. *Circus pygargus* | Montagu's harrier
35. *Aquila chrysaetus* | Golden eagle
36. *Hieraaetus pennatus* | Booted eagle
37. *Hieraaetus fasciatus* | Bonelli's eagle
38. *Pandion haliaetus* | Osprey
39. *Falco eleonora* | Eleonora's falcon
40. *Falco biarmicus* | Lanner falcon
41. *Falco peregrinus* | Peregrine
42. *Porphyrio porphyrio* | Purple gallinule
43. *Grus grus* | Crane
44. *Tetrax tetrax* (*Otis tetrax*) | Little bustard
45. *Otis tarda* | Great bustard
46. *Himantopus himantopus* | Black-winged stilt
47. *Recurvirostra avosetta* | Avocet
48. *Burhinus oedicephalus* | Stone curlew
49. *Glareola pratensis* | Pratincole
50. *Charadrius morinellus* (*Endromias morinellus*) | Dotterel
51. *Pluvialis apricaria* | Golden plover
52. *Gallinago media* | Great snipe
53. *Tringa glareola* | Wood-sandpiper
54. *Phalaropus lobatus* | Red-necked phalarope
55. *Larus genei* | Slender-billed gull
56. *Larus audouinii* | Audouin's gull
57. *Gelochelidon nilotica* | Gull-billed tern
58. *Sterna sandvicensis* | Sandwich tern
59. *Sterna dougallii* | Roseate tern
60. *Sterna hirundo* | Common tern
61. *Sterna paradisaea* | Arctic tern
62. *Sterna albifrons* | Little tern
63. *Chelidonias niger* | Black tern
64. *Pterocles alchata* | Pin-tailed sandgrouse
65. *Bubo bubo* | Eagle owl
66. *Nyctea scandiaca* | Snowy owl
67. *Asio flammeus* | Short-eared owl
68. *Alcedo atthis* | Kingfisher

- 69. *Dryocopus martius* | Black woodpecker
- 70. *Dendrocopus leucotus* | White-backed woodpecker
- 71. *Luscinia svecica* | Blue-throat
- 72. *Sylvia undata* | Dartford warbler
- 73. *Sylvia nisoria* | Barred warbler
- 74. *Sitta whiteheadi* | Corsican nuthatch



DIRECTIVE 2004/35/EC of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage

Incorporated and adapted by Ministerial Council Decision 2016/14/MC-EnC of 14 October 2016 on amending the Treaty establishing the Energy Community and adapting and implementing Directive 2004/35/EC of the European Parliament and of the Council.

*The adaptations made by Ministerial Council Decision 2016/12/MC-EnC are highlighted in **bold and blue**.*

Article 1

Subject matter

The purpose of this Directive is to establish a framework of environmental liability based on the “polluter-pays” principle, to prevent and remedy environmental damage.

Article 2

Definitions

For the purpose of this Directive the following definitions shall apply:

1. “environmental damage” means:

(a) damage to protected species and natural habitats, which is any damage that has significant adverse effects on reaching or maintaining the favourable conservation status of such habitats or species. The significance of such effects is to be assessed with reference to the baseline condition, taking account of the criteria set out in Annex I;

Damage to protected species and natural habitats does not include previously identified adverse effects which result from an act by an operator which was expressly authorised by the relevant authorities in accordance with provisions implementing Article 6(3) and (4) or Article 16 of Directive 92/43/EEC or Article 9 of Directive 79/409/EEC or, in the case of habitats and species not covered by Community law, in accordance with equivalent provisions of national law on nature conservation.

(b) water damage, which is any damage that significantly adversely affects the ecological, chemical and/or quantitative status and/or ecological potential, as defined in Directive 2000/60/EC, of the waters concerned, with the exception of adverse effects where Article 4(7) of that Directive applies;

(c) land damage, which is any land contamination that creates a significant risk of human health being adversely affected as a result of the direct or indirect introduction, in, on or under land, of substances, preparations, organisms or micro-organisms;

2. “damage” means a measurable adverse change in a natural resource or measurable impairment of a natural resource service which may occur directly or indirectly;

3. “protected species and natural habitats” means:

(a) the species mentioned in Article 4(2) of Directive 79/409/EEC or listed in Annex I thereto or listed in

Annexes II and IV to Directive 92/43/EEC;

(b) the habitats of species mentioned in Article 4(2) of Directive 79/409/EEC or listed in Annex I thereto or listed in Annex II to Directive 92/43/EEC, and the natural habitats listed in Annex I to Directive 92/43/EEC and the breeding sites or resting places of the species listed in Annex IV to Directive 92/43/EEC; and

(c) where a **Contracting Party** so determines, any habitat or species, not listed in those Annexes which the **Contracting Party** designates for equivalent purposes as those laid down in these two Directives;

4. "conservation status" means:

(a) in respect of a natural habitat, the sum of the influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species within, as the case may be, the European territory of the **Contracting Parties** to which the Treaty applies or the territory of a **Contracting Party** or the natural range of that habitat;

The conservation status of a natural habitat will be taken as "favourable" when:

- its natural range and areas it covers within that range are stable or increasing,
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable, as defined in (b);

(b) in respect of a species, the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within, as the case may be, the European territory of the **Contracting Parties** to which the Treaty applies or the territory of a **Contracting Party** or the natural range of that species;

The conservation status of a species will be taken as "favourable" when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats,
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis;

5. "waters" mean all waters covered by Directive 2000/60/EC;

6. "operator" means any natural or legal, private or public person who operates or controls the occupational activity or, where this is provided for in national legislation, to whom decisive economic power over the technical functioning of such an activity has been delegated, including the holder of a permit or authorisation for such an activity or the person registering or notifying such an activity;

7. "occupational activity" means any activity carried out in the course of an economic activity, a business or an undertaking, irrespectively of its private or public, profit or non-profit character;

8. "emission" means the release in the environment, as a result of human activities, of substances, preparations, organisms or micro-organisms;

9. "imminent threat of damage" means a sufficient likelihood that environmental damage will occur in the near future;

10. "preventive measures" means any measures taken in response to an event, act or omission that has

- created an imminent threat of environmental damage, with a view to preventing or minimising that damage;
11. “remedial measures” means any action, or combination of actions, including mitigating or interim measures to restore, rehabilitate or replace damaged natural resources and/or impaired services, or to provide an equivalent alternative to those resources or services as foreseen in Annex II;
12. “natural resource” means protected species and natural habitats, water and land;
13. “services” and “natural resources services” mean the functions performed by a natural resource for the benefit of another natural resource or the public;
14. “baseline condition” means the condition at the time of the damage of the natural resources and services that would have existed had the environmental damage not occurred, estimated on the basis of the best information available;
15. “recovery”, including “natural recovery”, means, in the case of water, protected species and natural habitats the return of damaged natural resources and/or impaired services to baseline condition and in the case of land damage, the elimination of any significant risk of adversely affecting human health;
16. “costs” means costs which are justified by the need to ensure the proper and effective implementation of this Directive including the costs of assessing environmental damage, an imminent threat of such damage, alternatives for action as well as the administrative, legal, and enforcement costs, the costs of data collection and other general costs, monitoring and supervision costs.

Article 3

Scope

1. This Directive shall apply to:
- (a) environmental damage caused by any of the occupational activities listed in Annex III **in the field of Network Energy**, and to any imminent threat of such damage occurring by reason of any of those activities;
- (b) damage to protected species and natural habitats caused by any occupational activities other than those listed in Annex III, and to any imminent threat of such damage occurring by reason of any of those activities, whenever the operator has been at fault or negligent.
2. This Directive shall apply without prejudice to more stringent Community legislation regulating the operation of any of the activities falling within the scope of this Directive and without prejudice to Community legislation containing rules on conflicts of jurisdiction.
3. Without prejudice to relevant national legislation, this Directive shall not give private parties a right of compensation as a consequence of environmental damage or of an imminent threat of such damage.

Article 4

Exceptions

1. This Directive shall not cover environmental damage or an imminent threat of such damage caused by:
 - (a) an act of armed conflict, hostilities, civil war or insurrection;
 - (b) a natural phenomenon of exceptional, inevitable and irresistible character.
2. This Directive shall not apply to environmental damage or to any imminent threat of such damage arising from an incident in respect of which liability or compensation falls within the scope of any of the International Conventions listed in Annex IV, including any future amendments thereof, which is in force in the **Contracting Party** concerned.
3. This Directive shall be without prejudice to the right of the operator to limit his liability in accordance with national legislation implementing the Convention on Limitation of Liability for Maritime Claims (LLMC), 1976, including any future amendment to the Convention, or the Strasbourg Convention on Limitation of Liability in Inland Navigation (CLNI), 1988, including any future amendment to the Convention.
4. This Directive shall not apply to such nuclear risks or environmental damage or imminent threat of such damage as may be caused by the activities covered by the Treaty establishing the European Atomic Energy Community or caused by an incident or activity in respect of which liability or compensation falls within the scope of any of the international instruments listed in Annex V, including any future amendments thereof.
5. This Directive shall only apply to environmental damage or to an imminent threat of such damage caused by pollution of a diffuse character, where it is possible to establish a causal link between the damage and the activities of individual operators.
6. This Directive shall not apply to activities the main purpose of which is to serve national defence or international security nor to activities the sole purpose of which is to protect from natural disasters.

Article 5

Preventive action

1. Where environmental damage has not yet occurred but there is an imminent threat of such damage occurring, the operator shall, without delay, take the necessary preventive measures.
2. **Contracting Parties** shall provide that, where appropriate, and in any case whenever an imminent threat of environmental damage is not dispelled despite the preventive measures taken by the operator, operators are to inform the competent authority of all relevant aspects of the situation, as soon as possible.
3. The competent authority may, at any time:
 - (a) require the operator to provide information on any imminent threat of environmental damage or in suspected cases of such an imminent threat;
 - (b) require the operator to take the necessary preventive measures;
 - (c) give instructions to the operator to be followed on the necessary preventive measures to be taken; or
 - (d) itself take the necessary preventive measures.

4. The competent authority shall require that the preventive measures are taken by the operator. If the operator fails to comply with the obligations laid down in paragraph 1 or 3(b) or (c), cannot be identified or is not required to bear the costs under this Directive, the competent authority may take these measures itself.

Article 6

Remedial action

1. Where environmental damage has occurred the operator shall, without delay, inform the competent authority of all relevant aspects of the situation and take:

(a) all practicable steps to immediately control, contain, remove or otherwise manage the relevant contaminants and/or any other damage factors in order to limit or to prevent further environmental damage and adverse effects on human health or further impairment of services and

(b) the necessary remedial measures, in accordance with Article 7.

2. The competent authority may, at any time:

(a) require the operator to provide supplementary information on any damage that has occurred;

(b) take, require the operator to take or give instructions to the operator concerning, all practicable steps to immediately control, contain, remove or otherwise manage the relevant contaminants and/ or any other damage factors in order to limit or to prevent further environmental damage and adverse effect on human health, or further impairment of services;

(c) require the operator to take the necessary remedial measures;

(d) give instructions to the operator to be followed on the necessary remedial measures to be taken; or

(e) itself take the necessary remedial measures.

3. The competent authority shall require that the remedial measures are taken by the operator. If the operator fails to comply with the obligations laid down in paragraph 1 or 2(b), (c) or (d), cannot be identified or is not required to bear the costs under this Directive, the competent authority may take these measures itself, as a means of last resort.

Article 7

Determination of remedial measures

1. Operators shall identify, in accordance with Annex II, potential remedial measures and submit them to the competent authority for its approval, unless the competent authority has taken action under Article 6(2)(e) and (3).

2. The competent authority shall decide which remedial measures shall be implemented in accordance with Annex II, and with the cooperation of the relevant operator, as required.

3. Where several instances of environmental damage have occurred in such a manner that the competent authority cannot ensure that the necessary remedial measures are taken at the same time, the competent authority shall be entitled to decide which instance of environmental damage must be remedied first.

In making that decision, the competent authority shall have regard, *inter alia*, to the nature, extent and gravity of the various instances of environmental damage concerned, and to the possibility of natural recovery. Risks to human health shall also be taken into account.

4. The competent authority shall invite the persons referred to in Article 12(1) and in any case the persons on whose land remedial measures would be carried out to submit their observations and shall take them into account.

Article 8

Prevention and remediation costs

1. The operator shall bear the costs for the preventive and remedial actions taken pursuant to this Directive.

2. Subject to paragraphs 3 and 4, the competent authority shall recover, *inter alia*, via security over property or other appropriate guarantees from the operator who has caused the damage or the imminent threat of damage, the costs it has incurred in relation to the preventive or remedial actions taken under this Directive.

However, the competent authority may decide not to recover the full costs where the expenditure required to do so would be greater than the recoverable sum or where the operator cannot be identified.

3. An operator shall not be required to bear the cost of preventive or remedial actions taken pursuant to this Directive when he can prove that the environmental damage or imminent threat of such damage:

(a) was caused by a third party and occurred despite the fact that appropriate safety measures were in place; or

(b) resulted from compliance with a compulsory order or instruction emanating from a public authority other than an order or instruction consequent upon an emission or incident caused by the operator's own activities.

In such cases **Contracting Parties** shall take the appropriate measures to enable the operator to recover the costs incurred.

4. The Contracting Parties may allow the operator not to bear the cost of remedial actions taken pursuant to this Directive where he demonstrates that he was not at fault or negligent and that the environmental damage was caused by:

(a) an emission or event expressly authorised by, and fully in accordance with the conditions of, an authorisation conferred by or given under applicable national laws and regulations which implement those legislative measures adopted by the Community specified in Annex III, as applied at the date of the emission or event;

(b) an emission or activity or any manner of using a product in the course of an activity which the operator demonstrates was not considered likely to cause environmental damage according to the state of scientific and technical knowledge at the time when the emission was released or the activity took place.

5. Measures taken by the competent authority in pursuance of Article 5(3) and (4) and Article 6(2) and (3) shall be without prejudice to the liability of the relevant operator under this Directive and without prejudice to Articles 87 and 88 of the Treaty.

Article 9

Cost allocation in cases of multiple party causation

This Directive is without prejudice to any provisions of national regulations concerning cost allocation in cases of multiple party causation especially concerning the apportionment of liability between the producer and the user of a product.

Article 10

Limitation period for recovery of costs

The competent authority shall be entitled to initiate cost recovery proceedings against the operator, or if appropriate, a third party who has caused the damage or the imminent threat of damage in relation to any measures taken in pursuance of this Directive within five years from the date on which those measures have been completed or the liable operator, or third party, has been identified, whichever is the later.

Article 11

Competent authority

1. **Contracting Parties** shall designate the competent authority(ies) responsible for fulfilling the duties provided for in this Directive.
2. The duty to establish which operator has caused the damage or the imminent threat of damage, to assess the significance of the damage and to determine which remedial measures should be taken with reference to Annex II shall rest with the competent authority. To that effect, the competent authority shall be entitled to require the relevant operator to carry out his own assessment and to supply any information and data necessary.
3. **Contracting Parties** shall ensure that the competent authority may empower or require third parties to carry out the necessary preventive or remedial measures.
4. Any decision taken pursuant to this Directive which imposes preventive or remedial measures shall state the exact grounds on which it is based. Such decision shall be notified forthwith to the operator concerned, who shall at the same time be informed of the legal remedies available to him under the laws in force in the **Contracting Party** concerned and of the time-limits to which such remedies are subject.

Article 12

Request for action

1. Natural or legal persons:
 - (a) affected or likely to be affected by environmental damage or
 - (b) having a sufficient interest in environmental decision making relating to the damage or, alternatively,

(c) alleging the impairment of a right, where administrative procedural law of a **Contracting Party** requires this as a precondition, shall be entitled to submit to the competent authority any observations relating to instances of environmental damage or an imminent threat of such damage of which they are aware and shall be entitled to request the competent authority to take action under this Directive.

What constitutes a “sufficient interest” and “impairment of a right” shall be determined by the **Contracting Parties**.

To this end, the interest of any non-governmental organisation promoting environmental protection and meeting any requirements under national law shall be deemed sufficient for the purpose of subparagraph (b). Such organisations shall also be deemed to have rights capable of being impaired for the purpose of subparagraph (c).

2. The request for action shall be accompanied by the relevant information and data supporting the observations submitted in relation to the environmental damage in question.

3. Where the request for action and the accompanying observations show in a plausible manner that environmental damage exists, the competent authority shall consider any such observations and requests for action. In such circumstances the competent authority shall give the relevant operator an opportunity to make his views known with respect to the request for action and the accompanying observations.

4. The competent authority shall, as soon as possible and in any case in accordance with the relevant provisions of national law, inform the persons referred to in paragraph 1, which submitted observations to the authority, of its decision to accede to or refuse the request for action and shall provide the reasons for it.

5. **Contracting Parties** may decide not to apply paragraphs 1 and 4 to cases of imminent threat of damage.

Article 13

Review procedures

1. The persons referred to in Article 12(1) shall have access to a court or other independent and impartial public body competent to review the procedural and substantive legality of the decisions, acts or failure to act of the competent authority under this Directive.

2. This Directive shall be without prejudice to any provisions of national law which regulate access to justice and those which require that administrative review procedures be exhausted prior to recourse to judicial proceedings.

Article 14

Financial security

1. **Contracting Parties** shall take measures to encourage the development of financial security instruments and markets by the appropriate economic and financial operators, including financial mechanisms in case of insolvency, with the aim of enabling operators to use financial guarantees to cover their responsibilities under this Directive.

2. <...>¹

¹ Not applicable in accordance with Article 2(2) of Decision 2016/14/MC-EnC.

Article 15**Cooperation between Contracting Parties**

1. Where environmental damage affects or is likely to affect several **Contracting Parties**, those **Contracting Parties** shall cooperate, including through the appropriate exchange of information, with a view to ensuring that preventive action and, where necessary, remedial action is taken in respect of any such environmental damage.
2. Where environmental damage has occurred, the **Contracting Party** in whose territory the damage originates shall provide sufficient information to the potentially affected **Contracting Parties**.
3. Where a **Contracting Party** identifies damage within its borders which has not been caused within them it may report the issue to the **Secretariat** and any other **Contracting Party** concerned; it may make recommendations for the adoption of preventive or remedial measures and it may seek, in accordance with this Directive, to recover the costs it has incurred in relation to the adoption of preventive or remedial measures.

Article 16**Relationship with national law**

1. This Directive shall not prevent **Contracting Parties** from maintaining or adopting more stringent provisions in relation to the prevention and remedying of environmental damage, including the identification of additional activities to be subject to the prevention and remediation requirements of this Directive and the identification of additional responsible parties.
2. This Directive shall not prevent **Contracting Parties** from adopting appropriate measures, such as the prohibition of double recovery of costs, in relation to situations where double recovery could occur as a result of concurrent action by a competent authority under this Directive and by a person whose property is affected by environmental damage.

Article 17**Temporal application**

This Directive shall not apply to:

- damage caused by an emission, event or incident that took place before the date referred to in Article 19(1),
- damage caused by an emission, event or incident which takes place subsequent to the date referred to in Article 19(1) when it derives from a specific activity that took place and finished before the said date,
- damage, if more than 30 years have passed since the emission, event or incident, resulting in the damage, occurred.

Article 18

Reports and review

1. **Contracting Parties** shall report to the **Secretariat** on the experience gained in the application of this Directive by **31 December 2026** at the latest. The reports shall include the information and data set out in Annex VI.

2. <...>

3. <...>

Article 19

Implementation

1. **Contracting Parties** shall inform the **Energy Community Secretariat** of the laws, regulations and administrative provisions brought into force to comply with the relevant provisions of Directive 2004/35/EC, as amended by Directive 2006/21/EC, Directive 2009/31/EC and Directive 2013/30/EU, in accordance with Article 12 of the Treaty establishing the Energy Community by 1 January 2021.

When **Contracting Parties** adopt those provisions, they shall contain a reference to this Decision and Directive 2004/35/EC, as amended by Directive 2006/21/EC, Directive 2009/31/EC and Directive 2013/30/EU, or shall be accompanied by such reference on the occasion of their official publication. The methods of making such reference shall be laid down by the **Contracting Parties**.

2. **Contracting Parties** shall communicate to the **Energy Community Secretariat** the text of the main provisions of national law which they adopt in the field covered by this Decision and Directive 2004/35/EC, as amended by Directive 2006/21/EC, Directive 2009/31/EC and Directive 2013/30/EU.²

Article 20

Entry into force

This Decision shall enter into force on the date of its adoption.³

Article 21

Addressees

This Decision is addressed to the **Contracting Parties of the Treaty establishing the Energy Community**.⁴

² The text displayed here corresponds to Article 3 of Decision 2016/14/MC-EnC.

³ The text displayed here corresponds to Article 4 of Decision 2016/14/MC-EnC.

⁴ The text displayed here corresponds to Article 5 of Decision 2016/14/MC-EnC.

ANNEX I

CRITERIA REFERRED TO IN ARTICLE 2(1)(A)

The significance of any damage that has adverse effects on reaching or maintaining the favourable conservation status of habitats or species has to be assessed by reference to the conservation status at the time of the damage, the services provided by the amenities they produce and their capacity for natural regeneration. Significant adverse changes to the baseline condition should be determined by means of measurable data such as:

- the number of individuals, their density or the area covered,
- the role of the particular individuals or of the damaged area in relation to the species or to the habitat conservation, the rarity of the species or habitat (assessed at local, regional and higher level including at Community level),
- the species' capacity for propagation (according to the dynamics specific to that species or to that population), its viability or the habitat's capacity for natural regeneration (according to the dynamics specific to its characteristic species or to their populations),
- the species' or habitat's capacity, after damage has occurred, to recover within a short time, without any intervention other than increased protection measures, to a condition which leads, solely by virtue of the dynamics of the species or habitat, to a condition deemed equivalent or superior to the baseline condition.

Damage with a proven effect on human health must be classified as significant damage. The following does not have to be classified as significant damage:

- negative variations that are smaller than natural fluctuations regarded as normal for the species or habitat in question,
- negative variations due to natural causes or resulting from intervention relating to the normal management of sites, as defined in habitat records or target documents or as carried on previously by owners or operators,
- damage to species or habitats for which it is established that they will recover, within a short time and without intervention, either to the baseline condition or to a condition which leads, solely by virtue of the dynamics of the species or habitat, to a condition deemed equivalent or superior to the baseline condition.

ANNEX II

REMEDYING OF ENVIRONMENTAL DAMAGE

This Annex sets out a common framework to be followed in order to choose the most appropriate measures to ensure the remedying of environmental damage.

1. Remediation of damage to water or protected species or natural habitats

Remedying of environmental damage, in relation to water or protected species or natural habitats, is achieved through the restoration of the environment to its baseline condition by way of primary, complementary and compensatory remediation, where:

(a) "Primary" remediation is any remedial measure which returns the damaged natural resources and/or impaired services to, or towards, baseline condition;

(b) "Complementary" remediation is any remedial measure taken in relation to natural resources and/or services to compensate for the fact that primary remediation does not result in fully restoring the damaged natural resources and/or services;

(c) "Compensatory" remediation is any action taken to compensate for interim losses of natural resources and/or services that occur from the date of damage occurring until primary remediation has achieved its full effect;

(d) "interim losses" means losses which result from the fact that the damaged natural resources and/or services are not able to perform their ecological functions or provide services to other natural resources or to the public until the primary or complementary measures have taken effect. It does not consist of financial compensation to members of the public.

Where primary remediation does not result in the restoration of the environment to its baseline condition, then complementary remediation will be undertaken. In addition, compensatory remediation will be undertaken to compensate for the interim losses.

Remedying of environmental damage, in terms of damage to water or protected species or natural habitats, also implies that any significant risk of human health being adversely affected be removed.

1.1. Remediation objectives

Purpose of primary remediation

1.1.1. The purpose of primary remediation is to restore the damaged natural resources and/or services to, or towards, baseline condition.

Purpose of complementary remediation

1.1.2. Where the damaged natural resources and/or services do not return to their baseline condition, then complementary remediation will be undertaken. The purpose of complementary remediation is to provide a similar level of natural resources and/or services, including, as appropriate, at an alternative site, as would have been provided if the damaged site had been returned to its baseline condition. Where possible and appropriate the alternative site should be geographically linked to the damaged site, taking into account the interests of the affected population.

Purpose of compensatory remediation

1.1.3. Compensatory remediation shall be undertaken to compensate for the interim loss of natural re-

sources and services pending recovery. This compensation consists of additional improvements to protected natural habitats and species or water at either the damaged site or at an alternative site. It does not consist of financial compensation to members of the public.

1.2. Identification of remedial measures

Identification of primary remedial measures

1.2.1. Options comprised of actions to directly restore the natural resources and services towards baseline condition on an accelerated time frame, or through natural recovery, shall be considered.

Identification of complementary and compensatory remedial measures

1.2.2. When determining the scale of complementary and compensatory remedial measures, the use of resource-to-resource or service-to-service equivalence approaches shall be considered first. Under these approaches, actions that provide natural resources and/or services of the same type, quality and quantity as those damaged shall be considered first. Where this is not possible, then alternative natural resources and/or services shall be provided. For example, a reduction in quality could be offset by an increase in the quantity of remedial measures.

1.2.3. If it is not possible to use the first choice resource-to-resource or service-to-service equivalence approaches, then alternative valuation techniques shall be used. The competent authority may prescribe the method, for example monetary valuation, to determine the extent of the necessary complementary and compensatory remedial measures. If valuation of the lost resources and/or services is practicable, but valuation of the replacement natural resources and/or services cannot be performed within a reasonable time-frame or at a reasonable cost, then the competent authority may choose remedial measures whose cost is equivalent to the estimated monetary value of the lost natural resources and/or services.

The complementary and compensatory remedial measures should be so designed that they provide for additional natural resources and/or services to reflect time preferences and the time profile of the remedial measures. For example, the longer the period of time before the baseline condition is reached, the greater the amount of compensatory remedial measures that will be undertaken (other things being equal).

1.3. Choice of the remedial options

1.3.1. The reasonable remedial options should be evaluated, using best available technologies, based on the following criteria:

- The effect of each option on public health and safety,
- The cost of implementing the option,
- The likelihood of success of each option,
- The extent to which each option will prevent future damage, and avoid collateral damage as a result of implementing the option,
- The extent to which each option benefits to each component of the natural resource and/or service,
- The extent to which each option takes account of relevant social, economic and cultural concerns and other relevant factors specific to the locality,
- The length of time it will take for the restoration of the environmental damage to be effective,
- The extent to which each option achieves the restoration of site of the environmental damage,
- The geographical linkage to the damaged site.

1.3.2. When evaluating the different identified remedial options, primary remedial measures that do not fully restore the damaged water or protected species or natural habitat to baseline or that restore it more slowly can be chosen. This decision can be taken only if the natural resources and/ or services foregone at the primary site as a result of the decision are compensated for by increasing complementary or compensatory actions to provide a similar level of natural resources and/or services as were foregone. This will be the case, for example, when the equivalent natural resources and/ or services could be provided elsewhere at a lower cost. These additional remedial measures shall be determined in accordance with the rules set out in section 1.2.2.

1.3.3. Notwithstanding the rules set out in section 1.3.2. and in accordance with Article 7(3), the competent authority is entitled to decide that no further remedial measures should be taken if:

- (a) the remedial measures already taken secure that there is no longer any significant risk of adversely affecting human health, water or protected species and natural habitats, and
- (b) the cost of the remedial measures that should be taken to reach baseline condition or similar level would be disproportionate to the environmental benefits to be obtained.

2. Remediation of land damage

The necessary measures shall be taken to ensure, as a minimum, that the relevant contaminants are removed, controlled, contained or diminished so that the contaminated land, taking account of its current use or approved future use at the time of the damage, no longer poses any significant risk of adversely affecting human health. The presence of such risks shall be assessed through risk-assessment procedures taking into account the characteristic and function of the soil, the type and concentration of the harmful substances, preparations, organisms or micro-organisms, their risk and the possibility of their dispersion. Use shall be ascertained on the basis of the land use regulations, or other relevant regulations, in force, if any, when the damage occurred.

If the use of the land is changed, all necessary measures shall be taken to prevent any adverse effects on human health.

If land use regulations, or other relevant regulations, are lacking, the nature of the relevant area where the damage occurred, taking into account its expected development, shall determine the use of the specific area.

A natural recovery option, that is to say an option in which no direct human intervention in the recovery process would be taken, shall be considered.

ANNEX III

ACTIVITIES REFERRED TO IN ARTICLE 3(1)

1. The operation of installations subject to permit in pursuance of Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control. That means all activities listed in Annex I of Directive 96/61/EC with the exception of installations or parts of installations used for research, development and testing of new products and processes.

2. Waste management operations, including the collection, transport, recovery and disposal of waste and hazardous waste, including the supervision of such operations and after-care of disposal sites, subject to permit or registration in pursuance of Council Directive 75/442/EEC of 15 July 1975 on waste and Council Directive 91/689/EEC of 12 December 1991 on hazardous waste.

Those operations include, *inter alia*, the operation of landfill sites under Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste and the operation of incineration plants under Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste.

For the purpose of this Directive, **Contracting Parties** may decide that those operations shall not include the spreading of sewage sludge from urban waste water treatment plants, treated to an approved standard, for agricultural purposes.

3. All discharges into the inland surface water, which require prior authorisation in pursuance of Council Directive 76/464/EEC of 4 May 1976 on pollution caused by certain dangerous substances, discharged into the aquatic environment of the Community.

4. All discharges of substances into groundwater which require prior authorisation in pursuance of Council Directive 80/68/EEC of 17 December 1979 on the protection of groundwater against pollution caused by certain dangerous substances.

5. The discharge or injection of pollutants into surface water or groundwater which require a permit, authorisation or registration in pursuance of Directive 2000/60/EC.

6. Water abstraction and impoundment of water subject to prior authorisation in pursuance of Directive 2000/60/EC.

7. Manufacture, use, storage, processing, filling, release into the environment and onsite transport of
(a) dangerous substances as defined in Article 2(2) of Council Directive 67/548/EEC of 27 June 1967 on the approximation of the laws, regulations and administrative provisions of the **Contracting Parties** relating to the classification, packaging and labelling of dangerous substances;

(b) dangerous preparations as defined in Article 2(2) of Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the **Contracting Parties** relating to the classification, packaging and labelling of dangerous preparations;

(c) plant protection products as defined in Article 2(1) of Council Directive 91/414/EEC of 15 July 1991 concerning the placing of plant protection products on the market;

(d) biocidal products as defined in Article 2(1)(a) of Directive 98/8/EC of the European Parliament and of the Council of 16 February 1998 concerning the placing of biocidal products on the market.

8. Transport by road, rail, inland waterways, sea or air of dangerous goods or polluting goods as defined

either in Annex A to Council Directive 94/55/EC of 21 November 1994 on the approximation of the laws of the **Contracting Parties** with regard to the transport of dangerous goods by road or in the Annex to Council Directive 96/49/EC of 23 July 1996 on the approximation of the laws of the **Contracting Parties** with regard to the transport of dangerous goods by rail or as defined in Council Directive 93/75/EEC of 13 September 1993 concerning minimum requirements for vessels bound for or leaving Community ports and carrying dangerous or polluting goods.

9. The operation of installations subject to authorisation in pursuance of Council Directive 84/360/EEC of 28 June 1984 on the combating of air pollution from industrial plants in relation to the release into air of any of the polluting substances covered by the aforementioned Directive.

10. Any contained use, including transport, involving genetically modified micro-organisms as defined by Council Directive 90/219/EEC of 23 April 1990 on the contained use of genetically modified micro-organisms.

11. Any deliberate release into the environment, transport and placing on the market of genetically modified organisms as defined by Directive 2001/18/EC of the European Parliament and of the Council.

12. Transboundary shipment of waste within, into or out of the European Union, requiring an authorisation or prohibited in the meaning of Council Regulation (EEC) No 259/93 of 1 February 1993 on the supervision and control of shipments of waste within, into and out of the European Community.

ANNEX IV

INTERNATIONAL CONVENTIONS REFERRED TO IN ARTICLE 4(2)

- (a) the International Convention of 27 November 1992 on Civil Liability for Oil Pollution Damage;
- (b) the International Convention of 27 November 1992 on the Establishment of an International Fund for Compensation for Oil Pollution Damage;
- (c) the International Convention of 23 March 2001 on Civil Liability for Bunker Oil Pollution Damage;
- (d) the International Convention of 3 May 1996 on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea;
- (e) the Convention of 10 October 1989 on Civil Liability for Damage Caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels.

ANNEX V

INTERNATIONAL INSTRUMENTS REFERRED TO IN ARTICLE 4(4)

- (a) the Paris Convention of 29 July 1960 on Third Party Liability in the Field of Nuclear Energy and the Brussels Supplementary Convention of 31 January 1963;
- (b) the Vienna Convention of 21 May 1963 on Civil Liability for Nuclear Damage;
- (c) the Convention of 12 September 1997 on Supplementary Compensation for Nuclear Damage;
- (d) the Joint Protocol of 21 September 1988 relating to the Application of the Vienna Convention and the Paris Convention;
- (e) the Brussels Convention of 17 December 1971 relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material.

ANNEX VI

INFORMATION AND DATA REFERRED TO IN ARTICLE 18(1)

The reports referred to in Article 18(1) shall include a list of instances of environmental damage and instances of liability under this Directive, with the following information and data for each instance:

1. Type of environmental damage, date of occurrence and/or discovery of the damage and date on which proceedings were initiated under this Directive.
2. Activity classification code of the liable legal person(s).
3. Whether there has been resort to judicial review proceedings either by liable parties or qualified entities. (The type of claimants and the outcome of proceedings shall be specified.)
4. Outcome of the remediation process.
5. Date of closure of proceedings.

Contracting Parties may include in their reports any other information and data they deem useful to allow a proper assessment of the functioning of this Directive, for example:

1. Costs incurred with remediation and prevention measures, as defined in this Directive:
 - paid for directly by liable parties, when this information is available;
 - recovered ex post facto from liable parties;
 - unrecovered from liable parties. (Reasons for non-recovery should be specified.)
2. Results of the actions to promote and the implementation of the financial security instruments used in accordance with this Directive.
3. An assessment of the additional administrative costs incurred annually by the public administration in setting up and operating the administrative structures needed to implement and enforce this Directive.



DIRECTIVE 2001/42/EC of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment

Incorporated and adapted by Ministerial Council Decision 2016/13/MC-EnC of 14 October 2016 on amending the Treaty establishing the Energy Community and adapting and implementing Directive 2001/42/EC of the European Parliament and of the Council.

*The adaptations made by Ministerial Council Decision 2016/13/MC-EnC are highlighted in **bold and blue**.*

Article 1 **Objectives**

The objective of this Directive is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment.

Article 2 **Definitions**

For the purposes of this Directive:

- (a) "plans and programmes" shall mean plans and programmes, including those co-financed by the **European Union, or international financial institutions**, as well as any modifications to them:
- which are subject to preparation and/or adoption by an authority at national, regional or local level or which are prepared by an authority for adoption, through a legislative procedure by Parliament or Government, and
 - which are required by legislative, regulatory or administrative provisions;
- (b) "environmental assessment" shall mean the preparation of an environmental report, the carrying out of consultations, the taking into account of the environmental report and the results of the consultations in decision-making and the provision of information on the decision in accordance with Articles 4 to 9;
- (c) "environmental report" shall mean the part of the plan or programme documentation containing the information required in Article 5 and Annex I;
- (d) "The public" shall mean one or more natural or legal persons and, in accordance with national legislation or practice, their associations, organisations or groups.

Article 3

Scope

1. An environmental assessment, in accordance with Articles 4 to 9, shall be carried out for plans and programmes referred to in paragraphs 2 to 4 which are likely to have significant environmental effects.
2. Subject to paragraph 3, an environmental assessment shall be carried out for all plans and programmes,
 - (a) which are prepared for **network energy, or, provided that they contain network-energy related issues, in the fields of** agriculture, forestry, fisheries, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use and which set the framework for future development consent of projects listed in Annexes I and II to Directive **2011/92/EU**, or
 - (b) which, in view of the likely effect on sites, have been determined to require an assessment pursuant to Article 6 or 7 of Directive 92/43/EEC.
3. Plans and programmes referred to in paragraph 2 which determine the use of small areas at local level and minor modifications to plans and programmes referred to in paragraph 2 shall require an environmental assessment only where the **Contracting Parties** determine that they are likely to have significant environmental effects.
4. **Contracting Parties** shall determine whether plans and programmes, other than those referred to in paragraph 2, which set the framework for future development consent of projects, are likely to have significant environmental effects.
5. **Contracting Parties** shall determine whether plans or programmes referred to in paragraphs 3 and 4 are likely to have significant environmental effects either through case-by-case examination or by specifying types of plans and programmes or by combining both approaches. For this purpose **Contracting Parties** shall in all cases take into account relevant criteria set out in Annex II, in order to ensure that plans and programmes with likely significant effects on the environment are covered by this Directive.
6. In the case-by-case examination and in specifying types of plans and programmes in accordance with paragraph 5, the authorities referred to in Article 6(3) shall be consulted.
7. **Contracting Parties** shall ensure that their conclusions pursuant to paragraph 5, including the reasons for not requiring an environmental assessment pursuant to Articles 4 to 9, are made available to the public.
8. The following plans and programmes are not subject to this Directive:
 - plans and programmes the sole purpose of which is to serve national defence or civil emergency,
 - financial or budget plans and programmes.
9. <...>¹

Article 4

General obligations

1. The environmental assessment referred to in Article 3 shall be carried out during the preparation of a plan or programme and before its adoption or submission to the legislative procedure.
2. The requirements of this Directive shall either be integrated into existing procedures in **Contracting**

¹ Not applicable in accordance with Article 2(2) of Decision 2016/13/MC-EnC.

Parties for the adoption of plans and programmes or incorporated in procedures established to comply with this Directive.

3. Where plans and programmes form part of a hierarchy, **Contracting Parties** shall, with a view to avoiding duplication of the assessment, take into account the fact that the assessment will be carried out, in accordance with this Directive, at different levels of the hierarchy. For the purpose of, *inter alia*, avoiding duplication of assessment, **Contracting Parties** shall apply Article 5(2) and (3).

Article 5

Environmental report

1. Where an environmental assessment is required under Article 3(1), an environmental report shall be prepared in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated. The information to be given for this purpose is referred to in Annex I.

2. The environmental report prepared pursuant to paragraph 1 shall include the information that may reasonably be required taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme, its stage in the decision-making process and the extent to which certain matters are more appropriately assessed at different levels in that process in order to avoid duplication of the assessment.

3. Relevant information available on environmental effects of the plans and programmes and obtained at other levels of decision-making or through other Community legislation may be used for providing the information referred to in Annex I.

4. The authorities referred to in Article 6(3) shall be consulted when deciding on the scope and level of detail of the information which must be included in the environmental report.

Article 6

Consultations

1. The draft plan or programme and the environmental report prepared in accordance with Article 5 shall be made available to the authorities referred to in paragraph 3 of this Article and the public.

2. The authorities referred to in paragraph 3 and the public referred to in paragraph 4 shall be given an early and effective opportunity within appropriate time frames to express their opinion on the draft plan or programme and the accompanying environmental report before the adoption of the plan or programme or its submission to the legislative procedure.

3. **Contracting Parties** shall designate the authorities to be consulted which, by reason of their specific environmental responsibilities, are likely to be concerned by the environmental effects of implementing plans and programmes.

4. **Contracting Parties** shall identify the public for the purposes of paragraph 2, including the public affected or likely to be affected by, or having an interest in, the decision-making subject to this Directive,

including relevant non-governmental organisations, such as those promoting environmental protection and other organisations concerned.

5. The detailed arrangements for the information and consultation of the authorities and the public shall be determined by the **Contracting Parties**.

Article 7

Transboundary consultations

1. Where a **Contracting Party** considers that the implementation of a plan or programme being prepared in relation to its territory is likely to have significant effects on the environment in another **Contracting Party**, or where a **Contracting Party** likely to be significantly affected so requests, the **Contracting Party** in whose territory the plan or programme is being prepared shall, before its adoption or submission to the legislative procedure, forward a copy of the draft plan or programme and the relevant environmental report to the other **Contracting Party as well as to the Secretariat**.

2. Where a **Contracting Party** is sent a copy of a draft plan or programme and an environmental report under paragraph 1, it shall indicate to the other **Contracting Party** whether it wishes to enter into consultations before the adoption of the plan or programme or its submission to the legislative procedure and, if it so indicates, the **parties** concerned shall enter into consultations concerning the likely transboundary environmental effects of implementing the plan or programme and the measures envisaged to reduce or eliminate such effects.

Where such consultations take place, the **parties** concerned shall agree on detailed arrangements to ensure that the authorities referred to in Article 6(3) and the public referred to in Article 6(4) in the **Contracting Party** likely to be significantly affected are informed and given an opportunity to forward their opinion within a reasonable time-frame.

3. Where **Contracting Parties** are required under this Article to enter into consultations, they shall agree, at the beginning of such consultations, on a reasonable timeframe for the duration of the consultations.

Article 8

Decision making

The environmental report prepared pursuant to Article 5, the opinions expressed pursuant to Article 6 and the results of any transboundary consultations entered into pursuant to Article 7 shall be taken into account during the preparation of the plan or programme and before its adoption or submission to the legislative procedure.

Article 9

Information on the decision

1. **Contracting Parties** shall ensure that, when a plan or programme is adopted, the authorities referred to in Article 6(3), the public and any **party** consulted under Article 7 are informed and the following items are made available to those so informed:

(a) the plan or programme as adopted;

(b) a statement summarising how environmental considerations have been integrated into the plan or programme and how the environmental report prepared pursuant to Article 5, the opinions expressed pursuant to Article 6 and the results of consultations entered into pursuant to Article 7 have been taken into account in accordance with Article 8 and the reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with; and,

(c) the measures decided concerning monitoring in accordance with Article 10.

2. The detailed arrangements concerning the information referred to in paragraph 1 shall be determined by the **Contracting Parties**.

Article 10

Monitoring

1. **Contracting Parties** shall monitor the significant environmental effects of the implementation of plans and programmes in order, *inter alia*, to identify at an early stage unforeseen adverse effects, and to be able to undertake appropriate remedial action.

2. In order to comply with paragraph 1, existing monitoring arrangements may be used if appropriate, with a view to avoiding duplication of monitoring.

Article 11

Relationship with other Community legislation

1. An environmental assessment carried out under this Directive shall be without prejudice to any requirements under Directive **2011/92/EU** and to any other Community law requirements.

2. For plans and programmes for which the obligation to carry out assessments of the effects on the environment arises simultaneously from this Directive and other **Energy Community** legislation, **Contracting Parties** may provide for coordinated or joint procedures fulfilling the requirements of the relevant **Energy Community** legislation in order, *inter alia*, to avoid duplication of assessment.

3. For plans and programmes co-financed by **international financial institutions**, the environmental assessment in accordance with this Directive shall be carried out in conformity with the specific provisions in relevant **Energy Community** legislation.

Article 12**Information, reporting and review**

1. **Contracting Parties** and the **Secretariat** shall exchange information on the experience gained in applying this Directive.
2. **Contracting Parties** shall ensure that environmental reports are of a sufficient quality to meet the requirements of this Directive and shall communicate to the **Secretariat** any measures they take concerning the quality of these reports.
3. <...>
4. <...>²

Article 13**Implementation of the Directive**

1. Contracting Parties shall inform the Energy Community Secretariat of the laws, regulations and administrative provisions brought into force to comply with the relevant provisions of Directive 2001/42/EC in accordance with Article 12 of the Treaty establishing the Energy Community by 1 January 2018.

When Contracting Parties adopt those provisions, they shall contain a reference to this Decision and Directive 2001/42/EC or shall be accompanied by such reference on the occasion of their official publication. The methods of making such reference shall be laid down by the Contracting Parties.

2. Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by this Decision and Directive 2001/42/EC.

Contracting Parties shall implement the provisions adopted according to this Decision by 31 March 2018.³

3. The obligation referred to in Article 4(1) shall apply to the plans and programmes of which the first formal preparatory act is subsequent to the date referred to in paragraph 1. Plans and programmes of which the first formal preparatory act is before that date and which are adopted or submitted to the legislative procedure more than 24 months thereafter, shall be made subject to the obligation referred to in Article 4(1) unless **Contracting Parties** decide on a case by case basis that this is not feasible and inform the public of their decision.

4. Before 21 July 2004, **Contracting Parties** shall communicate to the **Secretariat**, in addition to the measures referred to in paragraph 1, separate information on the types of plans and programmes which, in accordance with Article 3, would be subject to an environmental assessment pursuant to this Directive. The **Secretariat** shall make this information available to the **Contracting Parties**. The information will be updated on a regular basis.

² Not applicable in accordance with Article 2(2) of Decision 2016/13/MC-EnC.

³ The text displayed here corresponds to Article 3 of Decision 2016/13/MC-EnC.

Article 14
Entry into force

This Decision shall enter into force on the date of its adoption.⁴

Article 15
Addressees

This Decision is addressed to the Contracting Parties of the Treaty establishing the Energy Community.

⁴ The text displayed here corresponds to Article 4 of Decision 2016/13/MC-EnC.

ANNEX I

Information referred to in Article 5(1)

The information to be provided under Article 5(1), subject to Article 5(2) and (3), is the following:

- (a) an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes;
- (b) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;
- (c) the environmental characteristics of areas likely to be significantly affected;
- (d) any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC;
- (e) the environmental protection objectives, established at international, Community or **Contracting Party** level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation;
- (f) the likely significant effects⁵ on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors;
- (g) the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;
- (h) an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of knowhow) encountered in compiling the required information;
- (i) a description of the measures envisaged concerning monitoring in accordance with Article 10;
- (j) a non-technical summary of the information provided under the above headings.

⁵ These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

ANNEX II

Criteria for determining the likely significance of effects referred to in Article 3(5)

1. The characteristics of plans and programmes, having regard, in particular, to
 - the degree to which the plan or programme sets a framework for projects and other activities, either with regard to the location, nature, size and operating conditions or by allocating resources,
 - the degree to which the plan or programme influences other plans and programmes including those in a hierarchy,
 - the relevance of the plan or programme for the integration of environmental considerations in particular with a view to promoting sustainable development,
 - environmental problems relevant to the plan or programme,
 - the relevance of the plan or programme for the implementation of Community legislation on the environment (e.g. plans and programmes linked to waste-management or water protection).
2. Characteristics of the effects and of the area likely to be affected, having regard, in particular, to
 - the probability, duration, frequency and reversibility of the effects,
 - the cumulative nature of the effects,
 - the transboundary nature of the effects,
 - the risks to human health or the environment (e.g. due to accidents),
 - the magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected),
 - the value and vulnerability of the area likely to be affected due to:
 - special natural characteristics or cultural heritage,
 - exceeded environmental quality standards or limit values,
 - intensive land-use,
 - the effects on areas or landscapes which have a recognised national, Community or international protection status.



PART II

ACQUIS COMMUNAUTAIRE
GOVERNANCE AND CLIMATE

REGULATION (EU) 2018/1999 of 11 December 2018 on the Governance of the Energy Union and Climate Action

Incorporated and adapted by the Ministerial Council Decision 2021/14/MC-EnC of 30 November 2021 on incorporating Regulation (EU) 2018/1999 in the Energy Community acquis communautaire and amending Annex I of the Treaty.

The adaptations made by Ministerial Council Decision 2021/14/MC-EnC are highlighted in bold and blue.

CHAPTER 1 General provisions

Article 1

Subject matter and scope

1. This Regulation establishes a governance mechanism to:

- (a) implement strategies and measures designed to meet the objectives and targets of the **Contracting Parties** and the **Contracting Parties'** long-term greenhouse gas emissions commitments consistent with the Paris Agreement, and for the first <...> period, from **2025** to 2030, in particular the **Energy Community's** 2030 targets for energy and climate;
- (b) stimulate cooperation between **Contracting Parties, and between Contracting Parties and Member States of the European Union**, including, where appropriate, at regional level, designed to achieve the objectives and targets of the **Contracting Parties**;
- (c) ensure the timeliness, transparency, accuracy, consistency, comparability and completeness of reporting by the **Contracting Parties** to the UNFCCC and Paris Agreement secretariat;
- (d) contribute to greater regulatory certainty as well as contribute to greater investor certainty and help take full advantage of opportunities for economic development, investment stimulation, job creation and social cohesion.

The governance mechanism is based on long-term strategies, integrated national energy and climate plans covering **firstly a period from 2025 to 2030 and thereafter** ten-year periods starting from **2031 to 2040**, corresponding integrated national energy and climate progress reports by the **Contracting Parties** and integrated monitoring arrangements by the **Energy Community Secretariat**. The governance mechanism ensures effective opportunities for the public to participate in the preparation of those national plans and those long-term strategies. It comprises a structured, transparent, iterative process between the **Secretariat and Contracting Parties** for the purpose of the finalisation of the integrated national energy and climate plans and their subsequent implementation, including with regard to regional cooperation, and corresponding **Secretariat** action.

2. This Regulation applies to the five dimensions of the Energy Union, which are closely related and mutually reinforcing:

- (a) energy security;
- (b) internal energy market;
- (c) energy efficiency;
- (d) decarbonisation; and
- (e) research, innovation and competitiveness.

Article 2

Definitions

The following definitions apply:

- (1) 'policies and measures' means all instruments which contribute to meeting the objectives of the integrated national energy and climate plans and/or to implement commitments under points (a) and (b) of Article 4(2) of the UNFCCC, which may include those that do not have the limitation and reduction of greenhouse gas emissions or change in the energy system as a primary objective;
- (2) 'existing policies and measures' means implemented policies and measures and adopted policies and measures;
- (3) 'implemented policies and measures' means policies and measures for which one or more of the following applies at the date of submission of the integrated national energy and climate plan or of the integrated national energy and climate progress report: directly applicable **Energy Community** or national law is in force, one or more voluntary agreements have been established, financial resources have been allocated, human resources have been mobilised;
- (4) 'adopted policies and measures' means policies and measures for which an official government decision has been made by the date of submission of the integrated national energy and climate plan or of the integrated national energy and climate progress report and there is a clear commitment to proceed with implementation;
- (5) 'planned policies and measures' means options that are under discussion and that have a realistic chance of being adopted and implemented after the date of submission of the integrated national energy and climate plan or of the integrated national energy and climate progress report;
- (6) 'system for policies and measures and projections' means a system of institutional, legal and procedural arrangements established for reporting policies and measures and projections relating to anthropogenic emissions by sources and removals by sinks of greenhouse gases and to the energy system, inter alia as required by Article 39;
- (7) 'projections' means forecasts of anthropogenic greenhouse gas emissions by sources and removals by sinks or developments of the energy system, including at least quantitative estimates for a sequence of **six** future years ending with 0 or 5 immediately following the reporting year;
- (8) 'projections without measures' means projections of anthropogenic greenhouse gas emissions by sources and removals by sinks that exclude the effects of all policies and measures which are planned, adopted or implemented after the year chosen as the starting point for the relevant projection;
- (9) 'projections with measures' means projections of anthropogenic greenhouse gas emissions by sources

and removals by sinks that encompass the effects, in terms of greenhouse gas emission reductions or developments of the energy system, of policies and measures that have been adopted and implemented;

(10) ‘projections with additional measures’ means projections of anthropogenic greenhouse gas emissions by sources and removals by sinks or developments of the energy system that encompass the effects, in terms of greenhouse gas emission reductions, of policies and measures which have been adopted and implemented to mitigate climate change or meet energy objectives, as well as policies and measures which are planned for that purpose;

(11) ‘the Energy Community 2030 targets for energy and climate’, ‘the Energy Community 2030 targets’ or ‘the 2030 targets of the Energy Community’ means the value calculated on the basis of the targets adopted for each Contracting Party as follows: a minimum domestic reduction in economy-wide greenhouse gas emissions as compared to 1990 to be achieved by 2030, a minimum share of renewable energy consumed in the Energy Community in 2030, a minimum headline target for improving energy efficiency in 2030, and a minimum percentage of electricity interconnection target for 2030, or any subsequent targets in the terms to be adopted in this regard by the Ministerial Council for 2030 on the basis of the study(ies) carried out to this effect.

(11bis) ‘the Energy Community 2030 headline target for energy efficiency’ means the target for reduction of primary and/or final energy consumption of the Contracting Parties by 2030, in the terms to be adopted by the Ministerial Council, as appropriate, on the basis of the study(ies) carried out to this effect;

(11cis) ‘Energy Community’s energy consumption’ means the energy consumption of the Contracting Parties, in the terms to be adopted by the Ministerial Council, as appropriate, on the basis of the study(ies) carried out to this effect;

(12) ‘national inventory system’ means a system of institutional, legal and procedural arrangements established within a **Contracting Party** for estimating anthropogenic emissions by sources and removals by sinks of greenhouse gases, and for reporting and archiving inventory information;

(13) ‘indicator’ means a quantitative or qualitative factor or variable that contributes to better understanding progress in implementing;

(14) ‘key indicators’ mean the indicators for the progress made with regard to the five dimensions of the Energy Union as proposed by the **European** Commission;

(15) ‘technical corrections’ means adjustments to the national greenhouse gas inventory estimates made in the context of the review carried out pursuant to Article 38 when the submitted inventory data are incomplete or are prepared in a way that is not consistent with relevant international or **Energy Community** rules or guidelines and that are intended to replace originally submitted estimates;

(16) ‘quality assurance’ means a planned system of review procedures to ensure that data quality objectives are met and that the best possible estimates and information are reported to support the effectiveness of the quality control programme and to assist **Contracting Parties**;

(17) ‘quality control’ means a system of routine technical activities to measure and control the quality of the information and estimates compiled with the purpose of ensuring data integrity, correctness and completeness, identifying and addressing errors and omissions, documenting and archiving data and other material used, and recording all quality assurance activities;

(18) ‘energy efficiency first’ means taking utmost account in energy planning, and in policy and investment decisions, of alternative cost-efficient energy efficiency measures to make energy demand and energy supply more efficient, in particular by means of cost-effective end-use energy savings, demand response initiatives and more efficient conversion, transmission and distribution of energy, whilst still achieving the objectives of those decisions;

(19) <...>

(20) ‘early efforts’ means:

(a) in the context of the assessment of a potential gap between the **Contracting Party’s reference point in its trajectory and its 2030 target** for energy from renewable sources <...> a **Contracting Party’s** achievement of a share of energy from renewable sources above its national binding target for 2020 as set out in Annex I to Directive (EU) 2018/2001 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**, or a **Contracting Party’s** early progress towards its national binding target for 2020;

(b) in the context of **Secretariat** recommendations based on the assessment pursuant to point (b) of Article 29(1) with regard to energy from renewable sources, a **Contracting Party’s** early implementation of its <...> **reference point in the trajectory towards its 2030 target <...>**;

(21) ‘regional cooperation’ means cooperation between two or more **Contracting Parties and/or** Member States **of the European Union** engaged in a partnership covering one or more of the five dimensions of the Energy Union;

(22) ‘energy from renewable sources’ or ‘renewable energy’ means energy from renewable sources or renewable energy as defined in point (1) of Article 2 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;

(23) ‘gross final consumption of energy’ means gross final consumption of energy as defined in point (4) of Article 2 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;

(24) ‘support scheme’ means support scheme as defined in point (5) of Article 2 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;

(25) ‘repowering’ means repowering as defined in point (10) of Article 2 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;

(26) ‘renewable **Energy Community**’ means renewable **Energy Community** as defined in point (16) of Article 2 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;

(27) ‘district heating’ or ‘district cooling’ means district heating or district cooling as defined in point (19) of Article 2 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;

(28) ‘waste’ means waste as defined in point (23) of Article 2 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;

(29) ‘biomass’ means biomass as defined in point (24) of Article 2 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;

(30) ‘agricultural biomass’ means agricultural biomass as defined in point (25) of Article 2 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;

- (31) 'forest biomass' means forest biomass as defined in point (26) of Article 2 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;
- (32) 'biomass fuels' means biomass fuels as defined in point (27) of Article 2 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;
- (33) 'biogas' means biogas as defined in point (28) of Article 2 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;
- (34) 'bioliquids' means bioliquids as defined in point (32) of Article 2 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;
- (35) 'biofuels' means biofuels as defined in point (33) of Article 2 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;
- (36) 'advanced biofuels' means advanced biofuels as defined in point (34) of Article 2 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;
- (37) 'recycled carbon fuels' means recycled carbon fuels as defined in point (35) of Article 2 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;
- (38) 'starch-rich crops' means starch-rich crops as defined in point (39) of Article 2 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;
- (39) 'food and feed crops' means food and feed crops as defined in point (40) of Article 2 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;
- (40) 'ligno-cellulosic material' means ligno-cellulosic material as defined in point (41) of Article 2 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;
- (41) 'residue' means residue as defined in point (43) of Article 2 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;
- (42) 'primary energy consumption' means primary energy consumption as defined in point (2) of Article 2 of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**;
- (43) 'final energy consumption' means final energy consumption as defined in point (3) of Article 2 of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**;
- (44) 'energy efficiency' means energy efficiency as defined in point (4) of Article 2 of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**;
- (45) 'energy savings' means energy savings as defined in point (5) of Article 2 of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**;
- (46) 'energy efficiency improvement' means energy efficiency improvement as defined in point (6) of Article 2 of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**;
- (47) 'energy service' means energy service as defined in point (7) of Article 2 of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**;
- (48) 'total useful floor area' means total useful floor area as defined in point (10) of Article 2 of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC**

and 2021/14/MC-EnC;

(49) 'energy management system' means energy management system as defined in point (11) of Article 2 of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC;**

(50) 'obligated party' means obligated party as defined in point (14) of Article 2 of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC;**

(51) 'implementing public authority' means implementing public authority as defined in point (17) of Article 2 of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC;**

(52) 'individual action' means individual action as defined in point (19) of Article 2 of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC;**

(53) 'energy distributor' means energy distributor as defined in point (20) of Article 2 of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC;**

(54) 'distribution system operator' means 'distribution system operator' as defined in point (6) of Article 2 of Directive 2009/72/EC **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC** and in point (6) of Article 2 of Directive 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC;**

(55) 'retail energy sales company' means retail energy sales company as defined in point (22) of Article 2 of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and b 2021/14/MC-EnC;**

(56) 'energy service provider' means energy service provider as defined in point (24) of Article 2 of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC;**

(57) 'energy performance contracting' means energy performance contracting as defined in point (27) of Article 2 of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC;**

(58) 'cogeneration' means cogeneration as defined in point (30) of Article 2 of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC;**

(59) 'building' means a building as defined in point (1) of Article 2 of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decisions 2010/02/MC-EnC and 2021/14/MC-EnC;**

(60) 'nearly zero-energy building' means a nearly zero-energy building as defined in point (2) of Article 2 of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decisions 2010/02/MC-EnC and 2021/14/MC-EnC;**

(61) 'heat pump' means heat pump as defined in point (18) of Article 2 of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decisions 2010/02/MC-EnC and 2021/14/MC-EnC;**

(62) 'fossil fuel' means non-renewable carbon-based energy sources such as solid fuels, natural gas and oil.

CHAPTER 2

INTEGRATED NATIONAL ENERGY AND CLIMATE PLANS

Article 3

Integrated national energy and climate plans

1. By **30 June 2024**, and subsequently by 1 January 2029 and every ten years thereafter, each **Contracting Party** shall notify to the **Secretariat** an integrated national energy and climate plan. The plans shall contain the elements set out in paragraph 2 of this Article and in Annex I. The first plan shall cover the period from **2025** to 2030, taking into account the longer term perspective. The subsequent plans shall cover the ten-year period immediately following the end of the period covered by the previous plan.

2. The integrated national energy and climate plans shall consist of the following main sections:

(a) an overview of the process followed for establishing the integrated national energy and climate plan consisting of an executive summary, a description of the public consultation and involvement of stakeholders and their results, and of regional cooperation with other **Contracting Parties** in preparing the plan, as established in Articles 10, 11 and 12 and in point 1 of Section A of Part I of Annex I;

(b) a description of national objectives, targets and contributions relating to the dimensions of the Energy Union, as set out in Article 4 and Annex I;

(c) a description of the planned policies and measures in relation to the corresponding objectives, targets and contributions set out under point (b) as well as a general overview of the investment needed to meet the corresponding objectives, targets and contributions;

(d) a description of the current situation of the five dimensions of the Energy Union, including with regard to the energy system and greenhouse gas emissions and removals as well as projections with regard to the objectives referred to in point (b) with already existing policies and measures;

(e) where applicable, a description of the regulatory and non-regulatory barriers and hurdles to delivering the objectives, targets or contributions related to renewable energy and energy efficiency;

(f) an assessment of the impacts of the planned policies and measures to meet the objectives referred to in point (b) **of this paragraph**, including their consistency with the long-term greenhouse gas emission reduction objectives under the Paris Agreement and the long-term strategies as referred to in Article 15;

(g) a general assessment of the impacts of the planned policies and measures on competitiveness linked to the five dimensions of the Energy Union;

(h) an annex, drawn up in accordance with the requirements and structure laid down in Annex III to this Regulation, setting out the **Contracting Party's** methodologies and policy measures for achieving the energy savings requirement in accordance with Article 7 of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC** and Annex V thereto.

3. With regard to their integrated national energy and climate plans, **Contracting Parties** shall:

(a) limit administrative complexity and costs for all relevant stakeholders;

(b) take into account the interlinkages between the five dimensions of the Energy Union, in particular the energy efficiency first principle;

(c) use robust and consistent data and assumptions across the five dimensions where relevant;

(d) assess the number of households in energy poverty taking into account the necessary domestic energy services needed to guarantee basic standards of living in the relevant national context, existing social policy and other relevant policies, as well as indicative **European Commission** guidance on relevant indicators for energy poverty, **as adapted for the Energy Community by the Energy Community Secretariat**.

In the event that a **Contracting Party** finds, pursuant to point (d) of the first subparagraph, that it has a significant number of households in energy poverty, on the basis of its assessment of verifiable data, it shall include in its plan a national indicative objective to reduce energy poverty. The **Contracting Parties** concerned shall outline in their integrated national energy and climate plans, the policies and measures, which address energy poverty, if any, including social policy measures and other relevant national programmes.

4. Each **Contracting Party** shall make its integrated national energy and climate plan submitted to the **Secretariat** pursuant to this Article publicly available.

5. The Secretariat shall inform the Permanent High Level Group about any delegated acts adopted pursuant to Article 3(5) of Regulation (EU) 2018/1999 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant delegated acts into the Energy Community acquis.

Article 4

National objectives, targets and contributions for the five dimensions of the Energy Union

Each **Contracting Party** shall set out in its integrated national energy and climate plan the following main objectives, targets and contributions, as specified in point 2 of section A of Annex I:

(a) as regards the dimension 'Decarbonisation':

(1) with respect to greenhouse gas emissions and removals and with a view to contributing to the achievement of the economy wide **Contracting Parties'** greenhouse gas emission reduction target:

(i) the Contracting Party's binding national target for greenhouse gas emissions <...>;

(ii) <...>;

(iii) where applicable to meet the objectives <...> of the Energy Union, the **targets of the Contracting Parties** and the **Contracting Party's** long-term greenhouse gas emissions commitments consistent with the Paris Agreement, other objectives and targets, including sector targets and adaptation goals.

(2) with respect to renewable energy:

With a view to achieving the **Contracting Parties' economy-wide target of the relevant share** of renewable energy in 2030 a contribution to that target in terms of **each Contracting Party's** share of energy from renewable sources in gross final consumption of energy in 2030 **not lower than the share to be adopted by Ministerial Council Decision** with an indicative trajectory for that contribution from **2025** onwards. <...> By 2027, the indicative trajectory shall reach a reference point of at least 65 % of the total increase in the share of energy from renewable sources between that **Contracting Party** binding 2020 national target and its contribution to the 2030 target.

By 2030, the indicative trajectory shall reach at least the **Contracting Party's** planned contribution. If a

Contracting Party expects to surpass its binding 2020 national target, its indicative trajectory may start at the level it is projected to achieve. The **Contracting Parties'** indicative trajectories, taken together, shall add up to the **Contracting Parties'** reference point in 2027 and to the **Contracting Parties'** target of renewable energy in 2030. Separately from its contribution to the **Contracting Parties'** target and its indicative trajectory for the purposes of this Regulation, **each Contracting Party** shall be free to indicate higher ambitions for national policy purposes;

(b) as regards the dimension 'Energy Efficiency':

(1) the indicative national energy efficiency contribution to achieving the **Energy Community 2030 headline target for energy efficiency** as referred to in Article 1(1) and Article 3(5) of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**, based on either primary or final energy consumption, primary or final energy savings, or energy intensity.

Contracting Parties shall express their contribution in terms of absolute level of primary energy consumption and final energy consumption in 2020, and in terms of absolute level of primary energy consumption and final energy consumption in 2030, with an indicative trajectory for that contribution from **2025** onwards. They shall explain their underlying methodology and the conversion factors used;

(2) the cumulative amount of end-use energy savings to be achieved over the period **2025-2030** under point (b) of Article 7(1) on the energy saving obligations pursuant to Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**;

(3) the indicative milestones of the long-term strategy for the renovation of the national stock of residential and non-residential buildings, both public and private, the roadmap with domestically established measurable progress indicators, an evidence-based estimate of expected energy savings and wider benefits, and the contributions to the **Energy Community's** energy efficiency **2030** target pursuant to Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC** in accordance with Article 2a of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decisions 2010/02/MC-EnC and 2021/14/MC-EnC**;

(4) the total floor area to be renovated or equivalent annual energy savings to be achieved from **2025** to 2030 under Article 5 of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC** on the exemplary role of public bodies' buildings;

(c) as regards the dimension 'Energy Security':

(1) national objectives with regard to:

- increasing the diversification of energy sources and supply from third countries, the purpose of which may be to reduce energy import dependency,
- increasing the flexibility of the national energy system, and
- addressing constrained or interrupted supply of an energy source, for the purpose of improving the resilience of regional and national energy systems, including a timeframe for when the objectives should be met;

(d) as regards the dimension 'Internal Energy Market':

(1) the level of electricity interconnectivity that the **Contracting Party** aims for in 2030 in consideration of the electricity interconnection target for 2030 <...>, with a strategy with the level from **2025** onwards defined in close cooperation with the **Contracting Parties** and Member States **of the European Union** affected, taking into account <...> the indicators of the urgency of action based on price differential in

the wholesale market, nominal transmission capacity of interconnectors in relation to peak load and to installed renewable generation capacity as set out in point 2.4.1 of Section A of Part I of Annex I. Each new interconnector shall be subject to a socioeconomic and environmental cost-benefit analysis and implemented only if the potential benefits outweigh the costs;

(2) key electricity and gas transmission infrastructure projects, and, where relevant, modernisation projects, that are necessary for the achievement of objectives and targets under the five dimensions of the Energy Union;

(3) national objectives related to other aspects of the internal energy market such as: increasing system flexibility, in particular through policies and measures related to market-based price formation in compliance with applicable law; market integration and coupling, aiming to increase the tradeable capacity of existing interconnectors, smart grids, aggregation, demand response, storage, distributed generation, mechanisms for dispatching, re-dispatching and curtailment and real-time price signals, including a timeframe for when the objectives should be met, and other national objectives related to the internal energy market as set out in point 2.4.3 of Section A of Part 1 of Annex I;

(e) as regards the dimension 'Research, Innovation and Competitiveness':

(1) national objectives and funding targets for public and, where available, private research and innovation relating to the Energy Union, including, where appropriate, a timeframe for when the objectives should be met; reflecting the priorities of the Energy Union Strategy <...>. In setting out its objectives, targets and contributions, the **Contracting Party** may build upon existing national strategies or plans that are compatible with **Energy Community** law;

(2) where available, national 2050 objectives related to the promotion of clean energy technologies.

Article 5

Contracting Parties' contribution setting process in the area of renewable energy

1. In its contribution for its share of energy from renewable sources in gross final consumption of energy in 2030 and the last year of the period covered for the subsequent national plans, pursuant to point (a)(2) of Article 4, each **Contracting Party** shall take into account all of the following:

(a) the measures provided for in Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC;**

(b) the measures adopted to reach **its** energy efficiency target adopted pursuant to Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC;**

(c) any other existing measures to promote renewable energy within the **Contracting Party** and, where relevant, at **Energy Community** level;

(d) the binding 2020 national target of energy from renewable sources in its gross final consumption of energy set out in Annex I to Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC;**

(e) any relevant circumstances affecting renewable energy deployment, such as:

(i) equitable distribution of deployment across the **Energy Community;**

(ii) economic conditions and potential, including GDP per capita;

- (iii) potential for cost-effective renewable energy deployment;
- (iv) geographical, environmental and natural constraints, including those of non-interconnected areas and regions;
- (v) the level of power interconnection between **Contracting Parties and between Contracting Parties and Member States of the European Union**;
- (vi) other relevant circumstances, in particular early efforts.

With regard to point (e) of the first subparagraph, each **Contracting Party** shall indicate in its integrated national energy and climate plan which relevant circumstances affecting renewable energy deployment it has taken into account.

2. Contracting Parties shall <...> ensure that the sum of their contributions amounts to **a target of energy from renewable sources in gross final energy consumption at Energy Community level by 2030**.

Article 6

Contracting Parties' contribution setting process in the area of energy efficiency

1. In its indicative national energy efficiency contribution for 2030 and for the last year of the period covered for the subsequent national plans pursuant to point (b)(1) of Article 4, each **Contracting Party** shall take into account that, in accordance with Article 3 of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**, the **Energy Community's energy consumption in 2020** is to be no more than **187 Mtoe** of primary energy or no more than **137 Mtoe** of final energy and **Energy Community's energy consumption** in 2030 is to be no more than **a quantity of Mtoe of primary energy and/or no more than a quantity of Mtoe of final energy to be decided by the Ministerial Council on the basis of the relevant study(ies) to this effect**.

In addition, each **Contracting Party** shall take into account:

(a) the measures provided for in Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**;

(b) other measures to promote energy efficiency within the **Contracting Party** and at **Energy Community** level.

2. In its contribution referred to in paragraph 1, each **Contracting Party** may take into account national circumstances affecting primary and final energy consumption, such as:

- (a) remaining cost-effective energy-saving potential;
- (b) evolution and forecast of gross domestic product;
- (c) changes of energy imports and exports;
- (d) changes in the energy mix and the development of carbon capture and storage; and
- (e) early actions.

With regard to the first subparagraph, each **Contracting Party** shall indicate in its integrated national energy and climate plan which relevant circumstances affecting primary and final energy consumption it has taken into account, if any.

Article 7

National policies and measures for each of the five dimensions of the Energy Union

Contracting Parties shall describe, in accordance with Annex I, in their integrated national energy and climate plan, the main existing and planned policies and measures to achieve in particular the objectives set out in the national plan, including, where applicable, measures providing for regional cooperation and appropriate financing at national and regional level, including mobilisation of **programmes and instruments by international financial organisations**.

Contracting Parties shall provide a general overview of the investment needed to achieve the objectives, targets and contributions set out in the national plan, as well as a general assessment on the sources of that investment.

Article 8

Analytical basis of the integrated national energy and climate plans

1. **Contracting Parties** shall describe, in accordance with the structure and format specified in Annex I, the current situation for each of the five dimensions of the Energy Union, including of the energy system and greenhouse gas emissions and removals at the time of submission of the integrated national energy and climate plan or on the basis of the latest available information. **Contracting Parties** shall also set out and describe projections for each of the five dimensions of the Energy Union, for at least the duration of that plan, expected to result from existing policies and measures. **Contracting Parties** shall endeavour to describe additional longer term perspectives for the five dimensions beyond the duration of the integrated national energy and climate plan, where relevant and possible.

2. **Contracting Parties** shall describe in their integrated national energy and climate plan their assessment, at national and, where applicable, regional level, of:

(a) the impacts on the development of the energy system and greenhouse gas emissions and removals for the duration of the plan and for a period of ten years following the latest year covered by the plan, under the planned policies and measures or groups of measures, including a comparison with the projections based on existing policies and measures or groups of measures as referred to in paragraph 1;

(b) the macroeconomic and, to the extent feasible, the health, environmental, skills and social impact of the planned policies and measures or groups of measures referred to in Article 7 and further specified in Annex I, for the first ten-year period at least until the year 2030, including a comparison with the projections based on existing policies and measures or groups of measures as referred to in paragraph 1 of this Article. The methodology used to assess those impacts shall be made public;

(c) interactions between existing policies and measures or groups of measures and planned policies and measures or groups of measures within a policy dimension and between existing policies and measures or groups of measures and planned policies and measures or groups of measures of different dimensions for the first ten-year period at least until the year 2030. Projections concerning security of supply, infrastructure and market integration shall be linked to robust energy efficiency scenarios;

(d) the manner in which existing policies and measures and planned policies and measures are to attract

the investment necessary for their implementation.

3. **Contracting Parties** shall make available to the public comprehensive information concerning the assumptions, parameters and methodologies used for the final scenarios and projections, taking into account statistical restrictions, commercially sensitive data, and compliance with the data protection rules.

Article 9

Draft integrated national energy and climate plans

1. By **30 June 2023**, and subsequently by 1 January 2028 and every ten years thereafter, each **Contracting Party** shall prepare and submit to the **Secretariat** a draft of the integrated national energy and climate plan in accordance with Article 3(1) and Annex I.

2. The **Secretariat** shall assess the draft integrated national energy and climate plans and may issue country-specific recommendations to **Contracting Parties** in accordance with Article 34 no later than six months before the deadline for submitting those integrated national energy and climate plans. Those recommendations may, in particular address:

(a) the level of ambition of objectives, targets and contributions with a view to <...> achieving the Energy Union objectives and, in particular, the **Energy Community's** 2030 targets for renewable energy and energy efficiency as well as the level of electricity interconnectivity that the **Contracting Party** aims for in 2030 as referred to in point (d) of Article 4, taking due account of relevant circumstances affecting the deployment of renewable energy and energy consumption, as indicated by the **Contracting Party** concerned in the draft integrated national energy and climate plan and the indicators of the urgency of action for interconnectivity established in point 2.4.1 of Section A of Part 1 of Annex I;

(b) policies and measures relating to **Contracting Party** - and **Energy Community**-level objectives and other policies and measures of potential cross-border relevance;

(c) any additional policies and measures that might be required in the integrated national energy and climate plans;

(d) interactions between and consistency of existing and planned policies and measures included in the integrated national energy and climate plan within one dimension and among different dimensions of the Energy Union.

3. Each **Contracting Party** shall take due account of any recommendations from the **Secretariat** in its integrated national energy and climate plan. If the **Contracting Party** concerned does not address a recommendation or a substantial part thereof, that **Contracting Party** shall provide and make public its reasons.

4. In the context of the public consultation as referred to in Article 10, each **Contracting Party** shall make available to the public its draft integrated national energy and climate plan.

Article 10

Public consultation

Without prejudice to any other **Energy Community** law requirements, each **Contracting Party** shall ensure that the public is given early and effective opportunities to participate in the preparation of the draft integrated national energy and climate plan — as regards the plans for the **2025** to 2030 period, in the preparation of the final plan well before its adoption — as well as of the long-term strategies referred to in Article 15. Each **Contracting Party** shall attach to the submission of such documents to the **Secretariat** a summary of the public's views or provisional views. In so far as Directive 2001/42/EC, **as adapted and adopted by Ministerial Council Decision 2016/13/MC-Enc** is applicable, consultations undertaken on the draft in accordance with that Directive shall be deemed to satisfy the obligations to consult the public under this Regulation.

Each **Contracting Party** shall ensure that the public is informed. Each **Contracting Party** shall set reasonable timeframes allowing sufficient time for the public to be informed, to participate and express its views.

Each **Contracting Party** shall limit administrative complexity when implementing this Article.

Article 11

Multilevel climate and energy dialogue

Each **Contracting Party** shall establish a multilevel climate and energy dialogue pursuant to national rules, in which local authorities, civil society organisations, business community, investors and other relevant stakeholders and the general public are able actively to engage and discuss the different scenarios envisaged for energy and climate policies, including for the long term, and review progress, unless it already has a structure which serves the same purpose. Integrated national energy and climate plans may be discussed within the framework of such a dialogue.

Article 12

Regional cooperation

1. **Contracting Parties** shall cooperate with each other **and with Member States of the European Union**, taking account of all existing and potential forms of regional cooperation, to meet the objectives, targets and contributions set out in their integrated national energy and climate plan effectively.

2. Each **Contracting Party** shall, well before submitting its draft integrated national energy and climate plan to the **Energy Community Secretariat** pursuant to Article 9(1) — as regards the plans for the **2025** to 2030 period, in the preparation of the final plan well before its adoption — identify opportunities for regional cooperation and consult neighbouring **Contracting Parties** and Member States **of the European Union**, including in the **Energy and Climate Committee** and regional cooperation fora. If deemed <...> appropriate by the **Contracting Party** authoring the plan, that **Contracting Party** may consult other **Contracting Parties**, Member States **of the European Union** or third countries that have expressed an interest. **Contracting Parties** without energy interconnections to other **Contracting Parties** and Member States **of the European Union** shall carry out such consultations with neighbouring

Contracting Parties and Member States of the European Union with maritime borders. The **Contracting Parties and Member States of the European Union** consulted should be given a reasonable time within which to react. Each **Contracting Party** shall set out in its draft integrated national energy and climate plan — as regards the plans for the 2025-2030 period, in its final national energy and climate plan — at least the provisional results of such regional consultations, including, where applicable, how the comments of the **Contracting Parties, Member States of the European Union** or third countries consulted have been taken into account.

3. **Contracting Parties** may engage in voluntary joint drafting of parts of their integrated national energy and climate plans and progress reports, including in **the Energy and Climate Committee and** regional cooperation fora. If they do so, the result shall replace the equivalent parts of their integrated national energy and climate plan and progress reports. Upon a request by two or more **Contracting Parties**, the **Secretariat** shall facilitate that exercise.

4. In order to facilitate market integration and cost-efficient policies and measures, **Contracting Parties** shall, in the period between the deadline for submission of their draft integrated national energy and climate plans and the deadline for submission of their final plans, present the relevant parts of their draft integrated national energy and climate plan in **the Energy and Climate Committee and** relevant regional cooperation fora with a view to their finalisation. Where necessary, the **Secretariat** shall facilitate such cooperation and consultation among the **Contracting Parties**, and if it identifies opportunities for further regional cooperation, it may provide **Contracting Parties** with indicative guidance in order to facilitate the effective cooperation and consultation process.

5. **Contracting Parties** shall consider the comments received from other **Contracting Parties and Member States of the European Union** pursuant to paragraphs 2 and 3 in their final integrated national energy and climate plan, and explain in those plans how such comments have been considered.

6. For the purposes referred to in paragraph 1, **Contracting Parties** shall continue to cooperate at regional level, and, as appropriate, in **the Energy and Climate Committee and** regional cooperation fora, when implementing the relevant policies and measures of their integrated national energy and climate plans.

7. <...>

8. In so far as the provisions of Directive 2001/42/EC, **as adapted and adopted by Ministerial Council Decision 2016/13/MC-EnC** are applicable, transboundary consultation undertaken on the draft in accordance with Article 7 of that Directive shall be deemed to satisfy the obligations on regional cooperation pursuant to this Regulation, provided that the requirements of this Article are complied with.

Article 13

Assessment of the integrated national energy and climate plans

On the basis of the integrated national energy and climate plans and their updates as notified pursuant to Articles 3 and 14, the **Secretariat** shall assess, in particular, whether:

- (a) the objectives, targets and contributions are sufficient for the achievement of the Energy Union objectives and, for the first **five**-year period in particular, the **Energy Community's 2030 targets**;
- (b) the plans comply with requirements of Articles 3 to 12 and **Contracting Parties** have taken due account of the **Secretariat** recommendations issued pursuant to Article 34.

Article 14**Update of the integrated national energy and climate plan**

1. By <...> 1 January 2033 and **subsequently** every 10 years thereafter, each **Contracting Party** shall submit to the **Secretariat** a draft update of the latest notified integrated national energy and climate plan or shall provide the **Secretariat** with reasons justifying why the plan does not require updating.
2. By <...> 1 January 2034 and **subsequently** every 10 years thereafter, each **Contracting Party** shall submit to the **Secretariat** an update of its latest notified integrated national energy and climate plan, unless they have provided reasons why the plan does not require updating pursuant to paragraph 1.
3. In the update referred to in paragraph 2, each **Contracting Party** shall modify its national objective, target or contribution with regard to any of the quantified **Contracting Parties'** objectives, targets or contributions set out in point (a)(1) of Article 4 in order to reflect an increased ambition as compared to that set out in its latest notified integrated national energy and climate plan. In the update referred to in paragraph 2, each **Contracting Party** shall modify its national objective, target, or contribution with regard to any of the quantified **Contracting Parties'** objectives, targets or contributions set out in points (a)(2) and (b) of Article 4 only in order to reflect an equal or increased ambition as compared to that set out in its latest notified integrated national energy and climate plan.
4. **Contracting Parties** shall make efforts to mitigate in their updated integrated national energy and climate plan any adverse environmental impacts that become apparent as part of the integrated reporting pursuant to Articles 17 to 25.
5. In its updates referred to in paragraph 2, **Contracting Parties** shall take into consideration <...> obligations deriving from the Paris Agreement.
6. The procedures laid down in Article 9(2) and Articles 10 and 12 shall apply to the preparation and assessment of the updated integrated national energy and climate plans.
7. This Article is without prejudice to the right of **Contracting Parties** to make changes and adaptations in national policies set out or referred to in their integrated national energy and climate plans at any time, provided such changes and adaptations are included in the integrated national energy and climate progress report.

CHAPTER 3**LONG-TERM STRATEGIES****Article 15****Long-term strategies**

1. By **the time this Regulation comes into force**, and subsequently by 1 January 2029 and every 10 years thereafter, each **Contracting Party** shall prepare and submit to the **Secretariat** its long-term strategy with a 30 years **perspective and consistent with the Energy Community's climate-neutrality objective**. **Contracting Parties** should, where necessary, update those strategies every five years.

2. <...>

3. The **Contracting Parties' <...>** strategies shall contribute to:

(a) fulfilling the **<...> Contracting Parties'** commitments under the UNFCCC and the Paris Agreement to reduce anthropogenic greenhouse gas emissions and enhance removals by sinks and to promote increased carbon sequestration;

(b) fulfilling the objective of the Paris Agreement of holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1,5 °C above pre-industrial levels;

(c) achieving long-term greenhouse gas emission reductions and enhancements of removals by sinks in all sectors in accordance with the **Energy Community's objective**, in the context of necessary reductions **and enhancements of removals by sinks** according to the Intergovernmental Panel on Climate Change (IPCC) to reduce the **Contracting Parties'** greenhouse gas emissions in a cost-effective manner and enhance removals by sinks in pursuit of the **long-term** temperature goals in the Paris Agreement so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases within the **Energy Community <...>** and, as appropriate, achieve negative emissions thereafter;

(d) a highly energy efficient and highly renewables-based energy system within the **Energy Community**.

4. **Contracting Parties'** long-term strategies should contain the elements set out in Annex IV. Furthermore, the **Contracting Parties' <...>** long-term strategies shall cover:

(a) total greenhouse gas emission reductions and enhancements of removals by sinks;

(b) emission reductions and enhancements of removals in individual sectors, including electricity, industry, transport, the heating and cooling and buildings sector (residential and tertiary), agriculture, waste and land use, land-use change and forestry (LULUCF);

(c) expected progress on transition to a low greenhouse gas emission economy, including greenhouse gas intensity, CO₂ intensity of gross domestic product, related estimates of long-term investment, and strategies for related research, development and innovation;

(d) to the extent feasible, expected socio-economic effect of the decarbonisation measures, including, inter alia, aspects related to macro-economic and social development, health risks and benefits and environmental protection;

(e) links to other national long-term objectives, planning and other policies and measures, and investment.

5. The Secretariat shall inform the Permanent High Level Group about any delegated acts adopted pursuant to Article 15 paragraph 5 of Regulation (EU) 2018/1999 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant delegated acts into the Energy Community acquis.

6. The integrated national energy and climate plans shall be consistent with the long-term strategies referred to in this Article.

7. **Contracting Parties** shall inform and make available to the public forthwith their respective long-term strategies and any updates thereof, including by means of the **dedicated section of the Energy Community e-platform** referred in Article 28. **Contracting Parties** shall make relevant data of the final results available to the public, taking into account commercially sensitive data and compliance with

the data protection rules.

8. The **Secretariat** shall support **Contracting Parties** in the preparation of their long-term strategies by providing information on the state of the underlying scientific knowledge and opportunities for sharing knowledge and best practices, including, where relevant, guidance for **Contracting Parties** during the development and implementation phase of their strategies.

9. The **Energy Community Secretariat** shall assess whether the national long-term strategies are adequate for the achievement of the objectives <...> of the Energy Union **and the targets of the Energy Community** set out in Article 1 and shall provide information on any remaining gap.

Article 16

Strategic plan for methane

Given the high global warming potential and relatively short atmospheric lifetime of methane, the purpose of reducing the short- and middle-term impact of methane emissions on **Contracting Parties'** greenhouse gas emissions, **as well as** taking into account the circular economy objectives as appropriate, the **Contracting Parties assisted by the Energy Community Secretariat** shall consider policy options for rapidly addressing methane emissions and shall put forward **a strategic plan for methane at Energy Community level**.

CHAPTER 4 REPORTING

Section 1

Biennial progress reports and their follow up

Article 17

Integrated national energy and climate progress reports

1. Without prejudice to Article 26, **by 15 March 2025**, and every two years thereafter, each **Contracting Party** shall report to the **Secretariat** on the status of implementation of its integrated national energy and climate plan by means of an integrated national energy and climate progress report covering all five dimensions of the Energy Union.

2. The integrated national energy and climate progress report shall cover the following elements:

(a) information on the progress accomplished towards reaching the objectives, **including progress towards the Energy Community's climate-neutrality objective**, targets and contributions set out in the integrated national energy and climate plan, and towards financing and implementing the policies and measures necessary to meet them, including a review of actual investment against initial investment assumptions;

- (b) where applicable, information on the progress in establishing the dialogue referred to in Article 11;
- (c) the information referred to in Articles 20 to 25 and, where appropriate, updates on policies and measures, in accordance with those articles;
- (d) information on adaptation in accordance with point (a)(1) of Article 4;
- (e) as far as possible quantification of the impact of the policies and measures in the integrated national energy and climate plan on air quality and on emissions of air pollutants.

<...>

3. The integrated national energy and climate progress report shall cover the information contained in the annual reports referred to in Article 26(3) and the information on policies and measures and projections of anthropogenic greenhouse gas emissions by sources and removals by sinks contained in the reports referred to in Article 18.

4. The Secretariat shall inform the Permanent High Level Group about any implementing acts adopted pursuant to Article 17(4) of Regulation (EU) 2018/1999 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant implementing acts into the Energy Community acquis.

5. The frequency and scale of the information and updates referred to in point (c) of paragraph 2 shall be balanced against the need to ensure sufficient certainty for investors.

6. Where the **Secretariat** has issued recommendations pursuant to Article 32(1) or (2), the **Contracting Party** concerned shall include in its integrated national energy and climate progress report information on the policies and measures adopted, or intended to be adopted and implemented, to address those recommendations. Where applicable, such information shall include a detailed timetable for implementation.

Where the **Contracting Party** concerned decides not to address a recommendation or a substantial part thereof, it shall provide its reasoning.

7. **Contracting Parties** shall make available to the public the reports submitted to the **Secretariat** pursuant to this Article.

Article 18

Integrated reporting on greenhouse gas policies and measures and on projections

1. <...> **Contracting Parties** shall report to the **Secretariat** information on:

(a) their national policies and measures or group of measures as set out in Annex VI **by 15 March 2023 and every two years thereafter**, and

(b) their national projections of anthropogenic greenhouse gas emissions by sources and removals by sinks, organised by gas or group of gases (Hydrofluorocarbons and Perfluorocarbons) listed in Part 2 of Annex V, **by 15 March 2025 and every two years thereafter**. National projections shall take into consideration any policies and measures adopted at **Energy Community** level and shall include the information set out in Annex VII.

2. **Contracting Parties** shall report the most up-to-date projections available. Where a **Contracting**

Party does not submit complete projection estimates by 15 March every second year, and the **Secretariat** has established that gaps in the estimates cannot be filled by that **Contracting Party** once identified through the **Secretariat's** quality assurance or quality control procedures, the **Secretariat** may prepare estimates as required to compile **Contracting Parties'** projections, in consultation with the **Contracting Party** concerned.

3. A **Contracting Party** shall communicate to the **Secretariat** any substantial changes to the information reported pursuant to paragraph 1 during the first year of the reporting period, by 15 March of the year following the previous report.

4. **Contracting Parties** shall make available to the public, in electronic form, their national projections pursuant to paragraph 1 and any relevant assessment of the costs and effects of national policies and measures on the implementation of **Contracting Parties'** policies relevant for limiting greenhouse gas emissions along with any relevant underpinning technical reports. Those projections and assessments should include descriptions of the models and methodological approaches used, definitions and underlying assumptions.

Article 19

Integrated reporting on national adaptation actions, financial and technology support provided to developing countries and carbon price revenues

1. By 15 March **2023**, and every two years thereafter, **Contracting Parties** shall report to the **Secretariat** information on their national climate change adaptation planning and strategies, outlining their implemented and planned actions to facilitate adaptation to climate change, including the information specified in Part 1 of Annex VIII and in accordance with the reporting requirements agreed upon under the UNFCCC and the Paris Agreement.

2. By 31 July **2023** and every year thereafter (year X), **Contracting Parties** shall report to the **Energy Community Secretariat** information on the use of **any** revenues generated by the **Contracting Party from carbon price mechanisms**, including the information specified in Part 3 of Annex VIII.

3. By 30 September **2025** and every year thereafter (year X), **Contracting Parties** shall report to the **Secretariat** information on support to developing countries, including the information specified in Part 2 of Annex VIII and in accordance with the relevant reporting requirements agreed upon under the UNFCCC and the Paris Agreement.

4. **Contracting Parties** shall make available to the public the reports submitted to the **Secretariat** pursuant to this Article, with the exception of the information specified in point (b) of Part 2 of Annex VIII.

5. The Secretariat shall inform the Permanent High Level Group about any implementing acts adopted pursuant to Article 19(5) of Regulation (EU) 2018/1999 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant implementing acts into the Energy Community acquis.

Article 20

Integrated reporting on renewable energy

Contracting Parties shall include in the integrated national energy and climate progress reports information:

(a) on the implementation of the following trajectories and objectives:

(1) indicative national trajectory for the overall share of renewable energy in gross final energy consumption from **2025** to 2030;

(2) estimated trajectories for the sectoral share of renewable energy in final energy consumption from **2025** to 2030 in the electricity, heating and cooling and transport sector;

(3) estimated trajectories per renewable energy technology to achieve the overall and sectoral trajectories for renewable energy from **2025** to 2030, including total expected gross final energy consumption per technology and sector in Mtoe and total planned installed capacity per technology and sector in MW;

(4) trajectories on bioenergy demand, disaggregated between heat, electricity and transport, and on biomass supply, by feedstock and origin (distinguishing between domestic production and imports). For forest biomass, an assessment of its source and impact on the LULUCF sink;

(5) where applicable, other national trajectories and objectives, including those that are long-term and sectoral (such as share of electricity produced from biomass without the utilisation of heat, share of renewable energy in district heating, renewable energy use in buildings, renewable energy produced by cities, renewable energy communities and renewables self-consumers), energy recovered from the sludge acquired through the treatment of wastewater;

(b) on the implementation of the following policies and measures:

(1) implemented, adopted and planned policies and measures to achieve the national contribution to the 2030 <...> **Energy Community** target for renewable energy as indicated in point (a)(2) of Article 4 of this Regulation, including sector- and technology-specific measures, with a specific review of the implementation of measures laid down in Articles 23 to 28 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;

(2) where available, specific measures for regional cooperation;

(3) without prejudice to **Articles 18 and 19 of the Energy Community Treaty**, specific measures on financial support, <...> for the promotion of the use of energy from renewable sources in electricity, heating and cooling, and transport;

(4) when applicable, the assessment of the support for electricity from renewable sources that **Contracting Parties** are to carry out pursuant to Article 6(4) of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;

(5) specific measures to fulfil the requirements of Articles 15 to 18 of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;

(6) where applicable, specific measures to assess, make transparent and reduce the need for must-run capacity that can lead to curtailment of energy from renewable sources;

(7) a summary of the policies and measures under the enabling framework **Contracting Parties** are to put in place pursuant to Article 21(6) and Article 22(5) of Directive (EU) 2018/2001, **as adapted and ad-**

opted by Ministerial Council Decision 2021/14/MC-EnC to promote and facilitate the development of renewables self-consumption and renewable energy communities;

(8) measures promoting the use of energy from biomass, especially for new biomass mobilisation taking into account biomass, including sustainable biomass availability as well as measures for the sustainability of biomass produced and used;

(9) measures in place to increase the share of renewable energy in the heating and cooling and transport sector;

(10) policies and measures facilitating the uptake of power purchase agreements;

(c) as set out in Part 1 of Annex IX.

Article 21

Integrated reporting on energy efficiency

Contracting Parties shall include in the integrated national energy and climate progress reports information:

(a) on the implementation of the following national trajectories, objectives and targets:

(1) the indicative trajectory for primary and final annual energy consumption from **2025** to 2030 as the national energy savings contribution to achieving the **Energy Community**-level 2030 target, including the underlying methodology;

(2) the indicative milestones of the long-term strategy for the renovation of the national stock of residential and non-residential buildings, both public and private, and the contributions to the **Contracting Parties**' energy efficiency targets pursuant to Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC** in accordance with Article 2a of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decisions 2010/02/MC-EnC and 2021/14/MC-EnC**;

(3) where applicable, an update of other national objectives set out in the national plan;

(b) on the implementation of the following policies and measures:

(1) implemented, adopted and planned policies, measures and programmes to achieve the indicative national energy efficiency contribution for 2030 as well as other objectives referred to in Article 6, including planned measures and instruments (also of a financial nature) to promote the energy performance of buildings, measures to utilise energy efficiency potentials of gas and electricity infrastructure and other measures to promote energy efficiency;

(2) where applicable, market-based instruments that incentivise energy efficiency improvements, including but not limited to energy taxes, levies and allowances;

(3) national energy efficiency obligation scheme and alternative measures pursuant to Article 7a and 7b of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC** and in accordance with Annex III to this Regulation;

(4) long-term renovation strategies in accordance with Article 2a of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decisions 2010/02/MC-EnC and 2021/14/MC-EnC**;

- (5) policy and measures to promote energy services in the public sector and measures to remove regulatory and non-regulatory barriers that impede the uptake of energy performance contracting and other energy efficiency service models;
- (6) regional cooperation in the area of energy efficiency, where applicable;
- (7) without prejudice to Articles **18 and 19 of the Energy Community Treaty**, financing measures, <...> in the area of energy efficiency at national level, where applicable;
- (c) as set out in Part 2 of Annex IX.

Article 22

Integrated reporting on energy security

Contracting Parties shall include in the integrated national energy and climate progress reports information on the implementation of:

- (a) national objectives for the diversification of energy sources and supply;
- (b) where applicable, national objectives with regard to reducing energy import dependency from third countries;
- (c) national objectives for the development of the ability to cope with constrained or interrupted supply of an energy source, including gas and electricity;
- (d) national objectives with regard to increasing the flexibility of the national energy system, in particular by means of deploying domestic energy sources, demand response and energy storage;
- (e) implemented, adopted and planned policies and measures to achieve the objectives referred to in points (a) to (d);
- (f) regional cooperation in implementing the objectives and policies referred to in points (a) to (d);
- (g) without prejudice to Articles **18 and 19 of the Energy Community Treaty**, financing measures <...> in this area at national level, where applicable.

Article 23

Integrated reporting on the internal energy market

1. Contracting Parties shall include in their integrated national energy and climate progress reports information on the implementation of the following objectives and measures:

- (a) the level of electricity interconnectivity that the **Contracting Party** aims for in 2030 in consideration of the **Energy Community's** electricity interconnection target for 2030 <...> and the indicators set out in point 2.4.1 of Section A of Part I of Annex I, as well as measures for the implementation of the strategy for the achievement of this level, including those relating to the granting of authorisations;
- (b) key electricity and gas transmission infrastructure projects that are necessary for the achievement of objectives and targets under the five dimensions of the Energy Union;
- (c) where applicable, main infrastructure projects envisaged other than Projects of **Energy Community**

Interest **or Projects of Mutual Interest**, including infrastructure projects involving **Member States of the European Union and** third countries, and, to the extent feasible, a general assessment of their compatibility with, and contribution to, the aims and targets of the **Contracting Parties**;

(d) national objectives related to other aspects of the internal energy market such as increasing system flexibility, market integration and coupling, aiming to increase the tradeable capacity of existing interconnectors, smart grids, aggregation, demand response, storage, distributed generation, mechanisms for dispatching, re-dispatching and curtailment, real-time price signals;

(e) where applicable, national objectives and measures related to the non-discriminatory participation of renewable energy, demand response and storage, including via aggregation, in all energy markets;

(f) where applicable, national objectives and measures with regard to ensuring that consumers participate in the energy system and benefits from self-generation and new technologies, including smart meters;

(g) measures with regard to ensuring electricity system adequacy;

(h) implemented, adopted and planned policies and measures to achieve the objectives referred to in points (a) to (g);

(i) regional cooperation in implementing the objectives and policies referred to in points (a) to (h);

(j) without prejudice to Articles **18 and 19 of the Energy Community Treaty**, financing measures at national level <...> in the area of the internal energy market, including for the electricity interconnection target, where applicable;

(k) measures to increase the flexibility of the energy system with regard to renewable energy production, including the roll-out of intraday market coupling and cross-border balancing markets.

2. The information provided by **Contracting Parties** under paragraph 1 shall be consistent with and as appropriate be based on the report by the national regulators referred to in point (e) of Article 37(1) of Directive 2009/72/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC** and point (e) of Article 41(1) of Directive 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**.

Article 24

Integrated Reporting on Energy Poverty

Where the second subparagraph of point (d) of Article 3(3) applies, the **Contracting Party** concerned shall include in its integrated national energy and climate progress report:

(a) information on progress towards the national indicative objective to reduce the number of households in energy poverty; and

(b) quantitative information on the number of households in energy poverty, and, where available, information on policies and measures addressing energy poverty.

The **Secretariat** shall share data communicated by **Contracting Parties** pursuant to this Article with the European Energy Poverty Observatory.

Article 25**Integrated reporting on research, innovation and competitiveness**

Contracting Parties shall include in their integrated national energy and climate progress reports information on the implementation of the following objectives and measures:

(a) <...>

(b) national objectives for total public and, where available, private spending in research and innovation relating to clean energy technologies as well as for technology cost and performance development;

(c) where appropriate, national objectives, including long-term targets for 2050 for the deployment of technologies for decarbonising energy- and carbon-intensive industrial sectors and, where applicable, for related carbon transport, use, and storage infrastructure;

(d) national objectives to phase out energy subsidies, in particular for fossil fuels;

(e) implemented, adopted and planned policies and measures to achieve the objectives referred to in points **(b)** and **(c)**;

(f) cooperation with other **Contracting Parties** or Member States **of the European Union** in implementing the objectives and policies referred to in points **(b)** to **(d)**, such as alignment of research programmes and common programmes;

(g) financing measures **<...>** in this area at national **level and from non-domestic sources**, where applicable.

Section 2**Annual reporting****Article 26****Annual Reporting**

1. By 15 March **2023**, and every year thereafter (year X), **Contracting Parties** shall report to the **Secretariat**:

(a) the information referred to in Article 6(2) of Directive 2009/119/EC, **as adapted and adopted by Ministerial Council Decision 2012/03/MC-EnC**;

(b) <...>

2. By 31 July **2025**, and every year thereafter (year X), **Contracting Parties** shall report to the **Secretariat** their approximated greenhouse gas inventories for the year X-1.

For the purposes of this paragraph, the **Secretariat** shall, on the basis of the **Contracting Parties'** approximated greenhouse gas inventories or, if a **Contracting Party** has not communicated its approximated inventories by that date, on the basis of its own estimates, annually compile a **Contracting Parties'** approximated greenhouse gas inventory. The **Secretariat** shall make that information available to the

public by 30 September every year.

3. From **2025, Contracting Parties** shall determine and report to the **Secretariat** final greenhouse gas inventory data by 15 March each year (year X) and preliminary data by 15 January each year **in line with timeliness under UNFCCC flexibilities**, including the greenhouse gases and the inventory information listed in Annex V. The report on the final greenhouse gas inventory data shall also include a complete and up-to-date national inventory report. Within three months of receiving the reports, the **Secretariat** shall make the information referred to in point (n) of Part I of Annex V available to the **Energy and Climate Committee** referred to in point (a) of Article 44(1).

4. <...> The **Secretariat** shall, in cooperation with the **Contracting Parties**, <...> compile an **Energy Community** greenhouse gas inventory and prepare an **Energy Community** greenhouse gas inventory report <...>.

5. <...>

6. <...>

7. **The Secretariat shall inform the Permanent High Level Group about any implementing acts pursuant to Article 26(6) of Regulation (EU) 2018/1999 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant implementing acts into the Energy Community acquis.**

Article 27

Reporting on the 2020 targets

By 30 April 2022, each **Contracting Party** shall report to the **Secretariat** on the achievement of its 2020 energy efficiency national target established pursuant to Article 3(1) of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC** by providing the information set out in Part 2 of Annex IX to this Regulation, and of the national overall targets for the share of energy from renewable sources in 2020 as set out in Annex I to 2009/28/EC, **as adapted and adopted by Ministerial Council Decision 2018/02/MC-EnC amending Decision 2012/04/MC-EnC** by providing the following information:

(a) the sectoral (electricity, heating and cooling, and transport) and overall shares of energy from renewable sources in 2020;

(b) the measures taken to achieve the 2020 national renewable energy targets, including measures related to support schemes, guarantees of origin and simplification of administrative procedures;

(c) the share of energy from biofuels and bioliquids produced from cereal and other starch-rich crops, sugars and oil crops in energy consumption in transport;

(d) the share of energy from biofuels and biogas for transport produced from feedstocks and of other fuels listed in Part A of Annex IX to Directive (EU) 2018/2001 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** in energy consumption in transport.

Section 3

Reporting platform

Article 28

Energy Community E-platform

1. The **Secretariat** shall establish an online platform (**Energy Community** e-platform) to facilitate communication between the **Secretariat** and **Contracting Parties**, to promote cooperation among **Contracting Parties** and to facilitate public access to information.
2. **Contracting Parties** shall use the e-platform for the purposes of submitting to the **Secretariat** the reports referred to in this Chapter once it becomes operational.
3. The **Energy Community** e-platform shall become operational by 1 January **2023**. The **Secretariat** shall use the **Energy Community** e-platform to facilitate public online access to the reports referred to in this Chapter, the final integrated national energy and climate plans, the updates thereof, and the long-term strategies referred to in Article 15, taking into account commercially sensitive data and compliance with the data protection rules.

CHAPTER 5

AGGREGATE ASSESSMENT OF PROGRESS AND POLICY RESPONSE TO ENSURE CONTRACTING PARTIES' TARGETS ACHIEVEMENT — SECRETARIAT MONITORING

Article 29

Assessment of progress

1. By 31 October **2025** and every two years thereafter, the **Secretariat** shall assess, in particular on the basis of the integrated national energy and climate progress reports, of other information reported under this Regulation, of the indicators and of <...> statistics and data where available:
 - (a) the progress made at **Contracting Parties' level as a whole** towards meeting the objectives of the Energy Union, including for the first ten-year period the **Energy Community's** 2030 targets for energy and climate, in particular for the purpose of avoiding any gaps to the **Energy Community's** 2030 targets for renewable energy and energy efficiency;
 - (b) the progress made by each **Contracting Party** towards meeting its objectives, **including progress towards the Energy Community's climate-neutrality objective**, targets and contributions and implementing the policies and measures set out in its integrated national energy and climate plan;
 - (c) the overall impact of aviation on the global climate, including through non-CO₂ emissions or effects, based on the emission data provided by **Contracting Parties** pursuant to Article 26, and improve that assessment by reference to scientific advancements and air traffic data, as appropriate;

(d) the overall impact of the policies and measures of the integrated national energy and climate plans on the operation of the **Energy Community** climate and energy policy measures;

(e) <...>

2. In the area of renewable energy, as part of its assessment referred to in paragraph 1, the **Secretariat** shall assess the progress made in the share of energy from renewable sources in the **Contracting Parties'** gross final consumption on the basis of an indicative **Contracting Parties'** trajectory that starts <...> in 2020, reaches reference points of at least <...> 65 % in 2027 of the total increase in the share of energy from renewable sources between the **Contracting Parties'** 2020 renewable energy target and the **Contracting Parties'** 2030 renewable energy target, and reaches the **Contracting Parties'** 2030 renewable energy target <...> in 2030.

3. In the area of energy efficiency, as part of its assessment referred to in paragraph 1, the **Energy Community Secretariat** shall assess progress towards achieving a maximum energy consumption at **Contracting Parties'** level of <...> primary energy and <...> of final energy in 2030 in accordance with Article 3(5) of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC.**

In carrying out its assessment, the **Secretariat** shall take the following steps:

(a) consider whether the **Contracting Parties'** milestone of <...> primary energy and of <...> final energy in 2020 is achieved;

(b) assess whether **Contracting Parties'** progress indicates that the **Contracting Parties** as a whole **are** on track towards the level of energy consumption in 2030 as referred to in **Article 2(11)**, taking into account the assessment of information provided by **Contracting Parties** in their integrated national energy and climate progress reports;

(c) use results from modelling exercises in relation to future trends in energy consumption at level **of Contracting Parties as a whole** and national level and use other complementary analysis;

(d) take due account of relevant circumstances affecting primary and final energy consumption indicated by the **Contracting Parties** in their integrated national energy and climate plans, in accordance with Article 6(2).

4. In the area of the internal energy market, as part of its assessment referred to in paragraph 1, the **Secretariat** shall assess the progress made towards the level of electricity interconnectivity that the **Contracting Party** aims for in 2030.

5. By 31 October **2023** and every year thereafter, the **Secretariat** shall assess, in particular on the basis of the information reported pursuant to this Regulation, whether the <...> **Contracting Parties** have made sufficient progress towards meeting the following requirements:

(a) commitments under Article 4 of the UNFCCC and under Article 3 of the Paris Agreement as set out in decisions adopted by the Conference of the Parties to the UNFCCC, or by the Conference of the Parties to the UNFCCC serving as the meeting of the Parties to the Paris Agreement;

(b) <...>

(c) the objectives set out in the integrated national energy and climate plan with a view to achieving the Energy Union objectives and for the first **five-year** period with a view to fulfilling the 2030 targets for energy and climate.

6. <...>

7. The **Energy Community Secretariat** shall report on its assessment in accordance with this Article as part of the **annual implementation report**.

Article 30**Inconsistencies with overarching Energy Union objectives <...>**

1. Based on the assessment pursuant to Article 29, the **Secretariat** shall issue recommendations to a **Contracting Party** pursuant to Article 34 if policy developments in that **Contracting Party** show inconsistencies with the overarching objectives of the Energy Union.

2. <...>

Article 31**Response to insufficient ambition of integrated national energy and climate plans**

1. Where, on the basis of its assessment of the draft integrated national energy and climate plans pursuant to Article 9 or its assessment of the draft updates of the final plans pursuant to Article 14, and as part of the iterative process, the **Energy Community Secretariat** concludes that the objectives, targets and contributions of the **Contracting Parties** are insufficient for the <...> achievement of the Energy Union objectives and in particular, for the **2025 to 2030** period, for the **Energy Community's <...> 2030 target** for renewable energy and **the Energy Community 2030 headline target for energy efficiency**, it shall — as regards the **Energy Community's target for renewable energy** — and may — as regards the other Energy Union objectives — issue recommendations to **Contracting Parties** whose contributions it deems insufficient to increase their ambition in order to ensure a sufficient level of <...> ambition.

2. Where a gap between the **Energy Community's 2030 target** and the <...> contributions of **Contracting Parties** occurs in the area of renewable energy, the **Secretariat** shall base its assessment on <...> Annex II which is based on the objective criteria listed in point (e)(i) to (v) of the first subparagraph of Article 5(1), whilst having due regard to relevant circumstances affecting renewable energy deployment as indicated by the **Contracting Party** in accordance with the second subparagraph of Article 5(1).

Where a gap between the **Energy Community's 2030 target** and the sum of the national contributions occurs in the area of energy efficiency, the **Secretariat** shall, in particular, evaluate the relevant circumstances listed in Article 6(2), information provided by **Contracting Parties** in their integrated national energy and climate plans, results from modelling exercises in relation to future trends in energy consumption and other complementary analysis as appropriate.

Without prejudice to the other provisions of this Article, and for the sole purpose of assessing whether a gap between the **Energy Community's 2030 target** and the contributions of **Contracting Parties** occurs, the **Secretariat** shall, in its assessment, assume a national contribution of the **Contracting Party** which did not submit their draft integrated national energy and climate plans in accordance with Article 9(1).

In its assumption, in the area of renewable energy, the **Secretariat** shall take into account the **Contracting Party's national binding target for 2020** as set out in Annex I to Directive (EU) 2018/2001, **as adapted**

and adopted by Ministerial Council Decision 2021/14/MC-EnC results from modelling exercises on renewable energy development and <...> Annex II to this Regulation. In the area of energy efficiency, it shall take into account modelling exercises in relation to future trends in energy consumption and other complementary analysis as appropriate.

In its assessment of the renewable energy contributions, based on Annex II, the **Secretariat** shall take into consideration any potential negative impacts on the security of supply and grid stability in small or isolated energy systems or in **Contracting Parties'** systems where there may be significant implications due to the change of synchronous area.

In its assessment of the energy efficiency contributions, the **Secretariat** shall take into consideration the potential impact on electricity system operation and grid stability in **Contracting Parties** where there may be significant implications due to the change of synchronous area.

3. Where, on the basis of its assessment of the integrated national energy and climate plans and their updates pursuant to Article 14, the **Secretariat** concludes that the objectives, targets and contributions of the integrated national energy and climate plans or their updates are insufficient for the <...> achievement of the Energy Union objectives and, in particular, for the **2025 to 2030** period, for the **Energy Community's** 2030 targets for renewable energy and energy efficiency, it shall propose measures and exercise its powers at **Energy Community** level in order to ensure the <...> achievement of those objectives and targets. With regard to renewable energy, such measures shall take into consideration the level of ambition of contributions to the **Energy Community's** 2030 target by **Contracting Parties** set out in the integrated national energy and climate plans and their updates.

Article 32

Response to insufficient progress towards the <...> energy and climate objectives and targets of Contracting Parties as a whole

1. Where, on the basis of its assessment pursuant to point (b) of Article 29(1), the **Secretariat** concludes that insufficient progress is made by a **Contracting Party** towards meeting its objectives, targets and contributions, its reference points for renewable energy, or in implementing the policies and measures set out in its integrated national climate and energy plan, it shall issue recommendations to the **Contracting Party** concerned pursuant to Article 34.

In its recommendations in the area of renewable energy, the **Secretariat** shall take into consideration the relevant circumstances indicated by the **Contracting Party** in accordance with the second subparagraph of Article 5(1). The **Secretariat** shall also take into consideration renewable energy projects for which a final investment decision has been taken, provided that those projects become operational in the period **2025** to 2030 and have a significant impact on a **Contracting Party's** national contribution.

In its recommendations in the area of energy efficiency, the **Secretariat** shall take due account of the objective criteria listed in points (a) and (b) of Article 6(1) and the relevant national circumstances indicated by the **Contracting Party** in accordance with Article 6(2).

2. Where, on the basis of its aggregate assessment of **Contracting Parties'** integrated national energy and climate progress reports pursuant to point (a) of Article 29(1), and supported by other information sources, as appropriate, the **Energy Community Secretariat** concludes that the **Contracting Parties** are

at risk of not meeting the objectives of the Energy Union and, in particular, for the **2025 to 2030** period, the targets of the **Energy Community's** 2030 targets, it may issue recommendations to all **Contracting Parties** pursuant to Article 34 to mitigate such a risk.

In the area of renewable energy, the **Secretariat** shall assess if the national measures provided for in paragraph 3 are sufficient to achieve the **Energy Community's** renewable energy targets. In the case of insufficient national measures, the **Secretariat** shall, as appropriate, propose measures and exercise its power at **Energy Community** level in addition to those recommendations in order to ensure, in particular, the achievement of the **Energy Community's** 2030 target for renewable energy.

In the area of energy efficiency, the **Secretariat** shall as appropriate, propose measures and exercise its powers at **Energy Community** level in addition to those recommendations in order to ensure, in particular the achievement of the **Energy Community's** 2030 target for energy efficiency.

In the area of energy efficiency, such additional measures may in particular improve the energy efficiency of:

(a) products, pursuant to <...> Regulation (EU) 2017/1369, **as adapted and adopted by Ministerial Council Decision 2018/03/MC-EnC;**

(b) buildings, pursuant to Directive 2010/31/EU **as adapted and adopted by Ministerial Council Decisions 2010/02/MC-EnC and 2021/14/MC-EnC** and Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC;** and

(c) transport.

3. Where, in the area of renewable energy the **Energy Community Secretariat** concludes, based on its assessment pursuant to Article 29(1) and (2), that **the reference point of the indicative Contracting Parties' trajectory in 2027** referred to in Article 29(2) **was not met, Contracting Parties** that have fallen below **their national reference point in 2027** as referred to in point (a)(2) of Article 4 shall ensure that additional measures are implemented within one year following the date of reception of the **Secretariat's** assessment in order to cover the gap compared to their national reference point, such as:

(a) national measures to increase deployment of renewable energy;

(b) adjusting the share of renewable energy in the heating and cooling sector set out in Article 23(1) of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC;**

(c) adjusting the share of renewable energy in the transport sector set out in Article 25(1) of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC;**

(d) making a voluntary financial payment to the **Energy Community** renewable energy financing mechanism **once set up**, contributing to renewable energy projects <...> as set out in Article 33;

(e) using cooperation mechanisms set out in Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC.**

Such measures shall take into account the **Secretariat's** considerations as set out in the second subparagraph of paragraph 1 of this Article. The **Contracting Parties** concerned shall include those measures as part of their integrated national energy and climate progress report.

4. From 1 January **2022** onwards, the share of energy from renewable sources in each **Contracting Party's** gross final consumption of energy shall not be lower than a baseline share that is equal to its mandatory national overall target for the share of energy from renewable sources in 2020 set out in Article 3(4) of Directive (EU) 2018/2001 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-**

EnC. If a **Contracting Party** does not maintain its baseline share as measured over a one-year period, the **Contracting Party** concerned shall take, within one year, additional measures such as those as set out in points (a) to (e) of the first subparagraph of paragraph 3 of this Article sufficient to cover the gap within one year.

Contracting Parties fulfilling the obligation to cover the gap to the baseline shall be deemed to be in compliance with the obligations set out in the first sentence of the first subparagraph of this paragraph and in Article 3(4) of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** throughout the period where the gap occurred.

<...>

5. Where a **Contracting Party's** share of energy from renewable sources falls below one or more of its national reference points <...> as referred to in point (a)(2) of Article 4, it shall include in the next integrated report submitted to the **Secretariat** pursuant to Article 17 an explanation of how it will cover the gap compared to its national reference points.

6. Where, in the area of energy efficiency, without prejudice to other measures at **Energy Community** level pursuant to the third subparagraph of paragraph 2 of this Article, the **Secretariat** concludes, based on its assessment pursuant to Article 29(1) and (3), carried out by the years <...> 2025 and 2027 that progress towards <...> achieving the **Contracting Parties'** energy efficiency targets referred to in the first subparagraph of Article 29(3) is insufficient, it shall propose measures and exercise its power at **Energy Community** level in addition to those set out in Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC and by the Ministerial Council Decision 2021/14/MC-EnC** and Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC** to ensure that the **Contracting Parties'** 2030 energy efficiency targets are met.

7. Each **Contracting Party** concerned referred to in paragraph 3 of this Article shall detail the additional implemented, adopted and planned measures as part of its following progress report referred to in Article 17.

8. Where, in the area of interconnections, the **Secretariat** concludes, based on its assessment pursuant to Article 29(1) and (4), in the year 2025 that progress is insufficient, the **Secretariat** shall cooperate with the **Contracting Party** concerned by the year 2026 with the aim of addressing the circumstances encountered.

Article 33

Energy Community renewable energy financing mechanism

1. By 2023, the **European Commission may make a proposal to include the Contracting Parties in the European Union's** renewable energy financing mechanism **as established in accordance with Article 33 of Regulation (EU) 1999/2018.**

<...>

Article 34**Secretariat recommendations to Contracting Parties**

1. The **Secretariat** shall as appropriate issue recommendations to **Contracting Parties** to ensure the achievement of the objectives of the Energy Union. The **Secretariat** shall make such recommendations publicly available forthwith.
2. Where reference in this Regulation is made to this Article the following principles shall apply:
 - (a) the **Contracting Party** concerned shall take due account of the recommendation in a spirit of solidarity between **Contracting Parties** and the **Energy Community** and between **Contracting Parties, and Contracting Parties and Member States of the European Union**;
 - (b) the **Contracting Party** shall set out, in its integrated national energy and climate progress report made in the year following the year the recommendation was issued, how it has taken due account of the recommendation. If the **Contracting Party** concerned decides not to address a recommendation or a substantial part thereof, that **Contracting Party** shall provide its reasoning;
 - (c) <...>

Article 35**Implementation report**

1. By 31 October of every year, the **Energy Community Secretariat** shall submit to **Ministerial Council its annual Implementation Report**.
2. **Besides the state of implementation by Contracting Parties of the acquis communautaire under the Energy Community Treaty, the Implementation Report** shall include the following elements:
 - (a) the assessment carried out pursuant to Article 29;
 - (b) where appropriate, recommendations pursuant to Article 34;
 - (c) the report on the **development of carbon pricing instruments in the Contracting Parties and in the Energy Community and when relevant, a report on the functioning of the carbon market or any carbon pricing instruments**;
 - (d) biennially, from 2023, a report on <...> bioenergy sustainability **of Contracting Parties as a whole**, containing the information specified in Annex X;
 - (e) biennially, a report on voluntary schemes in respect of which the **Secretariat** has **issued an opinion** pursuant to Article 30(4) of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** containing the information specified in Annex XI to this Regulation;
 - (f) an overall progress report on the application of Directive 2009/72/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**;
 - (g) an overall progress report on the application of Directive 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC <...>**;
 - (h) an overall progress report on energy efficiency obligation schemes and alternative policy measures as referred to in Articles 7a and 7b of Directive 2012/27/EU, **as adapted and adopted by Ministerial**

Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC;

(i) biennially, an overall progress report on the renovation of the national stock of residential and non-residential buildings, both public and private, in line with the roadmaps set out in the long-term renovation strategies that each **Contracting Party** shall establish in accordance with Article 2a of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decisions 2010/02/MC-EnC and 2021/14/MC-EnC;**

(j) every four years, an overall progress report on **Contracting Parties'** increase in the number of nearly zero-energy buildings in accordance with Article 9(5) of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decisions 2010/02/MC-EnC and 2021/14/MC-EnC;**

(k) an overall progress report on **Contracting Parties'** progress in creating a complete and operational energy market;

(l) <...>

(m) a progress report on competitiveness;

(n) Contracting Parties' progress towards phasing out energy subsidies, in particular for fossil fuels;

(o) other issues of relevance to the implementation of the **acquis communautaire under the Energy Community Treaty**, including public and private support;

(p) <...>

Article 36**Monitoring of the governance mechanism**

In the context of the **Implementation Report** as referred to in Article 35, the **Secretariat** shall inform the **Ministerial Council** on the implementation of the integrated national energy and climate plans. The **Ministerial Council** shall, on an annual basis, address the progress achieved by the **Contracting Parties** in this respect.

CHAPTER 6**<...> NATIONAL SYSTEMS ON GREENHOUSE GAS EMISSIONS AND REMOVALS BY SINKS****Article 37****Energy Community and national inventory systems**

1. By 1 January **2023**, **Contracting Parties** shall establish, operate and seek to continuously improve national inventory systems to estimate anthropogenic emissions by sources and removals by sinks of greenhouse gases listed in Part 2 of Annex V and to ensure the timeliness, transparency, accuracy, consistency, comparability and completeness of their greenhouse gas inventories.
2. **Contracting Parties** shall ensure that their competent inventory authorities have access to the infor-

mation specified in Annex XII to this Regulation, <...> and are able to undertake the annual consistency checks referred to in **point (j)** of Part 1 of Annex V to this Regulation.

3. Unless Contracting Parties can be included in the European Union's inventory system established in accordance with Article 37 of Regulation (EU) 1999/2018, an Energy Community inventory system to ensure the timeliness, transparency, accuracy, consistency, comparability and completeness of national inventories with regard to the Energy Community greenhouse gas inventory shall be established. The **Secretariat** shall manage, maintain and seek to continuously improve that system which shall include the setting of a quality assurance and quality control programme, setting quality objectives and drafting an inventory quality assurance and quality control plan, procedures for completing emission estimates to compile the **Energy Community** inventory pursuant to paragraph 5 of this Article and the reviews referred to in Article 38.

4. In the case envisaged by paragraph 3, the Secretariat shall perform an initial check of the accuracy of the preliminary greenhouse gas inventory data to be submitted by **Contracting Parties** pursuant to Article 26(3). It shall send the results of that check to **Contracting Parties** within six weeks of the submission deadline. **Contracting Parties** shall respond to any relevant questions raised by the initial check by 15 March, together with the final inventory submission for the year X-2.

5. In the case envisaged by paragraph 3, where a Contracting Party does not submit the inventory data required to compile the **Energy Community** inventory by 15 March, the **Secretariat** may prepare estimates to complete the data submitted by the **Contracting Party**, in consultation and close cooperation with the **Contracting Party** concerned. The **Secretariat** shall use, for that purpose, the guidelines applicable for preparing the national greenhouse gas inventories.

6. <...>

7. The Secretariat shall inform the Permanent High Level Group about any implementing and delegated acts adopted pursuant to Article 37(6) and (7), respectively, of Regulation (EU) 2018/1999 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant implementing and delegated acts into the Energy Community acquis.

Article 38

Inventory review

1. With a view to monitoring **Contracting Parties'** greenhouse gas emission reductions or limitation <...> targets set out in **Energy Community** law, the **Energy Community Secretariat** shall, in 2027 and 2032, carry out a comprehensive review of the national inventory data submitted by **Contracting Parties <...>**. **Contracting Parties** shall participate fully in that process.

2. The comprehensive review referred to in paragraph 1 shall include:

(a) checks to verify the transparency, accuracy, consistency, comparability and completeness of information submitted;

(b) checks to identify cases where inventory data are prepared in a manner which is inconsistent with UNFCCC guidance documentation or **Energy Community** rules;

(c) <...>

(d) where appropriate, calculating the resulting technical corrections necessary, in consultation with the **Contracting Parties**.

3. The Secretariat shall inform the Permanent High Level Group about any implementing acts adopted pursuant to Article 38(3) of Regulation (EU) 2018/1999 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant implementing acts into the Energy Community acquis.

4. The **Energy Community Secretariat** shall <...> determine the total sum of emissions for the relevant years arising from the corrected inventory data for each **Contracting Party** upon completion of the review of <...> emission data referred to in point (c) of Part 1 of Annex V to this Regulation <...>.

5. <...>

6. <...>

Article 39

<...> National systems for policies and measures and projections

1. By 1 January **2023**, **Contracting Parties** and the **Secretariat** shall operate and seek to continuously improve national and **Energy Community** systems <...> for reporting on policies and measures and for reporting on projections of anthropogenic greenhouse gas emissions by sources and removals by sinks. Those systems shall include the relevant institutional, legal and procedural arrangements established within a **Contracting Party** and the **Energy Community** for evaluating policy and making projections of anthropogenic greenhouse gas emissions by sources and removals by sinks.

2. Contracting Parties and the **Secretariat** shall aim to ensure the timeliness, transparency, accuracy, consistency, comparability and completeness of the information reported on policies and measures and projections of anthropogenic greenhouse gas emissions by sources and removals by sinks, as referred to in Article 18, including the use and application of data, methods and models, and the implementation of quality assurance and quality control activities and sensitivity analysis.

3. The Secretariat shall inform the Permanent High Level Group about any implementing acts adopted pursuant to Article 39 paragraph 3 of Regulation (EU) 2018/1999 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant implementing acts into the Energy Community acquis.

Article 40

<...>

CHAPTER 7 COOPERATION AND SUPPORT

Article 41

Cooperation between the **Contracting Parties** and **Energy Community Secretariat**

1. The **Contracting Parties shall cooperate with each other and with** Member States **of the European Union and the Energy Community Secretariat** and coordinate fully with each other in relation to obligations under this Regulation, in particular concerning:

(a) the process for preparing, adopting, notifying and assessing the integrated national energy and climate plans pursuant to Articles 9 to 13;

(b) the process for preparing, adopting, notifying and assessing the integrated national energy and climate progress report pursuant to Article 17 and annual reporting pursuant to Article 26;

(c) the process related to the **Secretariat** recommendations and addressing those recommendations pursuant to Article 9(2) and (3), Article 17(6), Article 30(1), Article 31(1) and Article 32(1) and (2);

(d) compiling the **Energy Community** greenhouse gas inventory and preparing the **Energy Community** greenhouse gas inventory report, pursuant to Article 26(4);

(e) <...>

(f) <...>

(g) <...>

(h) compiling the **Energy Community** approximated greenhouse gas inventory, pursuant to Article 26(2).

2. The **Secretariat** may provide technical support to the **Contracting Parties** in relation to obligations under this Regulation upon request from a **Contracting Party**.

Article 42

Role of the European Environment Agency

The European Environment Agency, **based on a bilateral arrangement, may** assist the **Energy Community Secretariat** in its work as regards the decarbonisation and energy efficiency dimensions to comply with Articles 15 to 21, 26, 28, 29, 35, 37, 38, 39 and 41 in accordance with its annual work programme. That shall include assistance, as required, with:

(a) compiling the information reported by **Contracting Parties** on policies and measures and projections;

(b) performing quality assurance and quality control procedures on the information reported by **Contracting Parties** on projections and policies and measures;

(c) preparing estimates or complementing those available to the **Secretariat** for data on projections not reported by the **Contracting Parties**;

(d) compiling data, wherever available taken from European statistics and appropriate in terms of timing, as required for **Implementation Report** prepared by the **Energy Community Secretariat**;

(e) <...>

(f) performing quality assurance and quality control procedures in the preparation of the **Energy Community** greenhouse gas inventory;

(g) compiling the **Contracting Parties'** greenhouse gas inventory and preparing the **Contracting Parties'** greenhouse gas inventory report;

(h) preparing estimates for data not reported in the national greenhouse gas inventories;

(i) conducting the review referred to in Article 38;

(j) compiling the **Energy Community** approximated greenhouse gas inventory.

CHAPTER 8 FINAL PROVISIONS

Article 43

<...>

Article 44

Committees

The Energy Community Secretariat shall closely cooperate with the Energy and Climate Committee of the Energy Community.

Article 45

<...>

Article 46

<...>

Article 47

<...>

Article 48

<...>

Article 49

<...>

Article 50

Amendment to Regulation (EC) No 715/2009 as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC;

In Regulation (EC) No 715/2009, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**, Article 29 is deleted.

Article 51

Amendments to Directive 2009/73/EC as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC;

Directive 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**, is amended as follows:

- (1) Article 5 is deleted;
- (2) Article 52 is replaced by the following:

'Article 52

Reporting

The **Secretariat** shall monitor and review the application of this Directive and submit an **annual Implementation Report to the Ministerial Council.**'

Article 52

Amendment to Council Directive 2009/119/EC as adapted and adopted by Ministerial Council Decision 2012/03/MC-EnC;

In Article 6 of Directive 2009/119/EC, paragraph 2 **as adapted and adopted by Ministerial Council Decision 2012/03/MC-EnC** is replaced by the following:

'2. By 15 March each year, each **Contracting Party** shall send the **Secretariat** a summary copy of the stock register referred to in paragraph 1 showing at least the quantities and nature of the emergency stocks included in the register on the last day of the preceding calendar year.'

Article 53**Amendments to Directive 2010/31/EU as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC;**

Directive 2010/31/EU, as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC is amended as follows:

(1) An Article 2a is **included** as follows:

Article 2a**Long-term renovation strategy**

1. Each Contracting Party shall establish a long-term renovation strategy to support the renovation of the national stock of residential and non-residential buildings, both public and private, into a highly energy efficient and decarbonised building stock by 2050, facilitating the cost-effective transformation of existing buildings into nearly zero-energy buildings. Each long-term renovation strategy shall encompass:

(a) an overview of the national building stock, based, as appropriate, on statistical sampling and expected share of renovated buildings in 2020;

(b) the identification of cost-effective approaches to renovation relevant to the building type and climatic zone, considering potential relevant trigger points, where applicable, in the life-cycle of the building;

(c) policies and actions to stimulate cost-effective deep renovation of buildings, including staged deep renovation, and to support targeted cost-effective measures and renovation for example by introducing an optional scheme for building renovation passports;

(d) an overview of policies and actions to target the worst performing segments of the national building stock, split-incentive dilemmas and market failures, and an outline of relevant national actions that contribute to the alleviation of energy poverty;

(e) policies and actions to target all public buildings;

(f) an overview of national initiatives to promote smart technologies and well-connected buildings and communities, as well as skills and education in the construction and energy efficiency sectors; and

(g) an evidence-based estimate of expected energy savings and wider benefits, such as those related to health, safety and air quality.

2. In its long-term renovation strategy, each Contracting Party shall set out a roadmap with measures and domestically established measurable progress indicators, with a view to the long-term 2050 goal of reducing greenhouse gas emissions in the Energy Community by 80-95 % compared to 1990, in order to ensure a highly energy efficient and decarbonised national building stock and in order to facilitate the cost-effective transformation of existing buildings into nearly zero-energy buildings. The roadmap shall include indicative milestones for 2030, 2040 and 2050, and specify how they contribute to achieving the Energy Community's energy efficiency targets in accordance with Directive 2012/27/EU, as adapted and adopted by Ministerial Council Decision 2015/08/MC-EnC and by the Ministerial Council Decision

2021/14/MC-EnC.

3. To support the mobilisation of investments into the renovation needed to achieve the goals referred to in paragraph 1, Contracting Parties shall facilitate access to appropriate mechanisms for:

- (a) the aggregation of projects, including by investment platforms or groups, and by consortia of small and medium-sized enterprises, to enable investor access as well as packaged solutions for potential clients;**
- (b) the reduction of the perceived risk of energy efficiency operations for investors and the private sector;**
- (c) the use of public funding to leverage additional private-sector investment or address specific market failures;**
- (d) guiding investments into an energy efficient public building stock, in line with Eurostat guidance; and**
- (e) accessible and transparent advisory tools, such as one-stop-shops for consumers and energy advisory services, on relevant energy efficiency renovations and financing instruments.**

4. The Energy Community Secretariat shall collect and disseminate, at least to public authorities, best practices on successful public and private financing schemes for energy efficiency renovation as well as information on schemes for the aggregation of small-scale energy efficiency renovation projects. The Energy Community Secretariat shall identify and disseminate best practices on financial incentives to renovate from a consumer perspective taking into account cost-efficiency differences between Contracting Parties.

5. To support the development of its long-term renovation strategy, each Contracting Party shall carry out a public consultation on its long-term renovation strategy prior to submitting it to the Energy Community Secretariat. Each Contracting Party shall annex a summary of the results of its public consultation to its long-term renovation strategy.

Each Contracting Party shall establish the modalities for consultation in an inclusive way during the implementation of its long-term renovation strategy.

6. Each Contracting Party shall annex the details of the implementation of its most recent long-term renovation strategy to its long-term renovation strategy, including on the planned policies and actions.

7. Each Contracting Party may use its long-term renovation strategy to address fire safety and risks related to intense seismic activity affecting energy efficiency renovations and the lifetime of buildings.

8. Each Contracting Party's long-term renovation strategy shall be submitted to the Energy Community Secretariat as part of its final integrated national energy and climate plan referred to in Article 3 of Regulation (EU) 2018/1999, as incorporated in the Energy Community. As a derogation from Article 3(1) of that Regulation, the first long-term renovation strategy under paragraph 1 of this Article shall be submitted to the Secretariat by 10 March 2023.

(2) in the second subparagraph of Article 5(2), the sentence 'The report may be included in the Energy Efficiency Action Plans referred to in Article 14(2) of Directive 2006/32/EC' is deleted;

(3) in Article 9, paragraph 5 is replaced by the following:

'5. As part of its **annual Implementation Report**, the **Secretariat** shall report every four years to the **Ministerial Council** on the progress of **Contracting Parties** in increasing the number of nearly zero-energy buildings. On the basis of this reported information the **Secretariat** shall, where necessary, develop an action plan and propose recommendations and measures in accordance with Article 34 of Regulation (EU) 2018/1999, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** to increase the number of those buildings and encourage best practices as regards the cost-effective transformation of existing buildings into nearly zero-energy buildings.'

(4) in Article 10, paragraphs 2 and 3 are deleted;

(5) in Article 14(3), the third subparagraph is replaced by the following:

'Such a report shall be submitted to the **Secretariat** as part of the **Contracting Parties**' integrated national energy and climate plans referred to in Article 3 of Regulation (EU) 2018/1999, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;

(6) in Article 15(3), the third subparagraph is replaced by the following:

'Such a report shall be submitted to the **Secretariat** as part of the **Contracting Parties**' integrated national energy and climate plans referred to in Article 3 of Regulation (EU) 2018/1999, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**'.

Article 54

Amendments to Directive 2012/27/EU as adapted and adopted by Ministerial Council Decision 2015/08/MC-EnC;

Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decision 2015/08/MC-EnC** is amended as follows:

(1) Article 4 is deleted;

(2) in Article 18(1), point (e) is deleted;

(3) Article 24 is amended as follows:

(a) paragraphs 1, 3 <...> and 11, are deleted;

(b) paragraph 2 is deleted;

(4) Annex XIV is deleted.

Article 55

<...>

Article 56

<...>

Article 57

<...>

Article 58

Transitional provisions

Until adoption by the Ministerial Council of the Energy Community 2030 targets, including the energy efficiency headline target, and/or the targets for energy and climate of each Contracting Party, as appropriate, this Regulation shall be applied on the basis of Contracting Parties' National Domestic Contributions or targets or any other more ambitious targets or contributions that they have undertaken under any national or international legal and/or policy text.

Article 59

Entry into force

This decision shall enter into force on the date of its adoption.¹

¹ The text displayed here corresponds to Article 10 of Decision 2021/14/MC-EnC

ANNEX I

GENERAL FRAMEWORK FOR INTEGRATED NATIONAL ENERGY AND CLIMATE PLANS

Part 1 General framework

SECTION A: NATIONAL PLAN

1. OVERVIEW AND PROCESS FOR ESTABLISHING THE PLAN

1.1. Executive summary

- i. Political, economic, environmental, and social context of the plan
- ii. Strategy relating to the five dimensions of the Energy Union
- iii. Overview table with key objectives, policies and measures of the plan

1.2. Overview of current policy situation

- i. National and **Energy Community** energy system and policy context of the national plan
- ii. Current energy and climate policies and measures relating to the five dimensions of the Energy Union
- iii. Key issues of cross-border relevance
- iv. Administrative structure of implementing national energy and climate policies

1.3. Consultations and involvement of national and **Energy Community** entities and their outcome

- i. Involvement of the national parliament
- ii. Involvement of local and regional authorities
- iii. Consultations of stakeholders, including the social partners, and engagement of civil society and the general public
- iv. Consultations of other **Contracting Parties** and Member States **of the European Union**
- v. Iterative process with the **Secretariat**

1.4. Regional cooperation in preparing the plan

- i. Elements subject to joint or coordinated planning with other **Contracting Parties and Member States of the European Union**
- ii. Explanation of how regional cooperation is considered in the plan

2. NATIONAL OBJECTIVES AND TARGETS

2.1. Dimension decarbonisation

2.1.1. GHG emissions and removals²

² Consistency to be ensured with long-term strategies pursuant to Article 15.

- i. The elements set out in point (a)(1) of Article 4
 - ii. Where applicable, other national objectives and targets consistent with the Paris Agreement and the existing long-term strategies. Where applicable for the contribution to the overall **Contracting Parties'** commitment of reducing the GHG emissions, other objectives and targets, including sector targets and adaptation goals, if available
- 2.1.2. Renewable energy
- i. The elements set out in point (a)(2) of Article 4
 - ii. Estimated trajectories for the sectoral share of renewable energy in final energy consumption from 2025 to 2030 in the electricity, heating and cooling, and transport sector
 - iii. Estimated trajectories by renewable energy technology that the **Contracting Party** projects to use to achieve the overall and sectoral trajectories for renewable energy from 2025 to 2030, including expected total gross final energy consumption per technology and sector in Mtoe and total planned installed capacity (divided by new capacity and repowering) per technology and sector in MW
 - iv. Estimated trajectories on bioenergy demand, disaggregated between heat, electricity and transport, and on biomass supply by feedstocks and origin (distinguishing between domestic production and imports). For forest biomass, an assessment of its source and impact on the LULUCF sink
 - v. Where applicable, other national trajectories and objectives, including those that are long term or sectoral (e.g. share of renewable energy in district heating, renewable energy use in buildings, renewable energy produced by cities, renewable energy communities and renewables self-consumers, energy recovered from the sludge acquired through the treatment of wastewater)
- 2.2. Dimension energy efficiency
- i. The elements set out in point (b) of Article 4
 - ii. The indicative milestones for 2030, 2040 and 2050, the domestically established measurable progress indicators, an evidence-based estimate of expected energy savings and wider benefits, and their contributions as included in the roadmaps set out in the long-term renovation strategies for the national stock of residential and non-residential buildings, both public and private, in accordance with Article 2a of Directive 2010/31/EU **as adapted and adopted by Ministerial Council Decisions 2010/02/MC-EnC and 2021/14/MC-EnC**
 - iii. Where applicable, other national objectives, including long-term targets or strategies and sectoral targets, and national objectives in areas such as energy efficiency in the transport sector and with regard to heating and cooling
- 2.3. Dimension energy security
- i. The elements set out in point (c) of Article 4
 - ii. National objectives with regard to increasing: the diversification of energy sources and supply from third countries for the purpose of increasing the resilience of regional and national energy systems
 - iii. Where applicable, national objectives with regard to reducing energy import dependency from third countries, for the purpose of increasing the resilience of regional and national energy systems
 - iv. National objectives with regard to increasing the flexibility of the national energy system, in particular by means of deploying domestic energy sources, demand response and energy storage
- 2.4. Dimension internal energy market

2.4.1. Electricity interconnectivity

i. The level of electricity interconnectivity that the **Contracting Party** aims for in 2030 in consideration of the electricity interconnection target for 2030 **in accordance with Article 4(d)(1)** with a strategy with the level from 2025 onwards defined in close cooperation with affected **Contracting Parties and/or Member States of the European Union**, taking into account the 2020 interconnection target and the following indicators of the urgency of action:

(1) Price differential in the wholesale market exceeding an indicative threshold of EUR 2/MWh between **Contracting Parties and/or Member States of the European Union**, regions or bidding zones;

(2) Nominal transmission capacity of interconnectors below 30 % of peak load;

(3) Nominal transmission capacity of interconnectors below 30 % of installed renewable generation.

Each new interconnector shall be subject to a socioeconomic and environmental cost-benefit analysis and implemented only if the potential benefits outweigh the costs

2.4.2. Energy transmission infrastructure

i. Key electricity and gas transmission infrastructure projects, and, where relevant, modernisation projects, that are necessary for the achievement of objectives and targets under the five dimensions of the Energy Union Strategy

ii. Where applicable, main infrastructure projects envisaged other than Projects of **Energy Community Interest (PECIs)** and **Projects of Mutual Interest (PMIs)**³

2.4.3. Market integration

i. National objectives related to other aspects of the internal energy market such as increasing system flexibility, in particular related to the promotion of competitively determined electricity prices in line with relevant sectoral law, market integration and coupling, aimed at increasing the tradeable capacity of existing interconnectors, smart grids, aggregation, demand response, storage, distributed generation, mechanisms for dispatching, re-dispatching and curtailment, and real-time price signals, including a timeframe for when the objectives shall be met

ii. Where applicable, national objectives related to the non-discriminatory participation of renewable energy, demand response and storage, including via aggregation, in all energy markets, including a timeframe for when the objectives are to be met

iii. Where applicable, national objectives with regard to ensuring that consumers participate in the energy system and benefit from self-generation and new technologies, including smart meters;

iv. National objectives with regard to ensuring electricity system adequacy, as well as for the flexibility of the energy system with regard to renewable energy production, including a timeframe for when the objectives are to be met

v. Where applicable, national objectives to protect energy consumers and improve the competitiveness of the retail energy sector

2.4.4. Energy poverty

Where applicable, national objectives with regard to energy poverty, including a timeframe for when the objectives are to be met

³ In accordance with Regulation (EU) No 347/2013 as adapted and adopted by Ministerial Council Decision 2015/09/MC-EnC.

2.5. Dimension research, innovation and competitiveness

- i. National objectives and funding targets for public and, where available, private research and innovation, including, where appropriate, a timeframe for when the objectives are to be met
- ii. Where available, national 2050 objectives related to the promotion of clean energy technologies and, where appropriate, national objectives, including long-term targets (2050) for deployment of low-carbon technologies, including for decarbonising energy and carbon-intensive industrial sectors and, where applicable, for related carbon transport and storage infrastructure
- iii. Where applicable, national objectives with regard to competitiveness

3. POLICIES AND MEASURES

3.1. Dimension decarbonisation

3.1.1. GHG emissions and removals

- i. Policies and measures to achieve the **economy-wide** target covering all key emitting sectors and sectors for the enhancement of removals, with an outlook to the long-term vision and goal to become a low emission economy and achieving a balance between emissions and removals in accordance with the Paris Agreement
- ii. Where relevant, regional cooperation in this area
- iii. Without prejudice to the applicability of State aid rules, financing measures in this area at national level, where applicable

iv. Development of carbon pricing instruments and when relevant, functioning of the carbon market or any carbon pricing instruments

3.1.2. Renewable energy

- i. Policies and measures to achieve the national contribution to the 2030 **Energy Community** target for renewable energy and trajectories as referred to in point (a)(2) Article 4, and, where applicable or available, the elements referred to in point 2.1.2 of this Annex, including sector- and technology-specific measures⁴
 - ii. Where relevant, specific measures for regional cooperation, as well as, as an option, the estimated excess production of energy from renewable sources which could be transferred to other **Contracting Parties and/or Member States of the European Union** in order to achieve the national contribution and trajectories referred to in point 2.1.2
 - iii. Specific measures on financial support, where applicable for the promotion of the production and use of energy from renewable sources in electricity, heating and cooling, and transport
 - iv. Where applicable, the assessment of the support for electricity from renewable sources that **Contracting Parties** are to carry out pursuant to Article 6(4) of Directive (EU) 2018/2001, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**
 - v. Specific measures to introduce one or more contact points, streamline administrative procedures, provide information and training, and facilitate the uptake of power purchase agreements
- Summary of the policies and measures under the enabling framework **Contracting Parties** have

⁴ When planning those measures, **Contracting Parties** shall take into account the end of life of existing installations and the potential for repowering.

to put in place pursuant to Article 21(6) and Article 22(5) of Directive (EU) 2018/2001 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**, to promote and facilitate the development of self-consumption and renewable energy communities

vi. Assessment of the necessity to build new infrastructure for district heating and cooling produced from renewable sources

vii. Where applicable, specific measures on the promotion of the use of energy from biomass, especially for new biomass mobilisation taking into account:

- biomass availability, including sustainable biomass: both domestic potential and imports from third countries
- other biomass uses by other sectors (agriculture and forest-based sectors); as well as measures for the sustainability of biomass production and use

3.1.3. Other elements of the dimension

i. <...>

ii. Policies and measures to achieve other national targets, where applicable

iii. Policies and measures to achieve low emission mobility (including electrification of transport)

iv. Where applicable, national policies, timelines and measures planned to phase out energy subsidies, in particular for fossil fuels

3.2. Dimension energy efficiency

Planned policies, measures and programmes to achieve the indicative national energy efficiency contributions for 2030 as well as other objectives referred to in point 2.2, including planned measures and instruments (also of a financial nature) to promote the energy performance of buildings, in particular with regard to the following:

i. Energy efficiency obligation schemes and alternative policy measures under Articles 7a and 7b and Article 20(6) of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**, and to be prepared in accordance with Annex III to this Regulation

ii. Long-term renovation strategy to support the renovation of the national stock of residential and non-residential buildings, both public and private, including policies, measures and actions to stimulate cost-effective deep renovation and policies and actions to target the worst performing segments of the national building stock, in accordance with Article 2a of Directive 2010/31/EU **as adapted and adopted by Ministerial Council Decisions 2010/02/MC-EnC and 2021/14/MC-EnC**

iii. Description of policy and measures to promote energy services in the public sector and measures to remove regulatory and non-regulatory barriers that impede the uptake of energy performance contracting and other energy efficiency service models⁵

iv. Other planned policies, measures and programmes to achieve the indicative national energy efficiency contributions for 2030 as well as other objectives referred to in point 2.2 (for example measures to promote the exemplary role of public buildings and energy-efficient public procurement, measures to promote energy audits and energy management systems⁶, consumer information and training

⁵ In accordance with Article 18 of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**

⁶ In accordance with Article 8 of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**

measures⁷, and other measures to promote energy efficiency⁸)

v. Where applicable, a description of policies and measures to promote the role of local renewable energy communities in contributing to the implementation of policies and measures in points i, ii, iii and iv

vi. Description of measures to develop measures to utilise energy efficiency potentials of gas and electricity infrastructure⁹

vii. Regional cooperation in this area, where applicable

viii. Financing measures, in the area at national level

3.3. Dimension energy security¹⁰

i. Policies and measures related to the elements set out in point 2.3¹¹

ii. Regional cooperation in this area

iii. Where applicable, financing measures in this area at national level

3.4. Dimension internal energy market¹²

3.4.1. Electricity infrastructure

i. Policies and measures to achieve the targeted level of interconnectivity as set out in point (d) of Article 4

ii. Regional cooperation in this area¹³

iii. Where applicable, financing measures in this area at national level

3.4.2. Energy transmission infrastructure

i. Policies and measures related to the elements set out in point 2.4.2, including, where applicable, specific measures to enable the delivery of Projects of **Energy Community** Interest (PEIs), **Projects of Mutual Interest** and other key infrastructure projects

ii. Regional cooperation in this area¹⁴

iii. Where applicable, financing measures in this area at national level

3.4.3. Market integration

i. Policies and measures related to the elements set out in point 2.4.3

ii. Measures to increase the flexibility of the energy system with regard to renewable energy production such as smart grids, aggregation, demand response, storage, distributed generation, mechanisms for dispatching, re-dispatching and curtailment, real-time price signals, including the roll-out of intraday market coupling and cross-border balancing markets

⁷ In accordance with Articles 12 and 17 of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and b 2021/14/MC-EnC**

⁸ In accordance with Article 19 of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**

⁹ In accordance with Article 15(2) of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**

¹⁰ Policies and measures shall reflect the energy efficiency first principle.

¹¹ Consistency shall be ensured with the preventive action and emergency plans under Regulation (EU) 2017/1938 **as adapted and adopted by Ministerial Council Decisions 2021/15/MC-EnC** as well as the risk preparedness plans under Regulation (EU) 2019/941 **as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC**

¹² Policies and measures shall reflect the energy efficiency first principle.

¹³ Other than the PCI Regional Groups established under Regulation (EU) No 347/2013 **as adapted and adopted by Ministerial Council Decision 2015/09/MC-EnC**

¹⁴ Other than the PCI Regional Groups established under Regulation (EU) No 347/2013 **as adapted and adopted by Ministerial Council Decision 2015/09/MC-EnC**

- iii. Where applicable, measures to ensure the non-discriminatory participation of renewable energy, demand response and storage, including via aggregation, in all energy markets
- iv. Policies and measures to protect consumers, especially vulnerable and, where applicable, energy poor consumers, and to improve the competitiveness and contestability of the retail energy market
- v. Description of measures to enable and develop demand response, including those addressing tariffs to support dynamic pricing¹⁵

3.4.4. Energy poverty

Where applicable, policies and measures to achieve the objectives set out in point 2.4.4

3.5. Dimension research, innovation and competitiveness

- i. Policies and measures related to the elements set out in point 2.5
- ii. Where applicable, cooperation with other **Contracting Parties and/or** Member States **of the European Union** in this area
- iii. Where applicable, financing measures in this area at national

SECTION B: ANALYTICAL BASIS¹⁶

4. CURRENT SITUATION AND PROJECTIONS WITH EXISTING POLICIES AND MEASURES¹⁷

4.1. Projected evolution of main exogenous factors influencing energy system and GHG emission developments

- i. Macroeconomic forecasts (GDP and population growth)
- ii. Sectoral changes expected to impact the energy system and GHG emissions
- iii. Global energy trends, international fossil fuel prices, EU ETS carbon price
- iv. Technology cost developments

4.2. Dimension Decarbonisation

4.2.1. GHG emissions and removals

- i. Trends in current GHG emissions and removals **across the economy** and different sectors
- ii. Projections of sectoral developments with existing national, **Energy Community** and **European Union** policies and measures at least until 2040 (including for the year 2030)

4.2.2. Renewable energy

- i. Current share of renewable energy in gross final energy consumption and in different sectors (heating and cooling, electricity and transport) as well as per technology in each of these sectors
- ii. Indicative projections of development with existing policies for the year 2030 (with an outlook to the year 2040)

¹⁵ In accordance with Article 15(8) of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**

¹⁶ See Part 2 for a detailed list of parameters and variables to be reported in Section B of the Plan.

¹⁷ Current situation shall reflect the date of submission of the national plan (or latest available date). Existing policies and measures encompass implemented and adopted policies and measures. Adopted policies and measures are those for which an official government decision has been made by the date of submission of the national plan and there is a clear commitment to proceed with implementation. Implemented policies and measures are those for which one or more of the following applies at the date of submission of the integrated national energy and climate plan or the integrated national energy and climate progress report: directly applicable European legislation or national legislation is in force, one or more voluntary agreements have been established, financial resources have been allocated, human resources have been mobilised.

4.3. Dimension Energy efficiency

- i. Current primary and final energy consumption in the economy and per sector (including industry, residential, service and transport)
- ii. Current potential for the application of high-efficiency cogeneration and efficient district heating and cooling¹⁸
- iii. Projections considering existing energy efficiency policies, measures and programmes as described in point 1.2.(ii) for primary and final energy consumption for each sector at least until 2040 (including for the year 2030)¹⁹
- iv. Cost-optimal levels of minimum energy performance requirements resulting from national calculations, in accordance with Article 5 of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC and by the Ministerial Council Decision 2021/14/MC-EnC**;

4.4. Dimension energy security

- i. Current energy mix, domestic energy resources, import dependency, including relevant risks
- ii. Projections of development with existing policies and measures at least until 2040 (including for the year 2030)

4.5. Dimension internal energy market

4.5.1. Electricity interconnectivity

- i. Current interconnection level and main interconnectors²⁰
- ii. Projections of interconnector expansion requirements (including for the year 2030)²¹

4.5.2. Energy transmission infrastructure

- i. Key characteristics of the existing transmission infrastructure for electricity and gas²²
- ii. Projections of network expansion requirements at least until 2040 (including for the year 2030)²³

4.5.3. Electricity and gas markets, energy prices

- i. Current situation of electricity and gas markets, including energy prices
- ii. Projections of development with existing policies and measures at least until 2040 (including for the year 2030)

4.6. Dimension research, innovation and competitiveness

- i. Current situation of the low-carbon-technologies sector and, to the extent possible, its position on the global market (that analysis is to be carried out at **regional** or global level)
- ii. Current level of public and, where available, private research and innovation spending on low-carbon-technologies, current number of patents, and current number of researchers
- iii. Breakdown of current price elements that make up the main three price components (energy, network, taxes/levies)

¹⁸ In accordance with Article 14(1) of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**

¹⁹ This reference business as usual projection shall be the basis for the 2030 final and primary energy consumption target which is described in 2.3 and conversion factors.

²⁰ With reference to overviews of existing transmission infrastructure by Transmission System Operators (TSOs).

²¹ With reference to national network development plans and regional investment plans of TSOs.

²² With reference to overviews of existing transmission infrastructure by TSOs.

²³ With reference to national network development plans and regional investment plans of TSOs.

iv. Description of energy subsidies, including for fossil fuels

5. IMPACT ASSESSMENT OF PLANNED POLICIES AND MEASURES²⁴

5.1. Impacts of planned policies and measures described in section 3 on energy system and GHG emissions and removals, including comparison to projections with existing policies and measures (as described in section 4).

i. **Projections of the development of the energy system and GHG emissions and removals as well as the impact of the implementation of Directive 2001/80/EC as adapted and adopted by Ministerial Council Decision 2013/05/MC-EnC, amended by Decision 2015/07/MC-EnC and Directive 2010/75/EU as adapted and adopted by Ministerial Council Decision 2013/06/MC-EnC, amended by Decision 2015/06/MC-EnC, with particular regard to limited lifetime derogation.**

ii. Assessment of policy interactions (between existing policies and measures and planned policies and measures within a policy dimension and between existing policies and measures and planned policies and measures of different dimensions) at least until the last year of the period covered by the plan, in particular to establish a robust understanding of the impact of energy efficiency / energy savings policies on the sizing of the energy system and to reduce the risk of stranded investment in energy supply

iii. Assessment of interactions between existing policies and measures and planned policies and measures, and between those policies and measures and **Energy Community** climate and energy policy measures

5.2. Macroeconomic and, to the extent feasible, the health, environmental, employment and education, skills and social impacts, including just transition aspects (in terms of costs and benefits as well as cost-effectiveness) of the planned policies and measures described in section 3 at least until the last year of the period covered by the plan, including comparison to projections with existing policies and measures

5.3. Overview of investment needs

i. existing investment flows and forward investment assumptions with regard to the planned policies and measures

ii. sector or market risk factors or barriers in the national or regional context

iii. analysis of additional public finance support or resources to fill identified gaps identified under point ii

5.4. Impacts of planned policies and measures described in section 3 on other **Contracting Parties and/or Member States of the European Union** and regional cooperation at least until the last year of the period covered by the plan, including comparison to projections with existing policies and measures

i. Impacts on the energy system in neighbouring and other **Contracting Parties and/or Member States of the European Union** in the region to the extent possible

ii. Impacts on energy prices, utilities and energy market integration

iii. Where relevant, impacts on regional cooperation

²⁴ Planned policies and measures are options under discussion and having a realistic chance of being adopted and implemented after the date of submission of the national plan. The resulting projections under section 5.1.i shall therefore include not only implemented and adopted policies and measures (projections with existing policies and measures), but also planned policies and measures.

Part 2

List of parameters and variables to be reported in Section B of National Plans^{25 26 27 28}

The following parameters, variables, energy balances and indicators are to be reported in Section B 'Analytical Basis' of the National Plans, if used:

1. General parameters and variables

- (1) Population [million]
- (2) GDP [euro million]
- (3) Sectoral gross value added (including main industrial, construction, services, and agriculture sectors) [euro million]
- (4) Number of households [thousands]
- (5) Household size [inhabitants/households]
- (6) Disposable income of households [euro]
- (7) Number of passenger-kilometres: all modes, i.e. split between road (cars and buses separated if possible), rail, aviation and domestic navigation (when relevant) [million pkm]
- (8) Freight transport tonnes-kilometres: all modes excluding international maritime, i.e. split between road, rail, aviation, domestic navigation (inland waterways and national maritime) [million tkm]
- (9) International oil, gas and coal fuel import prices [EUR/GJ or euro/toe]
- (10) carbon price
- (11) Exchange rates to EUR and to USD (where applicable) assumptions [euro/currency and USD/currency]
- (12) Number of Heating Degree Days (HDD)
- (13) Number of Cooling Degree Days (CDD)
- (14) Technology cost assumptions used in modelling for main relevant technologies

2. Energy balances and indicators

2.1. Energy supply

- (1) Indigenous Production by fuel type (all energy products that are produced in significant quantities) [ktoe]
- (2) Net imports by fuel type (including electricity and split into intra- and extra EU net imports) [ktoe]
- (3) Import dependency from third countries [%]
- (4) Main import sources (countries) for main energy carriers (including gas and electricity)
- (5) Gross Inland Consumption by fuel type source (including solids, all energy products: coal, crude oil and petroleum products, natural gas, nuclear energy, electricity, derived heat, renewables, waste) [ktoe]

²⁵ For the plan covering the period from 2025 to 2030: For each parameter/variable in the list, trends over the years 2005-2040 (2005-2050 where appropriate) including for the year 2030 in five-year intervals shall be reported both in Section 4 and 5. Parameter based on exogenous assumptions v modelling output shall be indicated.

²⁶ As far as possible, reported data and projections shall build on and be consistent with Eurostat data and methodology used for reporting European statistics in the relevant sectoral law.

²⁷ Note: all projections are to be performed on the basis of constant prices (2016 prices used as base year)

²⁸ The **Secretariat** will provide recommendations for key parameters for projections, at least covering oil, gas, and coal import prices as well as EU ETS carbon prices.

2.2. Electricity and heat

- (1) Gross electricity generation [GWh]
- (2) Gross electricity generation by fuel (all energy products) [GWh]
- (3) Share of combined heat and power generation in total electricity and heat generation [%]
- (4) Capacity electricity generation by source, including retirements and new investment [MW]
- (5) Heat generation from thermal power generation
- (6) Heat generation from combined heat and power plants, including industrial waste heat
- (7) Cross-border interconnection capacities for gas and electricity [Definition for electricity in line with outcome of ongoing discussions on basis for 15 % interconnection target] and their projected usage rates

2.3. Transformation sector

- (1) Fuel inputs to thermal power generation (including solids, oil, gas) [ktoe]
- (2) Fuel inputs to other conversion processes [ktoe]

2.4. Energy consumption

- (1) Primary and final energy consumption [ktoe]
- (2) Final energy consumption by sector (including industry, residential, tertiary, agriculture and transport (including split between passenger and freight transport, when available)) [ktoe]
- (3) Final energy consumption by fuel (all energy products) [ktoe]
- (4) Final non-energy consumption [ktoe]
- (5) Primary energy intensity of the overall economy (primary energy consumption per GDP [toe/euro])
- (6) Final energy intensity by sector (including industry, residential, tertiary and transport (including split between passenger and freight transport, when available))

2.5. Prices

- (1) Electricity prices by type of using sector (residential, industry, tertiary)
- (2) National retail fuel prices (including taxes, per source and sector) [euro/ktoe]

2.6. Investment

Investment costs in energy transformation, supply, transmission and distribution sectors

2.7. Renewables

- (1) Gross final consumption of energy from renewable sources and share of renewable energy in gross final energy consumption and by sector (electricity, heating and cooling, transport) and by technology
- (2) Electricity and heat generation from renewable energy in buildings; this shall include, where available, disaggregated data on energy produced, consumed and injected into the grid by solar photovoltaic systems, solar thermal systems, biomass, heat pumps, geothermal systems, as well as all other decentralised renewables systems
- (3) Where applicable, other national trajectories, including those that are long-term or sectoral the share of food-based and advanced biofuels, the share of renewable energy in district heating, as well as the renewable energy produced by cities and renewable energy communities.

3. GHG emissions and removals related indicators

- (1) GHG emissions by policy sector, **including LULUCF**
- (2) GHG emissions by IPCC sector and by gas [tCO₂eq]
- (3) Carbon Intensity of the overall economy [tCO₂eq/GDP]
- (4) CO₂ emission related indicators
 - (a) GHG intensity of domestic power and heat generation [tCO₂eq/MWh]
 - (b) GHG intensity of final energy consumption by sector [tCO₂eq/toe]
- (5) Non-CO₂ emission related parameters
 - (a) Livestock: dairy cattle [1 000 heads], non-dairy cattle [1 000 heads], sheep [1 000 heads], pig [1 000 heads], poultry [1 000 heads]
 - (b) Nitrogen input from application of synthetic fertilisers [kt nitrogen]
 - (c) Nitrogen input from application of manure [kt nitrogen]
 - (d) Nitrogen fixed by N-fixing crops [kt nitrogen]
 - (e) Nitrogen in crop residues returned to soils [kt nitrogen]
 - (f) Area of cultivated organic soils [hectares]
 - (g) Municipal solid waste (MSW) generation
 - (h) Municipal solid waste (MSW) going to landfills
 - (i) Share of CH₄ recovery in total CH₄ generation from landfills [%]

ANNEX II

NATIONAL CONTRIBUTIONS FOR THE SHARE OF ENERGY FROM RENEWABLE SOURCES IN GROSS FINAL CONSUMPTION OF ENERGY IN 2030

<...>

ANNEX III

**NOTIFICATION OF CONTRACTING PARTIES' MEASURES AND
METHODOLOGIES TO IMPLEMENT ARTICLE 7 OF DIRECTIVE 2012/27/EU AS
ADAPTED AND ADOPTED BY MINISTERIAL COUNCIL DECISION 2015/08/MC-
ENC AND BY THE MINISTERIAL COUNCIL DECISION 2021/14/MC-ENC,**

Contracting Parties shall notify to the **Secretariat** their proposed detailed methodology pursuant to point 5 of Annex V to Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-ENC and 2021/14/MC-ENC** for the operation of the energy efficiency obligation schemes and alternative policy measures referred to in Articles 7a and 7b and Article 20(6) of that Directive.

1. Calculation of the level of the energy savings requirement to be achieved over the whole period from 1 January 2024 to 31 December 2030, showing how the following elements are taken into account:

(a) the annual final energy consumption, averaged over the most recent three-year period prior to **1 January 2022** [in ktoe];

(b) the total cumulative amount of end-use energy savings to be achieved [in ktoe] in accordance with point (b) of Article 7(1) of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-ENC and 2021/14/MC-ENC**;

(c) data used in the calculation of final energy consumption and sources of such data, including justification for the use of alternative statistical sources and any differences of the resulting quantities (if other sources than Eurostat are used);

2. **Contracting Parties** that decide to use any of the possibilities under Article 7(2) of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-ENC and 2021/14/MC-ENC**, shall also notify their calculation of the level of the energy savings requirement to be achieved over the whole period from 1 January 2025 to 31 December 2030, showing how the following elements are taken also into account:

(a) their own annual savings rate;

(b) their own calculation baseline and energy used in transport, in whole or in part, excluded from the calculation [in ktoe];

(c) calculated cumulative amount of energy savings over the whole period from 1 January 2025 to 31 December 2030 (before application of the options referred to in points (b) to (g) of Article 7(4) of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-ENC and 2021/14/MC-ENC**) [in ktoe];

(d) application of the options referred to in points (b) to (g) of Article 7(4) of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-ENC and 2021/14/MC-ENC**:

(i) <...>

(ii) amount of energy savings [in ktoe] achieved in the energy transformation, distribution and transmission sectors, including efficient district heating and cooling infrastructure, in accordance with point (c) of Article 7(4) of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-ENC and 2021/14/MC-ENC**;

(iii) amount of energy savings [in ktoe] resulting from individual actions newly implemented since 31 December 2008 that continue to have an impact in 2020 and beyond, in accordance with point (d) of Article 7(4) of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**;

(iv) amount of energy savings [in ktoe] that stem from policy measures, provided it can be demonstrated that those policy measures result in individual actions carried out from 1 January 2018 and until 31 December 2020, which deliver savings after 31 December 2020, in accordance with point (e) of Article 7(4) of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**;

(v) amount of energy generated [in ktoe] on or in buildings for own use as a result of policy measures promoting new installation of renewable energy technologies, in accordance with point (f) of Article 7(4) of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**;

(vi) amount of energy savings [in ktoe] that exceed the cumulative energy savings required in the period from 1 January 2018 to 31 December 2020, which **Contracting Parties** count towards the period from 1 January 2025 to 31 December 2030 in accordance with point (g) of Article 7(4) of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**;

(e) total cumulative amount of energy savings (after application of the options referred to in points (b) to (g) of Article 7(4) of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**).

3. Policy measures in view of the achievement of the savings requirement referred to in Article 7(1) of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**:

3.1. Energy efficiency obligation schemes referred to in Article 7a of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decision 2015/08/MC-EnC and 2021/14/MC-EnC**:

(a) description of the energy efficiency obligation scheme;

(b) expected cumulative and annual amount of savings and duration of the obligation period(s);

(c) obligated parties and their responsibilities;

(d) target sectors;

(e) eligible actions provided for under the measure;

(f) information on the application of the following provisions of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and by the Ministerial Council Decision 2021/14/MC-EnC**:

(i) where applicable, specific actions, share of savings to be achieved in households affected by energy poverty in accordance with Article 7(11);

(ii) savings achieved by energy service providers or other third parties in accordance with point (a) of Article 7a(6);

(iii) 'banking and borrowing' in accordance with point (b) of Article 7a(6);

(g) where relevant, information on trading of energy savings.

3.2. Alternative measures referred to in Article 7b and Article 20(6) of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**, (except taxation):

- (a) type of policy measure;
- (b) brief description of the policy measure, including the design features per each policy measure notified;
- (c) expected total cumulative and annual amount of savings per each measure and/ or amount of energy savings in relation to any intermediate periods;
- (d) implementing public authorities, participating or entrusted parties and their responsibilities for implementing the policy measure(s);
- (e) target sectors;
- (f) eligible actions provided for under the measure;
- (g) where applicable, specific policy measures or individual actions targeting energy poverty.

3.3. Information on taxation measures:

- (a) brief description of taxation measure;
- (b) duration of taxation measure;
- (c) implementing public authority;
- (d) expected cumulative and annual amount of savings per measure;
- (e) target sectors and segment of taxpayers;
- (f) calculation methodology, including which price elasticities are used and how they have been established, in accordance with point (4) of Annex V to Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**.

4. Calculation methodology for measures notified under Articles 7a and 7b and Article 20(6) of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decision 2015/08/MC-EnC and by the Ministerial Council Decision 2021/14/MC-EnC**, (except for taxation measures):

- (a) measurement methods used referred to in point 1 of Annex V to Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**;
- (b) method to express the energy savings (primary or final energy savings);
- (c) lifetimes of measures, rate at which the savings decline over time and approach used to take into account the lifetime of savings;
- (d) brief description of the calculation methodology, including how additionality and materiality of savings are ensured and which methodologies and benchmarks are used for deemed and scaled savings;
- (e) information on how the possible overlaps between the measures and individual actions are addressed to avoid double counting of energy savings;
- (f) where relevant, climatic variations and approach used.

5. Monitoring and verification

- (a) brief description of the monitoring and verification system and the process of the verification;
- (b) implementing public authority and its main responsibilities in charge of monitoring and verification system in relation to the energy efficiency obligation scheme or alternative measures;

- (c) independence of monitoring and verification from the obligated, participating or entrusted parties;
- (d) statistically significant proportion of energy efficiency improvement measures and proportion and criteria used to define and select a representative sample;
- (e) reporting obligations for obligated parties (savings achieved by each obligated party, or each sub-category of obligated party, and in total under the scheme).
- (f) publication of energy savings achieved (each year) under the energy efficiency obligation scheme and alternative measures;
- (g) information on **Contracting Party** law on penalties to be applied in the case of non-compliance;
- (h) Information on policy measures provided for in the event that progress is not satisfactory.

ANNEX IV

GENERAL FRAMEWORK FOR LONG-TERM STRATEGIES

1. OVERVIEW AND PROCESS FOR DEVELOPING THE STRATEGIES

- 1.1. Executive summary
- 1.2. Legal and policy context
- 1.3. Public consultation

2. CONTENT

2.1. TOTAL GHG EMISSION REDUCTIONS AND ENHANCEMENTS OF REMOVALS BY SINKS

- 2.1.1. Projected emission reductions and enhancement of removals by 2050
- 2.1.2. National target for 2030 and beyond, if available, and indicative milestones for 2040 and 2050
- 2.1.3. Adaptation policies and measures

2.2. RENEWABLE ENERGY

2.2.1. To the extent feasible, the estimated likely share of renewable energy in final energy consumption by 2050

2.3. ENERGY EFFICIENCY

2.3.1. To the extent feasible, the estimated likely energy consumption by 2050

2.4. SECTOR-SPECIFIC RELATED CONTENT

2.4.1. Energy system

- 2.4.1.1. Intended or likely future emissions trajectory or range
- 2.4.1.2. General description of main drivers for energy efficiency, demand-side flexibility and energy consumption and their evolution from 2025 and beyond

2.4.2. Industry

- 2.4.2.1. Expected emission reductions by sector and energy demands
- 2.4.2.2. General overview of the policies, existing plans and measures for decarbonisation as described in point 2.1 of Section A of Part I of Annex I

2.4.3. Transport

- 2.4.3.1. Expected emissions and energy sources by transport type (e.g. cars and vans, heavy duty road transport, shipping, aviation, rail)
- 2.4.3.2. Decarbonisation options

2.4.4. Agriculture and land use, land-use change and forestry (LULUCF)

- 2.4.4.1. To the extent feasible, expected emissions by sources and by individual GHGs
- 2.4.4.2. Emission reduction options envisaged
- 2.4.4.3. Links to agricultural and rural development policies

3. FINANCING

3.1. Estimates of investment needed

3.2. Policies and measures for related research, development and innovation

4. IMPACT ASSESSMENT OF THE SOCIO-ECONOMIC ASPECTS

5. ANNEXES (as necessary)

5.1. Details on modelling (including assumptions) and/or analysis, indicators, etc.

ANNEX V

GHG INVENTORIES INFORMATION

Part 1

Information to be included in the reports referred to in Article 26(3):

- (a) their anthropogenic emissions of GHGs listed in Part 2 of this Annex <...>
- (b) data on their anthropogenic emissions of carbon monoxide (CO), sulphur dioxide (SO₂), nitrogen oxides (NO_x) and volatile organic compounds, consistent with data already reported <...> for the year X-2;
- (c) their anthropogenic GHG emissions by sources and removals of CO₂ by sinks resulting from LULUCF, for the year X-2, in accordance with the methodologies specified in Part 3 of this Annex.
- (d) any changes to the information referred to in points (a), (b) and (c) for the years between the relevant base year or period and the year X-3, indicating the reasons for those changes;
- (e) information on indicators, as set out in Part 4 of this Annex, for the year X-2;
- (f) <...>
- (g) information on the steps taken to improve inventory estimates, in particular in areas of the inventory that have been subject to adjustments or recommendations following expert reviews;
- (h) the actual or estimated allocation of the verified emissions reported by installation operators to the source categories of the national GHG inventory and the ratio of those verified emissions to the total reported GHG emissions in those source categories, for the year X-2;
- (i) where relevant, the results of the checks performed on the consistency of the data used to estimate emissions in preparation of the GHG inventories, for the year X-2, with:
 - (i) <...>;
 - (ii) <...>;
 - (iii) the energy data reported pursuant to Article 4 of, and Annex B to, Regulation (EC) No 1099/2008, **as adapted and adopted by Ministerial Council Decision 2012/02/MC-EnC, amended by Decisions 2013/02/MC-EnC and 2015/02/MC-EnC**;
- (j) a description of changes to their national inventory system, if any;
- (k) a description of changes to the national registry, if any;
- (l) information on their quality assurance and quality control plans, a general uncertainty assessment, a general assessment of completeness and, any other elements of the national GHG inventory report needed to prepare the **Contracting Parties'** GHG inventory report;
- (m) <...>

A **Contracting Party** may request to be granted a derogation by the **Secretariat** from point (c) of the first paragraph to apply a different methodology from that specified in Part 3 of this Annex where the methodology improvement required cannot be achieved in time for the improvement to be taken into account in the GHG inventories for the period from **2025** to 2030, or where the cost of the methodology

improvement would be disproportionately high compared to the benefits of applying such methodology to improve accounting for emissions and removals due to the low significance of the emissions and removals from the carbon pools concerned. **Contracting Party** wishing to benefit from this derogation shall submit a reasoned request to the **Secretariat** by 31 December **2023**, indicating by which time the methodology improvement could be implemented, the alternative methodology proposed or both, and an assessment of the potential impacts on the accuracy of accounting. The **Secretariat** may request additional information to be submitted within a specific, reasonable time period. Where the **Secretariat** considers that the request is justified, it shall grant the derogation. If the **Secretariat** rejects the request, it shall give reasons for its decision.

Part 2

The GHGs to be covered are:

Carbon dioxide (CO₂)

Methane (CH₄)

Nitrous Oxide (N₂O)

Sulphur hexafluoride (SF₆)

Nitrogen trifluoride (NF₃)

Hydrofluorocarbons (HFCs):

- HFC-23 CHF₃
- HFC-32 CH₂F₂
- HFC-41 CH₃F
- HFC-125 CHF₂CF₃
- HFC-134 CHF₂CHF₂
- HFC-134a CH₂FCF₃
- HFC-143 CH₂FCHF₂
- HFC-143a CH₃CF₃
- HFC-152 CH₂FCH₂F
- HFC-152a CH₃CHF₂
- HFC-161 CH₃CH₂F
- HFC-227ea CF₃CHFCF₃
- HFC-236cb CF₃CF₂CH₂F
- HFC-236ea CF₃CHFCHF₂
- HFC-236fa CF₃CH₂CF₃
- HFC-245fa CHF₂CH₂CF₃
- HFC-245ca CH₂FCF₂CHF₂
- HFC-365mfc CH₃CF₂CH₂CF₃

- HFC-43-10mee $\text{CF}_3\text{CHFCHFCF}_2\text{CF}_3$ or $(\text{C}_5\text{H}_2\text{F}_{10})$

Perfluorocarbons (PFCs):

- PFC-14, Perfluoromethane, CF_4
- PFC-116, Perfluoroethane, C_2F_6
- PFC-218, Perfluoropropane, C_3F_8
- PFC-318, Perfluorocyclobutane, $\text{c-C}_4\text{F}_8$
- Perfluorocyclopropane $\text{c-C}_3\text{F}_6$
- PFC-3-1-10, Perfluorobutane, C_4F_{10}
- PFC-4-1-12, Perfluoropentane, C_5F_{12}
- PFC-5-1-14, Perfluorohexane, C_6F_{14}
- PFC-9-1-18, $\text{C}_{10}\text{F}_{18}$

Part 3

Methodologies for monitoring and reporting in the LULUCF sector

Geographically explicit land-use conversion data in accordance with the 2006 IPCC Guidelines for national GHG inventories.

Tier 1 methodology in accordance with the 2006 IPCC guidelines for national GHG inventories.

For emissions and removals for a carbon pool that accounts for at least 25-30 % of emissions or removals in a source or sink category which is prioritised within a **Contracting Party's** national inventory system because its estimate has a significant influence on a country's total inventory of GHGs in terms of the absolute level of emissions and removals, the trend in emissions and removals, or the uncertainty in emissions and removals in the land-use categories, at least Tier 2 methodology in accordance with the 2006 IPCC guidelines for national GHG inventories.

Contracting Parties are encouraged to apply Tier 3 methodology, in accordance with the 2006 IPCC guidelines for national GHG inventories.

Part 4

Inventory indicators

Indicator title	Indicator
TRANSFORMATION B0	Specific CO_2 emissions of public and auto-producer powerplants, t/TJ
	CO_2 emissions from public and auto-producer thermal power stations, kt divided by all products — output by public and auto-producer thermal power stations, PJ
TRANSFORMATION E0	Specific CO_2 emissions of auto-producer plants t/TJ
	CO_2 emissions from auto-producers, kt divided by All products output by auto-producer thermal power stations, PJ

INDUSTRY A1.1	Total CO ₂ intensity — iron and steel industry, t/million euro
	Total CO ₂ emissions from iron and steel, kt divided by gross value added — iron and steel industry
INDUSTRY A1.2	Energy-related CO ₂ intensity — chemical industry, t/million euro
	Energy-related CO ₂ emissions chemical industries, kt divided by gross value added — chemical industry
INDUSTRY A1.3	Energy-related CO ₂ intensity — glass, pottery and building materials industry, t/million euro
	Energy-related CO ₂ emissions glass, pottery and building materials, kt divided by gross value added — glass, pottery and buildings material industry
INDUSTRY A1.4	Energy-related CO ₂ intensity — food, drink and tobacco industry, t/million euro
	Energy-related CO ₂ emissions from food, drink and tobacco industry, kt divided by gross value-added — food, drink and tobacco industry, million euro (EC95)
INDUSTRY A1.5	Energy-related CO ₂ intensity — paper and printing industry, t/million euro
	Energy-related CO ₂ emissions paper and printing, kt — Gross value-added — paper and printing industry, million euro (EC95)
HOUSEHOLDS A0	Specific CO ₂ emissions of households for space heating, t/m ²
	CO ₂ emissions of households for space heating divided by surface area of permanently occupied dwellings, million m ²
SERVICES B0	Specific CO ₂ emissions of commercial and institutional sector for space heating, kg/m ²
	CO ₂ emissions from space heating in commercial and institutional, kt divided by Surface area of services buildings, million m ²
TRANSPORT B0	Specific diesel related CO ₂ emissions of passenger cars, g/100 km TRANSPORT B0
	Specific petrol related CO ₂ emissions of passenger cars, g/100 km

ANNEX VI

POLICIES AND MEASURES INFORMATION IN THE AREA OF GHG EMISSIONS

Information to be included in the reports referred to in Article 18:

(a) a description of their national system for reporting on policies and measures, or groups of measures, and for reporting on projections of anthropogenic GHG emissions by sources and removals by sinks pursuant to Article 39(1) or information on any changes made to that system where such a description has already been provided;

(b) updates relevant to their long-term strategies referred to in Article 15 and progress in implementing those strategies;

(c) information on national policies and measures, or groups of measures, and on implementation of **Energy Community** policies and measures, or groups of measures, that limit or reduce GHG emissions by sources or enhance removals by sinks, presented on a sectoral basis and organised by gas or group of gases (HFCs and PFCs) listed in Part 2 of Annex V. That information shall refer to applicable and relevant national **or Energy Community** policies and shall include:

(i) the objective of the policy or measure and a short description of the policy or measure;

(ii) the type of policy instrument;

(iii) the status of implementation of the policy or measure or group of measures;

(iv) indicators used to monitor and evaluate progress over time;

(v) where available, quantitative estimates of the effects on emissions by sources and removals by sinks of GHGs broken down into:

— the results of **ex ante** assessments of the effects of individual or groups of policies and measures on the mitigation of climate change. Estimates shall be provided for a sequence of four future years ending with 0 or 5 immediately following the reporting year,

— the results of **ex post** assessments of the effects of individual or groups of policies and measures on the mitigation of climate change where available;

(vi) available estimates of the projected costs and benefits of policies and measures, as well as estimates of the realised costs and benefits of policies and measures;

(vii) all existing references to the assessments of the costs and effects of national policies and measures, to information in the implementation of **Energy Community** and Union policies and measures that limit or reduce GHG emissions by sources or enhance removals by sinks and to the underpinning technical reports;

(viii) an assessment of the contribution of the policy or measure to the achievement of the long-term strategy referred to in Article 15;

(d) information on planned additional national policies and measures, or groups of measures, envisaged with a view to limiting GHG emissions;

(e) information regarding the links between the different policies and measures, or groups of measures, reported pursuant to point (c) and the way such policies and measures, or groups of measures, contribute to different projection scenarios.

ANNEX VII

PROJECTIONS INFORMATION IN THE AREA OF GHG EMISSIONS

Information to be included in the reports referred to in Article 18:

- (a) projections without measures where available, projections with measures, and, where available, projections with additional measures;
- (b) total GHG projections;
- (c) the impact of policies and measures identified pursuant to point (a) of Article 18(1). Where such policies and measures are not included, this shall be clearly stated and explained;
- (d) results of the sensitivity analysis performed for the projections and information on the models and parameters used;
- (e) all relevant references to the assessment and the technical reports that underpin the projections referred to in Article 18(4).

ANNEX VIII

INFORMATION ON NATIONAL ADAPTATION ACTIONS, FINANCIAL AND TECHNOLOGY SUPPORT PROVIDED TO DEVELOPING COUNTRIES AND CARBON PRICE REVENUES

Part 1

Reporting on adaptation actions

Information to be included in the reports referred to in Article 19(1):

- (a) the main goals, objectives and institutional framework for adaptation;
- (b) climate change projections, including weather extremes, climate-change impacts, assessment of climate vulnerability and risks and key climate hazards;
- (c) adaptive capacity;
- (d) adaptation plans and strategies;
- (e) monitoring and evaluation framework;
- (f) progress made in implementation, including good practices and changes to governance.

Part 2

Reporting on support provided to developing countries

Information to be included in the reports referred to in Article 19(3):

- (a) information on financial support committed and provided to developing countries for the year X-1 including:
 - (i) quantitative information on public and mobilised financial resources by the **Contracting Party**. The information on financial flows is to be based on the so-called 'Rio markers' for climate change mitigation-related support and climate change adaptation-related support and other tracking systems introduced by the OECD Development Assistance Committee;
 - (ii) qualitative methodological information explaining the method used to calculate the quantitative information, including an explanation of methodology for quantifying their data, and, where relevant, other information on the definitions and methodologies used to determine any figures, in particular for information reported on mobilised financial flows;
 - (iii) available information on activities by the **Contracting Party** related to public-funded technology transfer projects and capacity-building projects for developing countries under the UNFCCC, including whether the technology transferred or capacity-building project was used for mitigating or adapting to the effects of climate change, the recipient country, where possible the amount of support provided, and the type of technology transferred or capacity-building project;
- (b) available information for the year X and subsequent years on the planned provision of support, includ-

ing information on planned activities related to public-funded technology transfer projects or capacity building projects for developing countries under the UNFCCC and on technologies to be transferred and capacity-building projects, including whether the technology transferred or capacity-building project is intended for mitigating or adapting to the effects of climate change, the recipient country, where possible the amount of support to be provided, and the type of technology transferred or capacity-building project.

Part 3

Reporting on revenues from carbon price

Information to be included in the reports referred to in Article 19(2):

(a) information on the use of **any** revenues during the year X-1 generated by the **Contracting Party on carbon pricing**;

(b) <...>;

Revenues not disbursed at the time a **Contracting Party** submits a report to the **Secretariat** pursuant to Article 19(2) shall be quantified and reported in reports for subsequent years.

ANNEX IX

ADDITIONAL REPORTING OBLIGATIONS

Part 1

Additional reporting obligations in the area of renewable energy

The following additional information shall, unless otherwise stated, be included pursuant to point (c) of Article 20:

(a) the functioning of the system of guarantees of origin for electricity, gas and heating and cooling from renewable sources, the levels of issuance and cancellation of guarantees of origin and the resulting annual national renewable energy consumption, as well as the measures taken to ensure the reliability and protection against fraud of the system;

(b) amounts of biofuels, biogas renewable transport fuels of non-biological origin, recycled carbon fuels and renewable electricity consumed in the transport sector and, where relevant, their greenhouse saving performance, distinguishing between fuels produced from different types of food and feed crops and each type of feedstock listed in Annex IX to Directive (EU) 2018/2001, **as adopted and adapted by Ministerial Council Decision 2021/14/MC-EnC**;

(c) developments in the availability, origin and use of biomass resources for energy purposes;

(d) changes in commodity prices and land use within the **Contracting Party** associated with its increased use of biomass and other forms of energy from renewable sources;

(e) the estimated excess production of energy from renewable sources which could be transferred to other **Contracting Parties or Member States of the European Union** so that these comply with Article 3(3) of Directive (EU) 2018/2001, **as adopted and adapted by Ministerial Council Decision 2021/14/MC-EnC** and achieve the national contributions and trajectories referred to in point (a)(2) of Article 4 of this Regulation;

(f) where applicable, the estimated demand for energy from renewable sources to be satisfied by means other than domestic production until 2030, including imported biomass feedstock;

(g) the technological development and deployment of biofuels made from feedstocks listed in Annex IX to Directive (EU) 2018/2001, **as adopted and adapted by Ministerial Council Decision 2021/14/MC-EnC**;

(h) where available, the estimated impact of the production or use of biofuels, bioliquids and biomass fuels on biodiversity, water resources, water availability and quality, soils and air quality within the **Contracting Party**;

(i) observed cases of fraud in the chain of custody of biofuels, bioliquids and biomass fuels;

(j) information on how the share of biodegradable waste in waste used for producing energy has been estimated, and what steps have been taken to improve and verify such estimates;

(k) electricity and heat generation from renewable energy in buildings, including disaggregated data on energy produced, consumed and injected into the grid by solar photovoltaic systems, solar thermal systems,

biomass, heatpumps, geothermal systems, as well as all other decentralised renewables systems;

(l) where applicable, the share of renewable energy in district heating, as well as the renewable energy produced by cities and renewable energy communities;

(m) primary supply of solid biomass (in 1 000 m³, except with regard to point (1)(b)(iii), which will be provided in tonnes)

(1) Forest biomass used for energy production (domestic production and import)

(a) Primary biomass from forest used directly for energy production

(i) Where available, branches and tree tops (reporting is voluntary)

(ii) Where applicable, stumps (reporting is voluntary)

(iii) Round wood (split into industrial roundwood and fuelwood)

(b) Where applicable, forest-based industry co-products used directly for energy

(i) Where applicable, bark

(ii) Chips, sawdust and other wood particles

(iii) Where applicable, black liquor and crude tall oil

(c) Where available, post-consumer wood used directly for energy production

(d) Processed wood-based fuel, produced from feedstocks not accounted under point (1)(a), (b) or (c):

(i) Where applicable, wood charcoal

(ii) Wood pellets and wood briquettes

(2) Where available, agricultural biomass used for energy production (domestic production, import and export)

(a) Energy crops for electricity or heat (including short rotation coppice)

(b) Agricultural crop residues for electricity or heat

(3) Where available, organic waste biomass for energy production (domestic production, import and export)

(a) Organic fraction of industrial waste

(b) Organic fraction of municipal waste

(c) Waste sludges

(n) final energy consumption of solid biomass (amount of solid biomass used for energy production in the following sectors):

(1) Energy sector

(a) Electricity

(b) Combined heat and power

(c) Heat

(2) Industry sector internal (consumed and autoproduced electricity, CHP and heat)

(3) Direct final consumption residential

(4) Other

Part 2

Additional reporting obligations in the area of energy efficiency

In the area of energy efficiency, the following additional information shall be included pursuant to point (c) of Article 21:

(a) major legislative and non-legislative policies, measures, financing measures and programmes implemented in year X-2 and X-1 (with X as the year when the report is due) to achieve their objectives referred to in point (b) of Article 4 which promote energy service markets, improve the energy performance of buildings, measures to utilise energy efficiency potentials of gas and electricity infrastructure and heating and cooling, improve information and qualification, other measures to promote energy efficiency;

(b) the cumulative amount of energy savings achieved through Article 7 of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC** in years X-3 and X-2;

(c) the amount of savings achieved by policy measures aimed at alleviation of energy poverty in line with Article 7(11) of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**;

(d) where applicable, the amount of savings achieved in accordance with point (c) of Article 7(4) of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**;

(e) progress in each sector and reasons why energy consumption remained stable or was growing in year X-3 and X-2 in final energy consumption sectors;

(f) total building floor area of the buildings with a total useful floor area over 250 m² owned and occupied by the **Contracting Parties'** central government that, on 1 January in year X-2 and X-1, which did not meet the energy performance requirements referred to in Article 5(1) of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**;

(g) total building floor area of heated and/or cooled buildings owned and occupied by the **Contracting Parties'** central government that was renovated in year X-3 and X-2 referred to in Article 5(1) of the Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and Decision 2021/14/MC-EnC** or the amount of energy savings in eligible buildings owned and occupied by their central government as referred to in Article 5(6) of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**;

(h) number of energy audits carried out in in year X-3 and X-2. In addition, the total estimated number of large companies in their territory to which Article 8(4) of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC** is applicable and the number of energy audits carried out in those enterprises in the year X-3 and X-2;

(i) applied national primary energy factor for electricity and a justification if this is different from the default coefficient referred to in footnote (3) of Annex IV to Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC**;

(j) number and floor area of new and renovated nearly zero-energy buildings in year X-2 and X-1, as provided in Article 9 of the Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decisions 2010/02/MC-EnC and 2021/14/MC-EnC** where necessary based on statistical sampling;

(k) the internet link to the website where the list or the interface of energy services providers referred to in point (c) of Article 18(1) of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC and 2021/14/MC-EnC** can be accessible.

ANNEX X

ENERGY COMMUNITY BIOENERGY SUSTAINABILITY REPORT

The Energy Community bioenergy sustainability report on energy from biomass to be drafted biennially by the Secretariat together with the implementation report pursuant to point (d) of Article 35(2), shall contain as a minimum the following information:

(a) the relative environmental benefits and costs of different biofuels, bioliquids and biomass fuels, the effects of the Contracting Parties' import policies thereon, the security of supply implications and the ways of achieving a balanced approach between domestic production and imports;

(b) the impact of the production and use of biomass on sustainability in the Energy Community and in third countries, including impacts on biodiversity;

(c) data and analysis of current and projected sustainable biomass availability and demand, including the impact of increased demand for biomass on biomass using sectors;

(d) the technological development and deployment of biofuels made from feedstocks listed in Annex IX to Directive (EU) 2018/2001, as adopted and adapted by Ministerial Council Decision 2021/14/MC-EnC, and an assessment of the feedstock availability and resource competition taking into account the principles of the circular economy;

(e) information on, and analysis of, the available scientific research results regarding indirect land-use change in relation to all production pathways, accompanied by an assessment of whether the range of uncertainty identified in the analysis underlying the estimations of indirect land-use change emissions may be narrowed and the possible impact of Energy Community and national policies, such as environment, climate and agricultural policies, may be factored in;

(f) in respect of both third countries and Contracting Parties that are a significant source of biofuels, bioliquids and biomass fuels consumed within the Energy Community, on national measures taken to respect the sustainability criteria and GHG saving criteria set out in Article 29(2) to (7) and (10), of Directive (EU) 2018/2001, as adopted and adapted by Ministerial Council Decision 2021/14/MC-EnC for soil, water and air protection; and

(g) aggregated information from the database referred in Article 28(2) of Directive (EU) 2018/2001, as adopted and adapted by Ministerial Council Decision 2021/14/MC-EnC.

In reporting on GHG emission savings from the use of biomass, the **Secretariat** shall use the amounts reported by **Contracting Parties** in accordance with point (b) of Part 1 of Annex IX to this Regulation, including the provisional mean values of the estimated indirect land-use change emissions and the associated range derived from the sensitivity analysis as set out in Annex VIII to Directive (EU) 2018/2001, as adopted and adapted by Ministerial Council Decision 2021/14/MC-EnC. The Commission shall make data on the provisional mean values of the estimated indirect land-use change emissions and the associated range derived from the sensitivity analysis publicly available. In addition, the **Secretariat** shall evaluate whether and how the estimate for direct emission savings would change if co-products were accounted for using the substitution approach.

ANNEX XI

VOLUNTARY SCHEMES IN RESPECT OF WHICH THE SECRETARIAT HAS ISSUED AN OPINION PURSUANT TO ARTICLE 30(4) OF DIRECTIVE (EU) 2018/2001 AS ADOPTED AND ADAPTED BY MINISTERIAL COUNCIL DECISION 2021/14/MC-EnC;

The report on voluntary schemes in respect of which the **Secretariat** has **issued an opinion** pursuant to Article 30(4) of Directive (EU) 2018/2001, **as adopted and adapted by Ministerial Council Decision 2021/14/MC-EnC**, to be adopted biennially by the **Secretariat** together with the **Implementation Report** pursuant to point (e) of Article 35(2) of this Regulation, shall contain the **Secretariat's** assessment of, as a minimum, the following:

- (a) the independence, modality and frequency of audits, both in relation to what is stated on those aspects in the scheme documentation, at the time the scheme concerned was **acknowledged** by the **Secretariat**, and in relation to industry best practices;
- (b) the availability of, and experience and transparency in the application of, methods for identifying and dealing with non-compliance, with particular regard to dealing with situations or allegations of serious wrongdoing on the part of members of the scheme;
- (c) transparency, particularly in relation to the accessibility of the scheme, the availability of translations in the applicable languages of the countries and regions from which raw materials originate, the accessibility of a list of certified operators and relevant certificates, and the accessibility of auditor reports;
- (d) stakeholder involvement, particularly as regards the consultation of indigenous and local communities prior to decision making during the drafting and reviewing of the scheme as well as during audits and the response to their contributions;
- (e) the overall robustness of the scheme, particularly in light of rules on the accreditation, qualification and independence of auditors and relevant scheme bodies;
- (f) where available, market updates of the scheme, the amount of feedstocks and biofuels certified, by country of origin and type, the number of participants;
- (g) the ease and effectiveness of implementing a system that tracks the proofs of conformity with the sustainability criteria that the scheme gives to its member(s), such a system intended to serve as a means of preventing fraudulent activity with a view, in particular, to the detection, treatment and follow-up of suspected fraud and other irregularities and where appropriate, number of cases of fraud or irregularities detected;
- (h) options for entities to be authorised to recognise and monitor certification bodies;
- (i) criteria for the recognition or accreditation of certification bodies;
- (j) rules on how the monitoring of the certification bodies is to be conducted;
- (k) ways to facilitate or improve the promotion of best practices.

ANNEX XII

NATIONAL INVENTORY SYSTEMS

Information referred to in Article 37 includes the following:

(a) <...>

(b) data collected through the reporting systems on fluorinated gases in the relevant sectors [pursuant to Montreal Protocol] for the purpose of preparing national GHG inventories;

(c) <...>

(d) data reported under Regulation (EC) No 1099/2008, as adapted and adopted by Ministerial Council Decision 2012/02/MC-EnC, amended by Decisions 2013/02/MC-EnC and 2015/02/MC-EnC;

(e) data collected via the geographical tracking of land areas in the context of existing Energy Community and Contracting Party programmes and surveys, including the LUCAS Land Use Cover Area frame Survey and the Copernicus Programme.

ANNEX XIII

CORRELATION TABLE



COMMISSION DELEGATED REGULATION (EU) 2020/1044 of 8 May 2020 supplementing Regulation (EU) 2018/1999 with regard to values for global warming potentials and the inventory guidelines and with regard to the Union inventory system

Incorporated and adapted by the Ministerial Council Decision 2021/14/MC-EnC of 30 November 2021 on incorporating Regulation (EU) 2018/1999 in the Energy Community acquis communautaire and amending Annex I of the Treaty.

The adaptations made by Ministerial Council Decision 2021/14/MC-EnC are highlighted in bold and blue.

Article 1

Scope

This Regulation applies to the reports submitted by the **Contracting Parties** containing data required for the year **2023** onwards.

Article 2

Global warming potentials

The **Contracting Parties** and the **Energy Community Secretariat** shall use the global warming potentials listed in Annex I to this Regulation for the purpose of determining and reporting greenhouse gas inventories data pursuant to paragraphs 3 <...> of Article 26 of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**.

Article 3

Greenhouse gas inventory guidelines

The **Contracting Parties** and the **Energy Community Secretariat** shall determine greenhouse gas inventories referred to in paragraphs 3 <...> of Article 26 of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** in accordance with:

- (a) the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories;
- (b) the modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement set out in the Annex to Decision 18/CMA.1 of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement ('Decision 18/CMA.1').

Article 4

Quality assurance and quality control programme objectives

1. The **Energy Community Secretariat** shall manage, maintain and seek to continuously improve the **Contracting Parties** greenhouse gas inventory system based on the following quality assurance and quality control programme objectives:

(a) that the **Contracting Parties** greenhouse gas inventory is complete by, where relevant, applying the procedure set out in Article 37(5) of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**, in consultation with the Contracting Party concerned;

(b) that the **Contracting Parties** greenhouse gas inventory system provides a transparent aggregation of **Contracting Parties'** greenhouse gas emissions by sources and removals by sinks as well as overviews of methodological descriptions for **Contracting Parties** key categories, and reflects in a transparent manner the contribution of **Contracting Parties'** emissions by sources and removals by sinks to the **Contracting Parties** greenhouse gas inventory;

(c) that the total of the **Contracting Parties** greenhouse gas emissions by sources and removals by sinks for a reporting year is equal to the sum of **Contracting Parties'** greenhouse gas emissions by sources and removals by sinks reported pursuant to paragraphs 3 <...> of Article 26 of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** for that same year;

(d) that the **Contracting Parties** greenhouse gas inventory includes a consistent time series of emissions by sources and removals by sinks for all reported years.

2. The **Energy Community Secretariat** and the **Contracting Parties** shall increase, where possible, the comparability of national greenhouse gas inventories by seeking synergy of methods, activity data, notation keys and the allocation of emissions by sources and removals by sinks by **Contracting Parties**, where appropriate.

3. The quality assurance and quality control programme objectives of the **Contracting Parties** inventory shall complement the quality assurance and quality control programmes objectives implemented by the **Contracting Parties**.

4. **Contracting Parties** shall ensure the quality of activity data, emission factors and other parameters used for their national greenhouse gas inventory.

Article 5

Gap filling

1. The **Energy Community Secretariat** estimates for completing the inventory data submitted by a **Contracting Party** as referred to in Article 37(5) of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** shall be based on the following methodologies and data:

(a) where a **Contracting Party** has submitted in the previous reporting year a consistent time series of estimates for the relevant source category and:

(i) that **Contracting Party** has submitted an approximated greenhouse gas inventory for the

year X – 1 pursuant to Article 26(2) of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** that includes the missing estimate, on the data from that approximated greenhouse gas inventory;

(ii) that **Contracting Party** has not submitted an approximated greenhouse gas inventory for the year X – 1 under Article 26(2) of Regulation (EU) 2018/1999, but the **Energy Community Secretariat** has estimated approximated greenhouse gas emissions for the year X – 1 for that **Contracting Party** in accordance with Article 26(2) of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** on the data from that Energy Community approximated greenhouse gas inventory;

(iii) the use of the data from the approximated greenhouse gas inventory of the **Contracting Party** is not possible or may lead to a highly inaccurate estimation, for missing estimates in the energy sector, on the energy statistics data obtained in accordance with Regulation (EC) No 1099/2008 of the European Parliament and of the Council, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;

(iv) the use of the data from the approximated greenhouse gas inventory is not possible or may lead to a highly inaccurate estimation, for missing estimates in non-energy sectors, on estimation methodologies consistent with the technical advice on gap filling in Section 2.2.3 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (Vol. 1) using, where appropriate, European statistics;

(b) where an estimate of an emission by source or removal by sink for the relevant category was subject to technical corrections in accordance with Article 38(2)(d) of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** in the latest review prior to the submission and the **Contracting Party** concerned has not submitted a revised estimate, on the method used by the technical expert review team to calculate the technical correction;

(c) where a consistent time series of reported estimates for the relevant source category is not available, on estimation methodologies consistent with the technical advice on gap filling in Section 2.2.3 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (Vol. 1).

2. The **Energy Community Secretariat** shall prepare the estimates referred to in paragraph 1 by 31 March of the reporting year in consultation and close cooperation with the **Contracting Party** concerned.

3. <...>

Article 6

Initial checks

The initial checks performed by the **Energy Community Secretariat** pursuant to Article 37(4) of Regulation (EU) 2018/1999 may include:

(a) an assessment whether all categories required under the modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement set out in the Annex to Decision 18/CMA.1 and all greenhouse gases referred to in Annex V of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** are reported by the **Contracting Party**;

- (b) an assessment whether emissions by sources and removals by sinks data time series are consistent;
- (c) an assessment whether implied emission factors across **Contracting Parties** are comparable taking into account the IPCC default emission factors for different national circumstances;
- (d) an assessment of the use of 'Not Estimated' notation keys where IPCC Tier 1 methodologies exist and where the use of the notation key is not justified in accordance with point 32 of the Annex to Decision 18/CMA.1;
- (e) an analysis of recalculations performed for the greenhouse gas inventory submission, including whether the recalculations are based on methodological changes;
- (f) a comparison of the verified greenhouse gas emissions reported under the **Energy Community information** system with the greenhouse gas emissions reported pursuant to Article 26(3) of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;
- (g) a comparison of the results of Eurostat's reference approach with the **Contracting Parties'** reference approach;
- (h) a comparison of the results of Eurostat's sectoral approach with the **Contracting Parties'** sectoral approach;
- (i) an assessment whether issues from earlier **Energy Community Secretariat** initial checks and reviews as well as recommendations from UNFCCC reviews **where applicable** have been implemented by the **Contracting Party**;
- (j) an assessment of the accuracy of **Contracting Parties'** emissions by sources and removals by sinks estimates in relation to **Energy Community** key categories;
- (k) an assessment of the transparency and completeness of the methodological descriptions reported by **Contracting Parties** for the **Energy Community** key categories.
- (l) an assessment of monitoring and reporting of emissions by sources and removals by sinks in the land use, land use change and forestry (LULUCF) sector pursuant to Part 3 of Annex V to Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**, including the assignment of key categories, Tier methodology applied, and a comparison of reported land use and land use change activity data with information derived from the Union and Member State programmes and surveys.

Article 7

<...>

Article 8

<...>

Article 9

Entry into force and application

This decision shall enter into force on the date of its adoption.

ANNEX

GLOBAL WARMING POTENTIALS

Acronym, common name or chemical name	Global warming potential
Carbon dioxide (CO ₂)	1
Methane (CH ₄)	28
Nitrous oxide (N ₂ O)	265
Sulphur hexafluoride (SF ₆)	23 500
Nitrogen trifluoride (NF ₃)	16 100
Hydrofluorocarbons (HFCs):	
HFC-23 CHF ₃	12 400
HFC-32 CH ₂ F ₂	677
HFC-41 CH ₃ F	116
HFC-125 CHF ₂ CF ₃	3 170
HFC-134 CHF ₂ CHF ₂	1 120
HFC-134a CH ₂ FCF ₃	1 300
HFC-143 CH ₂ FCHF ₂	328
HFC-143a CH ₃ CF ₃	4 800
HFC-152 CH ₂ FCH ₂ F	16
HFC-152a CH ₃ CHF ₂	138
HFC-161 CH ₃ CH ₂ F	4
HFC-227ea CF ₃ CHFCF ₃	3 350
HFC-236cb CF ₃ CF ₂ CH ₂ F	1 210
HFC-236ea CF ₃ CHFCHF ₂	1 330
HFC-236fa CF ₃ CH ₂ CF ₃	8 060
HFC-245fa CHF ₂ CH ₂ CF ₃	858
HFC-245ca CH ₂ FCF ₂ CHF ₂	716
HFC-365mfc CH ₃ CF ₂ CH ₂ CF ₃	804
HFC-43-10mee CF ₃ CHFCHF ₂ CF ₃ or (C ₅ H ₂ F ₁₀)	1 650
Perfluorocarbons (PFCs):	
PFC-14, Perfluoromethane, CF ₄	6 630
PFC-116, Perfluoroethane, C ₂ F ₆	11 100
PFC-218, Perfluoropropane, C ₃ F ₈	8 900
PFC-318, Perfluorocyclobutane, c-C ₄ F ₈	9 540
Perfluorocyclopropane c-C ₃ F ₆	9 200

PFC-3-1-10, Perfluorobutane, C ₄ F ₁₀	9 200
PFC-4-1-12, Perfluoropentane, C ₅ F ₁₂	8 550
PFC-5-1-14, Perfluorohexane, C ₆ F ₁₄	7 910
PFC-9-1-18, C ₁₀ F ₁₈	7 190

COMMISSION IMPLEMENTING REGULATION (EU) 2020/1208 of 7 August 2020 on structure, format, submission processes and review of information reported by Member States pursuant to Regulation (EU) 2018/1999

Incorporated and adapted by the Ministerial Council Decision 2021/14/MC-EnC of 30 November 2021 on incorporating Regulation (EU) 2018/1999 in the Energy Community acquis communautaire and amending Annex I of the Treaty.

The adaptations made by Ministerial Council Decision 2021/14/MC-EnC are highlighted in bold and blue.

CHAPTER I SUBJECT MATTER, SCOPE AND DEFINITIONS

Article 1

Subject matter

This Regulation establishes rules implementing Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** as regards the following:

- (a) **Contracting Parties'** reporting on national adaptation actions, the use of **carbon price mechanism** revenues and financial and technology support provided to developing countries pursuant to Article 19 of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;
- (b) **Contracting Parties'** reporting on approximated greenhouse gas (or GHG) inventories, greenhouse gas inventories and accounted greenhouse gas emissions and removals pursuant to Article 26 of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;
- (c) requirements on the establishment, operation and functioning of national inventory systems pursuant to Article 37 of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;
- (d) the timing and the procedure for carrying out the comprehensive review pursuant to Article 38 of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;
- (e) **Contracting Parties'** reporting on national system for policies and measures and projections pursuant to Article 39 of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**.

Article 2

Scope

This Regulation applies to the reports submitted by the **Contracting Parties** containing data required for the year **2023** onwards.

Article 3

Definitions

For the purposes of this Regulation, the following definitions shall apply:

- (1) 'common reporting table', or 'CRT', means a table for information on anthropogenic greenhouse gas emissions by sources and removals by sinks included in Annex II to Decision 24/CP.19 of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) (Decision 24/CP.19);
- (2) 'reference approach' means the reference approach by the Intergovernmental Panel on Climate Change (IPCC), as set out in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories ('2006 IPCC Guidelines');
- (3) 'approach 1' means the basic method for the estimation of uncertainties included in the 2006 IPCC Guidelines;
- (4) 'key category' means a category which has a significant influence on a **Contracting Party's** or the **Energy Community** total inventory of greenhouse gases in terms of the absolute level of emissions and removals, the trend in emissions and removals, or uncertainty in emissions and removals;
- (5) 'sectoral approach' means the IPCC sectoral approach as set out in the 2006 IPCC Guidelines;
- (6) 'outline for greenhouse gas inventory documents' means the outline set out in the Appendix to the UNFCCC reporting guidelines on annual greenhouse gas inventories as included in Annex I to Decision 24/CP.19.;
- (7) 'transparency MPGs' means the modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement, as set out in the Annex to Decision 18/CMA.1 of the Conference of the Parties to the UNFCCC serving as meeting of the Parties to the Paris Agreement;
- (8) 'greenhouse gas inventory guidelines' mean guidelines specified in Article 3 of the Commission Delegated Regulation (EU) 2020/1044 (9), **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;
- (9) 'recalculation' is a procedure for re-estimating, in accordance with the greenhouse gas inventory guidelines anthropogenic GHG emissions by sources and removals by sinks of previously submitted GHG inventories as a consequence of changes in methodologies, changes in the manner in which emission factors and activity data are obtained and used, or the inclusion of new source and sink categories.

CHAPTER II

REPORTING BY **CONTRACTING PARTIES** ON NATIONAL ADAPTATION ACTIONS, **CARBON PRICE MECHANISM REVENUES** AND SUPPORT TO DEVELOPING COUNTRIES

Article 4

Information on national adaptation actions

Contracting Parties shall report the information on their national adaptation actions pursuant to Article 19(1) of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** in accordance with the format set out in Annex I to this Regulation.

Article 5

Information on the use of carbon price mechanism revenues

Contracting Parties shall report the information on the use of revenues generated by **carbon price mechanisms** pursuant to Article 19(2) of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** in accordance with the formats set out in Annex II to this Regulation.

Article 6

Information on financial and technology support provided to developing countries

1. **Contracting Parties** shall report the quantitative information on public and mobilised financial resources referred to in point (a)(i) and available information on activities by the Member State related to public-funded technology transfer projects and capacity-building projects for developing countries under the UNFCCC referred to in point (a)(iii) of Part 2 of Annex VIII to Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**, in accordance with the common tabular format introduced by the Organisation for Economic Cooperation and Development (OECD) Development Assistance Committee for reporting to the Creditor Reporting System (CRS) or the formats set out in Annex III to this Regulation.
2. **Contracting Parties** shall report the qualitative methodological information explaining the method used to calculate the quantitative information referred to in point (a)(ii) of Part 2 of Annex VIII to Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** in accordance with the format set out in Annex IV to this Regulation.
3. **Contracting Parties** shall report available information on the planned provision of support referred to in point (b) of Part 2 of Annex VIII to Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** in accordance with the format set out in Annex V to this Regulation.

CHAPTER III

REPORTING BY **CONTRACTING PARTIES** ON APPROXIMATED GREENHOUSE GAS INVENTORIES, GREENHOUSE GAS INVENTORIES AND ACCOUNTED GREENHOUSE GAS EMISSIONS AND REMOVALS

Article 7

Reporting on approximated greenhouse gas inventories

(a) 1. **Contracting Parties** shall report their approximated greenhouse gas inventories pursuant to Article 26(2) of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** in accordance with the format set out in Annex VI, at a level of disaggregation of categories reflecting the activity data and methods available for the preparation of estimates for the year X-1;

(b) <...>

2. **Contracting Parties** shall provide explanations including on the main drivers for the key changes in emissions and removals reported in accordance with the format set out in Annex VI compared to the most recent final greenhouse gas inventory reported.

Article 8

General rules for reporting on greenhouse gas inventories

1. **Contracting Parties** shall report the information referred to in Article 26(3) of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** by completing, in accordance with the greenhouse gas inventory guidelines and with the rules provided for in this Regulation:

(a) the common reporting tables by providing a complete set of spread sheets or Extensible Markup Language (XML) files, depending on the availability of the appropriate software, and covering **Contracting Party's** geographical scope under Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;

(b) the information as specified in Articles 9 to 23 of this Regulation.

2. **Contracting Parties** shall draft the national inventory report referred to in Article 26(3) of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** ('national inventory report', 'NIR') based on the outline for greenhouse gas inventory documents, and following the rules provided for in this Regulation. **Contracting Parties** shall include the information reported pursuant to Articles 9, 10, 12 and 14 to 18 of this Regulation in the national inventory report or in a separate Annex to the national inventory report and indicate clearly in accordance with Annex VII where the information is provided.

Article 9**Reporting on recalculations**

Contracting Parties shall report the reasons for recalculations of greenhouse gas emissions and removals referred to in point (d) of Part 1 of Annex V to Regulation (EU) 2018/1999 in the years 1990, 2005 and X-3; how the time series consistency for all reported years is maintained in writing in the form of a draft of the dedicated summary chapter on recalculations of the national inventory report.

Article 10**Reporting on implementation of recommendations**

1. **Contracting Parties** shall report the information on the steps taken to improve inventory estimates referred to in point (g) of Part 1 of Annex V to Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** in accordance with the formats set out in Annex VIII to this Regulation.
2. In their reports referred to in paragraph 1, **Contracting Parties** shall cover both issues raised for the first time in the most recent respective review reports and issues repeated from previous review reports.

Article 11**Reporting on inventory methods, emission factors and on related methodological descriptions for Energy Community key categories**

1. **Contracting Parties** shall provide the following information for the preparation of the **Energy Community** inventory report referred to in point (m) of Part 1 of Annex V of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**:
 - (a) summary information on the methods and emission factors used for the **Energy Community's** key categories within the relevant XML files of the common reporting tables;
 - (b) for those **Energy Community** key categories, where information on methods and emission factors is not contained in the common reporting tables, information in accordance with Part 3 of Annex IX of this Regulation;
 - (c) updated summary methodological descriptions for the **Energy Community's** key categories in accordance with the format set out in Part 4 of Annex IX.
2. For the purpose of reporting under paragraph 1, the **Energy Community Secretariat** shall provide the **Contracting Parties** with the following:
 - (a) the list of the most recent **Energy Community's** key categories by 31 October in accordance with the format set out in Part 1 of Annex IX;
 - (b) the updated list referred to in paragraph 2(a) with changes highlighted by 28 February;
 - (c) where available, information on inventory methods, emission factors and on summary methodological descriptions by 31 October in accordance with the format set out in Part 2 of Annex IX;
 - (d) the updated information referred to in paragraph 2(c) by 28 February.

Article 12**Reporting on uncertainty and completeness**

1. **Contracting Parties** shall report at least approach 1 uncertainty estimates referred to in point (m) of Part 1 of Annex V to Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** in accordance with the format set out in Annex X to this Regulation.
2. **Contracting Parties shall** report the information on the general assessment of completeness referred to in point (m) of Part 1 of Annex V to Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** in the national inventory report, specifying:
 - (a) the categories, which were reported as not estimated (NE), as defined in the transparency MPGs, and detailed explanations for the use of this notation key especially where the greenhouse gas inventory guidelines provide methods for estimation of greenhouse gases;
 - (b) the geographical coverage of the greenhouse gas inventory, and any differences between the geographical coverage under the UNFCCC and the Paris Agreement and under Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**.

Article 13**Reporting on indicators**

Contracting Parties shall report information on indicators referred to in point (e) of Part 1 of Annex V to Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** in accordance with the format set out in Annex XI.

Article 14**Reporting on consistency of reported emissions <...>**

1. **Contracting Parties** shall report the information referred to in point (h) of Part 1 of Annex V to Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** in accordance with the format set out in Annex XII to this Regulation.
2. **Contracting Parties** shall report the information on results of the checks referred to in point (i) of Part 1 of Annex V of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** in a textual format.

Article 15

<...>

Article 16**Reporting on consistency of the data reported on fluorinated greenhouse gases**

Contracting Parties who have incorporated Regulation (EU) 517/2014 shall report the information on the results of the checks referred to in point (j)(ii) of Part 1 of Annex V to

Regulation (EU) 2018/1999 in a textual format, specifying:

- (a) the checks performed by the Member State concerning the level of detail, the data sets and the submissions compared;
- (b) the main results of the checks and explanations for the main inconsistencies;
- (c) whether the data collected by operators under Article 6(1) of Regulation (EU) No 517/2014 of the European Parliament and of the Council ⁽¹⁰⁾ were made use of and how;
- (d) the reasons why the checks were not considered to be relevant, where those checks were not performed.

Article 17**Reporting on consistency with energy statistics**

1. **Contracting Parties** shall report information on the results of the checks referred to in point (j)(iii) of Part 1 of Annex V to Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** in a textual format, specifying the differences between the reference approach calculated on the basis of the data included in the greenhouse gas inventory and the reference approach calculated on the basis of the energy statistics reported pursuant to Article 4 and Annex B to Regulation (EC) No 1099/2008 of the European Parliament and of the Council (11).

2. **Contracting Parties** shall report the quantitative information and explanations for differences of more than $\pm 2\%$ in the total national apparent fossil fuel consumption at aggregate level for all fossil fuel categories for the year X-2 referred to in paragraph 1 in accordance with Annex XIV to this Regulation.

Article 18**Reporting on changes in descriptions of national inventory systems or registries**

Contracting Parties shall clearly state in the relevant chapters of the national inventory report if there were no changes in the description of their national inventory systems or, if applicable, of their national registries referred to in points (k) and (l) of Part 1 of Annex V to Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** since the previous submission of the national inventory report.

Article 19

<...>

Article 20

<...>

Article 21

<...>

Article 22

<...>

Article 23

<...>

Article 24

<...>

Article 25

Timescales for cooperation and coordination in preparing the Energy Community greenhouse gas inventory <...>

1. **Contracting Parties** and the **Energy Community Secretariat** shall cooperate and coordinate in preparing the **Energy Community** greenhouse gas inventory and of the **Energy Community** inventory report in accordance with the timescales set out in Annex XXI.
2. When a **Contracting Party** re-submits its inventory to the UNFCCC Secretariat that **Contracting Party** shall provide the **Energy Community Secretariat** with a summary of the changes made in the re-submitted inventory, no later than within one week of the re-submission.
3. <...>

CHAPTER IV

REQUIREMENTS ON THE ESTABLISHMENT, OPERATION AND FUNCTIONING OF NATIONAL INVENTORY SYSTEMS

Article 26

Functions of national inventory systems

In the implementation of the national inventory systems pursuant to Article 37 of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**, each **Contracting Party** shall:

- (a) establish and maintain the institutional, legal and procedural arrangements necessary to perform the functions pursuant to Articles 27 to 29, between the government agencies and other entities responsible for the performance of all functions;
- (b) ensure sufficient capacity for timely performance of the functions pursuant to Articles 27 to 29, including data collection for estimating anthropogenic GHG emissions by sources and removals by sinks and arrangements for technical competence of the staff involved in the inventory development process.

Article 27

Inventory planning

1. As part of its inventory planning, each **Contracting Party** shall:

- (a) designate a single national entity with overall responsibility for the national inventory and make available its postal and electronic addresses;
- (b) define and allocate specific responsibilities in the inventory development process, including those relating to choice of methods, data collection, particularly activity data and emission factors from statistical services and other entities, processing and archiving, and quality control and quality assurance;
- (c) elaborate an inventory quality assurance and quality control plan which describes specific quality control procedures to be implemented during the inventory development process, facilitate the overall quality assurance procedures to be conducted and establish quality objectives;
- (d) consider establishing processes for the official consideration and approval of the inventory, if relevant including any recalculations, prior to its submission and to respond to any issues raised by the inventory review processes.

2. As part of its inventory planning, each **Contracting Party** shall where relevant consider ways to improve the quality of activity data, emission factors, methods and other relevant technical elements of inventories. Information obtained from the implementation of the quality assurance and quality control plan, from reviews under Article 19 of Regulation (EU) No 525/2013, Article 38 of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** and under the UNFCCC shall where appropriate be considered in the development and/or revision of the quality assurance and quality control plan and the quality objectives.

Article 28

Inventory preparation

1. In accordance with the greenhouse gas inventory guidelines, each **Contracting Party** shall:
 - (a) identify key categories and prepare estimates applying appropriate methods to estimate emissions and removals from key categories;
 - (b) collect sufficient activity data, process information and emission factors necessary to support the methods selected for estimating anthropogenic GHG emissions by sources and removals by sinks;
 - (c) make a quantitative estimate of inventory uncertainty for each category and for the inventory in total and prepare recalculations of previously submitted estimates of anthropogenic GHG emissions by sources and removals by sinks;
 - (d) compile the national inventory and implement general inventory quality control procedures in accordance with their quality assurance and quality control plan.
2. As part of its inventory preparation, each **Contracting Party** shall where appropriate:
 - (a) apply category-specific quality control procedures for key categories and for individual categories where significant methodological and/or data revisions have occurred, in accordance with the greenhouse gas inventory guidelines;
 - (b) provide for a basic review of the inventory by an independent third party or personnel not involved in the inventory development,, before the submission of the inventory, in accordance with the planned quality assurance procedures referred to in Article 27(1)(c);
 - (c) provide for a more extensive review for key categories and categories where significant changes in methods occurred;
 - (d) based on the reviews according to the transparency MPGs and in accordance with Article 38 of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** and periodic internal evaluations of the inventory preparation process, re-evaluate the inventory planning process in order to meet the established quality objectives referred to in Article 27(1)(c) of this Regulation.

Article 29

Inventory management

1. As part of their inventory management, each **Contracting Party** shall:
 - (a) each year for the reported time series, archive inventory information including: all disaggregated emission factors, activity data, and documentation about how these were generated and aggregated; internal documentation on quality assurance and quality control procedures, external and internal reviews, documentation on annual key sources and key source identification and planned inventory improvements.
 - (b) provide review teams under the transparency MPGs and Article 38 of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** with access to all archived information used by the Member State to prepare the inventory, taking into account country-specific confidentiality rules.

- (c) respond to requests for clarifying inventory information resulting from the different stages of the review processes of the inventory information, and information on the national system, in a timely manner.
2. As part of their inventory management, each **Contracting Party** shall where appropriate make the collection of archived information easily accessible

CHAPTER V

PROCEDURE AND SCHEDULE FOR CARRYING OUT THE COMPREHENSIVE REVIEW

Article 30

Procedure for the comprehensive review

1. When conducting the comprehensive review (or 'review') referred to in Article 38(1) of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**, the **Energy Community Secretariat** and the European Environment Agency shall be assisted by a technical experts review team and follow the procedure set out in Annex XXII.
2. The European Environment Agency shall perform the secretarial tasks for the comprehensive reviews as specified in Annex XXII.
3. The **Energy Community Secretariat**, assisted by the European Environment Agency, shall select a sufficient number of review experts to cover the appropriate inventory sectors. The review experts selected shall have experience in the area of greenhouse gas inventories compilation and, where possible, be active in greenhouse gas review processes. Technical experts who have contributed to the compilation of an individual **Contracting Party's** greenhouse gas inventory, or are national of that **Contracting Party**, shall not take part in the review of that inventory.
4. The comprehensive reviews shall be carried out as desk-based and centralized reviews, as specified in Annex XXII. In addition, in-country visits may be organised upon recommendation of the technical experts review team and in consultation with the **Contracting Party** concerned.
5. The checks pursuant to Article 38(2)(b) of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** shall include, where appropriate, information specified in Annex XXII.
6. The checks referred to in Article 38(2)(c) of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** shall include, where appropriate, a detailed examination on consistency of the accounted emissions and removals with Union rules.
7. The comprehensive reviews shall include, where appropriate, checks to identify whether areas of improvement identified for one **Contracting Party** in the UNFCCC or **Energy Community** reviews may also constitute an area of improvement for other **Contracting Parties**.
8. The review of greenhouse gas inventories shall be performed consistently for all **Contracting Parties** concerned and in an objective manner.

Article 31

Technical corrections

1. A technical correction of an emission estimate within the meaning of Article 38(2)(d) of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** shall be deemed necessary if an underestimate or overestimate exceeds the threshold of significance established in paragraph 2 of this Article. Details of the technical corrections are specified in Annex XXII to this Regulation.
2. The threshold of significance for a given source or sink amounts to 0,05 % of a **Contracting Party's** total national greenhouse gas emissions without LULUCF for the year of the inventory under review, or 500 kt CO₂ equivalent, whichever is smaller.
3. In response to a finding by the **Energy Community Secretariat** communicated to a **Contracting Party** during the review, the **Contracting Party** may request a change of their estimates of emissions or accounted emissions and removals by providing revised estimates. If a revised estimate is deemed appropriate by the technical review team, it shall be included in the review report referred to in Article 32 and accompanied by a justification.

Article 32

Final review reports

The **Energy Community Secretariat** shall inform the **Contracting Party** concerned of the end of the comprehensive review and provide the **Contracting Party** with a final review report by 30 August 2027 and 30 August 2032 respectively.

Article 33

Cooperation with Contracting Parties

1. **Contracting Parties** shall:
 - (a) participate in the review pursuant to the schedule set out in Annex XXII;
 - (b) nominate a National contact point for the **Energy Community's** review;
 - (c) participate in and facilitate the organisation of an in-country visit, if needed;
 - (d) provide answers and additional information and comment on the review reports as relevant.
2. Upon request by the **Contracting Parties**, the **Energy Community Secretariat** shall include comments regarding the review findings in the final review report referred to in Article 32.
3. The **Energy Community Secretariat** shall inform the **Contracting Parties** of the composition of the technical experts review team selected pursuant to Article 30.

Article 34**Schedule for the comprehensive reviews**

The comprehensive review shall be carried out pursuant to the time schedule set out in Annex XXII.

CHAPTER VI POLICIES AND MEASURES AND PROJECTIONS

Article 35**Submission processes for reporting**

Contracting Parties shall use the e-platform referred to in Article 28 of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** and linked tools and templates of the Commission, assisted by the European Environment Agency pursuant to Article 42 of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**, for the submission of the information pursuant to this Chapter.

Article 36**Reporting on national systems for policies and measures and projections**

Contracting Parties shall provide the description of their national systems for reporting on policies and measures, or groups of measures, and projections referred to in point (a) of Annex VI to Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** in the format set out in Annex XXIII to this Regulation.

Article 37**Reporting on national policies and measures**

1. **Contracting Parties** shall report the information on their national policies and measures, or groups of measures, referred to in point (c) of Annex VI to Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** in the formats set out in Annex XXIV to this Regulation.
2. **Contracting Parties** shall report the following information in a textual format:
 - (a) the updates relevant to their long-term strategies referred to in point (b) of Annex VI to Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;
 - (b) planned additional policies and measures referred to in point (d) of Annex VI to Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**;
 - (c) links between different policies and measures and the contribution of those policies and measures to different projection scenarios, as referred to in point (e) of Annex VI to Regulation (EU) 2018/1999 **as**

adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC.

Article 38

Reporting on national projections

1. **Contracting Parties** shall report the information on their national projections of anthropogenic greenhouse gas emissions by sources and removals by sinks, organised by gas or group of gases, referred to in Article 18(1)(b) and point (a) of Annex VII of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** in the format set out in Annex XXV to this Regulation.

2. **Contracting Parties** shall provide the additional information on their national projections of anthropogenic greenhouse gas emissions by sources and removals by sinks referred to in Annex VII to Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** in a textual format, specifying:

(a) <...>

(b) the results of the sensitivity analysis performed pursuant to point (d) of Annex VII of Regulation (EU) 2018/1999;

(1) for the total reported greenhouse gas emissions, together with a brief explanation of which parameters were varied and how;

(2) <...>

(c) the year of the inventory data (base year) and the year of the inventory report used as a starting point for the projections;

(d) the methodologies used for the projections, including a brief description of the models used and their sectoral, geographical and temporal coverage, references to further information on the models and information on data sources, key exogenous assumptions and on the parameters used; pursuant to point (e) of Annex VII of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**.

3. In the reports on projections to be provided pursuant to Article 18(1) of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**, **Contracting Parties** shall take into account the harmonised values for key parameters for projections – at least for oil, gas, and coal import prices as well as for carbon prices under **national mechanism or carbon price mechanism** – which the **Secretariat** has recommended, in consultation with the Contracting Parties, 12 months before the deadline for submission of the reports.

CHAPTER VII TRANSITIONAL AND FINAL PROVISIONS

Article 39

<...>

Article 40

<...>

Article 41

Entry into force and application

This decision shall enter into force on the date of its adoption.

ANNEX I

Information on national adaptation actions pursuant to Article 4

1. National circumstances, impacts, vulnerabilities, risks and adaptive capacity¹

1.1 National circumstances relevant to adaptation actions:

- a) biogeophysical characteristics;
- b) demographics;
- c) economy and infrastructure.

1.2 Climate monitoring and modelling framework:

- a) main activities on climate monitoring, modelling, projections and scenarios;
- b) main approaches, methodologies and tools, and associated uncertainties and challenges.

1.3 Assessment of climate impacts, vulnerability and risks, including adaptive capacity:

- a) overview of observed climate hazards among the ones listed in Table 1² and existing pressures³;
- b) identification of key future climate hazards from the ones listed in Table 1 and key affected sectors⁴

Table 1 - Classification of climate-related hazards⁵

Temperature-related	Wind-related	Water-related	Solid mass-related
Changing temperature (air, freshwater, marine water)	Changing wind patterns	Changing precipitation patterns and types (rain, hail, snow/ice)	Coastal erosion
		Precipitation and/or hydrological variability	Soil degradation (including de
Temperature variability		Ocean acidification	Soil erosion
Permafrost thawing		Saline intrusion	Solifluction
		Sea level rise	
		Change in sea ice cover	
		Water scarcity	
Heat wave	Cyclone	Drought	Avalanche

¹ 'Adaptive capacity' as defined in the Fifth Assessment Report of the United Nations Intergovernmental Panel on Climate Change (IPCC AR5): 'The ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences.'

² The list is not exhaustive.

³ **Contracting Parties** shall report existing environmental, economic and social pressures that are likely to be significantly affected by climate change: e.g. loss of biodiversity, poor harvest, energy poverty, unemployment, migration.

⁴ **Contracting Parties** shall select key sectors among the following: Agriculture and food, biodiversity (including ecosystem-based approaches), buildings, coastal areas, civil protection and emergency management, energy, finance and insurance, forestry, health, marine and fisheries, transport, urban, water management, ICT (information and communications technology), land use planning, business, industry, tourism, rural development, other (please specify).

⁵ Where relevant, **Contracting Parties** shall also consider secondary effects of these hazards, such as forest fires, spread of invasive species and tropical diseases, cascading effects, and multiple hazards occurring at the same time.

Cold wave/frost	Storm (including blizzards, dust and sand storms)	Heavy precipitation (rain, hail, snow/ice)	Landslide
Wildfire	Tornado	Flood (coastal, fluvial, pluvial, ground water, flash)	Subsidence
		Snow and ice load	
		Glacial lake outburst	

c) For each key affected sector, overview of the following, rated on qualitative scales of high/medium/low/not applicable, with accompanying explanation as appropriate⁶:

- i. observed impacts of key hazards, including changes in frequency and magnitude;
- ii. likelihood of the occurrence of key hazards and exposure to them under future climate, drawing upon the best available climate modelling science;
- iii. vulnerability, including adaptive capacity;
- iv. risk of potential future impacts.

2. Legal and policy frameworks and institutional arrangements

2.1 Legal and policy frameworks and regulations, including National Adaptation Strategies (NAS), National Adaptation Plans (NAP)⁷ and any sectoral adaptation plans.

2.2 Overview of institutional arrangements and governance at the national level for:

- a) assessing climate vulnerability and risks;
- b) planning, implementing, monitoring, evaluating and revising adaptation policy⁸;
- c) integrating climate change impacts and resilience into environmental assessment procedures;
- d) collection, ownership and re-use of relevant data (such as climate-related disaster loss data or risk data) and access to it;
- e) integrating climate change impacts and adaptation planning into disaster risk management frameworks and vice versa⁹.

2.3 Overview of institutional arrangements and governance at the sub-national¹⁰ (¹⁰) level:

- a) legal requirements and strategic documents;
- b) networks or other collaborations on adaptation across national authorities;
- c) good practice examples of networks or other collaborations on adaptation across local and regional authorities.

6 The analysis outlined in points (i) to (iv) shall apply the best available science for vulnerability and risk analysis by the Intergovernmental Panel on Climate Change and the latest Commission guidance on the climate proofing of the Union-funded projects.

7 **Contracting Parties** shall report the title, year of adoption and status [superseded / adopted / completed and submitted for adoption / being developed] of each NAS and NAP.

8 Aspects to consider include decision making, planning and coordination related to adaptation strategies, policies, plans and goals, addressing cross-cutting issues, adjusting adaptation priorities and activities, implementing adaptation actions, including facilitating action to avert, minimise and address the adverse effect of climate change.

9 <...>

10 Throughout the Annex, 'sub-national' refers to local and regional.

3. *Adaptation strategies, policies, plans and goals*

3.1 Adaptation priorities

3.2 Challenges, gaps and barriers to adaptation¹¹

3.3 Summaries of national strategies, policies, plans and efforts, with a focus on goals and objectives, foreseen actions¹², budget and timeline¹³

3.4 Overview of the content of sub-national strategies, policies, plans and efforts

3.5 Overview of efforts to integrate climate change adaptation into sectoral policies, plans and programs, including disaster risk management strategies and action plans

3.6 Stakeholder engagement

Overview of measures in adaptation policy at the national level and good practice examples from the sub-national levels to engage with:

- a) stakeholders particularly vulnerable to climate change impacts;
- b) the private sector¹⁴.

4. *Monitoring and evaluation of adaptation actions and processes*

4.1 Monitoring and evaluation methodology¹⁵ related to:

- a) reducing climate impacts, vulnerabilities, risks, and increasing adaptive capacity;
- b) implementation of adaptation actions.

4.2 State of play of the implementation of measures planned under points 3.3 to 3.6, including an overview of the subnational level and the disbursement of funding to increase climate resilience. The reporting on funding shall cover:

- a) spending earmarked for climate adaptation including in disaster risk management;
- b) to the extent possible, the share of spending used to support climate adaptation¹⁶ in each sector¹⁷.

4.3 Evaluating progress towards the following¹⁸:

- a) reducing climate impacts, vulnerabilities and risks;
- b) increasing adaptive capacity;
- c) meeting adaptation priorities;
- d) addressing barriers to adaptation.

4.4 Steps taken to review and update the following:

- a) vulnerability and risk assessments;

¹¹ Including those institutional, governance-related and other barriers that restrict the adaptive capacity as identified in the vulnerability assessment.

¹² Including nature-based solutions and actions leading to mitigation co-benefits and other relevant co-benefits

¹³ The summaries shall cover also efforts to build resilience and avert, minimise and address the adverse consequences of climate change, and include an explanation how gender perspectives have been taken into account.

¹⁴ **Contracting Parties** shall provide an overview of available information on private sector plans, priorities, actions and programmes, public/ private partnerships, and other relevant private adaptation initiatives and/or projects.

¹⁵ **Contracting Parties** shall report on approaches, systems used, transparency and indicators.

¹⁶ The additional investment that makes a project (that would have been realised anyway) climate resilient.

¹⁷ **Contracting Parties** shall report on investment in adaptation actions by the following sectors: Agriculture and food, biodiversity (including ecosystem-based approaches), buildings, coastal areas, civil protection and emergency management, energy, finance and insurance, forestry, health, marine and fisheries, transport, urban, water management, ICT (information and communications technology), land use planning, business, industry, tourism, rural development; other [please specify].

¹⁸ Based on the monitoring and evaluation methodology as reported under point 4.1.

b) national adaptation policies, strategies, plans, and measures.

4.5 Overview of good practice with regard to steps taken to review and update subnational adaptation plans, policies, strategies and measures.

5. Cooperation, good practices, synergies, experience and lessons learned in the field of adaptation

5.1 Good practices and lessons learnt, including at sub-national level¹⁹

5.2 Synergies of adaptation actions with other international frameworks and/or conventions, in particular the Sustainable Development Goals and the Sendai Framework for Disaster Risk Reduction

5.3 Cooperation with **Contracting Parties** <...> Member States **of the European Union**, international cooperation, and with regional and international organisations²⁰:

a) cooperation to share information and to strengthen science, institutions and adaptation knowledge;

b) cooperation to enhance adaptation action at the sub-national, national, macro-regional and international level, including the area, scale and types of cooperation.

6. Any other information related to climate change impacts and adaptation

6.1 Key contact details of national coordinator and organisation

6.2 Relevant websites and social media sources used for communication on adaptation action at national and sub-national level, as appropriate

6.3 Key reports and publications at national and sub-national level

6.4 Any other relevant information.

¹⁹ **Contracting Parties** may report on the good practices and lessons learnt in the following areas, when relevant: Climate modelling activities and methodologies; assessment of climate impacts, vulnerability and risks to climate change, including adaptive capacity; institutional arrangements and governance at the national level; policy and regulatory changes; coordination mechanisms; adaptation priorities; adaptation barriers; adaptation goals, objectives, undertakings, efforts, strategies, policies and plans; efforts to integrate climate change adaptation into development and sectoral policies, plans and programs; integration of gender perspectives into climate adaptation; integration of indigenous, traditional and local knowledge into climate adaptation; stakeholder engagement; climate risk communication; monitoring and evaluation; strengthening scientific research and knowledge; disaster risk reduction and management, innovative adaptation solutions and innovative financing mechanisms.

²⁰ Excluding information on support to developing countries referred to in Part 2 of Annex VIII of Regulation (EU) 2018/1999.

ANNEX II

Information on the use of **carbon price mechanism** revenues pursuant to Article 5

Table 1a: Revenues generated from **carbon price mechanism in year X-1**

1		Amount for the year X-1		
2		1 000 Euros	1 000 in domestic currency, if applicable (1)	Comments (e.g. explain gaps, relevant national circumstances, changes since last reporting)
3	A	B	C	D
4	Total amount of revenues generated from carbon price mechanism (sum of rows 5 and 6)	Sum of B5+B6	Sum of C5+C6	
5	Of which amount of revenues generated from auctioning of allowances pursuant to Article 10 of Directive 2003/87/EC			
6	Of which amount of revenues generated from auctioning of allowances pursuant to Article 3d(1) or (2) of Directive 2003/87/EC			

Notes:

(1) An average annual exchange rate for the year X-1 or the real exchange rate applied to the amount disbursed shall be used for the currency conversion.

Table 1b: Use of revenues from carbon price mechanism in year X-1

1	Total amount disbursed in the year X-1		Of which amount disbursed in year X-1 and reported as committed in years before X-1		Total amount committed, but not disbursed, in the year X-1		Equivalent financial value used in the year X-1 ⁽²⁾				
	1 000 Euros	1 000 in domestic currency, if applicable ⁽¹⁾	1 000 Euros	1 000 in domestic currency, if applicable ⁽¹⁾	1 000 Euros	1 000 in domestic currency, if applicable ⁽¹⁾	1 000 Euros	1 000 in domestic currency, if applicable ⁽¹⁾			
2	A		B	C	D	E	F	G	H	I	J
3	A		B	C	D	E	F	G	H	I	J
4	Total amount of revenues from carbon price mechanism or equivalent financial value used for the purposes specified in paragraph 3 of Article 10, and Article 3d(4) of Directive 2003/87/EC										
5	Of which amount of revenues auctioning of allowances used for the purposes specified in Article 10(3) of Directive 2003/87/EC (if data are available for separate reporting)										
6	Of which amount of revenues auctioning of allowances used for the purposes specified in Article 3d(4) of Directive 2003/87/EC (if data are available for separate reporting)										

Notation: x = reporting year

Notes:

(1) An average annual exchange rate for the year X-1 or the real exchange rate applied to the amount disbursed shall be used for the currency conversion.

(2) By reporting 'equivalent financial value', **Contracting Parties** report values which are representative for their spending in accordance with Articles 3d and 10 of Directive 2003/87/EC, and indicate that all values reported in Tables 2 to 6 also represent equivalent financial value.

Table 2: Use of revenues from carbon price mechanism for domestic <...> purposes <...>

1	Purpose for which revenues were used	Short description	Amount for year X-1		Status (2)	Revenues pursuant to [tick relevant column]		Type of use (3)	Financial instrument (4)	Implementing Agency	Comments
2	e.g. programme, activity, action or project title	Including reference to online source of more detailed description, if available	1 000 Euros	1 000 Domestic Currency ⁽¹⁾	Committed (but not disbursed)/disbursed	Article 3d of Directive 2003/87/EC	Article 10 of Directive 2003/87/EC	Select type of use as outlined in Directive 2003/87/EC	To be selected: fiscal, financial support policy, domestic regulatory policy that leverage financial support, other	(e.g. responsible ministry)	e.g. explain gaps, qualitative information on specific uses if quantitative information is not available
3	A	B	C	D	E		G	H	I	J	K
4											
5											
6	Total amount of revenues or equivalent financial value used		Sum of column C	Sum of column D							

Notation: x = reporting year

Notes:

- (1) An average annual exchange rate for the year X-1 or the real exchange rate applied to the amount disbursed shall be used for the currency conversion.
- (2) **Contracting Parties** shall provide the definitions used for 'commitment' and 'disbursement' as part of their report. If part of the reported amount is committed and another part disbursed related to a specific programme/project, two separate rows should be used. If **Contracting Parties** are not able to distinguish between committed and disbursed amounts, the most appropriate category should be selected for the reported amounts. Consistent definitions should be used across the Tables. Generally, 'committed' auction revenues are those which have been legally committed to be used for climate and energy purposes, but in some cases may not have yet been spent at the time of reporting. 'Disbursed' auction revenues are those which have been spent at the time of reporting. However, in some cases, 'Commitment' can refer to revenues that are only preliminarily planned to be used and 'disbursement' are those which have been transferred to a specific State Agency for a specific purpose or to a regional government.
- (3) Categories of uses mentioned in Article 10(3) of Directive 2003/87/EC as follows:
 - funding of research and development and demonstration projects for reducing emissions and for adaptation;

- funding of initiatives within the framework of the European Strategic Energy Technology Plan and the European Technology Platforms;
- development of renewable energies to meet the commitment of the Union;
- development of other technologies contributing to the transition to a safe and sustainable low-carbon economy;
- development of technologies that help meet the commitment of the Union to increase energy efficiency;
- forestry sequestration in the Union;
- environmentally safe capture and geological storage of CO₂;
- encouragement of a shift to low-emission and public forms of transport;
- financing of research and development in energy efficiency and clean technologies;
- measures intended to increase energy efficiency and insulation or to provide financial support in order to address social aspects in lower and middle income house-holds;
- coverage of administrative expenses of the management of the EU ETS;
- promotion of skill formation and reallocation of labour in order to contribute to a just transition to a low carbon economy;
- other reduction of greenhouse gas emissions;
- adaptation to the impacts of climate change;
- other domestic uses.

Categories mentioned in Article 3d(4) of Directive 2003/87/EC, but not specifically mentioned in Article 10(3) as follows:

- funding of common projects to reduce greenhouse gas emissions from the aviation sector;
- measures to avoid deforestation.

Contracting Parties shall avoid double counting of amounts in this Table. If a specific use fits to several types of uses, several types can be selected; however, the amount indicated is not to be multiplied but additional rows for types of uses are to be linked with one entry field for that amount.

(4) Several categories can be selected if several financial instruments are relevant for the reported programme or project.

Table 3

<...>

Table 4

<...>

Table 5

<...>

Table 6

<...>

ANNEX III

Information on financial and technology support provided to developing countries pursuant to Article 6(1)

Table 1: Provision of support committed and provided of public resources through bilateral and regional channels, including technology development and transfer and capacity building where relevant ^{(1) (2)}

Channel	Recipient	Title of activity/ program/ project or other*	Funding source	Financial instrument	Type of support	Sector	Committed amount (a)	Provided amount (a)	Grant equivalent* (a)(b)	Sub-sector* (c)	Technology transfer/ Capacity Building* (d)	Additional Information* (e)
<i>Bilateral/ Regional/ Other (specify)</i>			<i>ODA/ OOF/ Other (specify)</i>	<i>Grant/ Concessional loan/ Non-concessional loan/ Equity/ Guarantee/ Insurance/ Other (specify)</i>	<i>Adaptation/ Mitigation/ Cross-cutting</i>	<i>Energy/ Transport/ Industry/ Agri-cultural/ Forestry/ Water and sanitation/ Cross-cutting/ Other (specify)</i>					<i>T/ C/ Both/ N/A</i>	

Notes:

- (1) The information elements marked with '*' shall be completed as available.
- (2) The information shall be reported per calendar year (X-1).
 - (a) Amount shall be reported in domestic currency.
 - (b) This information is to be provided as reported to the UN or the Organisation for Economic Cooperation and Development (OECD) in accordance with any internationally agreed information requirements.
 - (c) The five-digit purpose codes introduced by the OECD Development Assistance Committee for reporting to the Creditor Reporting System (DAC CRS) may be used when reporting sub-sector information.
 - (d) **Contracting Parties** shall indicate 'T' if the activity contributes to technology development and transfer objectives, 'C' if it contributes to capacity building objectives, 'Both' if cross-cutting and 'N/A' if not applicable.
 - (e) Additional information shall be provided, such as a link to relevant program documentation or a description of the project.

Table 2: Provision of support committed and provided of public financial resources through multilateral channels, including technology development and transfer and capacity building where relevant ^{(1) (2)}

Channel	Multilateral institution	Title of activity/ program/ project or other*	Funding source	Financial instrument	Committed Amount (a) (Core/ general)	Provided amount (a) (Core/ general)	Committed Amount (a) (Climate-specific)	Provided amount (a) (Climate-specific)	Recipient*	Grant equivalent * (a)/(b)
Multilateral Multi-bilateral/ Other (Specify)			ODA/ OOF/ Other (Specify)	Grant/ Concessional loan/ Non-concessional loan/ Equity/ Guarantee/ Insurance/ Other (Specify)					Global/ Regional/ Country	

Imputed multilateral contribution* (d)	Financial instrument	Type of support*	Sector*	Sub-Sector* (e)	Technology transfer/ Capacity building* (f)	Additional Information* (g)
Yes/ No/ N/A	Grant/ Concessional loan/ Non-concessional loan/ Equity/ Guarantee/ Insurance/ Policy intervention/ Other (Specify)	Adaptation/ Mitigation/ Cross-cutting	Energy/ Transport/ Industry/ Agriculture/ Forestry/ Water and sanitation/ Cross-cutting/ Other			

Notes:

(1) The information elements marked with '*' shall be completed as available.

(2) The information shall be reported per calendar year (X-1).

(a) Amount shall be reported in domestic currency.

(b) This information is to be provided as reported to the UN or OECD in accordance with any internationally agreed information requirements.

(c) **Contracting Parties** shall indicate if the amount reported is based on the 'inflow contribution' to the multilateral institution or on the 'outflow share' of the multilateral institution's financial resources.

(d) **Contracting Parties** shall indicate if the 'climate-specific' amount is calculated following the OECD Imputed Multilateral Shares.

(e) The OECD-DAC CRS five-digit purpose codes may be used when reporting sub-sector information.

(f) **Contracting Parties** shall indicate 'T' if the activity contributes to technology development and transfer objectives, 'C' if it contributes to capacity building objectives, 'Both' if cross-cutting and 'N/A' if not applicable.

(g) Additional information shall be provided, such as a link to relevant program documentation and description of the project.

Table 3: Information on financial support mobilised through public interventions ^{(1) (2)}

Channel	Recipient	Title of activity/ program/ project or other*	Type of public intervention	Type of support	Sector	Amount mo- bilised (a)	Sub-sector*	Grant equivalent* (a) (c)	Amount of resources used to mobilise the support*	Additional Information* (d)
<i>Bilateral/ Regional/ Other (specify)</i>	<i>Global/ Region/ Country</i>		<i>Grant/ Conces- sional loan/ Non-conces- sional loan/ Equity/ Guar- antee/ Insur- ance/ Capac- ity building/ Technology development and transfer/ Other (specify)</i>	<i>Adaptation/ Mitigation/ Crosscutting</i>	<i>Energy/ Transport/ Industry/ Agriculture/ Forestry/ Water and sanitation/ Crosscutting/ Other (specify)</i>					

Notes:

- (1) The information elements marked with "*" shall be completed as available.
- (2) The information shall be reported per calendar year (X-1).
 - (a) Amount shall be reported in domestic currency.
 - (b) The OECD-DAC CRS five-digit purpose codes may be used when reporting sub-sectoral information.
 - (c) This information is to be provided as reported to the UN or OECD in accordance with any internationally agreed information requirements.
 - (d) Additional information shall be provided, such as a link to relevant program documentation or a description of the project.

Template 1: Information on financial support mobilised through public interventions per activity (1) (2) to be used in cases where it is impossible for a **Contracting Party** to fill in Table 3

Title of activity/program/project or other

1. Channel

2. Recipient

3. Type of public intervention

4. Type of support

5. Sector

6. Amount mobilised (a)

7. Sub-sector* (b)

8. Grant equivalent* (a)(c)

9. Amount of resources used to mobilise the support*

10. Addition information* (d)

Notes:

- (1) The information elements marked with ‘*’ shall be completed as available.
- (2) The information shall be reported per calendar year (X-1).
 - (a) Amount shall be reported in domestic currency
 - (b) The OECD-DAC CRS five-digit purpose codes may be used when reporting sub-sector information.
 - (c) This information is to be provided as reported to the UN or OECD in accordance with any internationally agreed information requirements.
 - (d) Additional information shall be provided, such as a link to relevant program documentation or a description of the project.

ANNEX IV

Qualitative methodological information pursuant to Article 6(2)

Template 1: Provision of qualitative methodological information as applicable and other information on definitions and methodologies

1. Climate finance

2. New and additional

3. Developing Country

4. Core/general

5. Climate-specific

6. Financial instruments (e.g. grant, concessional loan, non-concessional loan, equity, guarantee, insurance, other (specify))

7. Funding source (ODA, OOF, other)

8. Status (committed and provided)

9. Support mobilised (e.g. (i) Identifying a clear causal link between a public intervention and mobilized private finance, where the activity would not have moved forward, or moved forward at scale, in the absence of the Party's intervention; (ii) Providing information on the point of measurement (e.g. point of commitment, point of disbursement) of the private finance mobilized as a result of the public intervention, to the extent possible in relation to the type of instrument or mechanism used for the mobilization; (iii) Providing information on the boundaries used to identify finance as mobilized by public intervention)

10. Sector, sub-sector

11. Type of support (climate mitigation/ climate adaptation/ cross-cutting)

12. Public finance/private finance (e.g. in particular where entities or funds are mixed)

13. Application of Rio Markers (coefficients)

14. Determining grant-equivalent component of support provided and support mobilised when grant-equivalent information has been reported

15. Methodologies used to determine figures on support mobilized

16. How double counting was avoided between the resources reported as committed or provided, and the resources used in accordance with Article 6 of the Paris Agreement by the acquiring Party for use towards the achievement of its Nationally Determined Contribution

17. A description of the systems and processes used to identify, track, and report on support committed, provided and mobilised through public interventions

18. A description of the national systems and institutional arrangements for the provision of information on planned provision of support, including information on planned activities related to public-funded technology transfer projects and capacity-building projects for developing countries under the UNFCCC

19. Information, as available, a description of national systems and institutional arrangements for the provision of technology transfer and capacity building support, including on the underlying assumptions, definitions and methodologies used to provide information on technology transfer and capacity-building support

20. Information on channels and barriers encountered, lessons learned and measures to taken to overcome them

21. Information on how it has been sought to ensure that support committed, provided and mobilised through public interventions is in line with the long-term goals of the Paris Agreement

22. Information on how support committed, provided and mobilised is targeted at helping developing countries in their efforts to meet the long-term goals of the Paris Agreement, including by assisting them in efforts to make financial flows consistent with a pathway towards low-greenhouse gas emissions and climate-resilient development

23. Information on how the information provided reflects a progression from previous levels in the provision of support and mobilisation of finance under the Paris Agreement

24. How it seeks to ensure that support provided and mobilized through public interventions effectively addresses the needs and priorities of developing country Parties for the implementation of the Paris Agreement, as identified in country-driven strategies and instruments, such as biennial transparency reports, NDCs and national adaptation plans

25. Information on actions and plans to mobilise additional climate finance as part of the global effort to mobilise climate finance from a wide variety of sources, including on the relationship between the public intervention to be used and the private finance mobilised

26. Information on reporting on multilateral finance, including: (i) Whether the multilateral finance reported is based on the Party's inflow contribution to a multilateral institution and/or on the Party's share in the outflow of the multilateral institution; (ii) Whether and how multilateral finance has been reported as climate-specific and how the climate-specific share was calculated, including by, for example, using existing international standards; (iii) Whether multilateral finance has been reported as core/general, with the understanding that the actual climate finance amount it would transfer into depends on the programming choices of the multilateral institutions; (iv) Whether and how multilateral finance has been attributed to the reporting Party.

ANNEX V

Available information on the planned provision of support pursuant to Article 6(3)

Table: Available information on the planned provision of support

Year/ period	Recipient (a)	Title of activity/ program/	Projected amount to be provided (b)	Type of support	Technology transfer/ Capacity Building (c)	Additional Information (d)
	Global/Region/ Country			Mitigation/ Adaptation/ Cross-cutting	T/ C/ Both/ N/A	

Notes:

- (a) **Contracting Parties** shall provide information on the recipient country/region at the preferred level of disaggregation.
- (b) Where possible, **Contracting Parties** shall provide the amount of support to be provided in domestic currency (recommended to provide face-value on a commitment basis).
- (c) **Contracting Parties** shall indicate 'T' if the activity contributes to technology development and transfer objectives, 'C' if it contributes to capacity building objectives, 'Both' if cross-cutting and 'N/A' if not applicable.
- (d) Additional information shall be provided, such as a link to relevant program documentation, a description of the project, or available information in accordance with Article 9(5) of the Paris Agreement.

*Template 1: Available information on the planned provision of support per activity/program/project to be used in cases where it is impossible for a **Contracting Party** to fill in Table 1*

Title of activity/program/project

1. Year

2. Recipient (a)

3. Projected amount to be provided (b)

4. Type of support

5. Technology transfer/Capacity Building (c)

6. Additional Information (d)

Notes:

- (a) **Contracting Parties** shall provide information on the recipient country/region at the preferred level of disaggregation.
- (b) Where possible, **Contracting Parties** shall provide the amount of support to be provided in domestic currency (recommended to provide face-value on a commitment basis).
- (c) **Contracting Parties** shall indicate 'T' if the activity contributes to technology development and transfer objectives, 'C' if it contributes to capacity building objectives, 'Both' if cross-cutting and 'N/A' if not applicable.
- (d) Additional information shall be provided, such as a link to relevant program documentation, a description of the project, or available information in accordance with Article 9(5) of the Paris Agreement.

ANNEX VI

Reporting on approximated greenhouse gas inventories pursuant to Article 7

Member state:	
Reported year 't-1'	
Reporting year 't'	

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂ (1)	CH ₄	N ₂ O	HFCs	PFCs	SF ₆	Unspecified mix of HFCs and PFCs	NF ₃	Total	ETS	Effort Sharing (3)
	CO ₂ equivalent (kt)										
Total (net emissions) (1)											
1. Energy											
A. Fuel combustion (sectoral approach)											
1. Energy industries											
2. Manufacturing industries and construction											
3. Transport											
4. Other sectors											
5. Other											
B. Fugitive emissions from fuels											
1. Solid fuels											
2. Oil and natural gas											
C. CO ₂ transport and storage											
2. Industrial processes and product use											
A. Mineral industry											
B. Chemical industry											
C. Metal industry											
D. Non-energy products from fuels and solvent use											
E. Electronic Industry											
F. Product uses as ODS substitutes											
G. Other product manufacture and use											
H. Other											

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂ (1)	CH ₄	N ₂ O	HFCs	PFCs	SF ₆	Unspecified mix of HFCs and PFCs	NF ₃	Total	ETS	Effort Sharing (3)
	CO ₂ equivalent (kt)									CO ₂ equivalent (kt)	
3. Agriculture											
A. Enteric fermentation											
B. Manure management											
C. Rice cultivation											
D. Agricultural soils											
E. Prescribed burning of savannahs											
F. Field burning of agricultural residues											
G. Liming											
H. Urea application											
I. Other carbon-containing fertilizer											
J. Other											
4. Land use, land-use change and forestry (1)											
A. Forest land											
B. Cropland											
C. Grassland											
D. Wetlands											
E. Settlements											
F. Other lands											
G. Harvested wood products											
5. Waste											
A. Solid waste disposal											
B. Biological treatment of solid waste											
C. Incineration and open burning of waste											
D. Waste water treatment and discharge											
E. Other											
6. Other (as specified in summary 1.A)											
Memo items:											
International bunkers											
Aviation											
Navigation											

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂ (1)	CH ₄	N ₂ O	HFCs	PFCs	SF ₆	Unspecified mix of HFCs and PFCs	NF ₃	Total	ETS	Effort Sharing (3)
	CO ₂ equivalent (kt)										
CO ₂ emission from biomass											
CO ₂ captured											
Indirect CO ₂ (2)											
Total CO₂ equivalent emissions without land use, land-use change and forestry											
Total CO₂ equivalent emissions with land use, land-use change and forestry											
Total CO₂ equivalent emissions, including indirect CO₂, without land use, land-use change and forestry											
Total CO₂ equivalent emissions, including indirect CO₂, with land use, land-use change and forestry											

Notes:

- (1) For carbon dioxide (CO₂) from land use, land-use change and forestry the net emissions/removals are to be reported. For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).
- (2) For **Contracting Parties** that report indirect CO₂ the national totals shall be provided with and without indirect CO₂.
- (3) Emissions within the scope of Regulation (EU) 2018/842.

Brief description of the key drivers underpinning the increase or decrease in GHG emissions in x-1 (proxy) compared to x-2 (inventory). If this information is publicly available please include the hyperlink to the relevant website.

Information on the uncertainties associated with the estimations for the LULUCF sector may also be provided.

ANNEX VII

Overview of reporting on greenhouse gas inventories pursuant to Article 8(2) (1), (2)

[Article of] This Regulation	Information to be provided in the National Inventory Report (tick)	Information to be provided in a separate annex to NIR (tick)	Reference to chapter in the NIR or in separate annex (specify)
Article 9 Reporting on recalculations	Obligatory		Chapter of the NIR on 'Recalculations and improvements'
Article 10 Reporting on implementation of recommendations in Table 1 of Annex VIII	Obligatory	Obligatory	Chapter of the NIR on recalculations and improvements
Article 10 Reporting on implementation of recommendations in Table 2 of Annex VIII	Not applicable	Obligatory	
Article 12(1) Reporting on uncertainty	Not applicable	Obligatory	
Article 12(2) Reporting on completeness	Obligatory	Not applicable	In the respective table of the CRT and in the respective chapters of the NIR
Article 14(1) Reporting on consistency of reported emissions with data from the emissions trading scheme (Annex XII data)	Not applicable	Obligatory	
Article 14(2) Reporting on consistency of reported emissions with data from the emissions trading scheme (textual information)	Possible	Possible	If in the NIR: In the relevant sections of the NIR
Article 15 Reporting on consistency of the reported data on air pollutants	Possible	Possible	If in the NIR: Chapter of the NIR on 'quality assurance, quality control and verification plan'
Article 16 Reporting on consistency of the data reported on fluorinated greenhouse gases	Possible	Possible	If in the NIR: In the relevant sections of the NIR
Article 17 Reporting on consistency with energy statistics	Possible	Possible	If in the NIR: In the relevant sections of the NIR
Article 18 Reporting on changes in descriptions of national inventory systems or registries	Obligatory	Not applicable	In the relevant chapters of the NIR

Notes:

- (1) Information to be submitted by 15 January shall be submitted as draft chapters of the NIR or respective separate annexes.
- (2) The entry 'possible' means that **Contracting Parties** shall choose whether to report the information either in the NIR or in a separate annex to the NIR.

ANNEX VIII

Reporting on implementation of recommendations pursuant to Article 10

Table 1: Format for reporting information on the status of implementation of each recommendation listed in the most recently published individual UNFCCC review report, including reasons for not having implemented such a recommendation

Year of latest UNFCCC inventory review					
CRT category/ issue	Review recom- mendation	Review report/ paragraph	Member State response/status of implementation	Reason for non-implemen- tation	Chapter/section in the NIR

Table 2: Format for reporting information on the status of implementation of each recommendation, technical correction or revised estimate listed in the most recent review report pursuant to Article 35(2) of Commission Implementing Regulation No 749/2014 or to Article 32 of this Regulation

Year of latest Energy Community -internal inventory review				
CRT category/issue	Review recommen- dation, technical correction or revised estimate	Review report/para- graph	Contracting Party response/status of implementation	Chapter/section in the NIR

ANNEX IX

Reporting on inventory methods, emission factors and on related methodological descriptions for Energy Community key categories pursuant to Article 11

Part 1			Part 2				Part 3				Part 4			
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Information to be provided by the Secretariat														
Information to be provided by the Energy Community key categories			Information to be reported by Contracting Parties											
Identification of Energy Community key categories			Information related to the Energy Community key categories											
by 31 October of the year previous to the submission and by 28 February of the current inventory submission			For Energy Community key categories identified in column B, by 15 January and 15 March											
For Energy Community key categories identified in column A, by 15 January and 15 March			For Energy Community key categories identified in column A, by 15 January and 15 March											
List of Energy Community key categories (a)	tick to identify key categories where the information on methods and emission factors are not available or reported by Contracting Party in the CRT	tick to identify as a new Energy Community key category compared to the previous Energy Community greenhouse gas inventory	Methods used in the latest Contracting Party's inventory (b)	Emission factors used in the latest Contracting Party's inventory (b)	tick to identify as a new Energy Community key category compared to the latest Energy Community greenhouse gas inventory (d)	reference (section number) to the description in the final NIR (c) (g)	tick to identify as a new Energy Community key category compared to the latest Energy Community greenhouse gas inventory (d)	Methods used in the latest Contracting Party's inventory (b)	Emission factors used in the latest Contracting Party's inventory (b)	tick to identify if the methods used in the latest inventory (column D) deviate from the methods used in the previous inventory (column D)	tick to identify if the emission factors used in the latest inventory (column E) deviate from the emission factors used in the previous inventory (column E)	Summary methodological descriptions in the latest inventory	Summary methodological descriptions in the latest inventory	reference (section number) to the description in the final NIT (g)

Notes:

- (a) The categories used in the Union key category analysis shall be specified by the Commission by category code, category title, assessed greenhouse gas and, where applicable, fuel type. For example: 1.A.1.a, Public Electricity and Heat Production, Gaseous Fuels, CO₂.
- (b) Notation keys (abbreviations) for 'method applied' and 'emission factors' used in the common reporting tables' summary sheet on methods and emission factors used.
- (c) Information of the previous year's description to be included by 31 October 2023, for the first time.
- (d) Column H is to be provided by the Commission.
- (e) Information in column F is to be provided by the Commission by 31 October 2023, for the first time.

(f) Changes related to information reported in columns I, J, K and L shall only be reported, if applicable, for key categories identified in column B.

(g) 'Final NIR' means the latest available complete NIR submitted to the EU.

ANNEX X

Reporting on uncertainty and completeness pursuant to Article 12

A	B	C	D	F	G	H	I	J	K	L	M
IPCC category	Gas	Base year emission or removals	Year x emissions or removals	Emission factor/ estimation parameter uncertainty	Combined uncertainty	Contribution to Variance by Category in Year x	Type A sensitivity	Type B sensitivity	Uncertainty in trend in national emissions introduced by emission factor/ estimation parameter uncertainty	Uncertainty in trend in national emissions introduced by activity data uncertainty	Uncertainty introduced into the trend in total national emissions
		Input data	Input data	Input data Note A	$\sqrt{E^2 + F^2}$	$\frac{(G + D)^2}{(\sum D)^2}$	Note B	$\left \frac{D}{\sum C} \right $	I * F Note C	J * E * 2 Note D	K ² + L ²
		Gg CO ₂ equivalent	Gg CO ₂ equivalent	%	%	%		%	%	%	%
E.g., 1.A.1. Energy industries fuel 1	CO ₂										
E.g., 1.A.1. Energy industries fuel 2	CO ₂										
Etc.	...										
Total		$\sum C$	$\sum D$			Percentage uncertainty in total inventory:	$\sum H$				$\sum M$
							$\sqrt{\sum H}$				$\sqrt{\sum M}$

Source: 2006 IPCC guidelines, Volume 1, Table 3.2 Approach 1 uncertainty calculation

ANNEX XI

Reporting on indicators pursuant to Article 13

No	Nomenclature in Eurostat energy efficiency indicators	Indicator	Numerator / denominator (1) (4)	Guidance / definitions (2) (3)	Year X-2
1	TRANSFORMATION BO	Specific CO ₂ emissions of public and auto-producer power plants, t/TJ	CO ₂ emissions from public and auto-producer thermal power stations, kt	CO ₂ emissions from all fossil fuel combustion for gross electricity and heat production by public and auto-producer thermal power and combined heat and power plants. Emissions from heat only plants are not included.	
			All products – output by public and auto-producer thermal power stations, PJ	Gross electricity produced and any heat sold to third parties (combined heat and power plants - CHP) by public and auto-producer thermal power and combined heat and power plants. Output from heat only plants is not included. Public thermal plants generate electricity (and heat) for sale to third parties, as their primary activity. They may be privately or publicly owned. Auto-producer thermal power stations generate electricity (and heat) wholly or partly for their use as an activity, which supports their primary activity. The gross electricity generation is measured at the outlet of the main transformers, i.e. the consumption of electricity in the plant auxiliaries and in transformers is included. (source: energy balance)	
2	TRANSFORMATION EO	Specific CO ₂ emissions of auto-producer plants, t/TJ	CO ₂ emissions from auto-producers, kt	CO ₂ emissions from all fossil fuel combustion for gross electricity and heat production by auto-producer thermal power and combined heat and power plants.	
				Gross electricity produced and any heat sold to third parties (combined heat and power - CHP) by auto-producer thermal power and combined heat and power plants. Auto-producer thermal power stations generate electricity (and heat) wholly or partly for their use as an activity, which supports their primary activity. The gross electricity generation is measured at the outlet of the main transformers, i.e. the consumption of electricity in the plant auxiliaries and in transformers is included (source: energy balance).	
3	INDUSTRY A1.1	Total CO ₂ intensity - iron and steel industry, t/ million euro	Energy-related CO ₂ emissions chemical industries, kt	CO ₂ emissions from combustion of fossil fuels in manufacture of chemicals and chemical products including combustion for the generation of electricity and heat (IPCC source category 1A2c).	
			gross value added - chemical industry, billion Euro	Gross value added at constant 2016 prices in manufacture of chemicals and chemical products (NACE 24) (source: National Accounts)	

No	Nomenclature in Eurostat energy efficiency indicators	Indicator	Numerator / denominator (1) (4)	Guidance / definitions (2) (3)	Year X-2
4	INDUSTRY A1.2	Energy-related CO ₂ intensity - chemical industry, t/ million euro	Energy-related CO ₂ emissions chemical industries, kt	CO ₂ emissions from combustion of fossil fuels in manufacture of chemicals and chemical products including combustion for the generation of electricity and heat (IPCC source category 1A2c).	
			gross value added - chemical industry, billion Euro	Gross value added at constant 2016 prices in manufacture of chemicals and chemical products (NACE 24) (source: National Accounts)	
5	INDUSTRY A1.3	Energy-related CO ₂ intensity - glass, pottery and building materials industry, t/ million euro	Energy-related CO ₂ emissions glass, pottery and building materials, kt	CO ₂ emissions from combustion of fossil fuels in manufacture of non-metallic mineral products (NACE 26) including combustion for the generation of electricity and heat.	
			gross value added - glass, pottery and buildings material industry, billion Euro	Gross value added at constant 2016 prices in manufacture of non-metallic mineral products (NACE 26) (source: National Accounts)	
6	INDUSTRY A1.4	Energy-related CO ₂ intensity - food, drink and tobacco industry, t/ million euro	Energy-related CO ₂ emissions from food, drink and tobacco industry, kt	CO ₂ emissions from combustion of fossil fuels in manufacture of food products and beverages and tobacco products including combustion for the generation of electricity and heat (IPCC source category 1A2e).	
			gross value-added - food, drink and tobacco industry, billion Euro	Gross value added at constant 2016 prices in manufacture of food products and beverages (NACE 15) and tobacco products (NACE 16) (source: National Accounts)	
7	INDUSTRY A1.5	Energy-related CO ₂ intensity paper and printing industry, t/million euro	Energy-related CO ₂ emissions paper and printing, kt	CO ₂ emissions from combustion of fossil fuels in manufacture of pulp, paper and paper products and publishing, printing and reproduction of recorded media including emissions from combustion for the generation of electricity and heat (IPCC source category 1A2d)	
			Gross value-added - paper and printing industry, billion Euro	Gross value added at constant 2016 prices in manufacture of pulp, paper and paper products (NACE 21) and publishing, printing and reproduction of recorded media (NACE 22) (source: National Accounts)	
8	HOUSE-HOLDS A0	Specific CO ₂ emissions of households for space heating, kg/m ²	CO ₂ emissions of households for space heating, kt	CO ₂ emissions from fossil fuel combustion for space heating in households.	
			surface area of permanently occupied dwellings, million m ²	Total surface area of permanently occupied dwellings	
9	SERVICES B0	Specific CO ₂ emissions of commercial and institutional sector for space heating, kg/m ²	CO ₂ emissions from space heating in commercial and institutional, kt	CO ₂ emissions from fossil fuel combustion for space heating in commercial and institutional buildings in the public and private sectors.	
			Surface area of services buildings, million m ²	Total surface area of services buildings (NACE 41, 50, 51, 52, 55, 63, 64, 65, 66, 67, 70, 71, 72, 73, 74, 75, 80, 85, 90, 91, 92, 93, 99)	

No	Nomenclature in Eurostat energy efficiency indicators	Indicator	Numerator / denominator (1) (4)	Guidance / definitions (2) (3)	Year X-2
10	TRANSPORT B0	Specific diesel related CO ₂ emissions of passenger cars, g/km	CO ₂ emissions of diesel-driven passenger cars, kt	CO ₂ emissions from the combustion of diesel for all transport activity with passenger cars (IPCC source category 1A3bi only diesel)	
			Number of kilometres of diesel-driven passenger cars, billion km	Number of vehicle kilometres of total diesel-driven passenger cars licensed to use roads open to public traffic. (source: transport statistics)	
11	TRANSPORT B0	Specific petrol related CO ₂ emissions of passenger cars, g/km	CO ₂ emissions of petrol-driven passenger cars, kt	CO ₂ emissions from the combustion of petrol for all transport activity with passenger cars (IPCC source category 1A3bi only petrol)	
			Number of kilometres of petrol-driven passenger cars, billion km	Number of vehicle kilometres of total petrol-driven passenger cars licensed to use roads open to public traffic. (source: transport statistics)	

Notation: x = reporting year

Notes:

- (1) **Contracting Parties** shall report numerator and denominator, if not included in the CRT.
- (2) **Contracting Parties** shall follow this guidance. If they cannot follow exactly this guidance or if numerator and denominator are not entirely consistent, **Contracting Parties** shall clearly indicate this.
- (3) The references to IPCC source categories refer to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.
- (4) One billion means one thousand millions.

ANNEX XII

Reporting on consistency of reported emissions with data from the EU Emissions Trading System pursuant to Article 14

Allocation of verified emissions reported by installations and operators under Directive 2003/87/EC to source categories of the national greenhouse gas inventory Contracting Party
Reporting year:
Basis for data: verified ETS emissions and greenhouse gas emissions as reported in inventory submission for the year X-2

	Total emissions (CO ₂ -eq)			
	Greenhouse gas inventory emissions [kt CO ₂ eq] (3)	Verified emissions under Directive 2003/87/EC [kt CO ₂ eq] (3)	Ratio in % (Verified emissions/inventory emissions) (3)	
Greenhouse gas emissions (for GHG inventory: total GHG emissions, including indirect CO ₂ emissions if reported, without LULUCF, and excluding emissions from domestic aviation; for Directive 2003/87/EC: GHG emissions from stationary installations under Article 2(1) of Directive 2003/87/EC)				
CO ₂ emissions (for GHG inventory: total CO ₂ emissions, including indirect CO ₂ emissions if reported, without LULUCF, and excluding CO ₂ emissions from domestic aviation; for Directive 2003/87/EC: CO ₂ emissions from stationary installations under Article 2(1) of Directive 2003/87/EC)				

Category (1)	CO ₂ emissions			
	Greenhouse gas inventory emissions [kt] (3)	Verified emissions under Directive 2003/87/EC [kt] (3)	Ratio in % (Verified emissions/inventory emissions) (3)	
1.A Fuel combustion activities, total				
1.A Fuel combustion activities, stationary combustion				
1.A.1 Energy industries				
1.A.1.a Public electricity and heat production				
1.A.1.b Petroleum refining				
1.A.1.c Manufacture of solid fuels and other energy industries				

Iron and steel (for GHG inventory combined CRT categories 1.A.2.a + 2.C.1 + 1.A.1.c and other relevant CRT categories that include emissions from iron and steel (e.g. 1A1a, 1B1) (4))				
1.A.2. Manufacturing industries and construction				
1.A.2.a Iron and steel				
1.A.2.b Non-ferrous metals				
1.A.2.c Chemicals				
1.A.2.d Pulp, paper and print				
1.A.2.e Food processing, beverages and tobacco				
1.A.2.f Non-metallic minerals				
1.A.2.g Other				
1.A.3. Transport				
1.A.3.e Other transportation (pipeline transport)				
1.A.4 Other sectors				
1.A.4.a Commercial/Institutional				
1.A.4.c Agriculture/Forestry/Fisheries				
1.B Fugitive emissions from Fuels				
1.C CO₂ Transport and storage				
1.C.1 Transport of CO ₂				
1.C.2 Injection and storage				
1.C.3 Other				
2.A Mineral products				
2.A.1 Cement production				
2.A.2 Lime production				
2.A.3 Glass production				
2.A.4 Other process uses of carbonates				
2.B Chemical industry				
2.B.1 Ammonia production				
2.B.3 Adipic acid production (CO ₂)				
2.B.4 Caprolactam, glyoxal and glyoxylic acid production				
2.B.5 Carbide production				
2.B.6 Titanium dioxide production				
2.B.7 Soda ash production				
2.B.8 Petrochemical and carbon black production				
2.C Metal production				
2.C.1 Iron and steel production				
2.C.2 Ferroalloys production				
2.C.3 Aluminium production				

2.C.4 Magnesium production				
2.C.5 Lead production				
2.C.6 Zinc production				
2.C.7 Other metal production				

Category (1)	N2O emissions			
	Greenhouse gas inventory emissions [kt CO ₂ eq] (3)	Verified emissions under Directive 2003/87/EC [kt CO ₂ eq] (3)	Ratio in % (Verified emissions/ inventory emissions) (3)	Comment (2)
2.B.2 Nitric acid production				
2.B.3 Adipic acid production				
2.B.4 Caprolactam, glyoxal and glyoxylic acid production				

Category (1)	PFC emissions			
	Greenhouse gas inventory emissions [kt CO ₂ eq] (3)	Verified emissions under Directive 2003/87/EC [kt CO ₂ eq] (3)	Ratio in % (Verified emissions/ inventory emissions) (3)	Comment (2)
2.C.3 Aluminium production				

Notation: x = reporting year

Notes:

- (1) The allocation of verified emissions to disaggregated inventory categories at four digit level must be reported where such allocation of verified emissions is possible and emissions occur. The following notation keys should be used:
 NO = not occurring; IE = included elsewhere; C = confidential;
 Negligible = small amount of verified emissions may occur in respective CRT category, but amount is < 5 % of the category.
- (2) The column comment should be used to give a brief summary of the checks performed and if a **Contracting Party** wants to provide additional explanations with regard to the allocation reported.
- (3) Data to be reported up to one decimal point for kt and % values.
- (4) To be filled on the basis of combined CRT categories pertaining to 'Iron and Steel', to be determined individually by each **Contracting Party**; the stated formula is for illustration purposes only.

ANNEX XIII

<...>

ANNEX XIV

Reporting on consistency with energy statistics pursuant to Article 17(2)

FUEL TYPES			Apparent consumption reported in GHG inventory (TJ) (3)	Apparent consumption using data reported pursuant to Regulation (EC) No 1099/2008 (TJ) (3)	Absolute difference (1) (TJ) (3)	Relative difference (2) % (3)	Explanations for differences
Liquid fossil	Primary fuels	Crude oil					
		Orimulsion					
		Natural gas liquids					
	Secondary fuels	Gasoline					
		Jet kerosene					
		Other kerosene					
		Shale oil					
		Gas/diesel oil					
		Residual fuel oil					
		Liquefied petroleum gases (LPG)					
		Ethane					
		Naphtha					
		Bitumen					
		Lubricants					
		Petroleum coke					
		Refinery feedstocks					
		Other oil					
Other liquid fossil							
Liquid fossil totals							

FUEL TYPES		Apparent consumption reported in GHG inventory (TJ) (3)	Apparent consumption using data reported pursuant to Regulation (EC) No 1099/2008 (TJ) (3)	Absolute difference (1) (TJ) (3)	Relative difference (2) % (3)	Explanations for differences
Primary fuels	Anthracite					
	Coking coal					
	Other bituminous coal					
	Sub-bituminous coal					
	Lignite					
	Oil shale and tar sand					
Secondary fuels	BKB and patent fuel					
	Coke oven/gas coke					
	Coal tar					
Other solid fossil						
Solid fossil totals						
Gaseous fossil	Natural gas (dry)					
Other gaseous fossil						
Gaseous fossil totals						
Waste (non-biomass fraction)						
Other fossil fuels						
Peat						
Total						

Notes:

- (1) Apparent consumption reported in GHG inventory minus apparent consumption using data reported pursuant to Regulation (EC) No 1099/2008
- (2) Absolute difference divided by apparent consumption reported in GHG inventory
- (3) Data to be reported up to one decimal point for TJ and % values

ANNEX XV



ANNEX XVI



ANNEX XVII



ANNEX XVIII



ANNEX XX



ANNEX XXI

Timescales for cooperation and coordination in preparing the **Energy Community** greenhouse gas inventory report pursuant to Article 25(1)

Element	Who	When	What
1. Submission of annual inventories (complete CRT and elements of the national inventory report) by Member States	Contracting Parties	Annually by 15 January	Elements listed in Article 26(3) of Regulation (EU) 2018/1999
2. 'Initial checks' of Contracting Party submissions	Secretariat (Eurostat), DG JRC, assisted by European Environment Agency (EEA)	For the Contracting Party submission from 15 January at the latest until 28 February	Checks to verify the transparency, accuracy, consistency, completeness and comparability of Contracting Parties' inventories (by EEA). Comparison of energy data provided by Contracting Parties in the CRT with Eurostat energy data (sectoral and reference approach) by Eurostat and EEA. Check of Contracting Parties' agriculture inventories by JRC (in consultation with Contracting Parties). Check of Contracting Parties' land use, land-use change and forestry (LULUCF) inventories by EEA (in consultation with JRC and Contracting Parties The findings of the initial checks will be documented.
3. Compilation of draft Energy Community inventory and inventory report (elements of the Energy Community inventory report)	Secretariat (JRC), assisted by EEA	Until 28 February	Draft Energy Community inventory and inventory report (compilation of Contracting Party information), based on Contracting Party inventories and additional information where needed (as submitted on 15 January).
4. Circulation of 'initial check' findings including notification of potential gap-filling	Secretariat assisted by EEA	28 February	Circulation of 'initial check' findings including notification of potential gap-filling and making available the findings.
5. Circulation of draft Energy Community inventory and inventory report	Secretariat assisted by EEA	28 February	Circulation of the draft Energy Community inventory on 28 February to Contracting Parties . Contracting Parties check data.
6. Submission of updated or additional inventory data and complete national inventory reports by Contracting Parties	Contracting Parties	By 15 March	Updated or additional inventory data submitted by Contracting Parties (to remove inconsistencies or to fill gaps) and complete national inventory reports.
7. Contracting Party commenting on the draft Energy Community inventory	Contracting Parties	By 15 March	If necessary, provide corrected data and comments to the draft Energy Community inventory.
8. Contracting Party responses to the 'initial checks' Contracting Parties	Contracting Parties	By 15 March	Contracting Parties respond to 'initial checks' if applicable.

Element	Who	When	What
9. Circulation of follow-up initial check findings	Secretariat assisted by EEA	15 March – 31 March	Evaluation of Contracting Parties' responses to the initial-check findings and follow-up questions to Contracting Parties .
10. Estimates for data missing from a national inventory	Secretariat assisted by EEA	31 March	The Secretariat prepares estimates for missing data by 31 March of the reporting year and communicates these to the Contracting Parties .
11. Comments from Contracting Parties regarding the Commission estimates for missing data	Contracting Parties	7 April	Contracting Parties provide comments on the Secretariat estimates for missing data, for consideration by the Secretariat.
12. Contracting Parties responses to follow-up 'initial checks'	Contracting Parties	7 April	Contracting Parties provide responses to follow up of 'initial checks'.
13. Contracting Parties' submissions to the UNFCCC	Contracting Parties	15 April	Submissions to the UNFCCC (with a copy to EEA).
14. Final annual Energy Community inventory (incl. Energy Community inventory report)	Secretariat assisted by EEA	15 April	Submission to UNFCCC of the final annual Energy Community inventory.
15. Submission of any other resubmission after the initial check phase	Contracting Parties	When additional resubmissions occur	Contracting Parties provide to the Secretariat any other resubmission (CRT or national inventory report) which they provide to the UNFCCC secretariat after the initial check phase.

ANNEX XXII



ANNEX XXIII

Format for reporting on national systems for policies and measures and projections pursuant to Article 36

The first report submitted pursuant to Article 36 shall provide a full description and contain all of the information listed in the Table below. For subsequent reporting years, only modifications of the national system for policies and measures and projections need to be reported.

Reporting obligation	Fields for textual information	Examples of details that could be reported under this specific reporting obligation
Name and contact information for the entities with overall responsibility for the National Systems for policies and measures and projections		<ul style="list-style-type: none"> • List the responsible entity or entities, and their specific roles and responsibilities. Identify the lead entity. • If such a description has already been provided, report changes to the name and contact information.
Institutional arrangements in place for preparation of reports on policies and measures and of projections as well as for reporting on them, including an organogram		<ul style="list-style-type: none"> • Define the overall structure/set-up of your national system. List all organisations involved in the preparation of the report on policies and measures and projections and in the archiving of information, their responsibilities, and their interactions. • Provide a description of the organogram to show the organisational structure of the National System for policies and measures and projections, including the functional and hierarchical interrelationships between organisations. • If such a description of the national system has already been provided, report and explain changes to institutional arrangements.
Legal arrangements in place for preparation of reports on policies and measures and of projections		<ul style="list-style-type: none"> • Are there any legal arrangements in place to ensure reporting is completed, and/or data provided? Report the legislation and its scope. • If such a description has already been provided, report the changes to legal arrangements in place for the preparation of the report on policies and measures and projections.
Procedural and administrative arrangements and timescales in place for the preparation of reports on policies and measures and of projections, to ensure the timeliness, transparency, accuracy, consistency, comparability and completeness of the information reported.		<ul style="list-style-type: none"> • Report the cycle for preparation of report on policies and measures and of projections. • Summarise the methodologies and mechanisms how timeliness, transparency, accuracy, consistency, comparability and completeness of the information reported are ensured. • Report on assurance of consistency with preparation of reports on policies and measures, where relevant, and of projections under Directive (EU)2016/2284. • Optionally, provide diagrams that show the processes involved in the national system. These diagrams could include the information flows through the system, and at which points QC and QA measures are applied. • If such a description has already been provided, report the changes to procedural and administrative arrangements.

Description of the information collection process		<ul style="list-style-type: none"> • Provide a summary of the process for collecting information for developing policies and measures, evaluating policies and measures and for developing projections. Explain if and how consistent processes are used for collecting and using information for policies and measures and projections. • If such a description has already been provided, report the changes to the data collection process.
Description of the alignment with the national inventory system		<ul style="list-style-type: none"> • Provide information on the alignment with the national system for the GHG inventory, such as processes to ensure consistency of the data used. • Option to provide details of links to other climate reporting systems if relevant. • If such a description has already been provided, report changes to the links to the national system for greenhouse gas inventories.
Description of the links to arrangements on integrated national energy and climate-reports pursuant to Art. 17 of Regulation (EU) 2018/1999		<ul style="list-style-type: none"> • Provide a summary of the linkages between the processes used to collect data related to policies and measures and projections, and relevant processes to report on progress other dimensions of the Energy Union, e.g. processes to foster consistent use of energy-related data for the development of policies and measures and projections and • for integrated progress reporting. • If such a description has already been provided, report changes to the links to energy-related reporting systems.
Description of the quality assurance and quality control activities for reporting of policies and measures and projections		<ul style="list-style-type: none"> • Provide a summary of the Quality Control activities applied to help ensure accuracy and completeness in the policies and measures and projections reports. Report the Quality Assurance activities in place. • If such a description has already been provided, report the changes to the quality control and quality assurance activities.
Description of the process for selecting assumptions, methodologies and models for making projections of anthropogenic greenhouse gas emissions		<ul style="list-style-type: none"> • Describe the process behind the selection of methodologies and models used. Contracting Parties may also report the reasons for their choices, or cross reference to other reports providing this information. • If such a description has already been provided, report the changes to these processes.
Description of procedures for the official consideration and approval of the Contracting Parties national system for policies and measures and projections		<ul style="list-style-type: none"> • Describe the process for officially approving the national system or changes to the national system. • If such a description has already been provided, report the changes to this process.
Information on relevant institutional administrative and procedural arrangements for domestic implementation of the EU's nationally determined contribution, or changes to such arrangements		<ul style="list-style-type: none"> • Refer to the arrangements for implementing policies and measures as means of domestic implementation and to the arrangements for national projections of anthropogenic greenhouse gas emissions by sources and removals by sinks as means to track domestic progress. • If such a description has already been provided, report the changes to such arrangements.
Description of the stakeholder engagement undertaken in relation to the preparation of policies and measures and projections		<ul style="list-style-type: none"> • Report a description of the stakeholder engagement undertaken in relation to the preparation of policies and measures and projections. Indicate which stakeholders were consulted, and any changes or improvements made.

ANNEX XXIV

Reporting on national policies and measures pursuant to Article 37

Table 1: Sectors, gases and type of policy instrument

General comments		
Reference to assessments and underpinning technical reports		
Indicators used to monitor and evaluate progress over time (j)	Value	
	Year	
	Description	
Entities responsible for implementing the policy (i)	Name	
	Type	
Projections scenario in which the PaM is included		
Implementation period	Finish	
	Start	
Status of implementation (h)		
Union policies which resulted in the implementation of the PaM	Other	
	Energy Community policy (g)	
Type of policy Instrument (f)		
Assessment of the contribution of the policy or Measure to the achievement of the long-term strategy referred to in Article 15 Regulation (EU) 2018/1999		
Short description		
Quantified objective (e)		
Objective (d)		
GHG(s) affected (c)		
Sector(s) affected (b)		
Geographical coverage (a)		
In case of a grouped policy or measure, which single policies or measures does it cover		
Single or grouped policy or measure		
Name of policy or measure		
PaM number		

Notes: Abbreviations: GHG = greenhouse gas; LULUCF = land use, land-use change and forestry.

(a) **Contracting Parties** shall select from the following categories: covering two or more countries, national, regional, local.

(b) **Contracting Parties** shall select from the following sectors (more than one sector can be selected for cross-sectoral policies and measures): energy supply (comprising extraction, transmission, distribution and storage of fuels as well as the transformation of energy for heating and cooling and electricity production); energy consumption (comprising consumption of fuels and electricity by end users such as households, public administration; services, industry and agriculture); transport; industrial processes (comprising industrial activities that chemically or physically transform materials leading to greenhouse gas emissions, use of greenhouse gases in products and non-energy uses of fossil fuel carbon); agriculture; LULUCF; waste management/waste; other sectors.

(c) **Contracting Parties** shall select from the following GHGs (more than one GHG can be selected): carbon dioxide (CO₂); methane (CH₄); nitrous oxide (N₂O); hydrofluorocarbons (HFC); perfluorocarbons (PFC); sulphur hexafluoride (SF₆); nitrogen trifluoride (NF₃).

(d) Objective means 'initial statement of the outcomes (including results and impacts) intended to be achieved by the intervention'. **Contracting Parties** shall select from the following objectives (more than one objective may be selected, additional objectives may be added and specified under 'other'):

For **energy supply** — increase in renewable energy sources in the electricity sector; increase in renewable energy in the heating and cooling sector; switch to less carbon-intensive fuels; enhanced non-renewable low carbon generation (nuclear); reduction of losses; efficiency improvement in the energy and transformation sector; carbon capture and storage or carbon capture and utilisation; control of fugitive emissions from energy production; other energy supply.

For **energy consumption** — efficiency improvements of buildings; efficiency improvement of appliances; efficiency improvement in services/tertiary sector; efficiency improvement in industrial end-use sectors; demand management/reduction; other energy consumption.

For **transport** — efficiency improvements of vehicles; modal shift to public transport or non-motorized transport; low carbon fuels; electric road transport; demand management/reduction; improved behaviour; improved transport infrastructure; reduce emissions from international air or maritime transport; other transport.

For **industrial processes** — installation of abatement technologies; improved control of fugitive emissions from industrial processes; improved control of manufacturing, fugitive and disposal emissions of fluorinated gases; replacement of fluorinated gases by gases with a lower GWP value; other industrial processes.

For **waste management/waste** — demand management/reduction; enhanced recycling; enhanced CH₄ collection and use; improved treatment technologies; improved landfill management; waste incineration with energy use; improved wastewater management systems; reduced landfilling; other waste.

For **agriculture** — reduction of fertilizer/manure use on cropland; other activities improving cropland management; improved livestock management; improved animal waste management systems; activities improving grazing land or grassland management; improved management of organic soils; other agriculture.

For **LULUCF** — afforestation and reforestation; conservation of carbon in existing forests; enhancing production in existing forests; increasing the harvested wood products pool; enhanced forest management; prevention of deforestation; strengthening protection against natural disturbances; substitution of GHG intensive feedstocks and materials with harvested wood products; prevention of drainage or rewetting of wetlands; restoration of degraded lands; other LULUCF.

For **Other** — **Contracting Parties** shall provide a brief description of the objective.

(e) **Contracting Parties** shall include, as a minimum, the figure(s), unit(s), end year and base year if the objective(s) is(are) quantified. Quantified objectives shall be specific, measurable, achievable, relevant and time-related.

(f) **Contracting Parties** shall select from the following policy types: economic; fiscal; voluntary/negotiated agreements; regulatory; information; education; research; planning; other.

(g) List here only Union policy/policies that are implemented through the national policy or where national policies are aimed directly at meeting the objectives of Union policies. **Contracting Party** shall select a policy/policies from a list provided in the electronic version of the template format, or select other and specify the name of the **Energy Community** policy. **Contracting Parties** shall select Directive (EU) 2016/2284 if the PaM has been reported under that Directive.

(h) **Contracting Parties** shall select from the following categories: planned; adopted; implemented; expired. Expired policies and measures shall be reported in the template only if they have an effect, or if they are expected to continue to have an effect on greenhouse gas emissions.

(i) **Contracting Parties** shall select from the following options and enter the name/s of entities responsible for implementing the policy or measure (more than one entity may be selected): national government; regional entities; local government; companies/businesses/industrial associations; research institutions; others not listed.

(j) **Contracting Parties** shall provide any indicator used (including the unit) and values for such indicators that they use to monitor and evaluate progress of policies and measures. Those values can be either *ex-post* or *ex-ante* values and Contracting Parties shall specify the year or years for which the value applies. Values for multiple indicators and years may be reported. Performance indicators identified by Contracting Parties shall be relevant, accepted, credible, easy and robust.

Table 2: Available results of ex-ante and ex-post assessments of the effects of individual or groups of policies and measures on mitigation of climate change (a)

Ex-post assessment (e)	Documentation/ Source of estimation if available (provide a weblink of the report where the figure is referenced from)		
	Factors affected by the PaM		
	Explanation of the basis for the mitigation estimates		
	GHG emissions reduction (kt CO ₂ -equivalent per year) (b)	Total (d)	
		LULUCF (c)	
		EDS/ESR	
EU ETS			
	Year of which reduction applies		
Ex-ante assessment	Documentation / Source of estimation if available (provide a weblink of the report where the figure is referenced from)		
	Factors affected by the PaM		
	Explanation of the basis for the mitigation estimates		
	GHG emissions reductions in t + 15 (kt CO ₂ -equivalent per year)	Total (d)	
		LULUCF (c)	
		ESR	
		EU ETS	
	GHG emissions reductions in t + 10 (kt CO ₂ -equivalent per year)	Total (d)	
		LULUCF (c)	
		ESR	
		EU ETS	
	GHG emissions reductions in t + 5 (kt CO ₂ -equivalent per year)	Total (d)	
		LULUCF (c)	
		ESR	
		EU ETS	
	GHG emissions reductions in year t (kt CO ₂ -equivalent per year)	Total (d)	
		LULUCF (c)	
		ESR	
		EU ETS	
	Policy impacting EU ETS, LULUCF and/or ESD/ESR /emission		
		PaM number	

Abbreviations: EU ETS = EU Emission Trading System; ESR = Effort Sharing Regulation (EU) 2018/842; ESD = Effort Sharing Decision No 406/2009/EC; LULUCF = land use, land-use change and forestry.

Notes:

- (a) **Contracting Parties** shall report on all the policies and measures or groups of policies and measures for which such assessment is available. Notation: t signifies the first future year ending with 0 or 5 immediately following the reporting year.
- (b) **Contracting Parties** may report ex-post assessments for more than one year, where available reporting shall focus on years ending with 0 or 5.
- (c) Enhanced removals or decreased emissions of greenhouse gases shall be expressed as a positive number. Decreased removals or increased emissions shall be expressed as a negative number.
- (d) In this field, the total of the EU ETS and ESR sectors shall be entered if the split between EU ETS and ESR is not available.
- (e) Ex-post evaluations include all evaluations based on results from parts of, or the whole implementation period.

Table 3: Available projected and realised costs and benefits of individual or groups of policies and measures on mitigation of climate change (a)

Realized costs and benefits	Description of non-GHG mitigation benefits.	
	Documentation / Source of cost estimation (provide a weblink of the report where the figure is referenced from)	
	Description of cost estimates (Basis for cost estimate, what type of costs are included in the estimate, methodology) (c)	
	Price year	
	Absolute net cost per year in EUR	
	Net costs in EUR per tonne CO ₂ -equivalent reduced/ sequestered	
	Absolute benefit (b) per year in EUR	
	Benefits (b) in EUR per tonne CO ₂ -equivalent reduced/ sequestered	
	Absolute gross costs per year in EUR	
	Gross costs in EUR per tonne CO ₂ -equivalent reduced/sequestered	
	Year(s) for which cost has been calculated	
Projected costs and benefits	Description of non-GHG mitigation benefits	
	Documentation / Source of cost estimation (provide a weblink of the report where the figure is referenced from)	
	Description of cost estimates (basis for cost estimate, what type of costs are included in the estimate, methodology) (c)	
	Price year	
	Absolute net cost per year in EUR	
	Net costs in EUR per tonne CO ₂ -equivalent reduced/ sequestered	
	Absolute benefit (b) per year in EUR	
	Benefits(b) in EUR per tonne CO ₂ -equivalent reduced/ sequestered	
	Absolute gross costs per year in EUR	
	Gross costs in EUR per tonne CO ₂ -equivalent reduced/sequestered	
	Year(s) for which cost has been calculated	
	PaM number	

Notes:

(a) **Contracting Parties** shall report on all the policies and measures or groups of policies and measures for which such assessment is available.

(b) A benefit shall be indicated in the template as a negative cost.

(c) The description shall include the type of costs and benefits that have been taken into consideration, the stakeholders considered in the assessment of costs and benefits, the baseline against which costs and benefits are compared, and the methodology.

ANNEX XXV

Reporting on national projections pursuant to Article 38

Table 1a: Greenhouse gas projections by gases and categories (1)

Category (2)	Separately for: CO ₂ , CH ₄ , N ₂ O, SF ₆ , NF ₃ , (kt) and HFCs, PFCs, unspecified mix of HFCs and PFCs- (kt CO ₂ -eq) (3)					Total GHG emissions (kt CO ₂ -eq)					ETS emissions (kt CO ₂ -eq) (4)					ESR emissions (kt CO ₂ -eq) (5)									
	Year					Year					Year					Year									
	projection base year (6)	t - 5 (7)	t	t + 5	t + 10	t + 15	projection base year	t - 5	t	t + 5	t + 10	t + 15	projection base year	t - 5	t	t + 5	t + 10	t + 15	projection base year	t - 5	t	t + 5	t + 10	t + 15	
Total excluding LULUCF																									
Total including LULUCF																									
1. Energy																									
A. Fuel combustion																									
1. Energy industries																									
a. Public electricity and heat production																									
b. Petroleum refining																									
c. Manufacture of solid fuels and other energy industries																									
2. Manufacturing industries and construction																									
3. Transport																									
a. Domestic aviation																									
b. Road transportation																									
c. Railways																									
e. Other transportation																									
4. Other sectors																									
a. Commercial/ Institutional																									
b. Residential																									
c. Agriculture/ Forestry/ Fishing																									
5. Other																									
B. Fugitive emissions from fuels																									
1. Solid fuels																									

2. Oil and natural gas and other emissions from energy production																					
C. CO ₂ transport and storage																					
2. Industrial processes																					
A. Mineral Industry of which 2.A.1 (cement production)																					
B. Chemical industry																					
C. Metal industry of which 2.C.1 (Iron and steel production)																					
D. Non-energy products from fuels and solvent use																					
E. Electronics industry																					
F. Product uses as substitutes for ODS (8)																					
G. Other product manufacture and use																					
H. Other																					
3. Agriculture																					
A. Enteric fermentation																					
B. Manure management																					
C. Rice cultivation																					
D. Agricultural soils																					
E. Prescribed burning of savannahs																					
F. Field burning of agricultural residues																					
G. Liming																					
H. Urea application																					
I. Other carbon-containing fertilizers																					
J. Other (please specify)																					
4. Land Use, Land-Use Change and Forestry (LULUCF, reported emissions and removals) (9)																					
A. Forest land																					
B. Cropland																					
C. Grassland																					
D. Wetlands																					
E. Settlements																					
F. Other Land																					
G. Harvested wood products																					
H. Other																					

5. Waste																			
A. Solid Waste Disposal																			
B. Biological treatment of solid waste																			
C. Incineration and open burning of waste																			
D. Wastewater treatment and discharge																			
E. Other (please specify)																			
Memo items																			
International bunkers																			
Aviation																			
Navigation																			
CO ₂ emissions from biomass																			
CO ₂ captured																			
Indirect CO ₂ (if available) (10)																			

Notation: t signifies the first future year ending with 0 or 5 immediately following the reporting year

Notes:

- (1) Consistency with the data reported under Article 8 of this Regulation is encouraged.
- (2) Use of notation keys: as regards the terms of use defined in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (chapter 8: reporting guidance and Tables), the notation keys of IE (included elsewhere), NO (not occurring), C (confidential) and NA (not applicable) may be used, as appropriate when projections do not yield data on a specific reporting level (see 2006 IPCC Guidelines).
- The use of the notation key NE (Not Estimated) shall be restricted to the situation where a disproportionate amount of effort would be required to collect data for a category or a gas from a specific category that would be insignificant in terms of the overall level and trend in national emissions. In these circumstances a **Contracting Party** shall list all categories and gases from categories excluded on these grounds, together with a justification for exclusion in terms of the likely level of emissions or removals and identify the category as 'not estimated' using the notation key 'NE' in the reporting Tables.
- (3) Unspecified mix of HFCs and PFCs is to be reported only if emissions are projected, for which it is not possible to report them under HFCs or under PFCs.
- (4) Emissions in the scope of Directive 2003/87/EC.
- (5) Emissions in the scope of Regulation (EU) 2018/842.
- (6) It shall be reported to which inventory submission (year, version) the base year was calibrated.
- (7) Values for t-5 shall only be provided when t-5 is after the projection base year.
- (8) ODS – ozone depleting substances.
- (9) For the purposes of reporting, the signs for removal shall always be negative (-) and the signs for emissions shall be positive (+). If the information requested in Table 1b is provided in full, this section does not need to be reported.
- (10) Projected indirect CO₂ emissions reported in this Table are part of the projected total greenhouse gas emissions (excluding and including LULUCF) and shall be reported as such if available and projected separately from the other reported emissions.

Table 1b:



Table 2: Indicators to monitor and evaluate projected progress of policies and measures if used

Indicator (1)/ numerator/ denominator	Unit	Guidance/definition	Guidance/ source	Indicator used (Yes/No)	With existing measures					With additional measures									
					Base year	t	t + 5	t + 10	t + 15	Base year	t	t + 5	t + 10	t + 15					
Carbon Intensity of the overall economy	tCO ₂ eq/ GDP	EUR (2016); Carbon intensity to be calculated with GDP as defined by Eurostat																	
GHG intensity of domestic power and heat generation	tCO ₂ / MWh	MWh of gross electricity and heat generation as defined by Eurostat																	
GHG intensity of final energy consumption by sector																			
Industry	tCO ₂ eq/ toe																		
Residential	tCO ₂ eq/ toe																		
Tertiary	tCO ₂ eq/ toe																		
Transport	tCO ₂ eq/ toe																		
Passenger transport (when available)	tCO ₂ eq/ toe																		
Freight transport (when available)	tCO ₂ eq/ toe																		
<i>Add a line for each other indicator</i>																			

Notation: t signifies the first future year ending with 0 or 5 immediately following the reporting year

Notes:

(1) Please add a row per indicator used in the projections.

Table 3: Reporting on parameters / variables for projections, if used (1) (2)

Parameter used (3) ('with existing measures' scenario)	Parameter / variable part of projections (6)	Year	Values	Default unit	Sectoral projections for which the parameter is used (6)	Comment for guidance	EUR (2016) (8)
1. General parameters and variables							
Population				Count			EUR (2016) (8)
Gross domestic product (GDP)	Real growth rate			%			EUR (2016)
	Constant price			EUR million			EUR (2016)
Gross value added (GVA)-total				EUR million			EUR (2016)
Gross value added (GVA) - agricultures				EUR million			EUR (2016)
Gross value added (GVA)-construction				EUR million			EUR (2016)
Gross value added (GVA) - services				EUR million			EUR (2016)
Gross value added (GVA) – energy sector				EUR million			EUR (2016)
Gross value added (GVA) – industry				EUR million			EUR (2016)
Number of households				Thousands inhabitants/ household			
Household size							
					International Aviation in the EU ETS		
					1:A:3:a Domestic aviation		
					5 Waste		
					4 LULUCF		
					3 Agriculture		
					2 Industrial Processes and product use		
					1B Fugitive emissions from fuels		
					1:A:4:b Residential		
					1:A:4:a Commercial = institutional		
					1:A:3 Transport excluding 1:A:3:a domestic aviation		
					1:A:2 Manufacturing industries and construction		
					1 A:1 Energy industries		
					Year of publication of data source		
					Year of publication of data source		
					Data source		

Disposable income of households																			EUR / year	
Number of passenger-kilometres (all modes)																			million pkm	
Number of passenger-kilometres – road																			million pkm	
<i>Of which public road transport</i>																			<i>million pkm</i>	
<i>Of which private cars</i>																			<i>million pkm</i>	
<i>Of which motorcycles</i>																			<i>million pkm</i>	
<i>Of which buses</i>																			<i>million pkm</i>	
Number of passenger-kilometres – rail																			million tkm	
Number of passenger-kilometres – domestic aviation																			million tkm	
Number of passenger-kilometres – international aviation																			million tkm	
Number of passenger-kilometres – domestic navigation																			million tkm	
Freight transport tonnes-kilometres (all modes)																			million tkm	
Freight transport tonnes-kilometres - road																			million tkm	
Freight transport tonnes-kilometres - rail																			million tkm	
Freight transport tonnes-kilometres – international aviation																			million tkm	

Freight transport tonnes-kilometres – do- mestic navigation (inland waterways and national maritime)	Coal	International (wholesale) fuel import prices	million tkm	either EUR/ GJ	or EUR/tonne	EUR (2016); Indicate if Commission recommen- dation has been followed; for calorific values use values published by Eurostat	
	Crude Oil		million tkm	either EUR/ GJ	or EUR/tonne	EUR (2016); Indicate if Commission recommen- dation has been followed	
	Natural gas		million tkm	either EUR/ GJ	or EUR/tonne	EUR (2016); Indicate if Commission recommen- dation has been followed; for calorific values use values published by Eurostat	
EU ETS carbon price			EUR/EUA		EUR (2016); Indicate if Commission recommen- dation has been followed		

Heat	ktoe																			
Renewable energy	ktoe																			
Other	ktoe																			
Tertiary	ktoe																			
Solids	ktoe																			
Oil	ktoe																			
Gas	ktoe																			
Electricity	ktoe																			
Heat	ktoe																			
Renewable energy	ktoe																			
Other	ktoe																			
Agriculture/ Forestry	ktoe																			
Transport	ktoe																			
Solids	ktoe																			
Oil	ktoe																			
Gas	ktoe																			
Electricity	ktoe																			
Heat	ktoe																			
Renewable energy	ktoe																			
Other	ktoe																			
thereof passenger transport (when available)	ktoe																			
thereof freight transport (when available)	ktoe																			
thereof international aviation	ktoe																			
Other	ktoe																			

3. Non-CO ₂ emission related parameters																	
3.1 Agriculture																	
Livestock																	
Dairy cattle																	1 000 heads
Non-dairy cattle																	1 000 heads
Sheep																	1 000 heads
Pig																	1 000 heads
Poultry																	1 000 heads
Nitrogen input from application of synthetic fertilizers																	kt nitrogen
Nitrogen input from application of manure																	kt nitrogen
Nitrogen fixed by N-fixing crops																	kt nitrogen
Nitrogen in crop residues returned to soils																	kt nitrogen
Area of cultivated organic soils																	1 000 hectares
3.2 Waste																	
Municipal solid waste (MSW) generation																	t
Municipal solid waste (MSW) going to landfills																	t
Share of CH ₄ recovery in total CH ₄ generation from landfills																	%

4. LULUCF												
4.1 Managed forest land												
Forest harvest removals for energy use											1 000 cubic meters	
Forest harvest removals for non-energy use											1 000 cubic meters	
Forest increment											1 000 cubic meters	
Forest disturbances included in modelling											Yes / No	
Forest land remaining forest land											1 000 hectares	
4.2 Afforested land												
Forest harvest removals for energy use											1 000 cubic meters	
Forest harvest removals for non-energy use											1 000 cubic meters	
Forest increment											1 000 cubic meters	
Cropland converted to forest land											1 000 hectares	
Grassland converted to forest land											1 000 hectares	
Wetlands converted to forest land											1 000 hectares	
Settlements converted to forest land											1 000 hectares	
Other land converted to forest land											1 000 hectares	
4.3 Deforested land												
Forest land converted to cropland											1 000 hectares	

Forest land converted to grassland																							1 000 hectares																				
Forest land converted to wetlands																									1 000 hectares																		
Forest land converted to settlements																									1 000 hectares																		
Forest land converted to other land																									1 000 hectares																		
4.4 Managed crop-land																																											
Cropland, remaining cropland																									1 000 hectares																		
Grassland, wetland, settlement or other land converted to cropland																									1 000 hectares																		
Cropland converted to wetland, settlement or other land (excl. forest land)																									1 000 hectares																		
4.5 Managed grass-land																																											
Grassland remaining grassland																									1 000 hectares																		
Cropland, wetland, settlement or other land, converted to grassland																									1 000 hectares																		
Grassland converted to wetland, settlement or other land																									1 000 hectares																		
4.6 Managed wetland																																											
Wetland remaining wetland																									1 000 hectares																		
Settlement or other land, converted to wetland																									1 000 hectares																		

Table 5a

<...>

Table 5b

<...>

Table 6

<...>

Table 7: Key parameters that were varied in the sensitivity analysis

(Submit for each sensitivity scenario calculated). Only those parameters are to be filled in that were varied in a specific scenario.

Parameter values in sensitivity scenario		Year	Values					Default unit	Comment for Guidance
			Parameter varied (1)	Base = Reference year	Base = Reference year	t- 5	t		
General parameters and variables									
Population								Count	
Gross domestic product (GDP)	Real growth rate							%	
	Constant prices							EUR million	EUR (2016) (2)
Gross value added (GVA) – total								EUR million	EUR (2016)
Gross value added (GVA) – agriculture								EUR million	EUR (2016)
Gross value added (GVA) – construction								EUR million	EUR (2016)
Gross value added (GVA) – services								EUR million	EUR (2016)
Gross value added (GVA) – energy sector								EUR million	EUR (2016)
Gross value added (GVA) – industry								EUR million	EUR (2016)
International (wholesale) fuel import prices	Coal							EUR/GJ	EUR (2016)
								EUR/toe	EUR (2016)
	Crude Oil							EUR/GJ	EUR (2016)
								EUR/toe	EUR (2016)
	Natural gas							EUR/GJ	EUR (2016)
								EUR/toe	EUR (2016)
EU ETS carbon price								EUR/ EUA	EUR (2016)
Number of heating degree days (HDD)								Count	

Number of cooling degree days (CDD)										Count	
Number of passenger-kilometres (all modes)										million pkm	
Freight transport tonnes-kilometres (all modes)										million tkm	
<i>(Add rows for further parameters that were varied)</i>											

Note: add rows at the end of the Table for other parameters varied. Leave those lines empty for which parameters were not varied.

(1) Indicate with Yes / No.

(2) Any update of this base year for expressing monetary values shall be part of the recommendations by the Commission on harmonised values for key supra-nationally determined parameters under Article 38(3) of this Regulation.

PART II

ACQUIS COMMUNAUTAIRE

RENEWABLE ENERGY



DIRECTIVE (EU) 2018/2001 of 11 December 2018 on the promotion of the use of energy from renewable sources

Incorporated and adapted by the Ministerial Council Decision 2021/14/MC-EnC of 30 November 2021 on incorporating Directive (EU) 2018/2001 in the Energy Community acquis communautaire and amending Article 20 and Annex I of the Treaty.

The adaptations made by Ministerial Council Decision 2021/14/MC-EnC are highlighted in bold and blue.

Whereas it should be ensured, as early as possible, that Guarantees of origins issued by Contracting Parties of the Energy Community are recognised by Member States as referred to Article 19(11) of the Directive (EU) 2018/2001, either through the Energy Community Treaty or a separate agreement.¹

Article 1

Subject matter

This Directive establishes a common framework for the promotion of energy from renewable sources. It sets a target for the overall share of energy from renewable sources in the **Energy Community** gross final consumption of energy in 2030, **in line with Regulation (EU) 2018/1999, in particular Article 2, point (11)**. It also lays down rules on financial support for electricity from renewable sources, on self-consumption of such electricity, on the use of energy from renewable sources in the heating and cooling sector and in the transport sector, on regional cooperation between **Contracting Parties, between Contracting Parties and Member States, and between Contracting Parties** and third countries, on guarantees of origin, on administrative procedures and on information and training. It also establishes sustainability and greenhouse gas emissions saving criteria for biofuels, bioliquids and biomass fuels.

Article 2

Definitions

For the purposes of this Directive, the relevant definitions in Directive 2009/72/EC, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**, apply.

The following definitions also apply:

(1bis) ‘(overall) Energy Community 2030 target’ means the value calculated on the basis of the targets for the Contracting Parties as regards the minimum share of renewable energy consumed in 2030, in the terms to be adopted by the Ministerial Council on the basis of the study(ies) carried out to this effect;²

(1) ‘energy from renewable sources’ or ‘renewable energy’ means energy from renewable non-fossil sources, namely wind, solar (solar thermal and solar photovoltaic) and geothermal energy, ambient energy, tide,

¹ The text displayed here corresponds to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

² The text displayed here corresponds to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

wave and other ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas, and biogas;

(2) 'ambient energy' means naturally occurring thermal energy and energy accumulated in the environment with constrained boundaries, which can be stored in the ambient air, excluding in exhaust air, or in surface or sewage water;

(3) 'geothermal energy' means energy stored in the form of heat beneath the surface of solid earth;

(4) 'gross final consumption of energy' means the energy commodities delivered for energy purposes to industry, transport, households, services including public services, agriculture, forestry and fisheries, the consumption of electricity and heat by the energy branch for electricity, heat and transport fuel production, and losses of electricity and heat in distribution and transmission;

(5) 'support scheme' means any instrument, scheme or mechanism applied by a **Contracting Party**, or a group of **Contracting Parties** or Member States, that promotes the use of energy from renewable sources by reducing the cost of that energy, increasing the price at which it can be sold, or increasing, by means of a renewable energy obligation or otherwise, the volume of such energy purchased, including but not restricted to, investment aid, tax exemptions or reductions, tax refunds, renewable energy obligation support schemes including those using green certificates, and direct price support schemes including feed-in tariffs and sliding or fixed premium payments;

(6) 'renewable energy obligation' means a support scheme requiring energy producers to include a given share of energy from renewable sources in their production, requiring energy suppliers to include a given share of energy from renewable sources in their supply, or requiring energy consumers to include a given share of energy from renewable sources in their consumption, including schemes under which such requirements may be fulfilled by using green certificates;

(7) < . . . > ³

(8) 'SME' means a micro, small or medium-sized enterprise as defined in Article 2 of the Annex to Commission Recommendation 2003/361/EC;

(9) 'waste heat and cold' means unavoidable heat or cold generated as by-product in industrial or power generation installations, or in the tertiary sector, which would be dissipated unused in air or water without access to a district heating or cooling system, where a cogeneration process has been used or will be used or where cogeneration is not feasible;

(10) 'repowering' means renewing power plants that produce renewable energy, including the full or partial replacement of installations or operation systems and equipment for the purposes of replacing capacity or increasing the efficiency or capacity of the installation;

(11) 'distribution system operator' means an operator as defined in point (6) of Article 2 of Directive 2009/72/EC and in point (6) of Article 2 of Directive 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**;

(12) 'guarantee of origin' means an electronic document which has the sole function of providing evidence to a final customer that a given share or quantity of energy was produced from renewable sources;

(13) 'residual energy mix' means the total annual energy mix for a **Contracting Party**, excluding the share covered by cancelled guarantees of origin;

(14) 'renewables self-consumer' means a final customer operating within its premises located within confined boundaries or, where permitted by a **Contracting Party**, within other premises, who generates

³ Not applicable according to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

renewable electricity for its own consumption, and who may store or sell self-generated renewable electricity, provided that, for a non-household renewables self-consumer, those activities do not constitute its primary commercial or professional activity;

(15) ‘jointly acting renewables self-consumers’ means a group of at least two jointly acting renewables self-consumers in accordance with point (14) who are located in the same building or multi-apartment block;

(16) ‘renewable energy community’ means a legal entity:

(a) which, in accordance with the applicable national law, is based on open and voluntary participation, is autonomous, and is effectively controlled by shareholders or members that are located in the proximity of the renewable energy projects that are owned and developed by that legal entity;

(b) the shareholders or members of which are natural persons, SMEs or local authorities, including municipalities;

(c) the primary purpose of which is to provide environmental, economic or social community benefits for its shareholders or members or for the local areas where it operates, rather than financial profits;

(17) ‘renewables power purchase agreement’ means a contract under which a natural or legal person agrees to purchase renewable electricity directly from an electricity producer;

(18) ‘peer-to-peer trading’ of renewable energy means the sale of renewable energy between market participants by means of a contract with pre-determined conditions governing the automated execution and settlement of the transaction, either directly between market participants or indirectly through a certified third-party market participant, such as an aggregator. The right to conduct peer-to-peer trading shall be without prejudice to the rights and obligations of the parties involved as final customers, producers, suppliers or aggregators;

(19) ‘district heating’ or ‘district cooling’ means the distribution of thermal energy in the form of steam, hot water or chilled liquids, from central or decentralised sources of production through a network to multiple buildings or sites, for the use of space or process heating or cooling;

(20) ‘efficient district heating and cooling’ means efficient district heating and cooling as defined in point (41) of Article 2 of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decision 2015/08/MC-EnC**;

(21) ‘high-efficiency cogeneration’ means high-efficiency cogeneration as defined in point (34) of Article 2 of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decision 2015/08/MC-EnC**;

(22) ‘energy performance certificate’ means energy performance certificate as defined in point (12) of Article 2 of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2009/05/MC-EnC**;

(23) ‘waste’ means waste as defined in point (1) of Article 3 of Directive 2008/98/EC, excluding substances that have been intentionally modified or contaminated in order to meet this definition;

(24) ‘biomass’ means the biodegradable fraction of products, waste and residues from biological origin from agriculture, including vegetal and animal substances, from forestry and related industries, including fisheries and aquaculture, as well as the biodegradable fraction of waste, including industrial and municipal waste of biological origin;

- (25) 'agricultural biomass' means biomass produced from agriculture;
- (26) 'forest biomass' means biomass produced from forestry;
- (27) 'biomass fuels' means gaseous and solid fuels produced from biomass;
- (28) 'biogas' means gaseous fuels produced from biomass;
- (29) 'biowaste' means biowaste as defined in point (4) of Article 3 of Directive 2008/98/EC ;
- (30) 'sourcing area' means the geographically defined area from which the forest biomass feedstock is sourced, from which reliable and independent information is available and where conditions are sufficiently homogeneous to evaluate the risk of the sustainability and legality characteristics of the forest biomass;
- (31) 'forest regeneration' means the re-establishment of a forest stand by natural or artificial means following the removal of the previous stand by felling or as a result of natural causes, including fire or storm;
- (32) 'bioliquids' means liquid fuel for energy purposes other than for transport, including electricity and heating and cooling, produced from biomass;
- (33) 'biofuels' means liquid fuel for transport produced from biomass;
- (34) 'advanced biofuels' means biofuels that are produced from the feedstock listed in Part A of Annex IX;
- (35) 'recycled carbon fuels' means liquid and gaseous fuels that are produced from liquid or solid waste streams of non-renewable origin which are not suitable for material recovery in accordance with Article 4 of Directive 2008/98/EC, or from waste processing gas and exhaust gas of non-renewable origin which are produced as an unavoidable and unintentional consequence of the production process in industrial installations;
- (36) 'renewable liquid and gaseous transport fuels of non-biological origin' means liquid or gaseous fuels which are used in the transport sector other than biofuels or biogas, the energy content of which is derived from renewable sources other than biomass;
- (37) 'low indirect land-use change-risk biofuels, bioliquids and biomass fuels' means biofuels, bioliquids and biomass fuels, the feedstock of which was produced within schemes which avoid displacement effects of food and feed-crop based biofuels, bioliquids and biomass fuels through improved agricultural practices as well as through the cultivation of crops on areas which were previously not used for cultivation of crops, and which were produced in accordance with the sustainability criteria for biofuels, bioliquids and biomass fuels laid down in Article 29;
- (38) 'fuel supplier' means an entity supplying fuel to the market that is responsible for passing fuel through an excise duty point or, in the case of electricity or where no excise is due or where duly justified, any other relevant entity designated by a **Contracting Party**;
- (39) 'starch-rich crops' means crops comprising mainly cereals, regardless of whether the grains alone or the whole plant, such as in the case of green maize, are used; tubers and root crops, such as potatoes, Jerusalem artichokes, sweet potatoes, cassava and yams; and corm crops, such as taro and cocoyam;
- (40) 'food and feed crops' means starch-rich crops, sugar crops or oil crops produced on agricultural land as a main crop excluding residues, waste or ligno-cellulosic material and intermediate crops, such as catch crops and cover crops, provided that the use of such intermediate crops does not trigger demand for additional land;
- (41) 'ligno-cellulosic material' means material composed of lignin, cellulose and hemicellulose, such as biomass sourced from forests, woody energy crops and forest-based industries' residues and wastes;

(42) 'non-food cellulosic material' means feedstock mainly composed of cellulose and hemicellulose, and having a lower lignin content than ligno-cellulosic material, including food and feed crop residues, such as straw, stover, husks and shells; grassy energy crops with a low starch content, such as ryegrass, switchgrass, miscanthus, giant cane; cover crops before and after main crops; ley crops; industrial residues, including from food and feed crops after vegetal oils, sugars, starches and protein have been extracted; and material from biowaste, where ley and cover crops are understood to be temporary, short-term sown pastures comprising grass-legume mixture with a low starch content to obtain fodder for livestock and improve soil fertility for obtaining higher yields of arable main crops;

(43) 'residue' means a substance that is not the end product(s) that a production process directly seeks to produce; it is not a primary aim of the production process and the process has not been deliberately modified to produce it;

(44) 'agricultural, aquaculture, fisheries and forestry residues' means residues that are directly generated by agriculture, aquaculture, fisheries and forestry and that do not include residues from related industries or processing;

(45) 'actual value' means the greenhouse gas emissions savings for some or all of the steps of a specific biofuel, bioliquid or biomass fuel production process, calculated in accordance with the methodology laid down in Part C of Annex V or Part B of Annex VI;

(46) 'typical value' means an estimate of the greenhouse gas emissions and greenhouse gas emissions savings for a particular biofuel, bioliquid or biomass fuel production pathway, which is representative of the **Energy Community** consumption;

(47) 'default value' means a value derived from a typical value by the application of pre-determined factors and that may, in circumstances specified in this Directive, be used in place of an actual value.

Article 3⁴

Overall Energy Community target for 2030

1. **Contracting Parties** shall ensure that the share of energy from renewable sources in the **Contracting Parties'** gross final consumption of energy in 2030 **corresponds to the target set by the Ministerial Council for 2030 on the basis of the study(ies) carried out to this effect.**

2. **Contracting Parties** shall set national contributions **not lower than the 2030 share included in the relevant Decision of the Ministerial Council to be taken on on the basis of the study(ies) carried out to this effect,** to meet the overall **Energy Community** target set in paragraph 1 of this Article as part of their integrated national energy and climate plans in accordance with Articles 3 to 5 and 9 to 14 of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC.**

If, on the basis of the assessment of the draft integrated national energy and climate plans submitted pursuant to Article 9 of Regulation (EU) 2018/1999, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC,** the **Secretariat** concludes that the national contributions of the **Contracting Parties** are insufficient for the achievement of the overall **Energy Community** target, it shall follow the procedure laid down in Articles 9 and 31 of that Regulation, **as adapted and adopted by**

⁴ Changes in the text of this Article correspond to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

Ministerial Council Decision 2021/14/MC-EnC.

3. **Contracting Parties** shall ensure that their national policies, including the obligations deriving from Articles 25 to 28 of this Directive, and their support schemes, are designed with due regard to the waste hierarchy as set out in Article 4 of Directive 2008/98/EC to aim to avoid undue distortive effects on the raw material markets. **Contracting Parties** shall grant no support for renewable energy produced from the incineration of waste if the separate collection obligations laid down in that Directive have not been complied with.

4. From 1 January 2022, the share of energy from renewable sources in each **Contracting Party's** gross final consumption of energy shall not be lower than the baseline share shown in the third column of the table in Part A of Annex I to this Directive. **Contracting Parties** shall take the necessary measures to ensure compliance with that baseline share. If a Contracting Party does not maintain its baseline share as measured over any one-year period, the first and second subparagraphs of Article 32(4) of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** shall apply.

5. The **European Union** shall **endeavour to** support the high ambition of **Contracting Parties** through an enabling framework comprising the enhanced use of **available** funds, including additional funds to facilitate a just transition of carbon intensive regions towards increased shares of renewable energy, in particular financial instruments, especially for the following purposes:

(a) reducing the cost of capital for renewable energy projects;

(b) developing projects and programmes for integrating renewable sources into the energy system, for increasing flexibility of the energy system, for maintaining grid stability and for managing grid congestions;

(c) developing transmission and distribution grid infrastructure, intelligent networks, storage facilities and interconnections, with the objective of arriving at a 15% electricity interconnection target by 2030, in order to increase the technically feasible and economically affordable level of renewable energy in the electricity system;

(d) enhancing regional cooperation between **Contracting Parties, Member States and Contracting Parties, Contracting Parties** and third countries, through joint projects, joint support schemes and the opening of support schemes for renewable electricity to producers located in other **Contracting Parties or Member States**.

6. The **Contracting Parties may use the Union Renewable Development Platform established by delegated regulation** in order to support **Contracting Parties** that use cooperation mechanisms to contribute to the overall **Energy Community'** target set in paragraph 1.

Article 4

Support schemes for energy from renewable sources

1. In order to reach or exceed the **Contracting Parties** target set in Article 3(1), and each **Contracting Party's** contribution to that target set at a national level for the deployment of renewable energy, **Contracting Parties** may apply support schemes.

2. Support schemes for electricity from renewable sources shall provide incentives for the integration of electricity from renewable sources in the electricity market in a market-based and market-responsive way,

while avoiding unnecessary distortions of electricity markets as well as taking into account possible system integration costs and grid stability.

3. Support schemes for electricity from renewable sources shall be designed so as to maximise the integration of electricity from renewable sources in the electricity market and to ensure that renewable energy producers are responding to market price signals and maximise their market revenues.

To that end, with regard to direct price support schemes, support shall be granted in the form of a market premium, which could be, *inter alia*, sliding or fixed.

Contracting Parties may exempt small-scale installations and demonstration projects from this paragraph, without prejudice to the applicable **Energy Community** law on the internal market for electricity.

4. **Contracting Parties** shall ensure that support for electricity from renewable sources is granted in an open, transparent, competitive, non-discriminatory and cost-effective manner.

Contracting Parties may exempt small-scale installations and demonstration projects from tendering procedures.

Contracting Parties may also consider establishing mechanisms to ensure the regional diversification in the deployment of renewable electricity, in particular to ensure cost-efficient system integration.

5. **Contracting Parties** may limit tendering procedures to specific technologies where opening support schemes to all producers of electricity from renewable sources would lead to a suboptimal result, in view of:

- (a) the long-term potential of a particular technology;
- (b) the need to achieve diversification;
- (c) grid integration costs;
- (d) network constraints and grid stability;
- (e) for biomass, the need to avoid distortions of raw materials markets.

6. Where support for electricity from renewable sources is granted by means of a tendering procedure, **Contracting Parties** shall, in order to ensure a high project realisation rate:

- (a) establish and publish non-discriminatory and transparent criteria to qualify for the tendering procedure and set clear dates and rules for delivery of the project;
- (b) publish information about previous tendering procedures, including project realisation rates.

7. In order to increase the generation of energy from renewable sources in the outermost regions and small islands, **Contracting Parties** may adapt financial support schemes for projects located in those regions in order to take into account the production costs associated with their specific conditions of isolation and external dependence.

8. By 31 December 2022 and every three years thereafter, the **Secretariat** shall report to the **Ministerial Council** on the performance of support for electricity from renewable sources granted by means of tendering procedures in the **Contracting Parties**, analysing in particular the ability of tendering procedures to:

- (a) achieve cost-reduction;
- (b) achieve technological improvement;
- (c) achieve high realisation rates;
- (d) provide non-discriminatory participation of small actors and, where applicable, local authorities;

- (e) limit environmental impact;
- (f) ensure local acceptability;
- (g) ensure security of supply and grid integration.

9. This Article shall apply without prejudice to **Article 18 of Energy Community Treaty**.

Article 5

Opening of support schemes for electricity from renewable sources

1. **Contracting Parties** shall have the right, in accordance with Articles 7 to 13 of this Directive, to decide to which extent they support electricity from renewable sources which is produced in another **Contracting Party or Member State**. However, **Contracting Parties** may open participation in support schemes for electricity from renewable sources to producers located in other **Contracting Parties or Member States**, subject to the conditions laid down in this Article.

When opening participation in support schemes for electricity from renewable sources, **Contracting Parties** may provide that support for an indicative share of the newly-supported capacity, or of the budget allocated thereto, in each year is open to producers located in other **Contracting Parties or Member States**.

Such indicative shares may, in each year, amount to at least 5% from 2023 to 2026 and at least 10% from 2027 to 2030, or, where lower, to the level of interconnectivity of the **Contracting Party** concerned in any given year.

In order to acquire further implementation experience, **Contracting Parties** may organise one or more pilot schemes where support is open to producers located in other **Contracting Parties or Member States**.

2. **Contracting Parties** may require proof of physical import of electricity from renewable sources. To that end, **Contracting Parties** may limit participation in their support schemes to producers located in **Contracting Parties or Member States** with which there is a direct connection via interconnectors. However, **Contracting Parties** shall not change or otherwise affect cross-zonal schedules and capacity allocation due to producers participating in cross-border support schemes. Cross-border electricity transfers shall be determined only by the outcome of capacity allocation pursuant to **Energy Community** law on the internal market in electricity.

3. If a **Contracting Party** decides to open participation in support schemes to producers located in other **Contracting Parties or Member States**, the relevant **Contracting Parties or Member States** shall agree on the principles of such participation. Such agreements shall cover at least the principles of allocation of renewable electricity that is the subject of cross-border support.

4. The **Secretariat** shall, upon the request of the relevant **Contracting Party**, assist them throughout the negotiation process with the setting up of cooperation arrangements by providing information and analysis, including quantitative and qualitative data on the direct and indirect costs and benefits of cooperation, as well as with guidance and technical expertise. The **Secretariat** may encourage or facilitate the exchange of best practices and may develop templates for cooperation agreements in order to facilitate the negotiation process. The **Secretariat** shall assess, by 2025, the costs and benefits of the deployment of electricity from renewable sources in the **Energy Community** pursuant to this Article.

5. By 2024, the **Secretariat** shall carry out an evaluation of the implementation of this Article. That evaluation shall assess the need to introduce an obligation on **Contracting Parties** partially to open participation in their support schemes for electricity from renewable sources to producers located in other **Contracting Parties or Member States** with a view to a 5% opening by 2025 and a 10% opening by 2030.

6. The Energy Community Secretariat shall coordinate with the European Commission in performing its tasks under paragraphs 4 and 5 of this Article.⁵

Article 6

Stability of financial support

1. Without prejudice to adaptations necessary to comply with Article **18 of Energy Community Treaty Contracting Parties** shall ensure that the level of, and the conditions attached to, the support granted to renewable energy projects are not revised in a way that negatively affects the rights conferred thereunder and undermines the economic viability of projects that already benefit from support.

2. **Contracting Parties** may adjust the level of support in accordance with objective criteria, provided that such criteria are established in the original design of the support scheme.

3. **Contracting Parties** shall publish a long-term schedule anticipating the expected allocation of support, covering, as a reference, at least the following five years, or, in the case of budgetary planning constraints, the following three years, including the indicative timing, the frequency of tendering procedures where appropriate, the expected capacity and budget or maximum unitary support expected to be allocated, and the expected eligible technologies, if applicable. That schedule shall be updated on an annual basis or, where necessary, to reflect recent market developments or expected allocation of support.

4. **Contracting Parties** shall, at least every five years, assess the effectiveness of their support schemes for electricity from renewable sources and their major distributive effects on different consumer groups, and on investments. That assessment shall take into account the effect of possible changes to the support schemes. The indicative long-term planning governing the decisions of the support and design of new support shall take into account the results of that assessment. Contracting Parties shall include the assessment in the relevant updates of their integrated national energy and climate plans and progress reports in accordance with Regulation (EU) 2018/1999, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**.

Article 7

Calculation of the share of energy from renewable sources

1. The gross final consumption of energy from renewable sources in each **Contracting Party** shall be calculated as the sum of:

- (a) gross final consumption of electricity from renewable sources;
- (b) gross final consumption of energy from renewable sources in the heating and cooling sector; and
- (c) final consumption of energy from renewable sources in the transport sector.

⁵ The text displayed here corresponds to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

With regard to point (a), (b), or (c) of the first subparagraph, gas, electricity and hydrogen from renewable sources shall be considered only once for the purposes of calculating the share of gross final consumption of energy from renewable sources.

Subject to the second subparagraph of Article 29(1), biofuels, bioliquids and biomass fuels that do not fulfil the sustainability and greenhouse gas emissions saving criteria laid down in Article 29(2) to (7) and (10) shall not be taken into account.

2. For the purposes of point (a) of the first subparagraph of paragraph 1, gross final consumption of electricity from renewable sources shall be calculated as the quantity of electricity produced in a **Contracting Party** from renewable sources, including the production of electricity from renewables self-consumers and renewable energy communities and excluding the production of electricity in pumped storage units from water that has previously been pumped uphill.

In multi-fuel plants using renewable and non-renewable sources, only the part of electricity produced from renewable sources shall be taken into account. For the purposes of that calculation, the contribution of each energy source shall be calculated on the basis of its energy content.

The electricity generated by hydropower and wind power shall be accounted for in accordance with the normalisation rules set out in Annex II.

3. For the purposes of point (b) of the first subparagraph of paragraph 1, gross final consumption of energy from renewable sources in the heating and cooling sector shall be calculated as the quantity of district heating and cooling produced in a **Contracting Party** from renewable sources, plus the consumption of other energy from renewable sources in industry, households, services, agriculture, forestry and fisheries, for heating, cooling and processing purposes.

In multi-fuel plants using renewable and non-renewable sources, only the part of heating and cooling produced from renewable sources shall be taken into account. For the purposes of that calculation, the contribution of each energy source shall be calculated on the basis of its energy content.

Ambient and geothermal energy used for heating and cooling by means of heat pumps and district cooling systems shall be taken into account for the purposes of point (b) of the first subparagraph of paragraph 1, provided that the final energy output significantly exceeds the primary energy input required to drive the heat pumps. The quantity of heat or cold to be considered to be energy from renewable sources for the purposes of this Directive shall be calculated in accordance with the methodology set out in Annex VII and shall take into account energy use in all end-use sectors.

Thermal energy generated by passive energy systems, under which lower energy consumption is achieved passively through building design or from heat generated by energy from non-renewable sources, shall not be taken into account for the purposes of point (b) of the first subparagraph of paragraph 1.

< . . . >

The Energy Community Secretariat shall inform the Permanent High Level Group about any delegated acts adopted in accordance with Article 7(3) of Directive (EU) 2018/2001 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant delegated acts into the Energy Community acquis. ⁶

4. For the purposes of point (c) of the first subparagraph of paragraph 1, the following requirements shall apply:

⁶ The text displayed here corresponds to Article 4 of Ministerial Council Decision 2021/14/MC-Enc

(a) Final consumption of energy from renewable sources in the transport sector shall be calculated as the sum of all biofuels, biomass fuels and renewable liquid and gaseous transport fuels of non-biological origin consumed in the transport sector. However, renewable liquid and gaseous transport fuels of non-biological origin that are produced from renewable electricity shall be considered to be part of the calculation pursuant to point (a) of the first subparagraph of paragraph 1 only when calculating the quantity of electricity produced in a **Contracting Party** from renewable sources.

(b) For the calculation of final consumption of energy in the transport sector, the values regarding the energy content of transport fuels, as set out in Annex III, shall be used. For the determination of the energy content of transport fuels not included in Annex III, **Contracting Parties** shall use the relevant European Standards Organisation (ESO) standards in order to determine the calorific values of fuels. Where no ESO standard has been adopted for that purpose, **Contracting Parties** shall use the relevant International Organization for Standardisation (ISO) standards.

5. The share of energy from renewable sources shall be calculated as the gross final consumption of energy from renewable sources divided by the gross final consumption of energy from all energy sources, expressed as a percentage.

For the purposes of the first subparagraph of this paragraph, the sum referred to in the first subparagraph of paragraph 1 of this Article shall be adjusted in accordance with Articles 8, 10, 12 and 13.

<...>⁷

6. The methodology and definitions used in the calculation of the share of energy from renewable sources shall be those provided for in Regulation (EC) No 1099/2008, **as adapted and adopted by Ministerial Council Decision 2015/02/MC-EnC**.

Contracting Parties shall ensure coherence of the statistical information used in calculating those sectoral and overall shares and of the statistical information reported to the **Secretariat** pursuant to that Regulation.

Article 8

Renewable development platform and statistical transfers between **Contracting Parties**

1. A **Contracting Party** may agree **with another Contracting Party** on the statistical transfer of a specified amount of energy from renewable sources from one **Contracting Party** to another **Contracting Party**. The transferred quantity shall be:

(a) deducted from the amount of energy from renewable sources that is taken into account in calculating the renewable energy share of the **Contracting Party** making the transfer for the purposes of this Directive; and

(b) added to the amount of energy from renewable sources that is taken into account in calculating the renewable energy share of the **Contracting Party** accepting the transfer for the purposes of this Directive.

2. In order to facilitate the achievement of the **Energy Community** target set in Article 3(1) of this Directive of each **Contracting Party's** contribution to that target in accordance with Article 3(2) of this Directive, and to facilitate statistical transfers in accordance with paragraph 1 of this Article, the **Contracting Parties** shall join the Union renewable development platform ('URDP'). **Contracting Parties** may, on a voluntary basis, submit to the **Energy Community Secretariat** annual data on their national contributions to the

⁷ Not applicable according to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

Energy Community target or any benchmark set for monitoring progress in Regulation (EU) 2018/1999, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**, including the amount by which they expect to fall short of or exceed their contribution, and an indication of the price at which they would accept to transfer any excess production of energy from renewable sources from or to another **Contracting Party**. **The Energy Community Secretariat shall forward such data to the URDP**. The price of those transfers shall be set on a case-by-case basis based on the URDP demand-and-supply matching mechanism.

3. The **URDP shall** match the demand for and supply of the amounts of energy from renewable sources that are taken into account in the calculation of the renewable energy share of a **Contracting Party** based on prices or other criteria specified by the **Contracting Party** accepting the transfer.

<...>

The Energy Community Secretariat shall inform the Permanent High Level Group about any delegated acts adopted in accordance with Article 8(3) of Directive (EU) 2018/2001 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant delegated acts into the Energy Community acquis.⁸

4. The arrangements referred to in paragraphs 1 and 2 may have a duration of one or more calendar years. Such arrangements shall be notified to the **Secretariat** or finalised on the URDP not later than 12 months after the end of each year in which they have effect. The information sent to the **Secretariat** shall include the quantity and price of the energy involved. For transfers finalised on the URDP, the parties involved and the information on the particular transfer shall be disclosed to the public.

5. Transfers shall become effective after all **Contracting Parties** involved in the transfer have notified the transfer to the **Secretariat** or after all clearing conditions are met on the URDP, as applicable.

Article 9

Joint projects between Contracting Parties or Contracting Parties and Member States

1. **One** or more **Contracting Parties** may cooperate **with one or more Contracting Parties or Member States** on all types of joint projects with regard to the production of electricity, heating or cooling from renewable sources. Such cooperation may involve private operators.

2. **Contracting Parties** shall notify the **Secretariat** of the proportion or amount of electricity, heating or cooling from renewable sources produced by any joint project in their territory that became operational after 25 June 2009, or by the increased capacity of an installation that was refurbished after that date, which is to be regarded as counting towards the renewable energy share of another **Contracting Party or Member State** for the purposes of this Directive.

3. The notification referred to in paragraph 2 shall:

(a) describe the proposed installation or identify the refurbished installation;

(b) specify the proportion or amount of electricity or heating or cooling produced from the installation which is to be regarded as counting towards the renewable energy share of the other **Contracting Party or Member State**;

⁸ The text displayed here corresponds to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

(c) identify the **Contracting Party or** Member State in whose favour the notification is being made; and
 (d) specify the period, in whole calendar years, during which the electricity or heating or cooling produced by the installation from renewable sources is to be regarded as counting towards the renewable energy share of the other **Contracting Party or** Member State.

4. The duration of a joint project as referred to in this Article may extend beyond 2030.

5. A notification made under this Article shall not be varied or withdrawn without the joint agreement of **the Contracting Party** making the notification and the **Contracting Party or** Member State identified in accordance with point (c) of paragraph 3.

6. The **Secretariat** shall, upon the request of the **Contracting Parties** concerned, facilitate the establishment of joint projects **involving Contracting Parties**, in particular via dedicated technical assistance and project development assistance.

Article 10

Effects of joint projects between Contracting Parties, or Contracting Parties and Member States

1. Within three months of the end of each year falling within the period referred to in point (d) of Article 9(3), the **Contracting Party** that made the notification under Article 9 shall issue a letter of notification stating:

(a) the total amount of electricity or heating or cooling produced from renewable sources during that year by the installation which was the subject of the notification under Article 9; and

(b) the amount of electricity or heating or cooling produced from renewable sources during that year by that installation which is to count towards the renewable energy share of another **Contracting Party or** Member State in accordance with the terms of the notification.

2. The notifying **Contracting Party** shall submit the letter of notification to the **Contracting Party or** Member State in whose favour the notification was made and to the Secretariat.

3. For the purposes of this Directive, the amount of electricity or heating or cooling from renewable sources notified in accordance with point (b) of paragraph 1 shall be:

(a) deducted from the amount of electricity or heating or cooling from renewable sources that is taken into account in calculating the renewable energy share of the **Contracting Party** issuing the letter of notification pursuant to paragraph 1; and

(b) added to the amount of electricity or heating or cooling from renewable sources that is taken into account in calculating the renewable energy share of the **Contracting Party or** Member State receiving the letter of notification pursuant to paragraph 2.

Article 11

Joint projects between Contracting Parties and third countries

1. One or more **Contracting Parties** may cooperate with one or more third countries on all types of joint projects with regard to the production of electricity from renewable sources. Such cooperation may involve

private operators and shall take place in full respect of international law.

2. Electricity from renewable sources produced in a third country shall be taken into account for the purposes of calculating the renewable energy shares of the **Contracting Parties** only where the following conditions are met:

- (a) the electricity is consumed in the **Contracting Party**, which is deemed to be met where:
- (i) an equivalent amount of electricity to the electricity accounted for has been firmly nominated to the allocated interconnection capacity by all responsible transmission system operators in the country of origin, the country of destination and, if relevant, each third country of transit;
 - (ii) an equivalent amount of electricity to the electricity accounted for has been firmly registered in the schedule of balance by the responsible transmission system operator on the Energy Community side of an interconnector; and
 - (iii) the nominated capacity and the production of electricity from renewable sources by the installation referred to in point (b) refer to the same period of time;
- (b) the electricity is produced by an installation that became operational after 25 June 2009 or by the increased capacity of an installation that was refurbished after that date, under a joint project as referred to in paragraph 1;
- (c) the amount of electricity produced and exported has not received support from a support scheme of a third country other than investment aid granted to the installation; and
- (d) the electricity has been produced in accordance with international law, in a third country that is a signatory to the Council of Europe Convention for the Protection of Human Rights and Fundamental Freedoms, or other international conventions or treaties on human rights.

3. For the purposes of paragraph 4, **Contracting Parties** may apply to the **Secretariat** for account to be taken of electricity from renewable sources produced and consumed in a third country, in the context of the construction of an interconnector with a very long lead-time between a **Contracting Party** and a third country where the following conditions are met:

- (a) construction of the interconnector started by 31 December 2026;
- (b) it is not possible for the interconnector to become operational by 31 December 2030;
- (c) it is possible for the interconnector to become operational by 31 December 2032;
- (d) after it becomes operational, the interconnector will be used for the export to the **Energy Community**, in accordance with paragraph 2, of electricity from renewable sources;
- (e) the application relates to a joint project that fulfils the criteria set out in points (b) and (c) of paragraph 2 and that will use the interconnector after it becomes operational, and to a quantity of electricity that is no greater than the quantity that will be exported to the **Energy Community** after the interconnector becomes operational.
4. The proportion or amount of electricity produced by any installation in the territory of a third country, which is to be regarded as counting towards the renewable energy share of one or more **Contracting Parties** for the purposes of this Directive, shall be notified to the Secretariat. When more than one **Contracting Party** is concerned, the distribution between **Contracting Parties** of that proportion or amount shall be notified to the **Secretariat**. The proportion or amount shall not exceed the proportion or amount actually exported to, and consumed in, the **Contracting Party**, shall correspond to the amount referred to in point (a)(i) and (ii) of paragraph 2 and shall meet the conditions set out in point

(a) of that paragraph. The notification shall be made by each **Contracting Party** towards whose overall national target the proportion or amount of electricity is to count.

5. The notification referred to in paragraph 4 shall:

(a) describe the proposed installation or identify the refurbished installation;

(b) specify the proportion or amount of electricity produced from the installation which is to be regarded as counting towards the renewable energy share of a Contracting Party as well as, subject to confidentiality requirements, the corresponding financial arrangements;

(c) specify the period, in whole calendar years, during which the electricity is to be regarded as counting towards the renewable energy share of the **Contracting Party**; and

(d) include a written acknowledgement of points (b) and (c) by the third country in whose territory the installation is to become operational and an indication of the proportion or amount of electricity produced by the installation which will be used domestically by that third country.

6. The duration of a joint project as referred to in this Article may extend beyond 2030.

7. A notification made under this Article shall be varied or withdrawn only where there is a joint agreement between the **Contracting Party** making the notification and the third country that has acknowledged the joint project in accordance with point (d) of paragraph 5.

8. <...>⁹

Article 12

Effects of joint projects between **Contracting Parties and third countries**

1. Within 12 months of the end of each year falling within the period specified under point (c) of Article 11(5), the notifying **Contracting Party** shall issue a letter of notification stating:

(a) the total amount of electricity produced from renewable sources during that year by the installation which was the subject of the notification under Article 11;

(b) the amount of electricity produced from renewable sources during that year by that installation which is to count towards its renewable energy share in accordance with the terms of the notification under Article 11; and

(c) evidence of compliance with the conditions laid down in Article 11(2).

2. The **Contracting Party** referred to in paragraph 1 shall submit the letter of notification to the **Secretariat** and to the third country that has acknowledged the project in accordance with point (d) of Article 11(5).

3. For the purposes of calculating the renewable energy shares under this Directive, the amount of electricity from renewable sources notified in accordance with point (b) of paragraph 1 shall be added to the amount of energy from renewable sources that is taken into account in calculating the renewable energy shares of the **Contracting Party** issuing the letter of notification.

⁹ Not applicable according to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

Article 13

Joint support schemes

1. Without prejudice to the obligations of **Contracting Parties** under Article 5, **one or more Contracting Parties** may decide, on a voluntary basis, to join or partly coordinate their national support schemes **with one or more Contracting Parties or Member States**. In such cases, a certain amount of energy from renewable sources produced in the territory of one participating **Contracting Party** may count towards the renewable energy share of another participating **Contracting Party or Member State**, provided that the parties concerned:

(a) make a statistical transfer of specified amounts of energy from renewable sources from one **Contracting Party** to another **Contracting Party or Member State** in accordance with Article 8; or

(b) set up a distribution rule agreed by participating **Contracting Parties and Member States** that allocates amounts of energy from renewable sources between the participating parties.

A distribution rule as referred to in point (b) of the first subparagraph shall be notified to the Secretariat not later than three months after the end of the first year in which it takes effect.

2. Within three months of the end of each year, each **Contracting Party** that has made a notification under the second subparagraph of paragraph 1 shall issue a letter of notification stating the total amount of electricity or heating or cooling from renewable sources produced during the year which is to be the subject of the distribution rule.

3. For the purposes of calculating the renewable energy shares under this Directive, the amount of electricity or heating or cooling from renewable sources notified in accordance with paragraph 2 shall be reallocated between the **parties** concerned in accordance with the notified distribution rule.

4. The **Energy Community Secretariat** shall disseminate guidelines and best practices, and, upon the request of the **Contracting Parties** concerned, facilitate the establishment of joint support schemes involving **Contracting Parties**.

Article 14

Capacity increases

For the purposes of Article 9(2) and point (b) of Article 11(2), units of energy from renewable sources imputable to an increase in the capacity of an installation shall be treated as if they were produced by a separate installation becoming operational at the moment at which the increase of capacity occurred.

Article 15

Administrative procedures, regulations and codes

1. **Contracting Parties** shall ensure that any national rules concerning the authorisation, certification and licensing procedures that are applied to plants and associated transmission and distribution networks for the production of electricity, heating or cooling from renewable sources, to the process of transformation

of biomass into biofuels, bioliquids, biomass fuels or other energy products, and to renewable liquid and gaseous transport fuels of non-biological origin are proportionate and necessary and contribute to the implementation of the energy efficiency first principle.

Contracting Parties shall, in particular, take the appropriate steps to ensure that:

- (a) administrative procedures are streamlined and expedited at the appropriate administrative level and predictable timeframes are established for the procedures referred to in the first subparagraph;
- (b) rules concerning authorisation, certification and licensing are objective, transparent and proportionate, do not discriminate between applicants and take fully into account the particularities of individual renewable energy technologies;
- (c) administrative charges paid by consumers, planners, architects, builders and equipment and system installers and suppliers are transparent and cost-related; and
- (d) simplified and less burdensome authorisation procedures, including a simple-notification procedure, are established for decentralised devices, and for producing and storing energy from renewable sources.

2. **Contracting Parties** shall clearly define any technical specifications which are to be met by renewable energy equipment and systems in order to benefit from support schemes. Where European standards exist, including eco-labels, energy labels and other technical reference systems established by the European standardisation bodies, such technical specifications shall be expressed in terms of those standards. Such technical specifications shall not prescribe where the equipment and systems are to be certified and shall not impede the proper functioning of the internal market.

3. **Contracting Parties** shall ensure that their competent authorities at national, regional and local level include provisions for the integration and deployment of renewable energy, including for renewables self-consumption and renewable energy communities, and the use of unavoidable waste heat and cold when planning, including early spatial planning, designing, building and renovating urban infrastructure, industrial, commercial or residential areas and energy infrastructure, including electricity, district heating and cooling, natural gas and alternative fuel networks. **Contracting Parties** shall, in particular, encourage local and regional administrative bodies to include heating and cooling from renewable sources in the planning of city infrastructure where appropriate, and to consult the network operators to reflect the impact of energy efficiency and demand response programs as well as specific provisions on renewables self-consumption and renewable energy communities, on the infrastructure development plans of the operators.

4. **Contracting Parties** shall introduce appropriate measures in their building regulations and codes in order to increase the share of all kinds of energy from renewable sources in the building sector.

In establishing such measures or in their support schemes, **Contracting Parties** may take into account, where applicable, national measures relating to substantial increases in renewables self-consumption, in local energy storage and in energy efficiency, relating to cogeneration and relating to passive, low-energy or zero-energy buildings.

Contracting Parties shall, in their building regulations and codes or by other means with equivalent effect, require the use of minimum levels of energy from renewable sources in new buildings and in existing buildings that are subject to major renovation in so far as technically, functionally and economically feasible, and reflecting the results of the cost-optimal calculation carried out pursuant to Article 5(2) of Directive 2010/31/EU as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC and in so far as this does not negatively affect indoor air quality. **Contracting Parties** shall permit those

minimum levels to be fulfilled, *inter alia*, through efficient district heating and cooling using a significant share of renewable energy and waste heat and cold.

The requirements laid down in the first subparagraph shall apply to the armed forces only to the extent that its application does not cause any conflict with the nature and primary aim of the activities of the armed forces and with the exception of material used exclusively for military purposes.

5. **Contracting Parties** shall ensure that new public buildings, and existing public buildings that are subject to major renovation, at national, regional and local level, fulfil an exemplary role in the context of this Directive from 1 January 2012. **Contracting Parties** may, *inter alia*, allow that obligation to be fulfilled by complying with nearly zero-energy building provisions as required in Directive 2010/31/EU **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC** or by providing for the roofs of public or mixed private-public buildings to be used by third parties for installations that produce energy from renewable sources.

6. With respect to their building regulations and codes, **Contracting Parties** shall promote the use of renewable heating and cooling systems and equipment that achieve a significant reduction of energy consumption. To that end, **Contracting Parties** shall use energy or eco-labels or other appropriate certificates or standards developed at national or **Energy Community** level, where these exist, and ensure the provision of adequate information and advice on renewable, highly energy efficient alternatives as well as eventual financial instruments and incentives available in the case of replacement, with a view to promoting an increased replacement rate of old heating systems and an increased switch to solutions based on renewable energy in accordance with Directive 2010/31/EU **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC**.

7. **Contracting Parties** shall carry out an assessment of their potential of energy from renewable sources and of the use of waste heat and cold in the heating and cooling sector. That assessment shall, where appropriate, include spatial analysis of areas suitable for low-ecological-risk deployment and the potential for small-scale household projects and shall be included in the second comprehensive assessment required pursuant to Article 14(1) of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decision 2015/08/MC-EnC**, for the first time by 31 December 2022 and in the subsequent updates of the comprehensive assessments.

8. **Contracting Parties** shall assess the regulatory and administrative barriers to long-term renewables power purchase agreements, and shall remove unjustified barriers to, and facilitate the uptake of, such agreements. **Contracting Parties** shall ensure that those agreements are not subject to disproportionate or discriminatory procedures or charges.

Contracting Parties shall describe policies and measures facilitating the uptake of renewables power purchase agreements in their integrated national energy and climate plans and progress reports pursuant to Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**.

Article 16

Organisation and duration of the permit-granting process

1. **Contracting Parties** shall set up or designate one or more contact points. Those contact points shall, upon request by the applicant, guide through and facilitate the entire administrative permit application and granting process. The applicant shall not be required to contact more than one contact point for the entire process. The permit-granting process shall cover the relevant administrative permits to build, repower and operate plants for the production of energy from renewable sources and assets necessary for their connection to the grid. The permit-granting process shall comprise all procedures from the acknowledgment of the receipt of the application to the transmission of the outcome of the procedure referred to in paragraph 2.

2. The contact point shall guide the applicant through the administrative permit application process in a transparent manner up to the delivery of one or several decisions by the responsible authorities at the end of the process, provide the applicant with all necessary information and involve, where appropriate, other administrative authorities. Applicants shall be allowed to submit relevant documents also in digital form.

3. The contact point shall make available a manual of procedures for developers of renewable energy production projects and shall provide that information also online, addressing distinctly also small-scale projects and renewables self-consumers projects. The online information shall indicate the contact point relevant to the applicant's application. If a Contracting Party has more than one contact point, the online information shall indicate the contact point relevant to the applicant's application.

4. Without prejudice to paragraph 7, the permit-granting process referred to in paragraph 1 shall not exceed two years for power plants, including all relevant procedures of competent authorities. Where duly justified on the grounds of extraordinary circumstances, that two-year period may be extended by up to one year.

5. Without prejudice to paragraph 7, the permit-granting process shall not exceed one year for installations with an electrical capacity of less than 150 kW. Where duly justified on the grounds of extraordinary circumstances, that one-year period may be extended by up to one year.

Contracting Parties shall ensure that applicants have easy access to simple procedures for the settlement of disputes concerning the permit-granting process and the issuance of permits to build and operate renewable energy plants, including, where applicable, alternative dispute resolution mechanisms.

6. **Contracting Parties** shall facilitate the repowering of existing renewable energy plants by ensuring a simplified and swift permit-granting process. The length of that process shall not exceed one year.

Where duly justified on the grounds of extraordinary circumstances, such as on grounds of overriding safety reasons where the repowering project impacts substantially on the grid or the original capacity, size or performance of the installation, that one-year period may be extended by up to one year.

7. The deadlines established in this Article shall apply without prejudice to obligations under applicable **Energy Community** environmental law, to judicial appeals, remedies and other proceedings before a court or tribunal, and to alternative dispute resolution mechanisms, including complaints procedures, non-judicial appeals and remedies, and may be extended for the duration of such procedures.

8. **Contracting Parties** may establish a simple-notification procedure for grid connections for repowering projects as referred to in Article 17(1). Where **Contracting Parties** do so, repowering shall be permitted following notification to the relevant authority where no significant negative environmental or social impact is expected. That authority shall decide within six months of receipt of a notification whether this is sufficient.

Where the relevant authority decides that a notification is sufficient, it shall automatically grant the permit. Where that authority decides that the notification is not sufficient, it shall be necessary to apply for a new permit and the time-limits referred to in paragraph 6 shall apply.

Article 17

Simple-notification procedure for grid connections

1. **Contracting Parties** shall establish a simple-notification procedure for grid connections whereby installations or aggregated production units of renewables self-consumers and demonstration projects, with an electrical capacity of 10,8 kW or less, or equivalent for connections other than three-phase connections, are to be connected to the grid following a notification to the distribution system operator.

The distribution system operator may, within a limited period following the notification, reject the requested grid connection or propose an alternative grid connection point on justified grounds of safety concerns or technical incompatibility of the system components. In the case of a positive decision by the distribution system operator, or in the absence of a decision by the distribution system operator within one month following the notification, the installation or aggregated production unit may be connected.

2. **Contracting Parties** may allow a simple-notification procedure for installations or aggregated production units with an electrical capacity of above 10,8 kW and up to 50 kW, provided that grid stability, grid reliability and grid safety are maintained.

Article 18

Information and training

1. **Contracting Parties** shall ensure that information on support measures is made available to all relevant actors, such as consumers including low-income, vulnerable consumers, renewables self-consumers, renewable energy communities, builders, installers, architects, suppliers of heating, cooling and electricity equipment and systems, and suppliers of vehicles compatible with the use of renewable energy and of intelligent transport systems.

2. **Contracting Parties** shall ensure that information on the net benefits, cost and energy efficiency of equipment and systems for the use of heating, cooling and electricity from renewable sources is made available either by the supplier of the equipment or system or by the competent authorities.

3. **Contracting Parties** shall ensure that certification schemes or equivalent qualification schemes are available for installers of small-scale biomass boilers and stoves, solar photovoltaic and solar thermal systems, shallow geothermal systems and heat pumps. Those schemes may take into account existing schemes and structures as appropriate, and shall be based on the criteria laid down in Annex IV. Each **Contracting Party** shall recognise the certification awarded by other **Contracting Parties** in accordance with those criteria.

4. **Contracting Parties** shall make information on certification schemes or equivalent qualification schemes as referred to in paragraph 3 available to the public. **Contracting Parties** may also make the list of installers who are qualified or certified in accordance with paragraph 3 available to the public.

5. **Contracting Parties** shall ensure that guidance is made available to all relevant actors, in particular to

planners and architects so that they are able properly to consider the optimal combination of energy from renewable sources, of high-efficiency technologies, and of district heating and cooling when planning, designing, building and renovating industrial, commercial or residential areas.

6. Contracting Parties, where appropriate with the participation of local and regional authorities, shall develop suitable information, awareness-raising, guidance or training programmes in order to inform citizens of how to exercise their rights as active customers, and of the benefits and practicalities, including technical and financial aspects, of developing and using energy from renewable sources, including by renewables self-consumption or in the framework of renewable energy communities.

Article 19

Guarantees of origin for energy from renewable sources

1. For the purposes of demonstrating to final customers the share or quantity of energy from renewable sources in an energy supplier's energy mix and in the energy supplied to consumers under contracts marketed with reference to the consumption of energy from renewable sources, **Contracting Parties** shall ensure that the origin of energy from renewable sources can be guaranteed as such within the meaning of this Directive, in accordance with objective, transparent and non-discriminatory criteria.

2. To that end, **Contracting Parties** shall ensure that a guarantee of origin is issued in response to a request from a producer of energy from renewable sources, unless **Contracting Parties** decide, for the purposes of accounting for the market value of the guarantee of origin, not to issue such a guarantee of origin to a producer that receives financial support from a support scheme. **Contracting Parties** may arrange for guarantees of origin to be issued for energy from non-renewable sources. Issuance of guarantees of origin may be made subject to a minimum capacity limit. A guarantee of origin shall be of the standard size of 1 MWh. No more than one guarantee of origin shall be issued in respect of each unit of energy produced.

Contracting Parties shall ensure that the same unit of energy from renewable sources is taken into account only once.

Contracting Parties shall ensure that when a producer receives financial support from a support scheme, the market value of the guarantee of origin for the same production is taken into account appropriately in the relevant support scheme.

It shall be presumed that the market value of the guarantee of origin has been taken into account appropriately in any of the following cases:

- (a) where the financial support is granted by way of a tendering procedure or a tradable green certificate system;
- (b) where the market value of the guarantees of origin is administratively taken into account in the level of financial support; or
- (c) where the guarantees of origin are not issued directly to the producer but to a supplier or consumer who buys the energy from renewable sources either in a competitive setting or in a long-term renewables power purchase agreement.

In order to take into account the market value of the guarantee of origin, **Contracting Parties** may, *inter alia*, decide to issue a guarantee of origin to the producer and immediately cancel it.

The guarantee of origin shall have no function in terms of a **Contracting Party's** compliance with Article 3. Transfers of guarantees of origin, separately or together with the physical transfer of energy, shall have no effect on the decision of **Contracting Parties** to use statistical transfers, joint projects or joint support schemes for compliance with Article 3 or on the calculation of the gross final consumption of energy from renewable sources in accordance with Article 7.

3. For the purposes of paragraph 1, guarantees of origin shall be valid for 12 months after the production of the relevant energy unit. **Contracting Parties** shall ensure that all guarantees of origin that have not been cancelled expire at the latest 18 months after the production of the energy unit. **Contracting Parties** shall include expired guarantees of origin in the calculation of their residual energy mix.

4. For the purposes of disclosure referred to in paragraphs 8 and 13, **Contracting Parties** shall ensure that energy companies cancel guarantees of origin at the latest six months after the end of the validity of the guarantee of origin.

5. **Contracting Parties** or designated competent bodies shall supervise the issuance, transfer and cancellation of guarantees of origin. The designated competent bodies shall not have overlapping geographical responsibilities, and shall be independent of production, trade and supply activities.

6. **Contracting Parties** or the designated competent bodies shall put in place appropriate mechanisms to ensure that guarantees of origin are issued, transferred and cancelled electronically and are accurate, reliable and fraud-resistant. **Contracting Parties** and designated competent bodies shall ensure that the requirements they impose comply with the standard CEN - EN 16325.

7. A guarantee of origin shall specify at least:

(a) the energy source from which the energy was produced and the start and end dates of production;

(b) whether it relates to:

(i) electricity;

(ii) gas, including hydrogen; or

(iii) heating or cooling;

(c) the identity, location, type and capacity of the installation where the energy was produced;

(d) whether the installation has benefited from investment support and whether the unit of energy has benefited in any other way from a national support scheme, and the type of support scheme;

(e) the date on which the installation became operational; and

(f) the date and country of issue and a unique identification number. Simplified information may be specified on guarantees of origin from installations of less than 50 kW.

8. Where an electricity supplier is required to demonstrate the share or quantity of energy from renewable sources in its energy mix for the purposes of point (a) of Article 18 and Annex I to Directive 2019/944/EC, as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC, it shall do so by using guarantees of origin except:

(a) as regards the share of its energy mix corresponding to non-tracked commercial offers, if any, for which the supplier may use the residual mix; or

(b) where a **Contracting Party** decides not to issue guarantees of origin to a producer that receives financial support from a support scheme.

Where **Contracting Parties** have arranged to have guarantees of origin for other types of energy, suppliers shall use for disclosure the same type of guarantees of origin as the energy supplied. Likewise, guarantees of origin created pursuant to Article 14(10) of Directive 2012/27/EU, **as adapted and adopted by Ministerial Council Decision 2015/08/MC-EnC**, may be used to substantiate any requirement to demonstrate the quantity of electricity produced from high-efficiency cogeneration. For the purposes of paragraph 2 of this Article, where electricity is generated from high-efficiency cogeneration using renewable sources, only one guarantee of origin specifying both characteristics may be issued.

9. **Contracting Parties** shall recognise guarantees of origin issued by other **Contracting Parties** in accordance with this Directive exclusively as evidence of the elements referred to in paragraph 1 and points (a) to (f) of the first subparagraph of paragraph 7. A **Contracting Party** may refuse to recognise a guarantee of origin only where it has well-founded doubts about its accuracy, reliability or veracity. The **Contracting Party** shall notify the **Secretariat** of such a refusal and its justification.

10. If the **Energy Community Secretariat** finds that a refusal to recognise a guarantee of origin is unfounded, the **Energy Community Secretariat** may **issue an opinion inviting the Contracting Party** in question to recognise it. **The Contracting Party in question shall take utmost account of the opinion and provide reasons for any deviation in writing.**¹⁰

11. **Contracting Parties** shall not recognise guarantees of origins issued by a third country except where the Union **or the Energy Community** has concluded an agreement with that third country on mutual recognition of guarantees of origin issued in the **Contracting Parties** and compatible guarantees of origin systems established in that third country, and only where there is direct import or export of energy.

12. A **Contracting Party** may, in accordance with **Energy Community** law, introduce objective, transparent and non-discriminatory criteria for the use of guarantees of origin in accordance with the obligations laid down in Article **18 and Annex I to Directive 2019/944/EC, as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC**.

13. The **Secretariat** shall adopt a report assessing options to establish an **Energy Community**-wide green label with a view to promoting the use of renewable energy coming from new installations. Suppliers shall use the information contained in guarantees of origin to demonstrate compliance with the requirements of such a label.

¹⁰ The text displayed here corresponds to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

Article 20

Access to and operation of the grids

1. Where relevant, **Contracting Parties** shall assess the need to extend existing gas network infrastructure to facilitate the integration of gas from renewable sources.
2. Where relevant, **Contracting Parties** shall require transmission system operators and distribution system operators in their territory to publish technical rules in accordance with Article 8 of Directive 2009/73/EC **as adapted and adopted by Ministerial Council Decision Decision 2011/02/MC-EnC**, in particular regarding network connection rules that include gas quality, gas odorization and gas pressure requirements. **Contracting Parties** shall also require transmission and distribution system operators to publish the connection tariffs to connect gas from renewable sources based on objective, transparent and non-discriminatory criteria.
3. Subject to their assessment included in the integrated national energy and climate plans in accordance with Annex I to Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** on the necessity to build new infrastructure for district heating and cooling from renewable sources in order to achieve the **Energy Community** target set in Article 3(1) of this Directive, **Contracting Parties** shall, where relevant, take the necessary steps with a view to developing a district heating and cooling infrastructure to accommodate the development of heating and cooling from large biomass, solar energy, ambient energy and geothermal energy facilities and from waste heat and cold.

Article 21

Renewables self-consumers

1. **Contracting Parties** shall ensure that consumers are entitled to become renewables self-consumers, subject to this Article.
2. **Contracting Parties** shall ensure that renewables self-consumers, individually or through aggregators, are entitled:
 - (a) to generate renewable energy, including for their own consumption, store and sell their excess production of renewable electricity, including through renewables power purchase agreements, electricity suppliers and peer-to-peer trading arrangements, without being subject:
 - (i) in relation to the electricity that they consume from or feed into the grid, to discriminatory or disproportionate procedures and charges, and to network charges that are not cost-reflective;
 - (ii) in relation to their self-generated electricity from renewable sources remaining within their premises, to discriminatory or disproportionate procedures, and to any charges or fees;
 - (b) to install and operate electricity storage systems combined with installations generating renewable electricity for self-consumption without liability for any double charge, including network charges, for stored electricity remaining within their premises;
 - (c) to maintain their rights and obligations as final consumers;
 - (d) to receive remuneration, including, where applicable, through support schemes, for the self-generated renewable electricity that they feed into the grid, which reflects the market value of that electricity and

which may take into account its long-term value to the grid, the environment and society.

3. **Contracting Parties** may apply non-discriminatory and proportionate charges and fees to renewables self-consumers, in relation to their self-generated renewable electricity remaining within their premises in one or more of the following cases:

(a) if the self-generated renewable electricity is effectively supported via support schemes, only to the extent that the economic viability of the project and the incentive effect of such support are not undermined;

(b) from 1 December 2026, if the overall share of self-consumption installations exceeds 8% of the total installed electricity capacity of a **Contracting Party**, and if it is demonstrated, by means of a cost-benefit analysis performed by the national regulatory authority of that **Contracting Party**, which is conducted by way of an open, transparent and participatory process, that the provision laid down in point (a)(ii) of paragraph 2 either results in a significant disproportionate burden on the long-term financial sustainability of the electric system, or creates an incentive exceeding what is objectively needed to achieve cost-effective deployment of renewable energy, and that such burden or incentive cannot be minimised by taking other reasonable actions; or

(c) if the self-generated renewable electricity is produced in installations with a total installed electrical capacity of more than 30 kW.

4. **Contracting Parties** shall ensure that renewables self-consumers located in the same building, including multi-apartment blocks, are entitled to engage jointly in activities referred to in paragraph 2 and that they are permitted to arrange sharing of renewable energy that is produced on their site or sites between themselves, without prejudice to the network charges and other relevant charges, fees, levies and taxes applicable to each renewables self-consumer. **Contracting Parties** may differentiate between individual renewables self-consumers and jointly acting renewables self-consumers. Any such differentiation shall be proportionate and duly justified.

5. The renewables self-consumer's installation may be owned by a third party or managed by a third party for installation, operation, including metering and maintenance, provided that the third party remains subject to the renewables self-consumer's instructions. The third party itself shall not be considered to be a renewables self-consumer.

6. **Contracting Parties** shall put in place an enabling framework to promote and facilitate the development of renewables self-consumption based on an assessment of the existing unjustified barriers to, and of the potential of, renewables self-consumption in their territories and energy networks. That enabling framework shall, *inter alia*:

(a) address accessibility of renewables self-consumption to all final customers, including those in low-income or vulnerable households;

(b) address unjustified barriers to the financing of projects in the market and measures to facilitate access to finance;

(c) address other unjustified regulatory barriers to renewables self-consumption, including for tenants;

(d) address incentives to building owners to create opportunities for renewables self-consumption, including for tenants;

(e) grant renewables self-consumers, for self-generated renewable electricity that they feed into the grid, non-discriminatory access to relevant existing support schemes as well as to all electricity market segments;

(f) ensure that renewables self-consumers contribute in an adequate and balanced way to the overall cost

sharing of the system when electricity is fed into the grid.

Contracting Parties shall include a summary of the policies and measures under the enabling framework and an assessment of their implementation respectively in their integrated national energy and climate plans and progress reports pursuant to Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**.

7. This Article shall apply without prejudice to Articles **18 and 19 of the Energy Community Treaty**.

Article 22

Renewable energy communities

1. **Contracting Parties** shall ensure that final customers, in particular household customers, are entitled to participate in a renewable energy community while maintaining their rights or obligations as final customers, and without being subject to unjustified or discriminatory conditions or procedures that would prevent their participation in a renewable energy community, provided that for private undertakings, their participation does not constitute their primary commercial or professional activity.

2. **Contracting Parties** shall ensure that renewable energy communities are entitled to:

(a) produce, consume, store and sell renewable energy, including through renewables power purchase agreements;

(b) share, within the renewable energy community, renewable energy that is produced by the production units owned by that renewable energy community, subject to the other requirements laid down in this Article and to maintaining the rights and obligations of the renewable energy community members as customers;

(c) access all suitable energy markets both directly or through aggregation in a non-discriminatory manner.

3. **Contracting Parties** shall carry out an assessment of the existing barriers and potential of development of renewable energy communities in their territories.

4. **Contracting Parties** shall provide an enabling framework to promote and facilitate the development of renewable energy communities. That framework shall ensure, *inter alia*, that:

(a) unjustified regulatory and administrative barriers to renewable energy communities are removed;

(b) renewable energy communities that supply energy or provide aggregation or other commercial energy services are subject to the provisions relevant for such activities;

(c) the relevant distribution system operator cooperates with renewable energy communities to facilitate energy transfers within renewable energy communities;

(d) renewable energy communities are subject to fair, proportionate and transparent procedures, including registration and licensing procedures, and cost-reflective network charges, as well as relevant charges, levies and taxes, ensuring that they contribute, in an adequate, fair and balanced way, to the overall cost sharing of the system in line with a transparent cost-benefit analysis of distributed energy sources developed by the national competent authorities;

(e) renewable energy communities are not subject to discriminatory treatment with regard to their activities, rights and obligations as final customers, producers, suppliers, distribution system operators, or as other

market participants;

(f) the participation in the renewable energy communities is accessible to all consumers, including those in low-income or vulnerable households;

(g) tools to facilitate access to finance and information are available;

(h) regulatory and capacity-building support is provided to public authorities in enabling and setting up renewable energy communities, and in helping authorities to participate directly;

(i) rules to secure the equal and non-discriminatory treatment of consumers that participate in the renewable energy community are in place.

5. The main elements of the enabling framework referred to in paragraph 4, and of its implementation, shall be part of the updates of the **Contracting Parties'** integrated national energy and climate plans and progress reports pursuant to Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**.

6. **Contracting Parties** may provide for renewable energy communities to be open to cross-border participation.

7. Without prejudice to Article **18 of the Energy Community Treaty**, **Contracting Parties** shall take into account specificities of renewable energy communities when designing support schemes in order to allow them to compete for support on an equal footing with other market participants.

Article 23

Mainstreaming renewable energy in heating and cooling

1. In order to promote the use of renewable energy in the heating and cooling sector, each **Contracting Party** shall endeavour to increase the share of renewable energy in that sector by an indicative 1,3 percentage points as an annual average calculated for the periods 2021 to 2025 and 2026 to 2030, starting from the share of renewable energy in the heating and cooling sector in 2020, expressed in terms of national share of final energy consumption and calculated in accordance with the methodology set out in Article 7, without prejudice to paragraph 2 of this Article. That increase shall be limited to an indicative 1,1 percentage points for **Contracting Parties** where waste heat and cold is not used. **Contracting Parties** shall, where appropriate, prioritise the best available technologies.

2. For the purposes of paragraph 1, when calculating its share of renewable energy in the heating and cooling sector and its average annual increase in accordance with that paragraph, each **Contracting Party**:

(a) may count waste heat and cold, subject to a limit of 40% of the average annual increase;

(b) where its share of renewable energy in the heating and cooling sector is above 60%, may count any such share as fulfilling the average annual increase; and

(c) where its share of renewable energy in the heating and cooling sector is above 50% and up to 60%, may count any such share as fulfilling half of the average annual increase.

When deciding which measures to adopt for the purposes of deploying energy from renewable sources in the heating and cooling sector, **Contracting Parties** may take into account cost-effectiveness reflecting structural barriers arising from the high share of natural gas or cooling, or from a dispersed settlement structure with low population density.

Where those measures would result in a lower average annual increase than that referred to in paragraph 1 of this Article, **Contracting Parties** shall make it public, for instance by the means of their integrated national energy and climate progress reports pursuant to Article 20 of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**, and provide the **Secretariat** with reasons, including of choice of measures as referred to the second subparagraph of this paragraph.

3. On the basis of objective and non-discriminatory criteria, **Contracting Parties** may establish and make public a list of measures and may designate and make public the implementing entities, such as fuel suppliers, public or professional bodies, which are to contribute to the average annual increase referred to in paragraph 1.

4. **Contracting Parties** may implement the average annual increase referred to in paragraph 1 by means, *inter alia*, of one or more of the following options:

(a) physical incorporation of renewable energy or waste heat and cold in the energy and energy fuel supplied for heating and cooling;

(b) direct mitigation measures such as the installation of highly efficient renewable heating and cooling systems in buildings, or the use of renewable energy or waste heat and cold in industrial heating and cooling processes;

(c) indirect mitigation measures covered by tradable certificates proving compliance with the obligation laid down in paragraph 1 through support to indirect mitigation measures, carried out by another economic operator such as an independent renewable technology installer or energy service company providing renewable installation services;

(d) other policy measures, with an equivalent effect, to reach the average annual increase referred to in paragraph 1, including fiscal measures or other financial incentives.

When adopting and implementing the measures referred to in the first subparagraph, **Contracting Parties** shall aim to ensure the accessibility of measures to all consumers, in particular those in low-income or vulnerable households, who would not otherwise possess sufficient up-front capital to benefit.

5. **Contracting Parties** may use the structures established under the national energy savings obligations set out in Article 7 of Directive 2012/27/EU **as adapted and adopted by Ministerial Council Decision 2015/08/MC-EnC** to implement and monitor the measures referred to in paragraph 3 of this Article.

6. Where entities are designated under paragraph 3, **Contracting Parties** shall ensure that the contribution by those designated entities is measurable and verifiable and that the designated entities report annually on:

(a) the total amount of energy supplied for heating and cooling;

(b) the total amount of renewable energy supplied for heating and cooling;

(c) the amount of waste heat and cold supplied for heating and cooling;

(d) the share of renewable energy and waste heat and cold in the total amount of energy supplied for heating and cooling; and

(e) the type of renewable energy source.

Article 24

District heating and cooling

1. **Contracting Parties** shall ensure that information on the energy performance and the share of renewable energy in their district heating and cooling systems is provided to final consumers in an easily accessible manner, such as on the suppliers' websites, on annual bills or upon request.

2. **Contracting Parties** shall lay down the necessary measures and conditions to allow customers of district heating or cooling systems which are not efficient district heating and cooling systems, or which are not such a system by 31 December 2025 on the basis of a plan approved by the competent authority, to disconnect by terminating or modifying their contract in order to produce heating or cooling from renewable sources themselves.

Where the termination of a contract is linked to physical disconnection, such a termination may be made conditional on compensation for the costs directly incurred as a result of the physical disconnection and for the undepreciated portion of assets needed to provide heat and cold to that customer.

3. **Contracting Parties** may restrict the right to disconnect by terminating or modifying a contract in accordance with paragraph 2 to customers who can demonstrate that the planned alternative supply solution for heating or cooling results in a significantly better energy performance. The energy-performance assessment of the alternative supply solution may be based on the energy performance certificate.

4. **Contracting Parties** shall lay down the necessary measures to ensure that district heating and cooling systems contribute to the increase referred to in Article 23(1) of this Directive by implementing at least one of the two following options:

(a) Endeavour to increase the share of energy from renewable sources and from waste heat and cold in district heating and cooling by at least one percentage point as an annual average calculated for the period 2021 to 2025 and for the period 2026 to 2030, starting from the share of energy from renewable sources and from waste heat and cold in district heating and cooling in 2020, expressed in terms of share of final energy consumption in district heating and cooling, by implementing measures that can be expected to trigger that average annual increase in years with normal climatic conditions.

Contracting Parties with a share of energy from renewable sources and from waste heat and cold in district heating and cooling above 60% may count any such share as fulfilling the average annual increase referred to in the first subparagraph of this point.

Contracting Parties shall lay down the necessary measures to implement the average annual increase referred to in the first subparagraph of this point in their integrated national energy and climate plans pursuant to Annex I to Regulation (EU) 2018/1999, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**.

(b) Ensure that operators of district heating or cooling systems are obliged to connect suppliers of energy from renewable sources and from waste heat and cold or are obliged to offer to connect and purchase heat or cold from renewable sources and from waste heat and cold from third-party suppliers based on non-discriminatory criteria set by the competent authority of the **Contracting Party** concerned, where they need to do one or more of the following:

- (i) meet demand from new customers;
- (ii) replace existing heat or cold generation capacity;

(iii) expand existing heat or cold generation capacity.

5. Where a **Contracting Party** exercises the option referred to in point (b) of paragraph 4, an operator of a district heating or cooling system may refuse to connect and to purchase heat or cold from a third-party supplier where:

- (a) the system lacks the necessary capacity due to other supplies of waste heat and cold, of heat or cold from renewable sources or of heat or cold produced by high-efficiency cogeneration;
- (b) the heat or cold from the third-party supplier does not meet the technical parameters necessary to connect and ensure the reliable and safe operation of the district heating and cooling system; or
- (c) the operator can demonstrate that providing access would lead to an excessive heat or cold cost increase for final customers compared to the cost of using the main local heat or cold supply with which the renewable source or waste heat and cold would compete.

Contracting Parties shall ensure that, when an operator of a district heating or cooling system refuses to connect a supplier of heating or cooling pursuant to the first subparagraph, information on the reasons for the refusal, as well as the conditions to be met and measures to be taken in the system in order to enable the connection, is provided by that operator to the competent authority in accordance with paragraph 9.

6. Where a Contracting Party exercises the option referred to in point (b) of paragraph 4, it may exempt operators of the following district heating and cooling systems from the application of that point:

- (a) efficient district heating and cooling;
- (b) efficient district heating and cooling that exploits high-efficiency cogeneration;
- (c) district heating and cooling that, on the basis of a plan approved by the competent authority, is efficient district heating and cooling by 31 December 2025;
- (d) district heating and cooling with a total rated thermal input below 20 MW.

7. The right to disconnect by terminating or modifying a contract in accordance with paragraph 2 may be exercised by individual customers, by joint undertakings formed by customers or by parties acting on behalf of customers. For multi-apartment blocks, such disconnection may be exercised only at a whole building level in accordance with the applicable housing law.

8. **Contracting Parties** shall require electricity distribution system operators to assess at least every four years, in cooperation with the operators of district heating or cooling systems in their respective area, the potential for district heating or cooling systems to provide balancing and other system services, including demand response and storing of excess electricity from renewable sources, and whether the use of the identified potential would be more resource- and cost-efficient than alternative solutions.

9. **Contracting Parties** shall ensure that the rights of consumers and the rules for operating district heating and cooling systems in accordance with this Article are clearly defined and enforced by the competent authority.

10. A **Contracting Party** shall not be required to apply paragraphs 2 to 9 of this Article where:

- (a) its share of district heating and cooling is less than or equal to 2% of the overall consumption of energy in heating and cooling on 24 December **2021**;
- (b) its share of district heating and cooling is increased above 2% by developing new efficient district heating and cooling based on its integrated national energy and climate plan pursuant to Annex I to Regulation (EU) 2018/1999, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** or

the assessment referred to in Article 15(7) of this Directive; or

(c) its share of systems referred to in paragraph 6 of this Article constitutes over 90% of total sales of its district heating and cooling.

Article 25

Mainstreaming renewable energy in the transport sector

1. In order to mainstream the use of renewable energy in the transport sector, each **Contracting Party** shall set an obligation on fuel suppliers to ensure that the share of renewable energy within the final consumption of energy in the transport sector is at least 14% by 2030 (minimum share) in accordance with an indicative trajectory set by the **Contracting Party** and calculated in accordance with the methodology set out in this Article and in Articles 26 and 27. <...>¹¹

Contracting Parties may exempt, or distinguish between, different fuel suppliers and different energy carriers when setting the obligation on the fuel suppliers, ensuring that the varying degrees of maturity and the cost of different technologies are taken into account.

For the calculation of the minimum share referred to in the first subparagraph, **Contracting Parties**:

- (a) shall take into account renewable liquid and gaseous transport fuels of non-biological origin also when they are used as intermediate products for the production of conventional fuels; and
- (b) may take into account recycled carbon fuels.

Within the minimum share referred to in the first subparagraph, the contribution of advanced biofuels and biogas produced from the feedstock listed in Part A of Annex IX as a share of final consumption of energy in the transport sector shall be at least 0,2% in 2022, at least 1% in 2025 and at least 3,5% in 2030.

Contracting Parties may exempt fuel suppliers supplying fuel in the form of electricity or renewable liquid and gaseous transport fuels of non-biological origin from the requirement to comply with the minimum share of advanced biofuels and biogas produced from the feedstock listed in Part A of Annex IX with respect to those fuels.

2. The greenhouse gas emissions savings from the use of renewable liquid and gaseous transport fuels of non-biological origin shall be at least 70% from 1 January 2024.

<...>

The Energy Community Secretariat shall inform the Permanent High Level Group about any delegated acts adopted in accordance with Article 25(2) of Directive (EU) 2018/2001 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant delegated acts into the Energy Community acquis. ¹²

¹¹ Not applicable according to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

¹² The text displayed here corresponds to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

Article 26

Specific rules for biofuels, bioliquids and biomass fuels produced from food and feed crops

1. For the calculation of a **Contracting Party's** gross final consumption of energy from renewable sources referred to in Article 7 and the minimum share referred to in the first subparagraph of Article 25(1), the share of biofuels and bioliquids, as well as of biomass fuels consumed in transport, where produced from food and feed crops, shall be no more than one percentage point higher than the share of such fuels in the final consumption of energy in the road and rail transport sectors in 2022 in that **Contracting Party**, with a maximum of 7% of final consumption of energy in the road and rail transport sectors in that **Contracting Party**.

Where that share is below 1% in a **Contracting Party**, it may be increased to a maximum of 2% of the final consumption of energy in the road and rail transport sectors.

Contracting Parties may set a lower limit and may distinguish, for the purposes of Article 29(1), between different biofuels, bioliquids and biomass fuels produced from food and feed crops, taking into account best available evidence on indirect land-use change impact. **Contracting Parties** may, for example, set a lower limit for the share of biofuels, bioliquids and biomass fuels produced from oil crops.

Where the share of biofuels and bioliquids, as well as of biomass fuels consumed in transport, produced from food and feed crops in a **Contracting Party** is limited to a share lower than 7% or a **Contracting Party** decides to limit the share further, that Contracting Party may reduce the minimum share referred to in the first subparagraph of Article 25(1) accordingly, by a maximum of 7 percentage points.

2. For the calculation of a **Contracting Party's** gross final consumption of energy from renewable sources referred to in Article 7 and the minimum share referred to in the first subparagraph of Article 25(1), the share of high indirect land-use change-risk biofuels, bioliquids or biomass fuels produced from food and feed crops for which a significant expansion of the production area into land with high-carbon stock is observed shall not exceed the level of consumption of such fuels in that **Contracting Party** in 2019, unless they are certified to be low indirect land-use change-risk biofuels, bioliquids or biomass fuels pursuant to this paragraph.

From 31 December 2026 until 31 December 2030 at the latest, that limit shall gradually decrease to 0%.

<...>

The Energy Community Secretariat shall inform the Permanent High Level Group about any delegated acts adopted in accordance with Article 26(2) of Directive (EU) 2018/2001 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant delegated acts into the Energy Community acquis". ¹³

¹³ The text displayed here corresponds to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

Article 27

Calculation rules with regard to the minimum shares of renewable energy in the transport sector

1. For the calculation of the minimum shares referred to in the first and fourth subparagraphs of Article 25(1), the following provisions shall apply:

(a) for the calculation of the denominator, that is the energy content of road- and rail- transport fuels supplied for consumption or use on the market, petrol, diesel, natural gas, biofuels, biogas, renewable liquid and gaseous transport fuels of non-biological origin, recycled carbon fuels and electricity supplied to the road and rail transport sectors, shall be taken into account;

(b) for the calculation of the numerator, that is the amount of energy from renewable sources consumed in the transport sector for the purposes of the first subparagraph of Article 25(1), the energy content of all types of energy from renewable sources supplied to all transport sectors, including renewable electricity supplied to the road and rail transport sectors, shall be taken into account. **Contracting Parties** may also take into account recycled carbon fuels.

For the calculation of the numerator, the share of biofuels and biogas produced from the feedstock listed in Part B of Annex IX shall <...> be limited to 1,7% of the energy content of transport fuels supplied for consumption or use on the market. **Contracting Parties** may, where justified, modify that limit, taking into account the availability of feedstock. Any such modification shall be subject to approval by the **Secretariat**;

(c) for the calculation of both numerator and denominator, the values regarding the energy content of transport fuels set out in Annex III shall be used. For the determination of the energy content of transport fuels not included in Annex III, the **Contracting Parties** shall use the relevant ESO standards for the determination of the calorific values of fuels. Where no ESO standard has been adopted for that purpose, the relevant ISO standards shall be used.

<...> The Energy Community Secretariat shall inform the Permanent High Level Group about any delegated acts adopted in accordance with Article 27(1) of Directive (EU) 2018/2001 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant delegated acts into the Energy Community acquis.¹⁴

2. For the purposes of demonstrating compliance with the minimum shares referred to in Article 25(1):

(a) the share of biofuels and biogas for transport produced from the feedstock listed in Annex IX may be considered to be twice its energy content;

(b) the share of renewable electricity shall be considered to be four times its energy content when supplied to road vehicles and may be considered to be 1,5 times its energy content when supplied to rail transport;

(c) with the exception of fuels produced from food and feed crops, the share of fuels supplied in the aviation and maritime sectors shall be considered to be 1,2 times their energy content.

3. For the calculation of the share of renewable electricity in the electricity supplied to road and rail vehicles for the purposes of paragraph 1 of this Article, **Contracting Parties** shall refer to the two-year period before the year in which the electricity is supplied in their territory.

¹⁴ The text displayed here corresponds to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

By way of derogation from the first subparagraph of this paragraph, to determine the share of electricity for the purposes of paragraph 1 of this Article, in the case of electricity obtained from a direct connection to an installation generating renewable electricity and supplied to road vehicles, that electricity shall be fully counted as renewable.

In order to ensure that the expected increase in demand for electricity in the transport sector beyond the current baseline is met with additional renewable energy generation capacity, the **Contracting Parties** shall **use** framework on additionality in the transport sector **developed by the European Commission**, and the **Secretariat** shall develop different options with a view to determining the baseline of **Contracting Parties** and measuring additionality.

For the purposes of this paragraph, where electricity is used for the production of renewable liquid and gaseous transport fuels of non-biological origin, either directly or for the production of intermediate products, the average share of electricity from renewable sources in the country of production, as measured two years before the year in question, shall be used to determine the share of renewable energy.

However, electricity obtained from direct connection to an installation generating renewable electricity may be fully counted as renewable electricity where it is used for the production of renewable liquid and gaseous transport fuels of non-biological origin, provided that the installation:

(a) comes into operation after, or at the same time as, the installation producing the renewable liquid and gaseous transport fuels of non-biological origin; and

(b) is not connected to the grid or is connected to the grid but evidence can be provided that the electricity concerned has been supplied without taking electricity from the grid.

Electricity that has been taken from the grid may be counted as fully renewable provided that it is produced exclusively from renewable sources and the renewable properties and other appropriate criteria have been demonstrated, ensuring that the renewable properties of that electricity are claimed only once and only in one end-use sector.

<...>

The Energy Community Secretariat shall inform the Permanent High Level Group about any delegated acts adopted in accordance with Article 27(3) of Directive (EU) 2018/2001 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant delegated acts into the Energy Community acquis. ¹⁵

¹⁵ The text displayed here corresponds to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

Article 28

Other provisions on renewable energy in the transport sector

1. With a view to minimising the risk of single consignments being claimed more than once in the **Energy Community, Contracting Parties** and the **Secretariat** shall strengthen cooperation among national systems and between national systems and voluntary schemes and verifiers established pursuant to Article 30, including, where appropriate, the exchange of data. Where the competent authority of one **Contracting Party** suspects or detects a fraud, it shall, where appropriate, inform the other **Contracting Parties**.

2. The **Secretariat** shall ensure that an **Energy Community** database is put in place to enable the tracing of liquid and gaseous transport fuels that are eligible for being counted towards the numerator referred to in point (b) of Article 27(1) or that are taken into account for the purposes referred to in points (a), (b), and (c) of the first subparagraph of Article 29(1). **Contracting Parties** shall require the relevant economic operators to enter into that database information on the transactions made and the sustainability characteristics of those fuels, including their life-cycle greenhouse gas emissions, starting from their point of production to the fuel supplier that places the fuel on the market. A **Contracting Party** may set up a national database that is linked to the **Energy Community** database ensuring that information entered is instantly transferred between the databases.

Fuel suppliers shall enter the information necessary to verify compliance with the requirements laid down in the first and fourth subparagraphs of Article 25(1) into the relevant database.

3. By 31 December 2024, **Contracting Parties** shall take measures to ensure the availability of fuels from renewable sources for transport including with regard to publicly accessible high-power recharging points and other refuelling infrastructure as provided for in their national policy frameworks. <...>

4. **Contracting Parties** shall have access to the **Energy Community** database referred to in paragraph 2 of this Article. They shall take measures to ensure that economic operators enter accurate information into the relevant database. <...>

5. The Energy Community Secretariat shall inform the Permanent High Level Group about any delegated acts adopted in accordance with Article 28(5) of Directive (EU) 2018/2001 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant delegated acts into the Energy Community acquis.¹⁶

6. The Energy Community Secretariat shall inform the Permanent High Level Group about any delegated acts adopted in accordance with Article 28(6) of Directive (EU) 2018/2001 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant delegated acts into the Energy Community acquis.¹⁷

7. By 31 December 2025, in the context of the biennial assessment of progress made pursuant to Regulation (EU) 2018/1999, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC, the Secretariat** shall assess whether the obligation relating to advanced biofuels and biogas produced from feedstock listed in Part A of Annex IX laid down in the fourth subparagraph of Article 25(1) effectively stimulates innovation and ensures greenhouse gas emissions savings in the transport sector. The **Secretariat** shall analyse in that

¹⁶ The text displayed here corresponds to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

¹⁷ The text displayed here corresponds to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

assessment whether the application of this Article effectively avoids double accounting of renewable energy. <...>¹⁸

Article 29

Sustainability and greenhouse gas emissions saving criteria for biofuels, bioliquids and biomass fuels

1. Energy from biofuels, bioliquids and biomass fuels shall be taken into account for the purposes referred to in points (a), (b) and (c) of this subparagraph only if they fulfil the sustainability and the greenhouse gas emissions saving criteria laid down in paragraphs 2 to 7 and 10:

(a) contributing towards the **Energy Community** target set in Article 3(1) and the renewable energy shares of Contracting Parties;

(b) measuring compliance with renewable energy obligations, including the obligation laid down in Article 25;

(c) eligibility for financial support for the consumption of biofuels, bioliquids and biomass fuels.

However, biofuels, bioliquids and biomass fuels produced from waste and residues, other than agricultural, aquaculture, fisheries and forestry residues, are required to fulfil only the greenhouse gas emissions saving criteria laid down in paragraph 10 in order to be taken into account for the purposes referred to in points (a), (b) and (c) of the first subparagraph. This subparagraph shall also apply to waste and residues that are first processed into a product before being further processed into biofuels, bioliquids and biomass fuels.

Electricity, heating and cooling produced from municipal solid waste shall not be subject to the greenhouse gas emissions saving criteria laid down in paragraph 10.

Biomass fuels shall fulfil the sustainability and greenhouse gas emissions saving criteria laid down in paragraphs 2 to 7 and 10 if used in installations producing electricity, heating and cooling or fuels with a total rated thermal input equal to or exceeding 20 MW in the case of solid biomass fuels, and with a total rated thermal input equal to or exceeding 2 MW in the case of gaseous biomass fuels. **Contracting Parties** may apply the sustainability and greenhouse gas emissions saving criteria to installations with lower total rated thermal input.

The sustainability and the greenhouse gas emissions saving criteria laid down in paragraphs 2 to 7 and 10 shall apply irrespective of the geographical origin of the biomass.

2. Biofuels, bioliquids and biomass fuels produced from waste and residues derived not from forestry but from agricultural land shall be taken into account for the purposes referred to in points (a), (b) and (c) of the first subparagraph of paragraph 1 only where operators or national authorities have monitoring or management plans in place in order to address the impacts on soil quality and soil carbon. Information about how those impacts are monitored and managed shall be reported pursuant to Article 30(3).

3. Biofuels, bioliquids and biomass fuels produced from agricultural biomass taken into account for the purposes referred to in points (a), (b) and (c) of the first subparagraph of paragraph 1 shall not be made from raw material obtained from land with a high biodiversity value, namely land that had one of the following statuses in or after January 2008, whether or not the land continues to have that status:

¹⁸ Not applicable according to Article 4 of Ministerial Council Decision 2021/14/MC-Enc

- (a) primary forest and other wooded land, namely forest and other wooded land of native species, where there is no clearly visible indication of human activity and the ecological processes are not significantly disturbed;
- (b) highly biodiverse forest and other wooded land which is species-rich and not degraded, or has been identified as being highly biodiverse by the relevant competent authority, unless evidence is provided that the production of that raw material did not interfere with those nature protection purposes;
- (c) areas designated:
- (i) by law or by the relevant competent authority for nature protection purposes; or
 - (ii) for the protection of rare, threatened or endangered ecosystems or species recognised by international agreements or included in lists drawn up by intergovernmental organisations or the International Union for the Conservation of Nature, subject to their recognition in accordance with the first subparagraph of Article 30(4), unless evidence is provided that the production of that raw material did not interfere with those nature protection purposes;
- (d) highly biodiverse grassland spanning more than one hectare that is:
- (i) natural, namely grassland that would remain grassland in the absence of human intervention and that maintains the natural species composition and ecological characteristics and processes; or
 - (ii) non-natural, namely grassland that would cease to be grassland in the absence of human intervention and that is species-rich and not degraded and has been identified as being highly biodiverse by the relevant competent authority, unless evidence is provided that the harvesting of the raw material is necessary to preserve its status as highly biodiverse grassland.

<...> The Energy Community Secretariat shall inform the Permanent High Level Group about any delegated acts adopted in accordance with Article 29(3) of Directive (EU) 2018/2001 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant delegated acts into the Energy Community acquis. ¹⁹

4. Biofuels, bioliquids and biomass fuels produced from agricultural biomass taken into account for the purposes referred to in points (a), (b) and (c) of the first subparagraph of paragraph 1 shall not be made from raw material obtained from land with high-carbon stock, namely land that had one of the following statuses in January 2008 and no longer has that status:

- (a) wetlands, namely land that is covered with or saturated by water permanently or for a significant part of the year;
- (b) continuously forested areas, namely land spanning more than one hectare with trees higher than five metres and a canopy cover of more than 30%, or trees able to reach those thresholds *in situ*;
- (c) land spanning more than one hectare with trees higher than five metres and a canopy cover of between 10% and 30%, or trees able to reach those thresholds *in situ*, unless evidence is provided that the carbon stock of the area before and after conversion is such that, when the methodology laid down in Part C of Annex V is applied, the conditions laid down in paragraph 10 of this Article would be fulfilled.

This paragraph shall not apply if, at the time the raw material was obtained, the land had the same status as it had in January 2008.

¹⁹ The text displayed here corresponds to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

5. Biofuels, bioliquids and biomass fuels produced from agricultural biomass taken into account for the purposes referred to in points (a), (b) and (c) of the first subparagraph of paragraph 1 shall not be made from raw material obtained from land that was peatland in January 2008, unless evidence is provided that the cultivation and harvesting of that raw material does not involve drainage of previously undrained soil.

6. Biofuels, bioliquids and biomass fuels produced from forest biomass taken into account for the purposes referred to in points (a), (b) and (c) of the first subparagraph of paragraph 1 shall meet the following criteria to minimise the risk of using forest biomass derived from unsustainable production:

(a) the country in which forest biomass was harvested has national or sub-national laws applicable in the area of harvest as well as monitoring and enforcement systems in place ensuring:

- (i) the legality of harvesting operations;
- (ii) forest regeneration of harvested areas;
- (iii) that areas designated by international or national law or by the relevant competent authority for nature protection purposes, including in wetlands and peatlands, are protected;
- (iv) that harvesting is carried out considering maintenance of soil quality and biodiversity with the aim of minimising negative impacts; and
- (v) that harvesting maintains or improves the long-term production capacity of the forest;

(b) when evidence referred to in point (a) of this paragraph is not available, the biofuels, bioliquids and biomass fuels produced from forest biomass shall be taken into account for the purposes referred to in points (a), (b) and (c) of the first subparagraph of paragraph 1 if management systems are in place at forest sourcing area level ensuring:

- (i) the legality of harvesting operations;
- (ii) forest regeneration of harvested areas;
- (iii) that areas designated by international or national law or by the relevant competent authority for nature protection purposes, including in wetlands and peatlands, are protected unless evidence is provided that the harvesting of that raw material does not interfere with those nature protection purposes;
- (iv) that harvesting is carried out considering the maintenance of soil quality and biodiversity with the aim of minimising negative impacts; and
- (v) that harvesting maintains or improves the long-term production capacity of the forest.

7. Biofuels, bioliquids and biomass fuels produced from forest biomass taken into account for the purposes referred to in points (a), (b) and (c) of the first subparagraph of paragraph 1 shall meet the following land-use, land-use change and forestry (LULUCF) criteria:

(a) the country or regional economic integration organisation of origin of the forest biomass:

- (i) is a Party to the Paris Agreement;
- (ii) has submitted a nationally determined contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC), covering emissions and removals from agriculture, forestry and land use which ensures that changes in carbon stock associated with biomass harvest are accounted towards the country's commitment to reduce or limit greenhouse gas emissions as specified in the NDC; or
- (iii) has national or sub-national laws in place, in accordance with Article 5 of the Paris Agreement, applicable in the area of harvest, to conserve and enhance carbon stocks and sinks, and providing

evidence that reported LULUCF-sector emissions do not exceed removals;

(b) where evidence referred to in point (a) of this paragraph is not available, the biofuels, bioliquids and biomass fuels produced from forest biomass shall be taken into account for the purposes referred to in points (a), (b) and (c) of the first subparagraph of paragraph 1 if management systems are in place at forest sourcing area level to ensure that carbon stocks and sinks levels in the forest are maintained, or strengthened over the long term.

8. <...> The Energy Community Secretariat shall inform the Permanent High Level Group about any delegated acts adopted in accordance with Article 29(8) of Directive (EU) 2018/2001 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant delegated acts into the Energy Community acquis. ²⁰

9. <...>²¹

10. The greenhouse gas emission savings from the use of biofuels, bioliquids and biomass fuels taken into account for the purposes referred to in paragraph 1 shall be:

(a) at least 50% for biofuels, biogas consumed in the transport sector, and bioliquids produced in installations in operation on or before 5 October 2015;

(b) at least 60% for biofuels, biogas consumed in the transport sector, and bioliquids produced in installations starting operation from 6 October 2015 until 31 December 2020;

(c) at least 65% for biofuels, biogas consumed in the transport sector, and bioliquids produced in installations starting operation from 1 January 2023;

(d) at least 70% for electricity, heating and cooling production from biomass fuels used in installations starting operation from 1 January 2023 until 31 December 2027, and 80% for installations starting operation from 1 January 2028. ²²

An installation shall be considered to be in operation once the physical production of biofuels, biogas consumed in the transport sector and bioliquids, and the physical production of heating and cooling and electricity from biomass fuels has started.

The greenhouse gas emission savings from the use of biofuels, biogas consumed in the transport sector, bioliquids and biomass fuels used in installations producing heating, cooling and electricity shall be calculated in accordance with Article 31(1).

11. Electricity from biomass fuels shall be taken into account for the purposes referred to in points (a), (b) and (c) of the first subparagraph of paragraph 1 only if it meets one or more of the following requirements:

(a) it is produced in installations with a total rated thermal input below 50 MW;

(b) for installations with a total rated thermal input from 50 to 100 MW, it is produced applying high-efficiency cogeneration technology, or, for electricity-only installations, meeting an energy efficiency level associated with the best available techniques (BAT-AEELs) as defined in Commission Implementing Decision (EU) 2017/1442;

(c) for installations with a total rated thermal input above 100 MW, it is produced applying high-efficiency cogeneration technology, or, for electricity-only installations, achieving a net-electrical efficiency of at least 36%;

²⁰ The text displayed here corresponds to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

²¹ Not applicable according to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

²² Changes in dates of this Article correspond to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

(d) it is produced applying Biomass CO₂ Capture and Storage.

For the purposes of points (a), (b) and (c) of the first subparagraph of paragraph 1 of this Article, electricity-only-installations shall be taken into account only if they do not use fossil fuels as a main fuel and only if there is no cost-effective potential for the application of high-efficiency cogeneration technology according to the assessment in accordance with Article 14 of Directive 2012/27/EU.

For the purposes of points (a) and (b) of the first subparagraph of paragraph 1 of this Article, this paragraph shall apply only to installations starting operation or converted to the use of biomass fuels after 25 December 2024. For the purposes of point (c) of the first subparagraph of paragraph 1 of this Article, this paragraph shall be without prejudice to support granted under support schemes in accordance with Article 4 approved by 25 December 2024.

Contracting Parties may apply higher energy efficiency requirements than those referred in the first subparagraph to installations with lower rated thermal input.

The first subparagraph shall not apply to electricity from installations which are the object of a specific notification by a **Contracting Party** to the **Secretariat** based on the duly substantiated existence of risks for the security of supply of electricity. Upon assessment of the notification, the **Energy Community Secretariat** shall **issue an opinion** taking into account the elements included therein. **The Contracting Party in question shall take utmost account of the opinion and provide reasons for any deviation in writing.**²³

12. For the purposes referred to in points (a), (b) and (c) of the first subparagraph of paragraph 1 of this Article, and without prejudice to Articles 25 and 26, **Contracting Parties** shall not refuse to take into account, on other sustainability grounds, biofuels and bioliquids obtained in compliance with this Article. This paragraph shall be without prejudice to public support granted under support schemes approved before 24 December 2018.

13. <...>²⁴

14. For the purposes referred to in points (a), (b) and (c) of the first subparagraph of paragraph 1, **Contracting Parties** may establish additional sustainability criteria for biomass fuels.

By 31 December 2029, the **Energy Community Secretariat** shall assess the impact of such additional criteria on the internal market.

Article 30

Verification of compliance with the sustainability and greenhouse gas emissions saving criteria

1. Where biofuels, bioliquids and biomass fuels, or other fuels that are eligible for counting towards the numerator referred to in point (b) of Article 27(1), are to be taken into account for the purposes referred to in Articles 23 and 25 and in points (a), (b) and (c) of the first subparagraph of Article 29(1), **Contracting Parties** shall require economic operators to show that the sustainability and greenhouse gas emissions saving criteria laid down in Article 29(2) to (7) and (10) have been fulfilled. For those purposes, they shall require economic operators to use a mass balance system which:

²³ The text displayed here corresponds to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

²⁴ Not applicable according to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

- (a) allows consignments of raw material or fuels with differing sustainability and greenhouse gas emissions saving characteristics to be mixed for instance in a container, processing or logistical facility, transmission and distribution infrastructure or site;
- (b) allows consignments of raw material with differing energy content to be mixed for the purposes of further processing, provided that the size of consignments is adjusted according to their energy content;
- (c) requires information about the sustainability and greenhouse gas emissions saving characteristics and sizes of the consignments referred to in point (a) to remain assigned to the mixture; and
- (d) provides for the sum of all consignments withdrawn from the mixture to be described as having the same sustainability characteristics, in the same quantities, as the sum of all consignments added to the mixture and requires that this balance be achieved over an appropriate period of time.

The mass balance system shall ensure that each consignment is counted only once in point (a), (b) or (c) of the first subparagraph of Article 7(1) for the purposes of calculating the gross final consumption of energy from renewable sources and shall include information on whether support has been provided for the production of that consignment, and if so, on the type of support scheme.

2. Where a consignment is processed, information on the sustainability and greenhouse gas emissions saving characteristics of the consignment shall be adjusted and assigned to the output in accordance with the following rules:

- (a) when the processing of a consignment of raw material yields only one output that is intended for the production of biofuels, bioliquids or biomass fuels, renewable liquid and gaseous transport fuels of non-biological origin, or recycled carbon fuels, the size of the consignment and the related quantities of sustainability and greenhouse gas emissions saving characteristics shall be adjusted applying a conversion factor representing the ratio between the mass of the output that is intended for such production and the mass of the raw material entering the process;
- (b) when the processing of a consignment of raw material yields more than one output that is intended for the production of biofuels, bioliquids or biomass fuels, renewable liquid and gaseous transport fuels of non-biological origin, or recycled carbon fuels, for each output a separate conversion factor shall be applied and a separate mass balance shall be used.

3. **Contracting Parties** shall take measures to ensure that economic operators submit reliable information regarding the compliance with the greenhouse gas emissions savings thresholds set in, and adopted pursuant to, Article 25(2), and with the sustainability and greenhouse gas emissions saving criteria laid down in Article 29(2) to (7) and (10), and that economic operators make available to the relevant **Contracting Party**, upon request, the data that were used to develop the information. **Contracting Parties** shall require economic operators to arrange for an adequate standard of independent auditing of the information submitted, and to provide evidence that this has been done. In order to comply with point (a) of Article 29(6) and point (a) of Article 29(7), the first or second party auditing may be used up to the first gathering point of the forest biomass. The auditing shall verify that the systems used by economic operators are accurate, reliable and protected against fraud, including verification ensuring that materials are not intentionally modified or discarded so that the consignment or part thereof could become a waste or residue. It shall evaluate the frequency and methodology of sampling and the robustness of the data.

The obligations laid down in this paragraph shall apply regardless of whether the biofuels, bioliquids, biomass fuels, renewable liquid and gaseous transport fuels of non-biological origin, or recycled carbon fuels are produced within the **Energy Community** or are imported. Information about the geographic

origin and feedstock type of biofuels, bioliquids and biomass fuels per fuel supplier shall be made available to consumers on the websites of operators, suppliers or the relevant competent authorities and shall be updated on an annual basis.

Contracting Parties shall submit to the Secretariat, in aggregated form, the information referred to in the first subparagraph of this paragraph. The **Secretariat** shall publish that information on the e-reporting platform referred to in Article 28 of Regulation (EU) 2018/1999 **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC** in summary form preserving the confidentiality of commercially sensitive information.

4. The **Secretariat** may recognize that voluntary national schemes setting standards for the production of biofuels, bioliquids or biomass fuels, or other fuels that are eligible for counting towards the numerator referred to in point (b) of Article 27(1), provide accurate data on greenhouse gas emission savings for the purposes of Article 25(2) and Article 29(10), demonstrate compliance with Article 27(3) and Article 28(2) and (4), or demonstrate that consignments of biofuels, bioliquids or biomass fuels comply with the sustainability criteria laid down in Article 29(2) to (7). When demonstrating that the criteria laid down in Article 29(6) and (7) are met, the operators may provide the required evidence directly at sourcing area level. The **Secretariat** may recognise areas for the protection of rare, threatened or endangered ecosystems or species recognised by international agreements or included in lists drawn up by intergovernmental organisations or the International Union for the Conservation of Nature for the purposes of point (c)(ii) of the first subparagraph of Article 29(3).

The **Secretariat** may **recognise** that those schemes contain accurate information on measures taken for soil, water and air protection, for the restoration of degraded land, for the avoidance of excessive water consumption in areas where water is scarce, and for certification of biofuels, bioliquids and biomass fuels with low indirect land-use change-risk.

5. <...> The **Secretariat** shall require that each voluntary scheme on which **an opinion has been issued** under paragraph 4 submit annually by 30 April a report to the **Secretariat** covering each of the points set out in Annex IX to Regulation (EU) 2018/1999, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**. The report shall cover the preceding calendar year. The requirement to submit a report shall apply only to voluntary schemes that have operated for at least 12 months.

The **Secretariat** shall make the reports drawn up by the voluntary schemes available, in an aggregated form or in full if appropriate, on the e-reporting platform referred to in Article 28 of Regulation (EU) 2018/1999, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**.

6. **Contracting Parties** may set up national schemes where compliance with the sustainability and greenhouse gas emissions saving criteria laid down in Article 29(2) to (7) and (10) and with the greenhouse gas emissions savings thresholds for renewable liquid and gaseous transport fuels of non-biological origin and recycled carbon fuels set in, and adopted pursuant to, Article 25(2) and in accordance with Article 28(5) is verified throughout the entire chain of custody involving competent national authorities.

A **Contracting Party** may notify such a national scheme to the **Secretariat**. The **Secretariat** may **issue an opinion**, whether such a notified national scheme complies with the conditions laid down in this Directive. **The Contracting Party in question shall take utmost account of the opinion and provide reasons for any deviation in writing.** ²⁵

Where the **opinion** is positive, schemes established in accordance with this Article shall not refuse mutual

²⁵ The text displayed here corresponds to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

recognition with that **Contracting Party's** scheme, as regards verification of compliance with the sustainability and greenhouse gas emissions saving criteria laid down in Article 29(2) to (7) and (10) and the greenhouse gas emissions savings thresholds set in, and adopted pursuant to, Article 25(2).

7. The **Secretariat shall issue opinions** under paragraph 4 of this Article only if the scheme in question meets adequate standards of reliability, transparency and independent auditing and provides adequate assurances that no materials have been intentionally modified or discarded so that the consignment or part thereof would fall under Annex IX. In the case of schemes to measure greenhouse gas emissions savings, such schemes shall also comply with the methodological requirements set out in Annex V or VI. Lists of areas of high biodiversity value as referred to in point (c)(ii) of the first subparagraph of Article 29(3) shall meet adequate standards of objectivity and coherence with internationally recognised standards and provide for appropriate appeal procedures.

The voluntary schemes referred to in paragraph 4 shall, at least annually, publish a list of their certification bodies used for independent auditing, indicating for each certification body by which entity or national public authority it was recognised and which entity or national public authority is monitoring it.

8. <...> The Energy Community Secretariat shall inform the Permanent High Level Group about any implementing acts adopted in accordance with Article 30(8) of Directive (EU) 2018/2001 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant implementing acts into the Energy Community acquis.²⁶

9. Where an economic operator provides evidence or data obtained in accordance with a scheme that has been the subject of an **opinion** pursuant to paragraph 4 or 6 of this Article, to the extent covered by that **opinion**, a **Contracting Party** shall not require the supplier to provide further evidence of compliance with the sustainability and greenhouse gas emissions saving criteria laid down in Article 29(2) to (7) and (10).

Competent authorities of the **Contracting Parties** shall supervise the operation of certification bodies that are conducting independent auditing under a voluntary scheme. Certification bodies shall submit, upon the request of competent authorities, all relevant information necessary to supervise the operation, including the exact date, time and location of audits. Where **Contracting Parties** find issues of non-conformity, they shall inform the voluntary scheme without delay.

10. At the request of a **Contracting Party**, which may be based on the request of an economic operator, the Secretariat shall, on the basis of all available evidence, examine whether the sustainability and greenhouse gas emissions saving criteria laid down in Article 29(2) to (7) and (10) in relation to a source of biofuels, bioliquids and biomass fuels, and the greenhouse gas emissions savings thresholds set in, and adopted pursuant to, Article 25(2), have been met.

Within six months of receipt of such a request and in accordance with the examination procedure referred to in Article 34(3), the **Secretariat** shall, decide whether the **Contracting Party** concerned may either:

- (a) take into account biofuels, bioliquids, biomass fuels and other fuels that are eligible for counting towards the numerator referred to in point (b) of Article 27(1) from that source for the purposes referred to in points (a), (b) and (c) of the first subparagraph of Article 29(1); or
- (b) by way of derogation from paragraph 9 of this Article, require suppliers of the source of biofuels, bioliquids, biomass fuels and other fuels that are eligible for counting towards the numerator referred to in point (b) of Article 27(1) to provide further evidence of compliance with those sustainability and greenhouse

²⁶ The text displayed here corresponds to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

gas emissions saving criteria and those greenhouse gas emissions savings thresholds.

Article 31

Calculation of the greenhouse gas impact of biofuels, bioliquids and biomass fuels

1. For the purposes of Article 29(10), the greenhouse gas emissions saving from the use of biofuel, bioliquids and biomass fuels shall be calculated in one of the following ways:

(a) where a default value for greenhouse gas emissions saving for the production pathway is laid down in Part A or B of Annex V for biofuels and bioliquids and in Part A of Annex VI for biomass fuels where the e_f value for those biofuels or bioliquids calculated in accordance with point 7 of Part C of Annex V and for those biomass fuels calculated in accordance with point 7 of Part B of Annex VI is equal to or less than zero, by using that default value;

(b) by using an actual value calculated in accordance with the methodology laid down in Part C of Annex V for biofuels and bioliquids and in Part B of Annex VI for biomass fuels;

(c) by using a value calculated as the sum of the factors of the formulas referred to in point 1 of Part C of Annex V, where disaggregated default values in Part D or E of Annex V may be used for some factors, and actual values, calculated in accordance with the methodology laid down in Part C of Annex V, are used for all other factors;

(d) by using a value calculated as the sum of the factors of the formulas referred to in point 1 of Part B of Annex VI, where disaggregated default values in Part C of Annex VI may be used for some factors, and actual values, calculated in accordance with the methodology laid down in Part B of Annex VI, are used for all other factors.

2. **Contracting Parties** may submit to the **Secretariat** reports including information on the typical greenhouse gas emissions from the cultivation of agricultural raw materials of the areas on their territory classified as level 2 in the nomenclature of territorial units for statistics (NUTS) or as a more disaggregated NUTS level in accordance with Regulation (EC) No 1059/2003 of the European Parliament and of the Council. Those reports shall be accompanied by a description of the method and data sources used to calculate the level of emissions. That method shall take into account soil characteristics, climate and expected raw material yields.

3. <...>²⁷

4. <...> **The Energy Community Secretariat shall inform the Permanent High Level Group about any implementing acts adopted in accordance with Article 31(4) of Directive (EU) 2018/2001 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant implementing acts into the Energy Community acquis.** ²⁸

5. **The Energy Community Secretariat shall inform the Permanent High Level Group about any implementing acts adopted in accordance with Article 31(5) of Directive (EU) 2018/2001 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant**

²⁷ Not applicable according to Article 4 of Ministerial Council Decision 2021/14/MC-Enc

²⁸ The text displayed here corresponds to Article 4 of Ministerial Council Decision 2021/14/MC-Enc

implementing acts into the Energy Community acquis.²⁹

6. The Energy Community Secretariat shall inform the Permanent High Level Group about any implementing acts adopted in accordance with Article 31(6) of Directive (EU) 2018/2001 within one week of their adoption. The Permanent High Level Group is empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant implementing acts into the Energy Community acquis.³⁰

Article 32

Implementing acts

< . . . >³¹

Article 33

Monitoring by the Secretariat

The **Secretariat** shall monitor the origin of biofuels, bioliquids and biomass fuels consumed in the **Energy Community** and the impact of their production, including the impact as a result of displacement, on land use in the **Energy Community** and in the main third countries of supply. Such monitoring shall be based on **Contracting Parties'** integrated national energy and climate plans and corresponding progress reports pursuant to Articles 3, 17 and 20 of Regulation (EU) 2018/1999, **as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC**, and those of relevant third countries, intergovernmental organisations, scientific studies and any other relevant pieces of information. The **Secretariat** shall also monitor the commodity price changes associated with the use of biomass for energy and any associated positive and negative effects on food security.

<...>³²

<...>³³

In 2032, the **Secretariat** shall publish a report reviewing the application of this Directive.

(new) Article 34

Until adoption by the Ministerial Council of the Energy Community 2030 targets, including the renewable energy target and/or targets for energy and climate of each Contracting Party, as appropriate, this Directive shall be applied on the basis of Contracting Parties' National Domestic Contributions or targets or any other more ambitious targets or contributions that they have undertaken under any national or international legal and/or policy text.

²⁹ The text displayed here corresponds to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

³⁰ The text displayed here corresponds to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

³¹ Not applicable according to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

³² Not applicable according to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

³³ Not applicable according to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

Article 34

Committee procedure

<...>³⁴

Article 35

Exercise of the delegation

<...>

Article 36

Transposition

<...>

Article 37

Repeal

<...>

Article 38

Entry into force

<...>

Article 39

Addressees

<...>

34 Articles 34, 35, 36, 37, 38 and 39 not applicable according to Article 4 of Ministerial Council Decision 2021/14/MC-Enc

ANNEX I

**NATIONAL OVERALL TARGETS FOR THE SHARE OF ENERGY FROM
RENEWABLE SOURCES IN GROSS FINAL CONSUMPTION OF ENERGY IN
2020⁽¹⁾**

A. National overall targets

	Share of energy from renewable sources in gross final consumption of energy, 2005 (S_{2005})	Target for share of energy from renewable sources in gross final consumption of energy, 2020 (S_{2020})
Albania	31,2%	38%
Bosnia and Herzegovina	34,0%	40%
Georgia	n/a	n/a
Kosovo*	18,9%	25%
Moldova	11,9%	17%
Montenegro	26,3%	33%
North Macedonia	17,2%	23%
Serbia	21,2%	27%
Ukraine	5,5%	11%

(1) In order to be able to achieve the national objectives set out in this Annex, it is underlined that the State aid guidelines for environmental protection recognise the continued need for national mechanisms of support for the promotion of energy from renewable sources.

ANNEX II

NORMALISATION RULE FOR ACCOUNTING FOR ELECTRICITY GENERATED FROM HYDROPOWER AND WIND POWER

The following rule shall be applied for the purposes of accounting for electricity generated from hydropower in a given **Contracting Party**:

$$Q_{N(\text{norm})} = \left(\frac{Q_i}{C_i} \right) \left(\frac{C_N}{C_{N-1}} \right)^2$$

where:

N = reference year;

$Q_{N(\text{norm})}$ = normalised electricity generated by all hydropower plants of the **Contracting Party** in year N, for accounting purposes;

Q_i = the quantity of electricity actually generated in year i by all hydropower plants of the **Contracting Party** measured in GWh, excluding production from pumped storage units using water that has previously been pumped uphill;

C_i = the total installed capacity, net of pumped storage, of all hydropower plants of the **Contracting Party** at the end of year i, measured in MW.

The following rule shall be applied for the purposes of accounting for electricity generated from onshore wind power in a given **Contracting Party**:

$$Q_{N(\text{norm})} = \left(\frac{Q_i}{C_i} \right) \left(\frac{C_N}{C_{N-1}} \right)^2$$

where:

N = reference year;

$Q_{N(\text{norm})}$ = normalised electricity generated by all onshore wind power plants of the **Contracting Party** in year N, for accounting purposes;

Q_i = the quantity of electricity actually generated in year i by all onshore wind power plants of the **Contracting Party** measured in GWh;

C_i = the total installed capacity of all the onshore wind power plants of the **Contracting Party** at the end of year j, measured in MW;

n = 4 or the number of years preceding year N for which capacity and production data are available for the **Contracting Party** in question, whichever is lower.

The following rule shall be applied for the purposes of accounting for electricity generated from offshore wind power in a given **Contracting Party**:

$$Q_{N(\text{norm})} = \left(\frac{Q_i}{C_i} \right) \left(\frac{C_N}{C_{N-1}} \right)^2$$

where:

N = reference year;

$Q_{N(\text{norm})}$ = normalised electricity generated by all offshore wind power plants of the **Contracting Party** in year N, for accounting purposes;

Q_i = the quantity of electricity actually generated in year i by all offshore wind power plants of the **Con-**

Contracting Party measured in GWh;

C_j = the total installed capacity of all the offshore wind power plants of the **Contracting Party** at the end of year j , measured in MW;

$n = 4$ or the number of years preceding year N for which capacity and production data are available for the **Contracting Party** in question, whichever is lower.

ANNEX III

ENERGY CONTENT OF FUELS

Fuel	Energy content by weight (lower calorific value, MJ/kg)	Energy content by volume (lower calorific value, MJ/l)
FUELS FROM BIOMASS AND/OR BIOMASS PROCESSING OPERATIONS		
Bio-Propane	46	24
Pure vegetable oil (oil produced from oil plants through pressing, extraction or comparable procedures, crude or refined but chemically unmodified)	37	34
Biodiesel - fatty acid methyl ester (methyl-ester produced from oil of biomass origin)	37	33
Biodiesel - fatty acid ethyl ester (ethyl-ester produced from oil of biomass origin)	38	34
Biogas that can be purified to natural gas quality	50	—
Hydrotreated (thermochemically treated with hydrogen) oil of biomass origin, to be used for replacement of diesel	44	34
Hydrotreated (thermochemically treated with hydrogen) oil of biomass origin, to be used for replacement of petrol	45	30
Hydrotreated (thermochemically treated with hydrogen) oil of biomass origin, to be used for replacement of jet fuel	44	34
Hydrotreated oil (thermochemically treated with hydrogen) of biomass origin, to be used for replacement of liquefied petroleum gas	46	24
Co-processed oil (processed in a refinery simultaneously with fossil fuel) of biomass or pyrolysed biomass origin to be used for replacement of diesel	43	36
Co-processed oil (processed in a refinery simultaneously with fossil fuel) of biomass or pyrolysed biomass origin, to be used to replace petrol	44	32
Co-processed oil (processed in a refinery simultaneously with fossil fuel) of biomass or pyrolysed biomass origin, to be used to replace jet fuel	43	33
Co-processed oil (processed in a refinery simultaneously with fossil fuel) of biomass or pyrolysed biomass origin, to be used to replace liquefied petroleum gas	46	23

RENEWABLE FUELS THAT CAN BE PRODUCED FROM VARIOUS RENEWABLE SOURCES, INCLUDING BIOMASS		
Methanol from renewable sources	20	16
Ethanol from renewable sources	27	21
Propanol from renewable sources	31	25
Butanol from renewable sources	33	27
Fischer-Tropsch diesel (a synthetic hydrocarbon or mixture of synthetic hydrocarbons to be used for replacement of diesel)	44	34
Fischer-Tropsch petrol (a synthetic hydrocarbon or mixture of synthetic hydrocarbons produced from biomass, to be used for replacement of petrol)	44	33
Fischer-Tropsch jet fuel (a synthetic hydrocarbon or mixture of synthetic hydrocarbons produced from biomass, to be used for replacement of jet fuel)	44	33
Fischer-Tropsch liquefied petroleum gas (a synthetic hydrocarbon or mixture of synthetic hydrocarbons, to be used for replacement of liquefied petroleum gas)	46	24
DME (dimethylether)	28	19
Hydrogen from renewable sources	120	—
ETBE (ethyl-tertio-butyl-ether produced on the basis of ethanol)	36 (of which 37% from renewable sources)	27 (of which 37% from renewable sources)
MTBE (methyl-tertio-butyl-ether produced on the basis of methanol)	35 (of which 22% from renewable sources)	26 (of which 22% from renewable sources)
TAAE (tertiary-amyl-ethyl-ether produced on the basis of ethanol)	38 (of which 29% from renewable sources)	29 (of which 29% from renewable sources)
TAME (tertiary-amyl-methyl-ether produced on the basis of methanol)	36 (of which 18% from renewable sources)	28 (of which 18% from renewable sources)
THxEE (tertiary-hexyl-ethyl-ether produced on the basis of ethanol)	38 (of which 25% from renewable sources)	30 (of which 25% from renewable sources)
THxME (tertiary-hexyl-methyl-ether produced on the basis of methanol)	38 (of which 14% from renewable sources)	30 (of which 14% from renewable sources)
FOSSIL FUELS		
Petrol	43	32
Diesel	43	36

ANNEX IV

CERTIFICATION OF INSTALLERS

The certification schemes or equivalent qualification schemes referred to in Article 18(3) shall be based on the following criteria:

1. The certification or qualification process shall be transparent and clearly defined by the **Contracting Parties** or by the administrative body that they appoint.
2. Installers of biomass, heat pump, shallow geothermal and solar photovoltaic and solar thermal energy shall be certified by an accredited training programme or training provider.
3. The accreditation of the training programme or provider shall be effected by **Contracting Parties** or by the administrative body that they appoint. The accrediting body shall ensure that the training programme offered by the training provider has continuity and regional or national coverage. The training provider shall have adequate technical facilities to provide practical training, including some laboratory equipment or corresponding facilities to provide practical training. The training provider shall also offer in addition to the basic training, shorter refresher courses on topical issues, including on new technologies, to enable life-long learning in installations. The training provider may be the manufacturer of the equipment or system, institutes or associations.
4. The training leading to certification or qualification of an installer shall include theoretical and practical parts. At the end of the training, the installer must have the skills required to install the relevant equipment and systems to meet the performance and reliability needs of the customer, incorporate quality craftsmanship, and comply with all applicable codes and standards, including energy and eco-labelling.
5. The training course shall end with an examination leading to a certificate or qualification. The examination shall include a practical assessment of successfully installing biomass boilers or stoves, heat pumps, shallow geothermal installations, solar photovoltaic or solar thermal installations.
6. The certification schemes or equivalent qualification schemes referred to in Article 18(3) shall take due account of the following guidelines:
 - (a) Accredited training programmes should be offered to installers with work experience, who have undergone, or are undergoing, the following types of training:
 - (i) in the case of biomass boiler and stove installers: training as a plumber, pipe fitter, heating engineer or technician of sanitary and heating or cooling equipment as a prerequisite;
 - (ii) in the case of heat pump installers: training as a plumber or refrigeration engineer and have basic electrical and plumbing skills (cutting pipe, soldering pipe joints, gluing pipe joints, lagging, sealing fittings, testing for leaks and installation of heating or cooling systems) as a prerequisite;
 - (iii) in the case of a solar photovoltaic or solar thermal installer: training as a plumber or electrician and have plumbing, electrical and roofing skills, including knowledge of soldering pipe joints, gluing pipe joints, sealing fittings, testing for plumbing leaks, ability to connect wiring, familiar with basic roof materials, flashing and sealing methods as a prerequisite; or
 - (iv) a vocational training scheme to provide an installer with adequate skills corresponding to a three years education in the skills referred to in point (a), (b) or (c), including both classroom and workplace learning.

(b) The theoretical part of the biomass stove and boiler installer training should give an overview of the market situation of biomass and cover ecological aspects, biomass fuels, logistics, fire protection, related subsidies, combustion techniques, firing systems, optimal hydraulic solutions, cost and profitability comparison as well as the design, installation and maintenance of biomass boilers and stoves. The training should also provide good knowledge of any European standards for technology and biomass fuels, such as pellets, and biomass related national and **Energy Community** law.

(c) The theoretical part of the heat pump installer training should give an overview of the market situation for heat pumps and cover geothermal resources and ground source temperatures of different regions, soil and rock identification for thermal conductivity, regulations on using geothermal resources, feasibility of using heat pumps in buildings and determining the most suitable heat pump system, and knowledge about their technical requirements, safety, air filtering, connection with the heat source and system layout. The training should also provide good knowledge of any European standards for heat pumps, and of relevant national and **Energy Community** law. The installer should demonstrate the following key competences:

- (i) a basic understanding of the physical and operation principles of a heat pump, including characteristics of the heat pump circle: context between low temperatures of the heat sink, high temperatures of the heat source, and the efficiency of the system, determination of the coefficient of performance and seasonal performance factor (SPF);
- (ii) an understanding of the components and their function within a heat pump circle, including the compressor, expansion valve, evaporator, condenser, fixtures and fittings, lubricating oil, refrigerant, superheating and sub-cooling and cooling possibilities with heat pumps; and
- (iii) the ability to choose and size the components in typical installation situations, including determining the typical values of the heat load of different buildings and for hot water production based on energy consumption, determining the capacity of the heat pump on the heat load for hot water production, on the storage mass of the building and on interruptible current supply; determine the buffer tank component and its volume and integration of a second heating system.

(d) The theoretical part of the solar photovoltaic and solar thermal installer training should give an overview of the market situation of solar products and cost and profitability comparisons, and cover ecological aspects, components, characteristics and dimensioning of solar systems, selection of accurate systems and dimensioning of components, determination of the heat demand, fire protection, related subsidies, as well as the design, installation and maintenance of solar photovoltaic and solar thermal installations. The training should also provide good knowledge of any European standards for technology, and certification such as Solar Keymark, and related national and **Energy Community** law. The installer should demonstrate the following key competences:

- (i) the ability to work safely using the required tools and equipment and implementing safety codes and standards and to identify plumbing, electrical and other hazards associated with solar installations;
- (ii) the ability to identify systems and their components specific to active and passive systems, including the mechanical design, and to determine the components' location and system layout and configuration;
- (iii) the ability to determine the required installation area, orientation and tilt for the solar photovoltaic and solar water heater, taking account of shading, solar access, structural integrity, the appropriateness of the installation for the building or the climate and to identify different installation methods suitable for roof types and the balance of system equipment required for the installation; and

(iv) for solar photovoltaic systems in particular, the ability to adapt the electrical design, including determining design currents, selecting appropriate conductor types and ratings for each electrical circuit, determining appropriate size, ratings and locations for all associated equipment and subsystems and selecting an appropriate interconnection point.

(e) The installer certification should be time restricted, so that a refresher seminar or event would be necessary for continued certification.

ANNEX V

RULES FOR CALCULATING THE GREENHOUSE GAS IMPACT OF BIOFUELS, BIOLIQUIDS AND THEIR FOSSIL FUEL COMPARATORS

A. TYPICAL AND DEFAULT VALUES FOR BIOFUELS IF PRODUCED WITH NO NET CARBON EMISSIONS FROM LAND-USE CHANGE

Biofuel production pathway	Greenhouse gas emissions saving – typical value	Greenhouse gas emissions saving – default value
sugar beet ethanol (no biogas from slop, natural gas as process fuel in conventional boiler)	67%	59%
sugar beet ethanol (with biogas from slop, natural gas as process fuel in conventional boiler)	77%	73%
sugar beet ethanol (no biogas from slop, natural gas as process fuel in CHP plant (*))	73%	68%
sugar beet ethanol (with biogas from slop, natural gas as process fuel in CHP plant (*))	79%	76%
sugar beet ethanol (no biogas from slop, lignite as process fuel in CHP plant (*))	58%	47%
sugar beet ethanol (with biogas from slop, lignite as process fuel in CHP plant (*))	71%	64%
corn (maize) ethanol (natural gas as process fuel in conventional boiler)	48%	40%
corn (maize) ethanol, (natural gas as process fuel in CHP plant (*))	55%	48%
corn (maize) ethanol (lignite as process fuel in CHP plant (*))	40%	28%
corn (maize) ethanol (forest residues as process fuel in CHP plant (*))	69%	68%
other cereals excluding maize ethanol (natural gas as process fuel in conventional boiler)	47%	38%
other cereals excluding maize ethanol (natural gas as process fuel in CHP plant (*))	53%	46%
other cereals excluding maize ethanol (lignite as process fuel in CHP plant (*))	37%	24%
other cereals excluding maize ethanol (forest residues as process fuel in CHP plant (*))	67%	67%
sugar cane ethanol	70%	70%
the part from renewable sources of ethyl-tertio-butyl-ether (ETBE)	Equal to that of the ethanol production pathway used	

the part from renewable sources of tertiary-amyl-ethyl-ether (TAAE)	Equal to that of the ethanol production pathway used	
rape seed biodiesel	52%	47%
sunflower biodiesel	57%	52%
soybean biodiesel	55%	50%
palm oil biodiesel (open effluent pond)	32%	19%
palm oil biodiesel (process with methane capture at oil mill)	51%	45%
waste cooking oil biodiesel	88%	84%
animal fats from rendering biodiesel (**)	84%	78%
hydrotreated vegetable oil from rape seed	51%	47%
hydrotreated vegetable oil from sunflower	58%	54%
hydrotreated vegetable oil from soybean	55%	51%
hydrotreated vegetable oil from palm oil (open effluent pond)	34%	22%
hydrotreated vegetable oil from palm oil (process with methane capture at oil mill)	53%	49%
hydrotreated oil from waste cooking oil	87%	83%
hydrotreated oil from animal fats from rendering (**)	83%	77%
pure vegetable oil from rape seed	59%	57%
pure vegetable oil from sunflower	65%	64%
pure vegetable oil from soybean	63%	61%
pure vegetable oil from palm oil (open effluent pond)	40%	30%
pure vegetable oil from palm oil (process with methane capture at oil mill)	59%	57%
pure oil from waste cooking oil	98%	98%

(*) Default values for processes using CHP are valid only if all the process heat is supplied by CHP.

(**) Applies only to biofuels produced from animal by-products classified as category 1 and 2 material in accordance with Regulation (EC) No 1069/2009 of the European Parliament and of the Council (1), for which emissions related to hygienisation as part of the rendering are not considered.

(1) Regulation (EC) No 1069/2009 of the European Parliament and of the Council of 21 October 2009 laying down health rules as regards animal by-products and derived products not intended for human consumption and repealing Regulation (EC) No 1774/2002 (Animal by-products Regulation) (OJ L 300, 14.11.2009, p. 1).

B. ESTIMATED TYPICAL AND DEFAULT VALUES FOR FUTURE BIOFUELS THAT WERE NOT ON THE MARKET OR WERE ON THE MARKET ONLY IN NEGLIGIBLE QUANTITIES IN 2016, IF PRODUCED WITH NO NET CARBON EMISSIONS FROM LAND-USE CHANGE

Biofuel production pathway	Greenhouse gas emissions saving - typical value	Greenhouse gas emissions saving - default value
wheat straw ethanol	85%	83%
waste wood Fischer-Tropsch diesel in free-standing plant	85%	85%
farmed wood Fischer-Tropsch diesel in free-standing plant	82%	82%
waste wood Fischer-Tropsch petrol in free-standing plant	85%	85%
farmed wood Fischer-Tropsch petrol in free-standing plant	82%	82%
waste wood dimethylether (DME) in free-standing plant	86%	86%
farmed wood dimethylether (DME) in free-standing plant	83%	83%
waste wood methanol in free-standing plant	86%	86%
farmed wood methanol in free-standing plant	83%	83%
Fischer-Tropsch diesel from black-liquor gasification integrated with pulp mill	89%	89%
Fischer-Tropsch petrol from black-liquor gasification integrated with pulp mill	89%	89%
dimethylether (DME) from black-liquor gasification integrated with pulp mill	89%	89%
Methanol from black-liquor gasification integrated with pulp mill	89%	89%
the part from renewable sources of methyl-tertio-butyl-ether (MTBE)	Equal to that of the methanol production pathway used	

C. METHODOLOGY

1. Greenhouse gas emissions from the production and use of transport fuels, biofuels and bioliquids shall be calculated as follows:

(a) greenhouse gas emissions from the production and use of biofuels shall be calculated as:

$$E = e_{ec} + e_l + e_p + e_{td} + e_u - e_{sca} - e_{ccs} - e_{ccr}$$

where

E = total emissions from the use of the fuel;

e_{ec} = emissions from the extraction or cultivation of raw materials;

e_i = annualised emissions from carbon stock changes caused by land-use change;

e_p = emissions from processing;

e_{td} = emissions from transport and distribution;

e_u = emissions from the fuel in use;

e_{sca} = emission savings from soil carbon accumulation via improved agricultural management;

e_{ccs} = emission savings from CO₂ capture and geological storage; and

e_{ccr} = emission savings from CO₂ capture and replacement. Emissions from the manufacture of machinery and equipment shall not be taken into account.

(b) Greenhouse gas emissions from the production and use of bioliquids shall be calculated as for biofuels (E), but with the extension necessary for including the energy conversion to electricity and/or heat and cooling produced, as follows:

(i) For energy installations delivering only heat:

$$EC_h = \frac{E}{\eta_h}$$

(ii) For energy installations delivering only electricity:

$$EC_{el} = \frac{E}{\eta_{el}}$$

where

$EC_{h,el}$ = Total greenhouse gas emissions from the final energy commodity.

E = Total greenhouse gas emissions of the bioliquid before end-conversion.

η_{el} = The electrical efficiency, defined as the annual electricity produced divided by the annual bioliquid input based on its energy content.

η_h = The heat efficiency, defined as the annual useful heat output divided by the annual bioliquid input based on its energy content.

(iii) For the electricity or mechanical energy coming from energy installations delivering useful heat together with electricity and/or mechanical energy:

$$EC_{el} = \frac{E}{\eta_{el}} \left(\frac{C_{el} \cdot \eta_{el}}{C_{el} \cdot \eta_{el} + C_h \cdot \eta_h} \right)$$

(iv) For the useful heat coming from energy installations delivering heat together with electricity and/or mechanical energy:

$$EC_h = \frac{E}{\eta_h} \left(\frac{C_h \cdot \eta_h}{C_{el} \cdot \eta_{el} + C_h \cdot \eta_h} \right)$$

where:

$EC_{h,el}$ = Total greenhouse gas emissions from the final energy commodity.

E = Total greenhouse gas emissions of the bioliquid before end-conversion.

η_{el} = The electrical efficiency, defined as the annual electricity produced divided by the annual fuel input based on its energy content.

η_h = The heat efficiency, defined as the annual useful heat output divided by the annual fuel input based on its energy content.

C_{el} = Fraction of exergy in the electricity, and/or mechanical energy, set to 100% ($C_{el} = 1$).

C_h = Carnot efficiency (fraction of exergy in the useful heat). The Carnot efficiency, C_h , for useful heat at different temperatures is defined as:

$$C_h = \frac{T_h - T_0}{T_h}$$

where

T_h = Temperature, measured in absolute temperature (kelvin) of the useful heat at point of delivery.

T_0 = Temperature of surroundings, set at 273,15 kelvin (equal to 0 °C) If the excess heat is exported for heating of buildings, at a temperature below 150 °C (423,15 kelvin), C_h can alternatively be defined as follows:

C_h = Carnot efficiency in heat at 150 °C (423,15 kelvin), which is: 0,3546

For the purposes of that calculation, the following definitions apply:

- (a) 'cogeneration' means the simultaneous generation in one process of thermal energy and electricity and/or mechanical energy;
- (b) 'useful heat' means heat generated to satisfy an economical justifiable demand for heat, for heating and cooling purposes;
- (c) 'economically justifiable demand' means the demand that does not exceed the needs for heat or cooling and which would otherwise be satisfied at market conditions.

2. Greenhouse gas emissions from biofuels and bioliquids shall be expressed as follows:

(a) greenhouse gas emissions from biofuels, E , shall be expressed in terms of grams of CO₂ equivalent per MJ of fuel, g CO₂eq/MJ.

(b) greenhouse gas emissions from bioliquids, EC , in terms of grams of CO₂ equivalent per MJ of final energy commodity (heat or electricity), g CO₂eq/MJ. When heating and cooling are co-generated with electricity, emissions shall be allocated between heat and electricity (as under 1(b)), irrespective if the heat is used for actual heating purposes or for cooling (?).

Where the greenhouse gas emissions from the extraction or cultivation of raw materials e_{oc} are expressed in unit g CO₂eq/dry-ton of feedstock, the conversion to grams of CO₂ equivalent per MJ of fuel, g CO₂eq/MJ, shall be calculated as follows (?):

$$e_{ec, fuel_a} \left[\frac{gCO_2eq}{MJfuel} \right]_{ec} = \frac{e_{ec, feedstock_a} \left[\frac{gCO_2eq}{t_{dry}} \right]}{LHV_a \left[\frac{MJfeedstock}{t_{dry} feedstock} \right]} \times \text{Fuel feedstock factor}_a \times \text{Allocation factor fuel}_a$$

where

$$\text{Allocation factor fuel}_a = \left[\frac{\text{Energy in fuel}}{\text{Energy fuel} + \text{Energy in co-products}} \right]$$

Fuel feedstock factor_a = [Ratio of MJ feedstock required to make 1 MJ fuel]

Emissions per dry-ton feedstock shall be calculated as follows:

$$e_{ec, feedstock_a} \left[\frac{gCO_2eq}{t_{dry}} \right] = \frac{e_{ec, feedstock_a} \left[\frac{gCO_2eq}{t_{moist}} \right]}{(1 - \text{moisture content})}$$

3. Greenhouse gas emissions savings from biofuels and bioliquids shall be calculated as follows:

(a) greenhouse gas emissions savings from biofuels:

$$\text{SAVING} = (E_{F(t)} - E_B) / E_{F(t)}$$

where

E_B = total emissions from the biofuel; and

$E_{F(t)}$ = total emissions from the fossil fuel comparator for transport

(b) greenhouse gas emissions savings from heat and cooling, and electricity being generated from bioliquids:

$$\text{SAVING} = (EC_{F(h\&c,el)} - EC_{B(h\&c,el)}) / EC_{F(h\&c,el)}$$

where

$EC_{B(h\&c,el)}$ = total emissions from the heat or electricity; and

$EC_{F(h\&c,el)}$ = total emissions from the fossil fuel comparator for useful heat or electricity.

4. The greenhouse gases taken into account for the purposes of point 1 shall be CO₂, N₂O and CH₄. For the purposes of calculating CO₂ equivalence, those gases shall be valued as follows:

CO₂ : 1

N₂O : 298

CH₄ : 25

5. Emissions from the extraction or cultivation of raw materials, e_{ec} , shall include emissions from the extraction or cultivation process itself; from the collection, drying and storage of raw materials; from waste and leakages; and from the production of chemicals or products used in extraction or cultivation. Capture of CO₂ in the cultivation of raw materials shall be excluded. Estimates of emissions from agriculture biomass cultivation may be derived from the use of regional averages for cultivation emissions included in the reports referred to in Article 31(4) or the information on the disaggregated default values for cultivation emissions included in this Annex, as an alternative to using actual values. In the absence of relevant information in those reports it is allowed to calculate averages based on local farming practises based for instance on data of a group of farms, as an alternative to using actual values.

6. For the purposes of the calculation referred to in point 1(a), greenhouse gas emissions savings from improved agriculture management, e_{sca} , such as shifting to reduced or zero-tillage, improved crop/rotation, the use of cover crops, including crop residue management, and the use of organic soil improver (e. g. compost, manure fermentation digestate), shall be taken into account only if solid and verifiable evidence is provided that the soil carbon has increased or that it is reasonable to expect to have increased over the period in which the raw materials concerned were cultivated while taking into account the emissions where such practices lead to increased fertiliser and herbicide use ⁽⁴⁾.

7. Annualised emissions from carbon stock changes caused by land-use change, e_p , shall be calculated by dividing total emissions equally over 20 years. For the calculation of those emissions, the following rule shall be applied:

$$e_i = (CS_R - CS_A) \times 3,664 \times 1/20 \times 1/P - e_B \text{ (}^5\text{)}$$

where

e_i = annualised greenhouse gas emissions from carbon stock change due to land-use change (measured as mass (grams) of CO₂-equivalent per unit of biofuel or bioliquid energy (megajoules)). 'Cropland' ⁽⁶⁾ and 'perennial cropland' ⁽⁷⁾ shall be regarded as one land use;

CS_R = the carbon stock per unit area associated with the reference land-use (measured as mass (tonnes) of carbon per unit area, including both soil and vegetation). The reference land-use shall be the land-use in January 2008 or 20 years before the raw material was obtained, whichever was the later;

CS_A = the carbon stock per unit area associated with the actual land-use (measured as mass (tonnes) of carbon per unit area, including both soil and vegetation). In cases where the carbon stock accumulates over more than one year, the value attributed to CS_A shall be the estimated stock per unit area after 20 years or when the crop reaches maturity, whichever the earlier;

P = the productivity of the crop (measured as biofuel or bioliquid energy per unit area per year) and

e_B = bonus of 29 g CO₂eq/MJ biofuel or bioliquid if biomass is obtained from restored degraded land under the conditions laid down in point 8.

8. The bonus of 29 g CO₂eq/MJ shall be attributed if evidence is provided that the land:

(a) was not in use for agriculture or any other activity in January 2008; and

(b) is severely degraded land, including such land that was formerly in agricultural use.

The bonus of 29 g CO₂eq/MJ shall apply for a period of up to 20 years from the date of conversion of the land to agricultural use, provided that a steady increase in carbon stocks as well as a sizable reduction in erosion phenomena for land falling under (b) are ensured.

9. 'Severely degraded land' means land that, for a significant period of time, has either been significantly salinated or presented significantly low organic matter content and has been severely eroded.

10. <...>³⁵

11. Emissions from processing, e_p , shall include emissions from the processing itself; from waste and leakages; and from the production of chemicals or products used in processing including the CO₂ emissions corresponding to the carbon contents of fossil inputs, whether or not actually combusted in the process.

In accounting for the consumption of electricity not produced within the fuel production plant, the greenhouse gas emissions intensity of the production and distribution of that electricity shall be assumed to

³⁵ The text displayed here corresponds to Article 4 of Ministerial Council Decision 2021/14/MC-EnC

be equal to the average emission intensity of the production and distribution of electricity in a defined region. By way of derogation from this rule, producers may use an average value for an individual electricity production plant for electricity produced by that plant, if that plant is not connected to the electricity grid.

Emissions from processing shall include emissions from drying of interim products and materials where relevant.

12. Emissions from transport and distribution, e_{td} , shall include emissions from the transport of raw and semi-finished materials and from the storage and distribution of finished materials. Emissions from transport and distribution to be taken into account under point 5 shall not be covered by this point.

13. Emissions of the fuel in use, e_u , shall be taken to be zero for biofuels and bioliquids.

Emissions of non-CO₂ greenhouse gases (N₂O and CH₄) of the fuel in use shall be included in the e_u factor for bioliquids.

14. Emission savings from CO₂ capture and geological storage, e_{ccs} , that have not already been accounted for in e_p , shall be limited to emissions avoided through the capture and storage of emitted CO₂ directly related to the extraction, transport, processing and distribution of fuel if stored in compliance with Directive 2009/31/EC of the European Parliament and of the Council⁽⁸⁾.

15. Emission savings from CO₂ capture and replacement, e_{ccr} , shall be related directly to the production of biofuel or bioliquid they are attributed to, and shall be limited to emissions avoided through the capture of CO₂ of which the carbon originates from biomass and which is used to replace fossil-derived CO₂ in production of commercial products and services.

16. Where a cogeneration unit – providing heat and/or electricity to a fuel production process for which emissions are being calculated – produces excess electricity and/or excess useful heat, the greenhouse gas emissions shall be divided between the electricity and the useful heat according to the temperature of the heat (which reflects the usefulness (utility) of the heat). The useful part of the heat is found by multiplying its energy content with the Carnot efficiency, C_h , calculated as follows:

$$C_h = \frac{T_h - T_0}{T_h}$$

where

T_h = Temperature, measured in absolute temperature (kelvin) of the useful heat at point of delivery.

T_0 = Temperature of surroundings, set at 273,15 kelvin (equal to 0 °C) If the excess heat is exported for heating of buildings, at a temperature below 150 °C (423,15 kelvin), C_h can alternatively be defined as follows:

C_h = Carnot efficiency in heat at 150 °C (423,15 kelvin), which is: 0,3546 For the purposes of that calculation, the actual efficiencies shall be used, defined as the annual mechanical energy, electricity and heat produced respectively divided by the annual energy input.

For the purposes of that calculation, the following definitions apply:

(a) 'cogeneration' shall mean the simultaneous generation in one process of thermal energy and electrical and/or mechanical energy;

(b) 'useful heat' shall mean heat generated to satisfy an economical justifiable demand for heat, for heating or cooling purposes;

(c) 'economically justifiable demand' shall mean the demand that does not exceed the needs for heat or cooling and which would otherwise be satisfied at market conditions.

17. Where a fuel production process produces, in combination, the fuel for which emissions are being calculated and one or more other products (co-products), greenhouse gas emissions shall be divided between the fuel or its intermediate product and the co-products in proportion to their energy content (determined by lower heating value in the case of co-products other than electricity and heat). The greenhouse gas intensity of excess useful heat or excess electricity is the same as the greenhouse gas intensity of heat or electricity delivered to the fuel production process and is determined from calculating the greenhouse intensity of all inputs and emissions, including the feedstock and CH₄ and N₂O emissions, to and from the cogeneration unit, boiler or other apparatus delivering heat or electricity to the fuel production process. In the case of cogeneration of electricity and heat, the calculation is performed following point 16.

18. For the purposes of the calculation referred to in point 17, the emissions to be divided shall be $e_{ec} + e_i + e_{sca}$ + those fractions of e_p , e_{td} , e_{ccs} , and e_{ccr} that take place up to and including the process step at which a co-product is produced. If any allocation to co-products has taken place at an earlier process step in the life-cycle, the fraction of those emissions assigned in the last such process step to the intermediate fuel product shall be used for those purposes instead of the total of those emissions.

In the case of biofuels and bioliquids, all co-products shall be taken into account for the purposes of that calculation. No emissions shall be allocated to wastes and residues. Co-products that have a negative energy content shall be considered to have an energy content of zero for the purposes of the calculation.

Wastes and residues, including tree tops and branches, straw, husks, cobs and nut shells, and residues from processing, including crude glycerine (glycerine that is not refined) and bagasse, shall be considered to have zero life-cycle greenhouse gas emissions up to the process of collection of those materials irrespectively of whether they are processed to interim products before being transformed into the final product.

In the case of fuels produced in refineries, other than the combination of processing plants with boilers or cogeneration units providing heat and/or electricity to the processing plant, the unit of analysis for the purposes of the calculation referred to in point 17 shall be the refinery.

19. For biofuels, for the purposes of the calculation referred to in point 3, the fossil fuel comparator $E_{F(t)}$ shall be 94 g CO₂eq/MJ.

For bioliquids used for the production of electricity, for the purposes of the calculation referred to in point 3, the fossil fuel comparator $EC_{F(e)}$ shall be 183 g CO₂eq/MJ.

For bioliquids used for the production of useful heat, as well as for the production of heating and/or cooling, for the purposes of the calculation referred to in point 3, the fossil fuel comparator $EC_{F(h&g)}$ shall be 80 g CO₂eq/MJ.

(2) Heat or waste heat is used to generate cooling (chilled air or water) through absorption chillers. Therefore, it is appropriate to calculate only the emissions associated to the heat produced per MJ of heat, irrespectively if the end-use of the heat is actual heating or cooling via absorption chillers.

(3) The formula for calculating greenhouse gas emissions from the extraction or cultivation of raw materials e_{ec} describes cases where feedstock is converted into biofuels in one step. For more complex supply chains, adjustments are needed for calculating greenhouse gas emissions from the extraction or cultivation of raw materials e_{ec} for intermediate products.

(4) Measurements of soil carbon can constitute such evidence, e.g. by a first measurement in advance of the cultivation and subsequent ones at regular intervals several years apart. In such a case, before the second measurement is available, increase in soil carbon would be estimated on the basis of representative experiments or soil models. From the second measurement onwards, the measurements would constitute the basis for determining the existence of an increase in soil carbon and its magnitude.

(5) The quotient obtained by dividing the molecular weight of CO₂ (44,010 g/mol) by the molecular weight of carbon (12,011 g/mol) is equal to 3,664.

(6) Cropland as defined by IPCC.

(7) Perennial crops are defined as multi-annual crops, the stem of which is usually not annually harvested such as short rotation coppice and oil palm.

(8) Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide and amending Council Directive 85/337/EEC, European Parliament and Council Directives 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006/12/EC, 2008/1/EC and Regulation (EC) No 1013/2006 (OJ L 140, 5.6.2009, p. 114).

D. DISAGGREGATED DEFAULT VALUES FOR BIOFUELS AND BIOLIQUIDS

Disaggregated default values for cultivation: 'e_{cc}' as defined in Part C of this Annex, including soil N₂O emissions

Biofuel and bioliquid production pathway	Greenhouse gas emissions – typical value (g CO₂eq/MJ)	Greenhouse gas emissions – default value (g CO₂eq/MJ)
sugar beet ethanol	9,6	9,6
corn (maize) ethanol	25,5	25,5
other cereals excluding corn (maize) ethanol	27,0	27,0
sugar cane ethanol	17,1	17,1
the part from renewable sources of ETBE	Equal to that of the ethanol production pathway used	
the part from renewable sources of TAAE	Equal to that of the ethanol production pathway used	
rape seed biodiesel	32,0	32,0
sunflower biodiesel	26,1	26,1
soybean biodiesel	21,2	21,2
palm oil biodiesel	26,2	26,2
waste cooking oil biodiesel	0	0
animal fats from rendering biodiesel (**)	0	0
hydrotreated vegetable oil from rape seed	33,4	33,4
hydrotreated vegetable oil from sunflower	26,9	26,9
hydrotreated vegetable oil from soybean	22,1	22,1
hydrotreated vegetable oil from palm oil	27,4	27,4
hydrotreated oil from waste cooking oil	0	0
hydrotreated oil from animal fats from rendering (**)	0	0
pure vegetable oil from rape seed	33,4	33,4
pure vegetable oil from sunflower	27,2	27,2
pure vegetable oil from soybean	22,2	22,2
pure vegetable oil from palm oil	27,1	27,1
pure oil from waste cooking oil	0	0

(**) Applies only to biofuels produced from animal by-products classified as category 1 and 2 material in accordance with Regulation (EC) No 1069/2009, for which emissions related to hygienisation as part of the rendering are not considered.

Disaggregated default values for cultivation: 'e_{ec}' – for soil N₂O emissions only (these are already included in the disaggregated values for cultivation emissions in the 'e_{ec}' table)

Biofuel and bioliquid production pathway	Greenhouse gas emissions – typical value (g CO₂eq/MJ)	Greenhouse gas emissions – default value (g CO₂eq/MJ)
sugar beet ethanol	4,9	4,9
corn (maize) ethanol	13,7	13,7
other cereals excluding corn (maize) ethanol	14,1	14,1
sugar cane ethanol	2,1	2,1
the part from renewable sources of ETBE	Equal to that of the ethanol production pathway used	
the part from renewable sources of TAE	Equal to that of the ethanol production pathway used	
rape seed biodiesel	17,6	17,6
sunflower biodiesel	12,2	12,2
soybean biodiesel	13,4	13,4
palm oil biodiesel	16,5	16,5
waste cooking oil biodiesel	0	0
animal fats from rendering biodiesel (*)	0	0
hydrotreated vegetable oil from rape seed	18,0	18,0
hydrotreated vegetable oil from sunflower	12,5	12,5
hydrotreated vegetable oil from soybean	13,7	13,7
hydrotreated vegetable oil from palm oil	16,9	16,9
hydrotreated oil from waste cooking oil	0	0
hydrotreated oil from animal fats from rendering (*)	0	0
pure vegetable oil from rape seed	17,6	17,6
pure vegetable oil from sunflower	12,2	12,2
pure vegetable oil from soybean	13,4	13,4
pure vegetable oil from palm oil	16,5	16,5
pure oil from waste cooking oil	0	0

Disaggregated default values for processing: 'e_p' as defined in Part C of this Annex

Biofuel and bioliquid production pathway	Greenhouse gas emissions – typical value (g CO₂eq/MJ)	Greenhouse gas emissions – default value (g CO₂eq/MJ)
sugar beet ethanol (no biogas from slop, natural gas as process fuel in conventional boiler)	18,8	26,3
sugar beet ethanol (with biogas from slop, natural gas as process fuel in conventional boiler)	9,7	13,6
sugar beet ethanol (no biogas from slop, natural gas as process fuel in CHP plant (°))	13,2	18,5
sugar beet ethanol (with biogas from slop, natural gas as process fuel in CHP plant (°))	7,6	10,6
sugar beet ethanol (no biogas from slop, lignite as process fuel in CHP plant (°))	27,4	38,3
sugar beet ethanol (with biogas from slop, lignite as process fuel in CHP plant (°))	15,7	22,0
corn (maize) ethanol (natural gas as process fuel in conventional boiler)	20,8	29,1
corn (maize) ethanol, (natural gas as process fuel in CHP plant (°))	14,8	20,8
corn (maize) ethanol (lignite as process fuel in CHP plant (°))	28,6	40,1
corn (maize) ethanol (forest residues as process fuel in CHP plant (°))	1,8	2,6
other cereals excluding maize ethanol (natural gas as process fuel in conventional boiler)	21,0	29,3
other cereals excluding maize ethanol (natural gas as process fuel in CHP plant (°))	15,1	21,1
other cereals excluding maize ethanol (lignite as process fuel in CHP plant (°))	30,3	42,5
other cereals excluding maize ethanol (forest residues as process fuel in CHP plant (°))	1,5	2,2
sugar cane ethanol	1,3	1,8
the part from renewable sources of ETBE	Equal to that of the ethanol production pathway used	
the part from renewable sources of TAAE	Equal to that of the ethanol production pathway used	
rape seed biodiesel	11,7	16,3
sunflower biodiesel	11,8	16,5
soybean biodiesel	12,1	16,9
palm oil biodiesel (open effluent pond)	30,4	42,6

palm oil biodiesel (process with methane capture at oil mill)	13,2	18,5
waste cooking oil biodiesel	9,3	13,0
animal fats from rendering biodiesel (**)	13,6	19,1
hydrotreated vegetable oil from rape seed	10,7	15,0
hydrotreated vegetable oil from sunflower	10,5	14,7
hydrotreated vegetable oil from soybean	10,9	15,2
hydrotreated vegetable oil from palm oil (open effluent pond)	27,8	38,9
hydrotreated vegetable oil from palm oil (process with methane capture at oil mill)	9,7	13,6
hydrotreated oil from waste cooking oil	10,2	14,3
hydrotreated oil from animal fats from rendering (**)	14,5	20,3
pure vegetable oil from rape seed	3,7	5,2
pure vegetable oil from sunflower	3,8	5,4
pure vegetable oil from soybean	4,2	5,9
pure vegetable oil from palm oil (open effluent pond)	22,6	31,7
pure vegetable oil from palm oil (process with methane capture at oil mill)	4,7	6,5
pure oil from waste cooking oil	0,6	0,8

(*) Default values for processes using CHP are valid only if all the process heat is supplied by CHP.

(**) Note: applies only to biofuels produced from animal by-products classified as category 1 and 2 material in accordance with Regulation (EC) No 1069/2009, for which emissions related to hygienisation as part of the rendering are not considered.

Disaggregated default values for oil extraction only (these are already included in the disaggregated values for processing emissions in the 'e_p' table)

Biofuel and bioliquid production pathway	Greenhouse gas emissions – typical value (g CO₂eq/MJ)	Greenhouse gas emissions – default value (g CO₂eq/MJ)
rape seed biodiesel	3,0	4,2
sunflower biodiesel	2,9	4,0
soybean biodiesel	3,2	4,4
palm oil biodiesel (open effluent pond)	20,9	29,2
palm oil biodiesel (process with methane capture at oil mill)	3,7	5,1
waste cooking oil biodiesel	0	0
animal fats from rendering biodiesel (**)	4,3	6,1
hydrotreated vegetable oil from rape seed	3,1	4,4
hydrotreated vegetable oil from sunflower	3,0	4,1
hydrotreated vegetable oil from soybean	3,3	4,6

hydrotreated vegetable oil from palm oil (open effluent pond)	21,9	30,7
hydrotreated vegetable oil from palm oil (process with methane capture at oil mill)	3,8	5,4
hydrotreated oil from waste cooking oil	0	0
hydrotreated oil from animal fats from rendering (**)	4,3	6,0
pure vegetable oil from rape seed	3,1	4,4
pure vegetable oil from sunflower	3,0	4,2
pure vegetable oil from soybean	3,4	4,7
pure vegetable oil from palm oil (open effluent pond)	21,8	30,5
pure vegetable oil from palm oil (process with methane capture at oil mill)	3,8	5,3
pure oil from waste cooking oil	0	0

(**) Note: applies only to biofuels produced from animal by-products classified as category 1 and 2 material in accordance with Regulation (EC) No 1069/2009, for which emissions related to hygienisation as part of the rendering are not considered.

Disaggregated default values for transport and distribution: 'e_{td}' as defined in Part C of this Annex

Biofuel and bioliquid production pathway	Greenhouse gas emissions – typical value (g CO₂eq/MJ)	Greenhouse gas emissions – default value (g CO₂eq/MJ)
sugar beet ethanol (no biogas from slop, natural gas as process fuel in conventional boiler)	2,3	2,3
sugar beet ethanol (with biogas from slop, natural gas as process fuel in conventional boiler)	2,3	2,3
sugar beet ethanol (no biogas from slop, natural gas as process fuel in CHP plant (‘))	2,3	2,3
sugar beet ethanol (with biogas from slop, natural gas as process fuel in CHP plant (‘))	2,3	2,3
sugar beet ethanol (no biogas from slop, lignite as process fuel in CHP plant (‘))	2,3	2,3
sugar beet ethanol (with biogas from slop, lignite as process fuel in CHP plant (‘))	2,3	2,3
corn (maize) ethanol (natural gas as process fuel in CHP plant (‘))	2,2	2,2
corn (maize) ethanol (natural gas as process fuel in conventional boiler)	2,2	2,2
corn (maize) ethanol (lignite as process fuel in CHP plant (‘))	2,2	2,2
corn (maize) ethanol (forest residues as process fuel in CHP plant (‘))	2,2	2,2

other cereals excluding maize ethanol (natural gas as process fuel in conventional boiler)	2,2	2,2
other cereals excluding maize ethanol (natural gas as process fuel in CHP plant (*)	2,2	2,2
other cereals excluding maize ethanol (lignite as process fuel in CHP plant (**))	2,2	2,2
other cereals excluding maize ethanol (forest residues as process fuel in CHP plant (**))	2,2	2,2
sugar cane ethanol	9,7	9,7
the part from renewable sources of ETBE	Equal to that of the ethanol production pathway used	
the part from renewable sources of TAAE	Equal to that of the ethanol production pathway used	
rape seed biodiesel	1,8	1,8
sunflower biodiesel	2,1	2,1
soybean biodiesel	8,9	8,9
palm oil biodiesel (open effluent pond)	6,9	6,9
palm oil biodiesel (process with methane capture at oil mill)	6,9	6,9
waste cooking oil biodiesel	1,9	1,9
animal fats from rendering biodiesel (**)	1,7	1,7
hydrotreated vegetable oil from rape seed	1,7	1,7
hydrotreated vegetable oil from sunflower	2,0	2,0
hydrotreated vegetable oil from soybean	9,2	9,2
hydrotreated vegetable oil from palm oil (open effluent pond)	7,0	7,0
hydrotreated vegetable oil from palm oil (process with methane capture at oil mill)	7,0	7,0
hydrotreated oil from waste cooking oil	1,7	1,7
hydrotreated oil from animal fats from rendering (**)	1,5	1,5
pure vegetable oil from rape seed	1,4	1,4
pure vegetable oil from sunflower	1,7	1,7
pure vegetable oil from soybean	8,8	8,8
pure vegetable oil from palm oil (open effluent pond)	6,7	6,7
pure vegetable oil from palm oil (process with methane capture at oil mill)	6,7	6,7
pure oil from waste cooking oil	1,4	1,4

(*) Default values for processes using CHP are valid only if all the process heat is supplied by CHP.

(**) Note: applies only to biofuels produced from animal by-products classified as category 1 and 2 material in accordance with Regulation (EC) No 1069/2009, for which emissions related to hygienisation as part of the rendering are not considered.

Disaggregated default values for transport and distribution of final fuel only. These are already included in the table of 'transport and distribution emissions e_{td} ' as defined in Part C of this Annex, but the following values are useful if an economic operator wishes to declare actual transport emissions for crops or oil transport only).

Biofuel and bioliquid production pathway	Greenhouse gas emissions – typical value (g CO₂eq/MJ)	Greenhouse gas emissions – default value (g CO₂eq/MJ)
sugar beet ethanol (no biogas from slop, natural gas as process fuel in conventional boiler)	1,6	1,6
sugar beet ethanol (with biogas from slop, natural gas as process fuel in conventional boiler)	1,6	1,6
sugar beet ethanol (no biogas from slop, natural gas as process fuel in CHP plant (°))	1,6	1,6
sugar beet ethanol (with biogas from slop, natural gas as process fuel in CHP plant (°))	1,6	1,6
sugar beet ethanol (no biogas from slop, lignite as process fuel in CHP plant (°))	1,6	1,6
sugar beet ethanol (with biogas from slop, lignite as process fuel in CHP plant (°))	1,6	1,6
corn (maize) ethanol (natural gas as process fuel in conventional boiler)	1,6	1,6
corn (maize) ethanol (natural gas as process fuel in CHP plant (°))	1,6	1,6
corn (maize) ethanol (lignite as process fuel in CHP plant (°))	1,6	1,6
corn (maize) ethanol (forest residues as process fuel in CHP plant (°))	1,6	1,6
other cereals excluding maize ethanol (natural gas as process fuel in conventional boiler)	1,6	1,6
other cereals excluding maize ethanol (natural gas as process fuel in CHP plant (°))	1,6	1,6
other cereals excluding maize ethanol (lignite as process fuel in CHP plant (°))	1,6	1,6
other cereals excluding maize ethanol (forest residues as process fuel in CHP plant (°))	1,6	1,6
sugar cane ethanol	6,0	6,0
the part of ethyl-tertio-butyl-ether (ETBE) from renewable ethanol	Will be considered to be equal to that of the ethanol production pathway used	
the part of tertiary-amyl-ethyl-ether (TAEE) from renewable ethanol	Will be considered to be equal to that of the ethanol production pathway used	

rape seed biodiesel	1,3	1,3
sunflower biodiesel	1,3	1,3
soybean biodiesel	1,3	1,3
palm oil biodiesel (open effluent pond)	1,3	1,3
palm oil biodiesel (process with methane capture at oil mill)	1,3	1,3
waste cooking oil biodiesel	1,3	1,3
animal fats from rendering biodiesel (*)	1,3	1,3
hydrotreated vegetable oil from rape seed	1,2	1,2
hydrotreated vegetable oil from sunflower	1,2	1,2
hydrotreated vegetable oil from soybean	1,2	1,2
hydrotreated vegetable oil from palm oil (open effluent pond)	1,2	1,2
hydrotreated vegetable oil from palm oil (process with methane capture at oil mill)	1,2	1,2
hydrotreated oil from waste cooking oil	1,2	1,2
hydrotreated oil from animal fats from rendering (*)	1,2	1,2
pure vegetable oil from rape seed	0,8	0,8
pure vegetable oil from sunflower	0,8	0,8
pure vegetable oil from soybean	0,8	0,8
pure vegetable oil from palm oil (open effluent pond)	0,8	0,8
pure vegetable oil from palm oil (process with methane capture at oil mill)	0,8	0,8
pure oil from waste cooking oil	0,8	0,8

(*) Default values for processes using CHP are valid only if all the process heat is supplied by CHP.

(**) Note: applies only to biofuels produced from animal by-products classified as category 1 and 2 material in accordance with Regulation (EC) No 1069/2009, for which emissions related to hygienisation as part of the rendering are not considered.

Total for cultivation, processing, transport and distribution

Biofuel and bioliquid production pathway	Greenhouse gas emissions – typical value (g CO₂eq/MJ)	Greenhouse gas emissions – default value (g CO₂eq/MJ)
sugar beet ethanol (no biogas from slop, natural gas as process fuel in conventional boiler)	30,7	38,2
sugar beet ethanol (with biogas from slop, natural gas as process fuel in conventional boiler)	21,6	25,5
sugar beet ethanol (no biogas from slop, natural gas as process fuel in CHP plant (†))	25,1	30,4
sugar beet ethanol (with biogas from slop, natural gas as process fuel in CHP plant (†))	19,5	22,5

sugar beet ethanol (no biogas from slop, lignite as process fuel in CHP plant (*)	39,3	50,2
sugar beet ethanol (with biogas from slop, lignite as process fuel in CHP plant (*)	27,6	33,9
corn (maize) ethanol (natural gas as process fuel in conventional boiler)	48,5	56,8
corn (maize) ethanol, (natural gas as process fuel in CHP plant (*)	42,5	48,5
corn (maize) ethanol (lignite as process fuel in CHP plant (*)	56,3	67,8
corn (maize) ethanol (forest residues as process fuel in CHP plant (*)	29,5	30,3
other cereals excluding maize ethanol (natural gas as process fuel in conventional boiler)	50,2	58,5
other cereals excluding maize ethanol (natural gas as process fuel in CHP plant (*)	44,3	50,3
other cereals excluding maize ethanol (lignite as process fuel in CHP plant (*)	59,5	71,7
other cereals excluding maize ethanol (forest residues as process fuel in CHP plant (*)	30,7	31. 4
sugar cane ethanol	28,1	28. 6
the part from renewable sources of ETBE	Equal to that of the ethanol production pathway used	
the part from renewable sources of TAAE	Equal to that of the ethanol production pathway used	
rape seed biodiesel	45,5	50,1
sunflower biodiesel	40,0	44,7
soybean biodiesel	42,2	47,0
palm oil biodiesel (open effluent pond)	63,5	75,7
palm oil biodiesel (process with methane capture at oil mill)	46,3	51,6
waste cooking oil biodiesel	11,2	14,9
animals fats from rendering biodiesel (**)	15,3	20,8
hydrotreated vegetable oil from rape seed	45,8	50,1
hydrotreated vegetable oil from sunflower	39,4	43,6
hydrotreated vegetable oil from soybean	42,2	46,5
hydrotreated vegetable oil from palm oil (open effluent pond)	62,2	73,3
hydrotreated vegetable oil from palm oil (process with methane capture at oil mill)	44,1	48,0
hydrotreated oil from waste cooking oil	11,9	16,0
hydrotreated oil from animal fats from rendering (**)	16,0	21,8

pure vegetable oil from rape seed	38,5	40,0
pure vegetable oil from sunflower	32,7	34,3
pure vegetable oil from soybean	35,2	36,9
pure vegetable oil from palm oil (open effluent pond)	56,3	65,4
pure vegetable oil from palm oil (process with methane capture at oil mill)	38,4	57,2
pure oil from waste cooking oil	2,0	2,2

(*) Default values for processes using CHP are valid only if all the process heat is supplied by CHP.

(**) Note: applies only to biofuels produced from animal by-products classified as category 1 and 2 material in accordance with Regulation (EC) No 1069/2009, for which emissions related to hygienisation as part of the rendering are not considered.

E. ESTIMATED DISAGGREGATED DEFAULT VALUES FOR FUTURE BIOFUELS AND BIOLIQUIDS THAT WERE NOT ON THE MARKET OR WERE ONLY ON THE MARKET IN NEGLIGIBLE QUANTITIES IN 2016

Disaggregated default values for cultivation: 'e_{ec}' as defined in Part C of this Annex, including N₂O emissions (including chipping of waste or farmed wood)

Biofuel and bioliquid production pathway	Greenhouse gas emissions – typical value (g CO₂eq/MJ)	Greenhouse gas emissions – default value (g CO₂eq/MJ)
wheat straw ethanol	1,8	1,8
waste wood Fischer-Tropsch diesel in free-standing plant	3,3	3,3
farmed wood Fischer-Tropsch diesel in free-standing plant	8,2	8,2
waste wood Fischer-Tropsch petrol in free-standing plant	8,2	8,2
farmed wood Fischer-Tropsch petrol in free-standing plant	12,4	12,4
waste wood dimethylether (DME) in free-standing plant	3,1	3,1
farmed wood dimethylether (DME) in free-standing plant	7,6	7,6
waste wood methanol in free-standing plant	3,1	3,1
farmed wood methanol in free-standing plant	7,6	7,6
Fischer-Tropsch diesel from black-liquor gasification integrated with pulp mill	2,5	2,5
Fischer-Tropsch petrol from black-liquor gasification integrated with pulp mill	2,5	2,5
dimethylether (DME) from black-liquor gasification integrated with pulp mill	2,5	2,5
Methanol from black-liquor gasification integrated with pulp mill	2,5	2,5
the part from renewable sources of MTBE	Equal to that of the methanol production pathway used	

Disaggregated default values for soil N₂O emissions (included in disaggregated default values for cultivation emissions in the 'e_{ec}' table)

Biofuel and bioliq uid production pathway	Greenhouse gas emissions – typical value (g CO₂eq/MJ)	Greenhouse gas emissions – default value (g CO₂eq/MJ)
wheat straw ethanol	0	0
waste wood Fischer-Tropsch diesel in free-standing plant	0	0
farmed wood Fischer-Tropsch diesel in free-standing plant	4,4	4,4
waste wood Fischer-Tropsch petrol in free-standing plant	0	0
farmed wood Fischer-Tropsch petrol in free-standing plant	4,4	4,4
waste wood dimethylether (DME) in free-standing plant	0	0
farmed wood dimethylether (DME) in free-standing plant	4,1	4,1
waste wood methanol in free-standing plant	0	0
farmed wood methanol in free-standing plant	4,1	4,1
Fischer-Tropsch diesel from black-liquor gasification integrated with pulp mill	0	0
Fischer-Tropsch petrol from black-liquor gasification integrated with pulp mill	0	0
dimethylether (DME) from black-liquor gasification integrated with pulp mill	0	0
Methanol from black-liquor gasification integrated with pulp mill	0	0
the part from renewable sources of MTBE	Equal to that of the methanol production pathway used	

Disaggregated default values for processing: 'e_p' as defined in Part C of this Annex

Biofuel and bioliq uid production pathway	Greenhouse gas emissions – typical value (g CO₂eq/MJ)	Greenhouse gas emissions – default value (g CO₂eq/MJ)
wheat straw ethanol	4,8	6,8
waste wood Fischer-Tropsch diesel in free-standing plant	0,1	0,1
farmed wood Fischer-Tropsch diesel in free-standing plant	0,1	0,1
waste wood Fischer-Tropsch petrol in free-standing plant	0,1	0,1
farmed wood Fischer-Tropsch petrol in free-standing plant	0,1	0,1
waste wood dimethylether (DME) in free-standing plant	0	0
farmed wood dimethylether (DME) in free-standing plant	0	0

waste wood methanol in free-standing plant	0	0
farmed wood methanol in free-standing plant	0	0
Fischer-Tropsch diesel from black-liquor gasification integrated with pulp mill	0	0
Fischer-Tropsch petrol from black-liquor gasification integrated with pulp mill	0	0
dimethylether (DME) from black-liquor gasification integrated with pulp mill	0	0
methanol from black-liquor gasification integrated with pulp mill	0	0
the part from renewable sources of MTBE	Equal to that of the methanol production pathway used	

Disaggregated default values for transport and distribution: 'e_{td}' as defined in Part C of this Annex

Biofuel and bioliquid production pathway	Greenhouse gas emissions – typical value (g CO₂eq/MJ)	Greenhouse gas emissions – default value (g CO₂eq/MJ)
wheat straw ethanol	7,1	7,1
waste wood Fischer-Tropsch diesel in free-standing plant	10,3	10,3
farmed wood Fischer-Tropsch diesel in free-standing plant	8,4	8,4
waste wood Fischer-Tropsch petrol in free-standing plant	10,3	10,3
farmed wood Fischer-Tropsch petrol in free-standing plant	8,4	8,4
waste wood dimethylether (DME) in free-standing plant	10,4	10,4
farmed wood dimethylether (DME) in free-standing plant	8,6	8,6
waste wood methanol in free-standing plant	10,4	10,4
farmed wood methanol in free-standing plant	8,6	8,6
Fischer-Tropsch diesel from black-liquor gasification integrated with pulp mill	7,7	7,7
Fischer-Tropsch petrol from black-liquor gasification integrated with pulp mill	7,9	7,9
dimethylether (DME) from black-liquor gasification integrated with pulp mill	7,7	7,7
methanol from black-liquor gasification integrated with pulp mill	7,9	7,9
the part from renewable sources of MTBE	Equal to that of the methanol production pathway used	

Disaggregated default values for transport and distribution of final fuel only. These are already included in the table of 'transport and distribution emissions e_{td} ' as defined in Part C of this Annex, but the following values are useful if an economic operator wishes to declare actual transport emissions for feedstock transport only).

Biofuel and bioliquid production pathway	Greenhouse gas emissions – typical value (g CO₂eq/MJ)	Greenhouse gas emissions – default value (g CO₂eq/MJ)
wheat straw ethanol	1,6	1,6
waste wood Fischer-Tropsch diesel in free-standing plant	1,2	1,2
farmed wood Fischer-Tropsch diesel in free-standing plant	1,2	1,2
waste wood Fischer-Tropsch petrol in free-standing plant	1,2	1,2
farmed wood Fischer-Tropsch petrol in free-standing plant	1,2	1,2
waste wood dimethylether (DME) in free-standing plant	2,0	2,0
farmed wood dimethylether (DME) in free-standing plant	2,0	2,0
waste wood methanol in free-standing plant	2,0	2,0
farmed wood methanol in free-standing plant	2,0	2,0
Fischer-Tropsch diesel from black-liquor gasification integrated with pulp mill	2,0	2,0
Fischer-Tropsch petrol from black-liquor gasification integrated with pulp mill	2,0	2,0
dimethylether (DME) from black-liquor gasification integrated with pulp mill	2,0	2,0
methanol from black-liquor gasification integrated with pulp mill	2,0	2,0
the part from renewable sources of MTBE	Equal to that of the methanol production pathway used	

Total for cultivation, processing, transport and distribution

Biofuel and bioliquid production pathway	Greenhouse gas emissions – typical value (g CO₂eq/MJ)	Greenhouse gas emissions – default value (g CO₂eq/MJ)
wheat straw ethanol	13,7	15,7
waste wood Fischer-Tropsch diesel in free-standing plant	13,7	13,7
farmed wood Fischer-Tropsch diesel in free-standing plant	16,7	16,7
waste wood Fischer-Tropsch petrol in free-standing plant	13,7	13,7
farmed wood Fischer-Tropsch petrol in free-standing plant	16,7	16,7
waste wood dimethylether (DME) in free-standing plant	13,5	13,5
farmed wood dimethylether (DME) in free-standing plant	16,2	16,2

waste wood methanol in free-standing plant	13,5	13,5
farmed wood methanol in free-standing plant	16,2	16,2
Fischer-Tropsch diesel from black-liquor gasification integrated with pulp mill	10,2	10,2
Fischer-Tropsch petrol from black-liquor gasification integrated with pulp mill	10,4	10,4
dimethylether (DME) from black-liquor gasification integrated with pulp mill	10,2	10,2
methanol from black-liquor gasification integrated with pulp mill	10,4	10,4
the part from renewable sources of MTBE	Equal to that of the methanol production pathway used	

ANNEX VI

RULES FOR CALCULATING THE GREENHOUSE GAS IMPACT OF BIOMASS FUELS AND THEIR FOSSIL FUEL COMPARATORS

A. Typical and default values of greenhouse gas emissions savings for biomass fuels if produced with no net-carbon emissions from land-use change

WOODCHIPS					
Biomass fuel production system	Transport distance	Greenhouse gas emissions savings –typical value		Greenhouse gas emissions savings – default value	
		Heat	Electricity	Heat	Electricity
Woodchips from forest residues	1 to 500 km	93%	89%	91%	87%
	500 to 2 500 km	89%	84%	87%	81%
	2 500 to 10 000 km	82%	73%	78%	67%
	Above 10 000 km	67%	51%	60%	41%
Woodchips from short rotation coppice (Eucalyptus)	2 500 to 10 000 km	77%	65%	73%	60%
Woodchips from short rotation coppice (Poplar – Fertilised)	1 to 500 km	89%	83%	87%	81%
	500 to 2 500 km	85%	78%	84%	76%
	2 500 to 10 000 km	78%	67%	74%	62%
	Above 10 000 km	63%	45%	57%	35%
Woodchips from short rotation coppice (Poplar – No fertilisation)	1 to 500 km	91%	87%	90%	85%
	500 to 2 500 km	88%	82%	86%	79%
	2 500 to 10 000 km	80%	70%	77%	65%
	Above 10 000 km	65%	48%	59%	39%
Woodchips from stem-wood	1 to 500 km	93%	89%	92%	88%
	500 to 2 500 km	90%	85%	88%	82%
	2 500 to 10 000 km	82%	73%	79%	68%
	Above 10 000 km	67%	51%	61%	42%

Woodchips from industry residues	1 to 500 km	94%	92%	93%	90%
	500 to 2 500 km	91%	87%	90%	85%
	2 500 to 10 000 km	83%	75%	80%	71%
	Above 10 000 km	69%	54%	63%	44%

WOOD PELLETS (*)						
Biomass fuel production system		Transport distance	Greenhouse gas emissions savings – typical value		Greenhouse gas emissions savings – default value	
			Heat	Electricity	Heat	Electricity
Wood briquettes or pellets from forest residues	Case 1	1 to 500 km	58%	37%	49%	24%
		500 to 2 500 km	58%	37%	49%	25%
		2 500 to 10 000 km	55%	34%	47%	21%
		Above 10 000 km	50%	26%	40%	11%
	Case 2a	1 to 500 km	77%	66%	72%	59%
		500 to 2 500 km	77%	66%	72%	59%
		2 500 to 10 000 km	75%	62%	70%	55%
		Above 10 000 km	69%	54%	63%	45%
	Case 3a	1 to 500 km	92%	88%	90%	85%
		500 to 2 500 km	92%	88%	90%	86%
		2 500 to 10 000 km	90%	85%	88%	81%
		Above 10 000 km	84%	76%	81%	72%
Wood briquettes or pellets from short rotation coppice (Eucalyptus)	Case 1	2 500 to 10 000 km	52%	28%	43%	15%
	Case 2a	2 500 to 10 000 km	70%	56%	66%	49%
	Case 3a	2 500 to 10 000 km	85%	78%	83%	75%

Wood briquettes or pellets from short rotation coppice (Poplar – Fertilised)	Case 1	1 to 500 km	54%	32%	46%	20%
		500 to 10 000 km	52%	29%	44%	16%
		Above 10 000 km	47%	21%	37%	7%
	Case 2a	1 to 500 km	73%	60%	69%	54%
		500 to 10 000 km	71%	57%	67%	50%
		Above 10 000 km	66%	49%	60%	41%
	Case 3a	1 to 500 km	88%	82%	87%	81%
		500 to 10 000 km	86%	79%	84%	77%
		Above 10 000 km	80%	71%	78%	67%
Wood briquettes or pellets from short rotation coppice (Poplar – No fertilisation)	Case 1	1 to 500 km	56%	35%	48%	23%
		500 to 10 000 km	54%	32%	46%	20%
		Above 10 000 km	49%	24%	40%	10%
	Case 2a	1 to 500 km	76%	64%	72%	58%
		500 to 10 000 km	74%	61%	69%	54%
		Above 10 000 km	68%	53%	63%	45%
	Case 3a	1 to 500 km	91%	86%	90%	85%
		500 to 10 000 km	89%	83%	87%	81%
		Above 10 000 km	83%	75%	81%	71%

Stemwood	Case 1	1 to 500 km	57%	37%	49%	24%	
		500 to 2 500 km	58%	37%	49%	25%	
		2 500 to 10 000 km	55%	34%	47%	21%	
		Above 10 000 km	50%	26%	40%	11%	
	Case 2a	1 to 500 km	77%	66%	73%	60%	
		500 to 2 500 km	77%	66%	73%	60%	
		2 500 to 10 000 km	75%	63%	70%	56%	
		Above 10 000 km	70%	55%	64%	46%	
	Case 3a	1 to 500 km	92%	88%	91%	86%	
		500 to 2 500 km	92%	88%	91%	87%	
		2 500 to 10 000 km	90%	85%	88%	83%	
		Above 10 000 km	84%	77%	82%	73%	
	Wood briquettes or pellets from wood industry residues	Case 1	1 to 500 km	75%	62%	69%	55%
			500 to 2 500 km	75%	62%	70%	55%
			2 500 to 10 000 km	72%	59%	67%	51%
			Above 10 000 km	67%	51%	61%	42%
Case 2a		1 to 500 km	87%	80%	84%	76%	
		500 to 2 500 km	87%	80%	84%	77%	
		2 500 to 10 000 km	85%	77%	82%	73%	
		Above 10 000 km	79%	69%	75%	63%	
Case 3a		1 to 500 km	95%	93%	94%	91%	
		500 to 2 500 km	95%	93%	94%	92%	
		2 500 to 10 000 km	93%	90%	92%	88%	
		Above 10 000 km	88%	82%	85%	78%	

(*) Case 1 refers to processes in which a natural gas boiler is used to provide the process heat to the pellet mill. Electricity for the pellet mill is supplied from the grid; Case 2a refers to processes in which a woodchips boiler, fed with pre-dried chips, is used to provide process heat. Electricity for the pellet mill is supplied from the grid; Case 3a refers to processes in which a CHP, fed with pre-dried woodchips, is used to provide electricity and heat to the pellet mill.

AGRICULTURE PATHWAYS					
Biomass fuel production system	Transport distance	Greenhouse gas emissions savings – typical value		Greenhouse gas emissions savings – default value	
		Heat	Electricity	Heat	Electricity
Agricultural Residues with density < 0,2 t/m ³ (*)	1 to 500 km	95%	92%	93%	90%
	500 to 2 500 km	89%	83%	86%	80%
	2 500 to 10 000 km	77%	66%	73%	60%
	Above 10 000 km	57%	36%	48%	23%
Agricultural Residues with density > 0,2 t/m ³ (**)	1 to 500 km	95%	92%	93%	90%
	500 to 2 500 km	93%	89%	92%	87%
	2 500 to 10 000 km	88%	82%	85%	78%
	Above 10 000 km	78%	68%	74%	61%
Straw pellets	1 to 500 km	88%	82%	85%	78%
	500 to 10 000 km	86%	79%	83%	74%
	Above 10 000 km	80%	70%	76%	64%
Bagasse briquettes	500 to 10 000 km	93%	89%	91%	87%
	Above 10 000 km	87%	81%	85%	77%
Palm Kernel Meal	Above 10 000 km	20%	-18%	11%	-33%
Palm Kernel Meal (no CH ₄ emissions from oil mill)	Above 10 000 km	46%	20%	42%	14%

(*) This group of materials includes agricultural residues with a low bulk density and it comprises materials such as straw bales, oat hulls, rice husks and sugar cane bagasse bales (not exhaustive list).

(**) The group of agricultural residues with higher bulk density includes materials such as corn cobs, nut shells, soybean hulls, palm kernel shells (not exhaustive list).

 BIOGAS FOR ELECTRICITY (*)				
Biogas production system		Technological option	Greenhouse gas emissions savings – typical value	Greenhouse gas emissions savings – default value
Wet manure (1)	Case 1	Open digestate (2)	146%	94%
		Close digestate (3)	246%	240%
	Case 2	Open digestate	136%	85%
		Close digestate	227%	219%
	Case 3	Open digestate	142%	86%
		Close digestate	243%	235%
Maize whole plant (4)	Case 1	Open digestate	36%	21%
		Close digestate	59%	53%
	Case 2	Open digestate	34%	18%
		Close digestate	55%	47%
	Case 3	Open digestate	28%	10%
		Close digestate	52%	43%
Biowaste	Case 1	Open digestate	47%	26%
		Close digestate	84%	78%
	Case 2	Open digestate	43%	21%
		Close digestate	77%	68%
	Case 3	Open digestate	38%	14%
		Close digestate	76%	66%

(1) The values for biogas production from manure include negative emissions for emissions saved from raw manure management. The value of esca considered is equal to – 45 g CO₂eq/MJ manure used in anaerobic digestion.

(2) Open storage of digestate accounts for additional emissions of CH₄ and N₂O. The magnitude of those emissions changes with ambient conditions, substrate types and the digestion efficiency.

(3) Close storage means that the digestate resulting from the digestion process is stored in a gas-tight tank and that the additional biogas released during storage is considered to be recovered for production of additional electricity or biomethane. No greenhouse gas emissions are included in that process.

(4) Maize whole plant means maize harvested as fodder and ensiled for preservation.

(*) Case 1 refers to pathways in which electricity and heat required in the process are supplied by the CHP engine itself. Case 2 refers to pathways in which the electricity required in the process is taken from the grid and the process heat is supplied by the CHP engine itself. In some Member States, operators are not allowed to claim the gross production for subsidies and case 1 is the more likely configuration. Case 3 refers to pathways in which the electricity required in the process is taken from the grid and the process heat is supplied by a biogas boiler. This case applies to some installations in which the CHP engine is not on-site and biogas is sold (but not upgraded to biomethane).

BIOGAS FOR ELECTRICITY – MIXTURES OF MANURE AND MAIZE				
Biogas production system		Technological option	Greenhouse gas emissions savings – typical value	Greenhouse gas emissions savings – default value
Manure – Maize 80% - 20%	Case 1	Open digestate	72%	45%
		Close digestate	120%	114%
	Case 2	Open digestate	67%	40%
		Close digestate	111%	103%
	Case 3	Open digestate	65%	35%
		Close digestate	114%	106%
Manure – Maize 70% - 30%	Case 1	Open digestate	60%	37%
		Close digestate	100%	94%
	Case 2	Open digestate	57%	32%
		Close digestate	93%	85%
	Case 3	Open digestate	53%	27%
		Close digestate	94%	85%
Manure – Maize 60% - 40%	Case 1	Open digestate	53%	32%
		Close digestate	88%	82%
	Case 2	Open digestate	50%	28%
		Close digestate	82%	73%
	Case 3	Open digestate	46%	22%
		Close digestate	81%	72%

BIOMETHANE FOR TRANSPORT (*)			
Biomethane production system	Technological options	Greenhouse gas emissions savings – typical value	Greenhouse gas emissions savings – default value
Wet manure	Open digestate, no off-gas combustion	117%	72%
	Open digestate, off-gas combustion	133%	94%
	Close digestate, no off-gas combustion	190%	179%
	Close digestate, off-gas combustion	206%	202%

Maize whole plant	Open digestate, no off-gas combustion	35%	17%
	Open digestate, off-gas combustion	51%	39%
	Close digestate, no off-gas combustion	52%	41%
	Close digestate, off-gas combustion	68%	63%
Biowaste	Open digestate, no off-gas combustion	43%	20%
	Open digestate, off-gas combustion	59%	42%
	Close digestate, no off-gas combustion	70%	58%
	Close digestate, off-gas combustion	86%	80%

(*) The greenhouse gas emissions savings for biomethane only refer to compressed biomethane relative to the fossil fuel comparator for transport of 94 g CO₂eq/MJ.

BIOMETHANE – MIXTURES OF MANURE AND MAIZE (*)			
Biomethane production system	Technological options	Greenhouse gas emissions savings – typical value	Greenhouse gas emissions savings – default value
Manure – Maize 80% - 20%	Open digestate, no off-gas combustion (*)	62%	35%
	Open digestate, off-gas combustion (*)	78%	57%
	Close digestate, no off-gas combustion	97%	86%
	Close digestate, off-gas combustion	113%	108%
Manure – Maize 70% - 30%	Open digestate, no off-gas combustion	53%	29%
	Open digestate, off-gas combustion	69%	51%
	Close digestate, no off-gas combustion	83%	71%
	Close digestate, off-gas combustion	99%	94%

Manure – Maize 60% - 40%	Open digestate, no off-gas combustion	48%	25%
	Open digestate, off-gas combustion	64%	48%
	Close digestate, no off-gas combustion	74%	62%
	Close digestate, off-gas combustion	90%	84%

(*) The greenhouse gas emissions savings for biomethane only refer to compressed biomethane relative to the fossil fuel comparator for transport of 94 g CO₂eq/MJ.

B. METHODOLOGY

1. Greenhouse gas emissions from the production and use of biomass fuels, shall be calculated as follows:

(a) Greenhouse gas emissions from the production and use of biomass fuels before conversion into electricity, heating and cooling, shall be calculated as:

$$E = e_{ec} + e_l + e_p + e_{td} + e_u - e_{sca} - e_{ccs} - e_{crr}$$

Where

E = total emissions from the production of the fuel before energy conversion;

e_{ec} = emissions from the extraction or cultivation of raw materials;

e_l = annualised emissions from carbon stock changes caused by land-use change;

e_p = emissions from processing;

e_{td} = emissions from transport and distribution;

e_u = emissions from the fuel in use;

e_{sca} = emission savings from soil carbon accumulation via improved agricultural management;

e_{ccs} = emission savings from CO₂ capture and geological storage; and

e_{crr} = emission savings from CO₂ capture and replacement. Emissions from the manufacture of machinery and equipment shall not be taken into account.

(b) In the case of co-digestion of different substrates in a biogas plant for the production of biogas or biomethane, the typical and default values of greenhouse gas emissions shall be calculated as:

$$E = \sum_{1}^n S_n \cdot E_n$$

where

E = greenhouse gas emissions per MJ biogas or biomethane produced from co-digestion of the defined mixture of substrates

S_n = Share of feedstock n in energy content

E_n = Emission in g CO₂/MJ for pathway n as provided in Part D of this Annex (*)

$$S_n = \frac{P_n \cdot W_n}{\sum_1^n \cdot W_n}$$

where

P_n = energy yield [MJ] per kilogram of wet input of feedstock n (**)

W_n = weighting factor of substrate n defined as:

$$W_n = \frac{I_n}{\sum_1^n I_n} \cdot \left(\frac{1 - AM_n}{1 - SM_n} \right)$$

where:

I_n = Annual input to digester of substrate n [tonne of fresh matter]

AM_n = Average annual moisture of substrate n [kg water/kg fresh matter]

SM_n = Standard moisture for substrate n (***)

(*) For animal manure used as substrate, a bonus of 45 g CO₂eq/MJ manure (– 54 kg CO₂eq/t fresh matter) is added for improved agricultural and manure management.

(**) The following values of P_n shall be used for calculating typical and default values:

P(Maize): 4,16 [MJ_{biogas}/kg_{wet maize @ 65% moisture}]

P(Manure): 0,50 [MJ_{biogas}/kg_{wet manure @ 90% moisture}]

P(Biowaste) 3,41 [MJ_{biogas}/kg_{wet biowaste @ 76% moisture}]

(***) The following values of the standard moisture for substrate SM_n shall be used:

SM(Maize): 0,65 [kg water/kg fresh matter]

SM(Manure): 0,90 [kg water/kg fresh matter]

SM(Biowaste): 0,76 [kg water/kg fresh matter]

(c) In the case of co-digestion of n substrates in a biogas plant for the production of electricity or biomethane, actual greenhouse gas emissions of biogas and biomethane are calculated as follows:

$$E = \sum_1^n S_n \cdot (e_{ec,n} + e_{td,feedstock,n} + e_{l,n} - e_{sca,n}) + e_p + e_{td,product} + e_u - e_{ccs} - e_{ccr}$$

where

E = total emissions from the production of the biogas or biomethane before energy conversion;

S_n = Share of feedstock n, in fraction of input to the digester;

$e_{ec,n}$ = emissions from the extraction or cultivation of feedstock n;

$e_{td,feedstock,n}$ = emissions from transport of feedstock n to the digester;

$e_{l,n}$ = annualised emissions from carbon stock changes caused by land-use change, for feedstock n;

e_{sca} = emission savings from improved agricultural management of feedstock n (*);

e_p = emissions from processing;

$e_{td,product}$ = emissions from transport and distribution of biogas and/or biomethane;

e_u = emissions from the fuel in use, that is greenhouse gases emitted during combustion;

e_{ccs} = emission savings from CO₂ capture and geological storage; and

e_{ccr} = emission savings from CO₂ capture and replacement.

(*) For e_{sca} a bonus of 45 g CO₂eq/MJ manure shall be attributed for improved agricultural and manure management in the case animal manure is used as a substrate for the production of biogas and biomethane.

(d) Greenhouse gas emissions from the use of biomass fuels in producing electricity, heating and cooling, including the energy conversion to electricity and/or heat or cooling produced, shall be calculated as follows:

(i) For energy installations delivering only heat:

$$EC_h = \frac{E}{\eta_h}$$

(ii) For energy installations delivering only electricity:

$$EC_{el} = \frac{E}{\eta_{el}}$$

where

$EC_{h,el}$ = Total greenhouse gas emissions from the final energy commodity.

E = Total greenhouse gas emissions of the fuel before end-conversion.

η_{el} = The electrical efficiency, defined as the annual electricity produced divided by the annual fuel input, based on its energy content.

η_h = The heat efficiency, defined as the annual useful heat output divided by the annual fuel input, based on its energy content.

(iii) For the electricity or mechanical energy coming from energy installations delivering useful heat together with electricity and/or mechanical energy:

$$EC_{el} = \frac{E}{\eta_{el}} \left(\frac{C_{el} \cdot \eta_{el}}{C_{el} \cdot \eta_{el} + C_h \cdot \eta_h} \right)$$

(iv) For the useful heat coming from energy installations delivering heat together with electricity and/or mechanical energy:

$$EC_h = \frac{E}{\eta_h} \left(\frac{C_h \cdot \eta_h}{C_{el} \cdot \eta_{el} + C_h \cdot \eta_h} \right)$$

where:

$EC_{h,el}$ = Total greenhouse gas emissions from the final energy commodity.

E = Total greenhouse gas emissions of the fuel before end-conversion.

η_{el} = The electrical efficiency, defined as the annual electricity produced divided by the annual energy

input, based on its energy content.

η_h = The heat efficiency, defined as the annual useful heat output divided by the annual energy input, based on its energy content.

C_{ei} = Fraction of exergy in the electricity, and/or mechanical energy, set to 100% ($C_{ei} = 1$).

C_h = Carnot efficiency (fraction of exergy in the useful heat).

The Carnot efficiency, C_h , for useful heat at different temperatures is defined as:

$$C_h = \frac{T_h - T_0}{T_h}$$

where:

T_h = Temperature, measured in absolute temperature (kelvin) of the useful heat at point of delivery.

T_0 = Temperature of surroundings, set at 273,15 kelvin (equal to 0 °C). If the excess heat is exported for heating of buildings, at a temperature below 150 °C (423,15 kelvin), C_h can alternatively be defined as follows:

C_h = Carnot efficiency in heat at 150 °C (423,15 kelvin), which is: 0,3546 For the purposes of that calculation, the following definitions apply:

- (i) 'cogeneration' shall mean the simultaneous generation in one process of thermal energy and electricity and/or mechanical energy;
- (ii) 'useful heat' shall mean heat generated to satisfy an economical justifiable demand for heat, for heating or cooling purposes;
- (iii) 'economically justifiable demand' shall mean the demand that does not exceed the needs for heat or cooling and which would otherwise be satisfied at market conditions.

2. Greenhouse gas emissions from biomass fuels shall be expressed as follows:

(a) greenhouse gas emissions from biomass fuels, E, shall be expressed in terms of grams of CO₂ equivalent per MJ of biomass fuel, g CO₂eq/MJ;

(b) greenhouse gas emissions from heating or electricity, produced from biomass fuels, EC, shall be expressed in terms of grams of CO₂ equivalent per MJ of final energy commodity (heat or electricity), g CO₂eq/MJ.

When heating and cooling are co-generated with electricity, emissions shall be allocated between heat and electricity (as under point 1(d)), irrespective if the heat is used for actual heating purposes or for cooling. (1)

Where the greenhouse gas emissions from the extraction or cultivation of raw materials e_{ec} are expressed in unit g CO₂eq/dry-ton of feedstock, the conversion to grams of CO₂ equivalent per MJ of fuel, g CO₂eq/MJ, shall be calculated as follows (2):

$$e_{ec, fuel_a} \left[\frac{gCO_2eq}{MJfuel} \right]_{ec} = \frac{e_{ec, feedstock_a} \left[\frac{gCO_2eq}{tdry} \right]}{LHV_a \left[\frac{MJfeedstock}{tdry feedstock} \right]} \cdot \text{Fuel feedstock factor}_a \cdot \text{Allocation factor fuel}_a$$

Where

$$\text{Allocation factor fuel}_a = \left[\frac{\text{Energy in fuel}}{\text{Energy fuel} + \text{Energy in co-products}} \right]$$

$$\text{Fuel feedstock factor}_a = [\text{Ratio of MJ feedstock required to make 1 MJ fuel}]$$

Emissions per dry-ton feedstock shall be calculated as follows:

$$e_{ec\text{ feedstock}_a} \left[\frac{\text{gCO}_2\text{eq}}{t_{\text{dry}}} \right] = \frac{e_{ec\text{ feedstock}_a} \left[\frac{\text{gCO}_2\text{eq}}{t_{\text{moist}}} \right]}{(1 - \text{moisture content})}$$

3. Greenhouse gas emissions savings from biomass fuels shall be calculated as follows:

(a) greenhouse gas emissions savings from biomass fuels used as transport fuels:

$$\text{SAVING} = (E_{F(t)} - E_B) / E_{F(t)}$$

where

E_B = total emissions from biomass fuels used as transport fuels; and

$E_{F(t)}$ = total emissions from the fossil fuel comparator for transport

(b) greenhouse gas emissions savings from heat and cooling, and electricity being generated from biomass fuels:

$$\text{SAVING} = (EC_{F(h\&c,el)} - EC_{B(h\&c,el)}) / EC_{F(h\&c,el)}$$

where

$EC_{B(h\&c,el)}$ = total emissions from the heat or electricity,

$EC_{F(h\&c,el)}$ = total emissions from the fossil fuel comparator for useful heat or electricity.

4. The greenhouse gases taken into account for the purposes of point 1 shall be CO₂, N₂O and CH₄. For the purposes of calculating CO₂ equivalence, those gases shall be valued as follows:

CO₂: 1

N₂O: 298

CH₄: 25

5. Emissions from the extraction, harvesting or cultivation of raw materials, e_{ec} , shall include emissions from the extraction, harvesting or cultivation process itself; from the collection, drying and storage of raw materials; from waste and leakages; and from the production of chemicals or products used in extraction or cultivation. Capture of CO₂ in the cultivation of raw materials shall be excluded. Estimates of emissions from agriculture biomass cultivation may be derived from the regional averages for cultivation emissions included in the reports referred to in Article 31(4) of this Directive or the information on the disaggregated default values for cultivation emissions included in this Annex, as an alternative to using actual values. In the absence of relevant information in those reports it is allowed to calculate averages based on local farming practises based for instance on data of a group of farms, as an alternative to using actual values. Estimates of emissions from cultivation and harvesting of forestry biomass may be derived from the use of averages for cultivation and harvesting emissions calculated for geographical areas at national level, as

an alternative to using actual values.

6. For the purposes of the calculation referred to in point 1(a), emission savings from improved agriculture management, e_{sca} , such as shifting to reduced or zero-tillage, improved crop/rotation, the use of cover crops, including crop residue management, and the use of organic soil improver (e. g. compost, manure fermentation digestate), shall be taken into account only if solid and verifiable evidence is provided that the soil carbon has increased or that it is reasonable to expect to have increased over the period in which the raw materials concerned were cultivated while taking into account the emissions where such practices lead to increased fertiliser and herbicide use ⁽³⁾.

7. Annualised emissions from carbon stock changes caused by land-use change, e_l , shall be calculated by dividing total emissions equally over 20 years. For the calculation of those emissions the following rule shall be applied:

$$e_l = (CS_R - CS_A) \times 3,664 \times 1/20 \times 1/P - e_b \text{ } ^{(4)}$$

where

e_l = annualised greenhouse gas emissions from carbon stock change due to land-use change (measured as mass of CO₂-equivalent per unit biomass fuel energy). 'Cropland' ⁽⁵⁾ and 'perennial cropland' ⁽⁶⁾ shall be regarded as one land use;

CS_R = the carbon stock per unit area associated with the reference land use (measured as mass (tonnes) of carbon per unit area, including both soil and vegetation). The reference land use shall be the land use in January 2008 or 20 years before the raw material was obtained, whichever was the later;

CS_A = the carbon stock per unit area associated with the actual land use (measured as mass (tonnes) of carbon per unit area, including both soil and vegetation). In cases where the carbon stock accumulates over more than one year, the value attributed to CS_A shall be the estimated stock per unit area after 20 years or when the crop reaches maturity, whichever is the earlier;

P = the productivity of the crop (measured as biomass fuel energy per unit area per year); and

e_b = bonus of 29 g CO₂eq/MJ biomass fuel if biomass is obtained from restored degraded land under the conditions laid down in point 8.

8. The bonus of 29 g CO₂eq/MJ shall be attributed if evidence is provided that the land:

(a) was not in use for agriculture in January 2008 or any other activity; and

(b) is severely degraded land, including such land that was formerly in agricultural use.

The bonus of 29 g CO₂eq/MJ shall apply for a period of up to 20 years from the date of conversion of the land to agricultural use, provided that a steady increase in carbon stocks as well as a sizable reduction in erosion phenomena for land falling under (b) are ensured.

9. 'Severely degraded land' means land that, for a significant period of time, has either been significantly salinated or presented significantly low organic matter content and has been severely eroded.

10. In accordance with point 10 of Part C of Annex V to this Directive, Decision 2010/335/EU ⁽⁷⁾, which provides for guidelines for the calculation of land carbon stocks in relation to this Directive, drawing on the 2006 IPCC Guidelines for National Greenhouse Gas Inventories – volume 4, and in accordance with Regulations (EU) No 525/2013 and (EU) 2018/841, shall serve as the basis for the calculation of land carbon stocks.

11. Emissions from processing, e_p , shall include emissions from the processing itself; from waste and leakages; and from the production of chemicals or products used in processing, including the CO₂ emissions

corresponding to the carbon contents of fossil inputs, whether or not actually combusted in the process. In accounting for the consumption of electricity not produced within the solid or gaseous biomass fuel production plant, the greenhouse gas emissions intensity of the production and distribution of that electricity shall be assumed to be equal to the average emission intensity of the production and distribution of electricity in a defined region. By way of derogation from this rule, producers may use an average value for an individual electricity production plant for electricity produced by that plant, if that plant is not connected to the electricity grid.

Emissions from processing shall include emissions from drying of interim products and materials where relevant.

12. Emissions from transport and distribution, e_{td} , shall include emissions from the transport of raw and semi-finished materials and from the storage and distribution of finished materials. Emissions from transport and distribution to be taken into account under point 5 shall not be covered by this point.

13. Emissions of CO₂ from fuel in use, e_u , shall be taken to be zero for biomass fuels. Emissions of non-CO₂ greenhouse gases (CH₄ and N₂O) from the fuel in use shall be included in the e_u factor.

14. Emission savings from CO₂ capture and geological storage, e_{cs} , that have not already been accounted for in e_p , shall be limited to emissions avoided through the capture and storage of emitted CO₂ directly related to the extraction, transport, processing and distribution of biomass fuel if stored in compliance with Directive 2009/31/EC.

15. Emission savings from CO₂ capture and replacement, e_{crr} , shall be related directly to the production of biomass fuel they are attributed to, and shall be limited to emissions avoided through the capture of CO₂ of which the carbon originates from biomass and which is used to replace fossil-derived CO₂ in production of commercial products and services.

16. Where a cogeneration unit – providing heat and/or electricity to a biomass fuel production process for which emissions are being calculated – produces excess electricity and/or excess useful heat, the greenhouse gas emissions shall be divided between the electricity and the useful heat according to the temperature of the heat (which reflects the usefulness (utility) of the heat). The useful part of the heat is found by multiplying its energy content with the Carnot efficiency, C_h , calculated as follows:

$$C_h = \frac{T_h - T_0}{T_h}$$

where

T_h = Temperature, measured in absolute temperature (kelvin) of the useful heat at point of delivery.

T_0 = Temperature of surroundings, set at 273,15 kelvin (equal to 0 °C).

If the excess heat is exported for heating of buildings, at a temperature below 150 °C (423,15 kelvin), C_h can alternatively be defined as follows:

C_h = Carnot efficiency in heat at 150 °C (423,15 kelvin), which is: 0,3546

For the purposes of that calculation, the actual efficiencies shall be used, defined as the annual mechanical energy, electricity and heat produced respectively divided by the annual energy input.

For the purposes of that calculation, the following definitions apply:

(a) 'cogeneration' shall mean the simultaneous generation in one process of thermal energy and electrical and/or mechanical energy;

(b) 'useful heat' shall mean heat generated to satisfy an economical justifiable demand for heat, for heating or cooling purposes;

(c) 'economically justifiable demand' shall mean the demand that does not exceed the needs for heat or cooling and which would otherwise be satisfied at market conditions.

17. Where a biomass fuel production process produces, in combination, the fuel for which emissions are being calculated and one or more other products ('co-products'), greenhouse gas emissions shall be divided between the fuel or its intermediate product and the co-products in proportion to their energy content (determined by lower heating value in the case of co-products other than electricity and heat). The greenhouse gas intensity of excess useful heat or excess electricity is the same as the greenhouse gas intensity of heat or electricity delivered to the biomass fuel production process and is determined from calculating the greenhouse gas intensity of all inputs and emissions, including the feedstock and CH₄ and N₂O emissions, to and from the cogeneration unit, boiler or other apparatus delivering heat or electricity to the biomass fuel production process. In the case of cogeneration of electricity and heat, the calculation is performed following point 16.

18. For the purposes of the calculations referred to in point 17, the emissions to be divided shall be $e_{ec} + e_i + e_{sca}$ + those fractions of e_{pr} , e_{td} , e_{ccs} and e_{ccr} that take place up to and including the process step at which a co-product is produced. If any allocation to co-products has taken place at an earlier process step in the life-cycle, the fraction of those emissions assigned in the last such process step to the intermediate fuel product shall be used for those purposes instead of the total of those emissions.

In the case of biogas and biomethane, all co-products that do not fall under the scope of point 7 shall be taken into account for the purposes of that calculation. No emissions shall be allocated to wastes and residues. Co-products that have a negative energy content shall be considered to have an energy content of zero for the purposes of the calculation.

Wastes and residues, including tree tops and branches, straw, husks, cobs and nut shells, and residues from processing, including crude glycerine (glycerine that is not refined) and bagasse, shall be considered to have zero life-cycle greenhouse gas emissions up to the process of collection of those materials irrespectively of whether they are processed to interim products before being transformed into the final product.

In the case of biomass fuels produced in refineries, other than the combination of processing plants with boilers or cogeneration units providing heat and/or electricity to the processing plant, the unit of analysis for the purposes of the calculation referred to in point 17 shall be the refinery.

19. For biomass fuels used for the production of electricity, for the purposes of the calculation referred to in point 3, the fossil fuel comparator $EC_{F(e)}$ shall be 183 g CO₂eq/MJ electricity or 212 g CO₂eq/MJ electricity for the outermost regions.

For biomass fuels used for the production of useful heat, as well as for the production of heating and/or cooling, for the purposes of the calculation referred to in point 3, the fossil fuel comparator $EC_{F(h)}$ shall be 80 g CO₂eq/MJ heat.

For biomass fuels used for the production of useful heat, in which a direct physical substitution of coal can be demonstrated, for the purposes of the calculation referred to in point 3, the fossil fuel comparator $EC_{F(h)}$ shall be 124 g CO₂eq/MJ heat.

For biomass fuels used as transport fuels, for the purposes of the calculation referred to in point 3, the fossil fuel comparator $E_{F(t)}$ shall be 94 g CO₂eq/MJ.

(1) Heat or waste heat is used to generate cooling (chilled air or water) through absorption chillers. Therefore, it is appropriate to calculate only the emissions associated to the heat produced, per MJ of heat, irrespectively if the end-use of the heat is actual heating or cooling via absorption chillers.

(2) The formula for calculating greenhouse gas emissions from the extraction or cultivation of raw materials eec describes cases where feedstock is converted into biofuels in one step. For more complex supply chains, adjustments are needed for calculating greenhouse gas emissions from the extraction or cultivation of raw materials eec for intermediate products.

(3) Measurements of soil carbon can constitute such evidence, e.g. by a first measurement in advance of the cultivation and subsequent ones at regular intervals several years apart. In such a case, before the second measurement is available, increase in soil carbon would be estimated on the basis of representative experiments or soil models. From the second measurement onwards, the measurements would constitute the basis for determining the existence of an increase in soil carbon and its magnitude.

(4) The quotient obtained by dividing the molecular weight of CO₂ (44,010 g/mol) by the molecular weight of carbon (12,011 g/mol) is equal to 3,664

(5) Cropland as defined by IPCC.

(6) Perennial crops are defined as multi-annual crops, the stem of which is usually not annually harvested such as short rotation coppice and oil palm.

(7) Commission Decision 2010/335/EU of 10 June 2010 on guidelines for the calculation of land carbon stocks for the purpose of Annex V to Directive 2009/28/EC (OJ L 151, 17.6.2010, p. 19).

C. DISAGGREGATED DEFAULT VALUES FOR BIOMASS FUELS

Wood briquettes or pellets

Biomass fuel production system	Transport distance	Greenhouse gas emissions – typical value (g CO ₂ eq/MJ)				Greenhouse gas emissions – default value (g CO ₂ eq/MJ)			
		Cultivation	Processing	Transport	Non-CO ₂ emissions from the fuel in use	Cultivation	Processing	Transport	Non-CO ₂ emissions from the fuel in use
Wood chips from forest residues	1 to 500 km	0,0	1,6	3,0	0,4	0,0	1,9	3,6	0,5
	500 to 2 500 km	0,0	1,6	5,2	0,4	0,0	1,9	6,2	0,5
	2 500 to 10 000 km	0,0	1,6	10,5	0,4	0,0	1,9	12,6	0,5
Wood chips from SRC (Eucalyptus)	Above 10 000 km	0,0	1,6	20,5	0,4	0,0	1,9	24,6	0,5
	2 500 to 10 000 km	4,4	0,0	11,0	0,4	4,4	0,0	13,2	0,5
	1 to 500 km	3,9	0,0	3,5	0,4	3,9	0,0	4,2	0,5
Wood chips from SRC (Poplar – fertilised)	500 to 2 500 km	3,9	0,0	5,6	0,4	3,9	0,0	6,8	0,5
	2 500 to 10 000 km	3,9	0,0	11,0	0,4	3,9	0,0	13,2	0,5
	Above 10 000 km	3,9	0,0	21,0	0,4	3,9	0,0	25,2	0,5

Wood chips from SRC (Poplar – Not fertilised)	1 to 500 km	2,2	0,0	3,5	0,4	2,2	0,0	4,2	0,5
	500 to 2 500 km	2,2	0,0	5,6	0,4	2,2	0,0	6,8	0,5
	2 500 to 10 000 km	2,2	0,0	11,0	0,4	2,2	0,0	13,2	0,5
Wood chips from stem-wood	Above 10 000 km	2,2	0,0	21,0	0,4	2,2	0,0	25,2	0,5
	1 to 500 km	1,1	0,3	3,0	0,4	1,1	0,4	3,6	0,5
	500 to 2 500 km	1,1	0,3	5,2	0,4	1,1	0,4	6,2	0,5
Wood chips from wood industry residues	2 500 to 10 000 km	1,1	0,3	10,5	0,4	1,1	0,4	12,6	0,5
	Above 10 000 km	1,1	0,3	20,5	0,4	1,1	0,4	24,6	0,5
	1 to 500 km	0,0	0,3	3,0	0,4	0,0	0,4	3,6	0,5
Wood briquettes or pellets	500 to 2 500 km	0,0	0,3	5,2	0,4	0,0	0,4	6,2	0,5
	2 500 to 10 000 km	0,0	0,3	10,5	0,4	0,0	0,4	12,6	0,5
	Above 10 000 km	0,0	0,3	20,5	0,4	0,0	0,4	24,6	0,5

Biomass fuel production system	Transport distance	Greenhouse gas emissions – typical value (g CO ₂ eq/MJ)				Greenhouse gas emissions – default value (g CO ₂ eq/MJ)			
		Cultivation	Processing	Transport & distribution	Non-CO ₂ emissions from the fuel in use	Cultivation	Processing	Transport & distribution	Non-CO ₂ emissions from the fuel in use

Wood briquettes or pellets from forest residues (case 1)	1 to 500 km	0,0	25,8	2,9	0,3	0,0	30,9	3,5	0,3
	500 to 2 500 km	0,0	25,8	2,8	0,3	0,0	30,9	3,3	0,3
	2 500 to 10 000 km	0,0	25,8	4,3	0,3	0,0	30,9	5,2	0,3
	Above 10 000 km	0,0	25,8	7,9	0,3	0,0	30,9	9,5	0,3
Wood briquettes or pellets from forest residues (case 2a)	1 to 500 km	0,0	12,5	3,0	0,3	0,0	15,0	3,6	0,3
	500 to 2 500 km	0,0	12,5	2,9	0,3	0,0	15,0	3,5	0,3
	2 500 to 10 000 km	0,0	12,5	4,4	0,3	0,0	15,0	5,3	0,3
	Above 10 000 km	0,0	12,5	8,1	0,3	0,0	15,0	9,8	0,3
Wood briquettes or pellets from forest residues (case 3a)	1 to 500 km	0,0	2,4	3,0	0,3	0,0	2,8	3,6	0,3
	500 to 2 500 km	0,0	2,4	2,9	0,3	0,0	2,8	3,5	0,3
	2 500 to 10 000 km	0,0	2,4	4,4	0,3	0,0	2,8	5,3	0,3
	Above 10 000 km	0,0	2,4	8,2	0,3	0,0	2,8	9,8	0,3
Wood briquettes from short rotation coppice (Eucalyptus – case 1)	2 500 to 10 000 km	3,9	24,5	4,3	0,3	3,9	29,4	5,2	0,3

Wood briquettes from short rotation coppice (Eucalyptus – case 2a)	2 500 to 10 000 km	5,0	10,6	4,4	0,3	0,3	5,0	12,7	5,3	0,3
Wood briquettes from short rotation coppice (Eucalyptus – case 3a)	2 500 to 10 000 km	5,3	0,3	4,4	0,3	0,3	5,3	0,4	5,3	0,3
Wood briquettes from short rotation coppice (Poplar – Fertilised – case 1)	1 to 500 km	3,4	24,5	2,9	0,3	0,3	3,4	29,4	3,5	0,3
	500 to 10 000 km	3,4	24,5	4,3	0,3	0,3	3,4	29,4	5,2	0,3
	Above 10 000 km	3,4	24,5	7,9	0,3	0,3	3,4	29,4	9,5	0,3
Wood briquettes from short rotation coppice (Poplar – Fertilised – case 2a)	1 to 500 km	4,4	10,6	3,0	0,3	0,3	4,4	12,7	3,6	0,3
	500 to 10 000 km	4,4	10,6	4,4	0,3	0,3	4,4	12,7	5,3	0,3
	Above 10 000 km	4,4	10,6	8,1	0,3	0,3	4,4	12,7	9,8	0,3

Wood briquettes from short rotation coppice (Poplar – Fertilised – case 3a)	1 to 500 km	4,6	0,3	3,0	0,3	4,6	0,4	3,6	0,3
	500 to 1000 km	4,6	0,3	4,4	0,3	4,6	0,4	5,3	0,3
	Above 1000 km	4,6	0,3	8,2	0,3	4,6	0,4	9,8	0,3
Wood briquettes from short rotation coppice (Poplar – no fertilisation – case 1)	1 to 500 km	2,0	24,5	2,9	0,3	2,0	29,4	3,5	0,3
	500 to 2500 km	2,0	24,5	4,3	0,3	2,0	29,4	5,2	0,3
	2500 to 10000 km	2,0	24,5	7,9	0,3	2,0	29,4	9,5	0,3
Wood briquettes from short rotation coppice (Poplar – no fertilisation – case 2a)	1 to 500 km	2,5	10,6	3,0	0,3	2,5	12,7	3,6	0,3
	500 to 1000 km	2,5	10,6	4,4	0,3	2,5	12,7	5,3	0,3
	Above 1000 km	2,5	10,6	8,1	0,3	2,5	12,7	9,8	0,3
Wood briquettes from short rotation coppice (Poplar – no fertilisation – case 3a)	1 to 500 km	2,6	0,3	3,0	0,3	2,6	0,4	3,6	0,3
	500 to 1000 km	2,6	0,3	4,4	0,3	2,6	0,4	5,3	0,3
	Above 1000 km	2,6	0,3	8,2	0,3	2,6	0,4	9,8	0,3

Wood briquettes or pellets from stemwood (case 1)	1 to 500 km	1,1	24,8	2,9	0,3	1,1	29,8	3,5	0,3
	500 to 2 500 km	1,1	24,8	2,8	0,3	1,1	29,8	3,3	0,3
	2 500 to 10 000 km	1,1	24,8	4,3	0,3	1,1	29,8	5,2	0,3
	Above 10 000 km	1,1	24,8	7,9	0,3	1,1	29,8	9,5	0,3
Wood briquettes or pellets from stemwood (case 2a)	1 to 500 km	1,4	11,0	3,0	0,3	1,4	13,2	3,6	0,3
	500 to 2 500 km	1,4	11,0	2,9	0,3	1,4	13,2	3,5	0,3
	2 500 to 10 000 km	1,4	11,0	4,4	0,3	1,4	13,2	5,3	0,3
	Above 10 000 km	1,4	11,0	8,1	0,3	1,4	13,2	9,8	0,3
Wood briquettes or pellets from stemwood (case 3a)	1 to 500 km	1,4	0,8	3,0	0,3	1,4	0,9	3,6	0,3
	500 to 2 500 km	1,4	0,8	2,9	0,3	1,4	0,9	3,5	0,3
	2 500 to 10 000 km	1,4	0,8	4,4	0,3	1,4	0,9	5,3	0,3
	Above 10 000 km	1,4	0,8	8,2	0,3	1,4	0,9	9,8	0,3
Wood briquettes or pellets from wood industry residues (case 1)	1 to 500 km	0,0	14,3	2,8	0,3	0,0	17,2	3,3	0,3
	500 to 2 500 km	0,0	14,3	2,7	0,3	0,0	17,2	3,2	0,3
	2 500 to 10 000 km	0,0	14,3	4,2	0,3	0,0	17,2	5,0	0,3
	Above 10 000 km	0,0	14,3	7,7	0,3	0,0	17,2	9,2	0,3

Wood briquettes or pellets from wood industry residues (case 2a)	1 to 500 km	0,0	6,0	2,8	0,3	0,0	7,2	3,4	0,3
	500 to 2 500 km	0,0	6,0	2,7	0,3	0,0	7,2	3,3	0,3
	2 500 to 10 000 km	0,0	6,0	4,2	0,3	0,0	7,2	5,1	0,3
	Above 10 000 km	0,0	6,0	7,8	0,3	0,0	7,2	9,3	0,3
	1 to 500 km	0,0	0,2	2,8	0,3	0,0	0,3	3,4	0,3
Wood briquettes or pellets from wood industry residues (case 3a)	500 to 2 500 km	0,0	0,2	2,7	0,3	0,0	0,3	3,3	0,3
	2 500 to 10 000 km	0,0	0,2	4,2	0,3	0,0	0,3	5,1	0,3
	Above 10 000 km	0,0	0,2	7,8	0,3	0,0	0,3	9,3	0,3

Agriculture pathways

Biomass fuel production system	Transport distance	Greenhouse gas emissions – typical value (g CO ₂ eq/MJ)					Greenhouse gas emissions – default value (g CO ₂ eq/MJ)						
		Cultivation	Processing	Transport & distribution	Non-CO ₂ emissions from the fuel in use	Cultivation	Processing	Transport & distribution	Non-CO ₂ emissions from the fuel in use				

Agricultural Residues with density < 0,2 t/m ³	1 to 500 km	0,0	0,9	2,6	0,2	0,0	1,1	3,1	0,3
	500 to 2 500 km	0,0	0,9	6,5	0,2	0,0	1,1	7,8	0,3
	2 500 to 10 000 km	0,0	0,9	14,2	0,2	0,0	1,1	17,0	0,3
Agricultural Residues with density > 0,2 t/m ³	Above 10 000 km	0,0	0,9	28,3	0,2	0,0	1,1	34,0	0,3
	1 to 500 km	0,0	0,9	2,6	0,2	0,0	1,1	3,1	0,3
	500 to 2 500 km	0,0	0,9	3,6	0,2	0,0	1,1	4,4	0,3
Straw pellets	2 500 to 10 000 km	0,0	0,9	7,1	0,2	0,0	1,1	8,5	0,3
	Above 10 000 km	0,0	0,9	13,6	0,2	0,0	1,1	16,3	0,3
	1 to 500 km	0,0	5,0	3,0	0,2	0,0	6,0	3,6	0,3
Bagasse briquettes	500 to 10 000 km	0,0	5,0	4,6	0,2	0,0	6,0	5,5	0,3
	Above 10 000 km	0,0	5,0	8,3	0,2	0,0	6,0	10,0	0,3
	500 to 10 000 km	0,0	0,3	4,3	0,4	0,0	0,4	5,2	0,5
Palm Kernel Meal	Above 10 000 km	0,0	0,3	8,0	0,4	0,0	0,4	9,5	0,5
	Above 10 000 km	21,6	21,1	11,2	0,2	21,6	25,4	13,5	0,3

Palm Kernel Meal (no CH ₄ emissions from oil mill)	Above 10 000 km	21,6	3,5	11,2	0,2	21,6	4,2	13,5	0,3
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Disaggregated default values for biogas for the production of electricity

Biomass fuel production system	Technology Cultivation	TYPICAL VALUE [g CO ₂ eq/MJ]					DEFAULT VALUE [g CO ₂ eq/MJ]				
		Processing	Non-CO ₂ emissions from the fuel in use	Transport	Manure credits	Cultivation	Processing	Non-CO ₂ emissions from the fuel in use	Transport	Manure credits	
Wet manure ⁽¹⁾	Open digestate	0,0	69,6	8,9	0,8	- 107,3	0,0	97,4	12,5	0,8	- 107,3
		0,0	0,0	8,9	0,8	- 97,6	0,0	0,0	12,5	0,8	- 97,6
case 2	Open digestate	0,0	74,1	8,9	0,8	- 107,3	0,0	103,7	12,5	0,8	- 107,3
		0,0	4,2	8,9	0,8	- 97,6	0,0	5,9	12,5	0,8	- 97,6
case 3	Open digestate	0,0	83,2	8,9	0,9	- 120,7	0,0	116,4	12,5	0,9	- 120,7
		0,0	4,6	8,9	0,8	- 108,5	0,0	6,4	12,5	0,8	- 108,5

Maize whole plant ⁽²⁾	case 1	Open digestate	15,6	13,5	8,9	0,0 ⁽³⁾	—	15,6	18,9	12,5	0,0	—
		Close digestate	15,2	0,0	8,9	0,0	—	15,2	0,0	12,5	0,0	—
case 2		Open digestate	15,6	18,8	8,9	0,0	—	15,6	26,3	12,5	0,0	—
		Close digestate	15,2	5,2	8,9	0,0	—	15,2	7,2	12,5	0,0	—
case 3		Open digestate	17,5	21,0	8,9	0,0	—	17,5	29,3	12,5	0,0	—
		Close digestate	17,1	5,7	8,9	0,0	—	17,1	7,9	12,5	0,0	—
Biowaste	case 1	Open digestate	0,0	21,8	8,9	0,5	—	0,0	30,6	12,5	0,5	—
		Close digestate	0,0	0,0	8,9	0,5	—	0,0	0,0	12,5	0,5	—
case 2		Open digestate	0,0	27,9	8,9	0,5	—	0,0	39,0	12,5	0,5	—
		Close digestate	0,0	5,9	8,9	0,5	—	0,0	8,3	12,5	0,5	—
case 3		Open digestate	0,0	31,2	8,9	0,5	—	0,0	43,7	12,5	0,5	—
		Close digestate	0,0	6,5	8,9	0,5	—	0,0	9,1	12,5	0,5	—

(1) The values for biogas production from manure include negative emissions for emissions saved from raw manure management. The value of esca considered is equal to -45 g CO₂eq/MJ manure used in anaerobic digestion.

(2) Maize whole plant means maize harvested as fodder and ensiled for preservation.

(3) Transport of agricultural raw materials to the transformation plant is, according to the methodology provided in the Commission's report of 25 February, 2010 on sustainability requirements for the use of solid and gaseous biomass sources in electricity, heating and cooling, included in the 'cultivation' value. The value for transport of maize silage accounts for 0,4 g CO₂eq/MJ biogas.

Disaggregated default values for biomethane

Biome- thane pro- duction system	Technological op- eration	TYPICAL VALUE [g CO ₂ eq/MJ]						DEFAULT VALUE [g CO ₂ eq/MJ]						
		Process- ing	Upgra- ding	Trans- port	Com- pres- sion at filling station	Ma- nure credits	Cultiva- tion	Process- ing	Upgra- ding	Trans- port	Com- pres- sion at filling station	Ma- nure credits	Cultiva- tion	
Wet manure	Open di- gestate	no off-gas combus- tion	0,0	84,2	19,5	1,0	3,3	- 124,4	0,0	117,9	27,3	1,0	4,6	- 124,4
		off-gas combus- tion	0,0	84,2	4,5	1,0	3,3	- 124,4	0,0	117,9	6,3	1,0	4,6	- 124,4
	Close di- gestate	no off-gas combus- tion	0,0	3,2	19,5	0,9	3,3	- 111,9	0,0	4,4	27,3	0,9	4,6	- 111,9
		off-gas combus- tion	0,0	3,2	4,5	0,9	3,3	- 111,9	0,0	4,4	6,3	0,9	4,6	- 111,9

Maize whole plant	Open digestate	no off-gas combustion	18,1	20,1	19,5	0,0	3,3	—	18,1	28,1	27,3	0,0	4,6	—
		off-gas combustion	18,1	20,1	4,5	0,0	3,3	—	18,1	28,1	6,3	0,0	4,6	—
Biowaste	Close digestate	no off-gas combustion	17,6	4,3	19,5	0,0	3,3	—	17,6	6,0	27,3	0,0	4,6	—
		off-gas combustion	17,6	4,3	4,5	0,0	3,3	—	17,6	6,0	6,3	0,0	4,6	—
	Open digestate	no off-gas combustion	0,0	30,6	19,5	0,6	3,3	—	0,0	42,8	27,3	0,6	4,6	—
		off-gas combustion	0,0	30,6	4,5	0,6	3,3	—	0,0	42,8	6,3	0,6	4,6	—
Close digestate	no off-gas combustion	0,0	5,1	19,5	0,5	3,3	—	0,0	7,2	27,3	0,5	4,6	—	
	off-gas combustion	0,0	5,1	4,5	0,5	3,3	—	0,0	7,2	6,3	0,5	4,6	—	

D. TOTAL TYPICAL AND DEFAULT VALUES FOR BIOMASS FUEL PATHWAYS

Biomass fuel production system	Transport distance	Greenhouse gas emissions – typical value (g CO ₂ eq/MJ)	Greenhouse gas emissions – default value (g CO ₂ eq/MJ)
Woodchips from forest residues	1 to 500 km	5	6
	500 to 2 500 km	7	9
	2 500 to 10 000 km	12	15
	Above 10 000 km	22	27
Woodchips from short rotation coppice (Eucalyptus)	2 500 to 10 000 km	16	18
Woodchips from short rotation coppice (Poplar – Fertilised)	1 to 500 km	8	9
	500 to 2 500 km	10	11
	2 500 to 10 000 km	15	18
	Above 10 000 km	25	30
Woodchips from short rotation coppice (Poplar – No fertilisation)	1 to 500 km	6	7
	500 to 2 500 km	8	10
	2 500 to 10 000 km	14	16
	Above 10 000 km	24	28
Woodchips from stemwood	1 to 500 km	5	6
	500 to 2 500 km	7	8
	2 500 to 10 000 km	12	15
	Above 10 000 km	22	27
Woodchips from industry residues	1 to 500 km	4	5
	500 to 2 500 km	6	7
	2 500 to 10 000 km	11	13
	Above 10 000 km	21	25
Wood briquettes or pellets from forest residues (case 1)	1 to 500 km	29	35
	500 to 2 500 km	29	35
	2 500 to 10 000 km	30	36
	Above 10 000 km	34	41
Wood briquettes or pellets from forest residues (case 2a)	1 to 500 km	16	19
	500 to 2 500 km	16	19
	2 500 to 10 000 km	17	21
	Above 10 000 km	21	25

Wood briquettes or pellets from forest residues (case 3a)	1 to 500 km	6	7
	500 to 2 500 km	6	7
	2 500 to 10 000 km	7	8
	Above 10 000 km	11	13
Wood briquettes or pellets from short rotation coppice (Eucalyptus – case 1)	2 500 to 10 000 km	33	39
Wood briquettes or pellets from short rotation coppice (Eucalyptus – case 2a)	2 500 to 10 000 km	20	23
Wood briquettes or pellets from short rotation coppice (Eucalyptus – case 3a)	2 500 to 10 000 km	10	11
Wood briquettes or pellets from short rotation coppice (Poplar – Fertilised – case 1)	1 to 500 km	31	37
	500 to 10 000 km	32	38
	Above 10 000 km	36	43
Wood briquettes or pellets from short rotation coppice (Poplar – Fertilised – case 2a)	1 to 500 km	18	21
	500 to 10 000 km	20	23
	Above 10 000 km	23	27
Wood briquettes or pellets from short rotation coppice (Poplar – Fertilised – case 3a)	1 to 500 km	8	9
	500 to 10 000 km	10	11
	Above 10 000 km	13	15
Wood briquettes or pellets from short rotation coppice (Poplar – no fertilisation – case 1)	1 to 500 km	30	35
	500 to 10 000 km	31	37
	Above 10 000 km	35	41
Wood briquettes or pellets from short rotation coppice (Poplar – no fertilisation – case 2a)	1 to 500 km	16	19
	500 to 10 000 km	18	21
	Above 10 000 km	21	25
Wood briquettes or pellets from short rotation coppice (Poplar – no fertilisation – case 3a)	1 to 500 km	6	7
	500 to 10 000 km	8	9
	Above 10 000 km	11	13
Wood briquettes or pellets from stemwood (case 1)	1 to 500 km	29	35
	500 to 2 500 km	29	34
	2 500 to 10 000 km	30	36
	Above 10 000 km	34	41

Wood briquettes or pellets from stemwood (case 2a)	1 to 500 km	16	18
	500 to 2 500 km	15	18
	2 500 to 10 000 km	17	20
	Above 10 000 km	21	25
Wood briquettes or pellets from stemwood (case 3a)	1 to 500 km	5	6
	500 to 2 500 km	5	6
	2 500 to 10 000 km	7	8
	Above 10 000 km	11	12
Wood briquettes or pellets from wood industry residues (case 1)	1 to 500 km	17	21
	500 to 2 500 km	17	21
	2 500 to 10 000 km	19	23
	Above 10 000 km	22	27
Wood briquettes or pellets from wood industry residues (case 2a)	1 to 500 km	9	11
	500 to 2 500 km	9	11
	2 500 to 10 000 km	10	13
	Above 10 000 km	14	17
Wood briquettes or pellets from wood industry residues (case 3a)	1 to 500 km	3	4
	500 to 2 500 km	3	4
	2 500 to 10 000 km	5	6
	Above 10 000 km	8	10

Comments

Case 1 refers to processes in which a Natural Gas boiler is used to provide the process heat to the pellet mill. Process electricity is purchased from the grid.

Case 2a refers to processes in which a boiler fuelled with wood chips is used to provide the process heat to the pellet mill. Process electricity is purchased from the grid.

Case 3a refers to processes in which a CHP, fuelled with wood chips, is used to provide heat and electricity to the pellet mill.

Biomass fuel production system	Transport distance	Greenhouse gas emissions – typical value (g CO ₂ eq/MJ)	Greenhouse gas emissions – default value (g CO ₂ eq/MJ)
Agricultural Residues with density < 0,2 t/m ³ (1)	1 to 500 km	4	4
	500 to 2 500 km	8	9
	2 500 to 10 000 km	15	18
	Above 10 000 km	29	35
Agricultural Residues with density > 0,2 t/m ³ (2)	1 to 500 km	4	4
	500 to 2 500 km	5	6
	2 500 to 10 000 km	8	10
	Above 10 000 km	15	18
Straw pellets	1 to 500 km	8	10
	500 to 10 000 km	10	12
	Above 10 000 km	14	16
Bagasse briquettes	500 to 10 000 km	5	6
	Above 10 000 km	9	10
Palm Kernel Meal	Above 10 000 km	54	61
Palm Kernel Meal (no CH ₄ emissions from oil mill)	Above 10 000 km	37	40

(1) Open storage of digestate accounts for additional emissions of methane which change with the weather, the substrate and the digestion efficiency. In these calculations the amounts are taken to be equal to 0,05 MJ CH₄/MJ biogas for manure, 0,035 MJ CH₄/MJ biogas for maize and 0,01 MJ CH₄/MJ biogas for biowaste.

(2) Close storage means that the digestate resulting from the digestion process is stored in a gas tight tank and the additional biogas released during storage is considered to be recovered for production of additional electricity or biomethane.

Typical and default values – biogas for electricity

Biogas production system	Technological option		Typical value	Default value
			Greenhouse gas emissions (g CO ₂ eq/MJ)	Greenhouse gas emissions (g CO ₂ eq/MJ)
Biogas for electricity from wet manure	Case 1	Open digestate (1)	– 28	3
		Close digestate (2)	– 88	– 84
	Case 2	Open digestate	– 23	10
		Close digestate	– 84	– 78
	Case 3	Open digestate	– 28	9
		Close digestate	– 94	– 89

Biogas for electricity from maize whole plant	Case 1	Open digestate	38	47
		Close digestate	24	28
	Case 2	Open digestate	43	54
		Close digestate	29	35
	Case 3	Open digestate	47	59
		Close digestate	32	38
Biogas for electricity from biowaste	Case 1	Open digestate	31	44
		Close digestate	9	13
	Case 2	Open digestate	37	52
		Close digestate	15	21
	Case 3	Open digestate	41	57
		Close digestate	16	22

(1) This group of materials includes agricultural residues with a low bulk density and it comprises materials such as straw bales, oat hulls, rice husks and sugar cane bagasse bales (not exhaustive list).

(2) The group of agricultural residues with higher bulk density includes materials such as corn cobs, nut shells, soybean hulls, palm kernel shells (not exhaustive list).

Typical and default values for biomethane

Biomethane production system	Technological option	Greenhouse gas emissions – typical value (g CO ₂ eq/MJ)	Greenhouse gas emissions – default value (g CO ₂ eq/MJ)
Biomethane from wet manure	Open digestate, no off-gas combustion ⁽¹⁾	– 20	22
	Open digestate, off-gas combustion ⁽²⁾	– 35	1
	Close digestate, no off-gas combustion	– 88	– 79
	Close digestate, off-gas combustion	– 103	– 100
Biomethane from maize whole plant	Open digestate, no off-gas combustion	58	73
	Open digestate, off-gas combustion	43	52
	Close digestate, no off-gas combustion	41	51
	Close digestate, off-gas combustion	26	30

Biomethane from biowaste	Open digestate, no off-gas combustion	51	71
	Open digestate, off-gas combustion	36	50
	Close digestate, no off-gas combustion	25	35
	Close digestate, off-gas combustion	10	14

(1) This category includes the following categories of technologies for biogas upgrade to biomethane: Pressure Swing Adsorption (PSA), Pressure Water Scrubbing (PWS), Membranes, Cryogenic, and Organic Physical Scrubbing (OPS). It includes an emission of 0,03 MJ CH₄/MJ biomethane for the emission of methane in the off-gases.

(2) This category includes the following categories of technologies for biogas upgrade to biomethane: Pressure Water Scrubbing (PWS) when water is recycled, Pressure Swing Adsorption (PSA), Chemical Scrubbing, Organic Physical Scrubbing (OPS), Membranes and Cryogenic upgrading. No methane emissions are considered for this category (the methane in the off-gas is combusted, if any).

Typical and default values – biogas for electricity – mixtures of manure and maize: greenhouse gas emissions with shares given on a fresh mass basis

Biogas production system		Technological options	Greenhouse gas emissions – typical value (g CO ₂ eq/MJ)	Greenhouse gas emissions – default value (g CO ₂ eq/MJ)
Manure – Maize 80% - 20%	Case 1	Open digestate	17	33
		Close digestate	– 12	– 9
	Case 2	Open digestate	22	40
		Close digestate	– 7	– 2
	Case 3	Open digestate	23	43
		Close digestate	– 9	– 4
Manure – Maize 70% - 30%	Case 1	Open digestate	24	37
		Close digestate	0	3
	Case 2	Open digestate	29	45
		Close digestate	4	10
	Case 3	Open digestate	31	48
		Close digestate	4	10
Manure – Maize 60% - 40%	Case 1	Open digestate	28	40
		Close digestate	7	11
	Case 2	Open digestate	33	47
		Close digestate	12	18
	Case 3	Open digestate	36	52
		Close digestate	12	18

Comments

Case 1 refers to pathways in which electricity and heat required in the process are supplied by the CHP engine itself.

Case 2 refers to pathways in which the electricity required in the process is taken from the grid and the process heat is supplied by the CHP engine itself. In some Contracting Parties, operators are not allowed to claim the gross production for subsidies and case 1 is the more likely configuration.

Case 3 refers to pathways in which the electricity required in the process is taken from the grid and the process heat is supplied by a biogas boiler. This case applies to some installations in which the CHP engine is not on-site and biogas is sold (but not upgraded to biomethane).

Typical and default values – biomethane - mixtures of manure and maize: greenhouse gas emissions with shares given on a fresh mass basis

Biomethane production system	Technological options	Typical value	Default value
		(g CO ₂ eq/MJ)	(g CO ₂ eq/MJ)
Manure – Maize 80% - 20%	Open digestate, no off-gas combustion	32	57
	Open digestate, off-gas combustion	17	36
	Close digestate, no off-gas combustion	- 1	9
	Close digestate, off-gas combustion	- 16	- 12
Manure – Maize 70% - 30%	Open digestate, no off-gas combustion	41	62
	Open digestate, off-gas combustion	26	41
	Close digestate, no off-gas combustion	13	22
	Close digestate, off-gas combustion	- 2	1
Manure – Maize 60% - 40%	Open digestate, no off-gas combustion	46	66
	Open digestate, off-gas combustion	31	45
	Close digestate, no off-gas combustion	22	31
	Close digestate, off-gas combustion	7	10

Where biomethane is used as Compressed Biomethane as a transport fuel, a value of 3,3 g CO₂eq/MJ biomethane needs to be added to the typical values and a value of 4,6 g CO₂eq/MJ biomethane to the default values.

ANNEX VII

ACCOUNTING OF ENERGY FROM HEAT PUMPS

The amount of aerothermal, geothermal or hydrothermal energy captured by heat pumps to be considered to be energy from renewable sources for the purposes of this Directive, E_{RES} , shall be calculated in accordance with the following formula:

$$E_{RES} = Q_{usable} * (1 - 1/SPF)$$

where

- Q_{usable} = the estimated total usable heat delivered by heat pumps fulfilling the criteria referred to in Article 7(4), implemented as follows: Only heat pumps for which $SPF > 1,15 * 1/\eta$ shall be taken into account,
- SPF = the estimated average seasonal performance factor for those heat pumps,
- η = the ratio between total gross production of electricity and the primary energy consumption for the production of electricity and shall be calculated as an EU average based on Eurostat data.

ANNEX VIII

PART A. PROVISIONAL ESTIMATED INDIRECT LAND-USE CHANGE EMISSIONS FROM BIOFUEL, BIOLIQUID AND BIOMASS FUEL FEEDSTOCK (g CO₂eq/MJ) ⁽¹⁾

Feedstock group	Mean ⁽²⁾	Interpercentile range derived from the sensitivity analysis ⁽³⁾
Cereals and other starch-rich crops	12	8 to 16
Sugars	13	4 to 17
Oil crops	55	33 to 66

PART B. BIOFUELS, BIOLIQUIDS AND BIOMASS FUELS FOR WHICH THE ESTIMATED INDIRECT LAND-USE CHANGE EMISSIONS ARE CONSIDERED TO BE ZERO

Biofuels, bioliquids and biomass fuels produced from the following feedstock categories will be considered to have estimated indirect land-use change emissions of zero:

- (1) feedstocks which are not listed under part A of this Annex.
- (2) feedstocks, the production of which has led to direct land-use change, namely, a change from one of the following IPCC land cover categories: forest land, grassland, wetlands, settlements, or other land, to cropland or perennial cropland ⁽⁴⁾. In such a case a direct land-use change emission value (e) should have been calculated in accordance with point 7 of part C of Annex V.

⁽¹⁾ The mean values reported here represent a weighted average of the individually modelled feedstock values. The magnitude of the values in the Annex is sensitive to the range of assumptions (such as treatment of co-products, yield developments, carbon stocks and displacement of other commodities) used in the economic models developed for their estimation. Although it is therefore not possible to fully characterise the uncertainty range associated with such estimates, a sensitivity analysis conducted on the results based on a random variation of key parameters, a so-called Monte Carlo analysis, was conducted.

⁽²⁾ The mean values included here represent a weighted average of the individually modelled feedstock values.

⁽³⁾ The range included here reflects 90% of the results using the fifth and ninety-fifth percentile values resulting from the analysis. The fifth percentile suggests a value below which 5% of the observations were found (namely, 5% of total data used showed results below 8, 4, and 33 g CO₂eq/MJ). The ninety-fifth percentile suggests a value below which 95% of the observations were found (namely, 5% of total data used showed results above 16, 17, and 66 g CO₂eq/MJ).

⁽⁴⁾ Perennial crops are defined as multi-annual crops, the stem of which is usually not annually harvested such as short rotation coppice and oil palm.

ANNEX IX

PART A. Feedstocks for the production of biogas for transport and advanced biofuels, the contribution of which towards the minimum shares referred to in the first and fourth subparagraphs of Article 25(1) may be considered to be twice their energy content:

- (a) Algae if cultivated on land in ponds or photobioreactors;
- (b) Biomass fraction of mixed municipal waste, but not separated household waste subject to recycling targets under point (a) of Article 11(2) of Directive 2008/98/EC;
- (c) Biowaste as defined in point (4) of Article 3 of Directive 2008/98/EC from private households subject to separate collection as defined in point (11) of Article 3 of that Directive;
- (d) Biomass fraction of industrial waste not fit for use in the food or feed chain, including material from retail and wholesale and the agro-food and fish and aquaculture industry, and excluding feedstocks listed in part B of this Annex;
- (e) Straw;
- (f) Animal manure and sewage sludge;
- (g) Palm oil mill effluent and empty palm fruit bunches;
- (h) Tall oil pitch;
- (i) Crude glycerine;
- (j) Bagasse;
- (k) Grape marcs and wine lees;
- (l) Nut shells;
- (m) Husks;
- (n) Cobs cleaned of kernels of corn;
- (o) Biomass fraction of wastes and residues from forestry and forest-based industries, namely, bark, branches, pre-commercial thinnings, leaves, needles, tree tops, saw dust, cutter shavings, black liquor, brown liquor, fibre sludge, lignin and tall oil;
- (p) Other non-food cellulosic material;
- (q) Other ligno-cellulosic material except saw logs and veneer logs.

PART B. Feedstocks for the production of biofuels and biogas for transport, the contribution of which towards the minimum share established in the first subparagraph of Article 25(1) shall be limited and may be considered to be twice their energy content:

- (a) Used cooking oil;
- (b) Animal fats classified as categories 1 and 2 in accordance with Regulation (EC) No 1069/2009.

ANNEX X

PART A

Repealed Directive with a list of the successive amendments thereto (referred to in Article 37)

Directive 2009/28/EC of the European Parliament and of the Council (OJ L 140, 5. 6. 2009, p. 16)	
Council Directive 2013/18/EU (OJ L 158, 10. 6. 2013, p. 230)	
Directive (EU) 2015/1513 of the European Parliament and of the Council (OJ L 239, 15. 9. 2015, p. 1)	Only Article 2

PART B

Time-limits for transposition into national law

(referred to in Article 36)

Directive	Time-limit for transposition
2009/28/EC	25 June 2009
2013/18/EU	1 July 2013
(EU) 2015/1513	10 September 2017

ANNEX XI

Correlation table

Directive 2009/28/EC	This Directive
Article 1	Article 1
Article 2, first subparagraph	Article 2, first subparagraph
Article 2, second subparagraph, introductory wording	Article 2, second subparagraph, introductory wording
Article 2, second subparagraph, point (a)	Article 2, second subparagraph, point (1)
Article 2, second subparagraph, point (b)	—
—	Article 2, second subparagraph, point (2)
Article 2, second subparagraph, point (c)	Article 2, second subparagraph, point (3)
Article 2, second subparagraph, point (d)	—
Article 2, second subparagraph, points (e), (f), (g), (h), (i), (j), (k), (l), (m), (n), (o), (p), (q), (r), (s), (t), (u), (v) and (w)	Article 2, second subparagraph, points (24), (4), (19), (32), (33), (12), (5), (6), (45), (46), (47), (23), (39), (41), (42), (43), (36), (44) and (37)
—	Article 2, second subparagraph, points (7), (8), (9), (10), (11), (13), (14), (15), (16), (17), (18), (20), (21), (22), (25), (26), (27), (28), (29), (30), (31), (34), (35), (38) and (40)
Article 3	—
—	Article 3
Article 4	—
—	Article 4
—	Article 5
—	Article 6
Article 5(1)	Article 7(1)
Article 5(2)	—
Article 5(3)	Article 7(2)
Article 5(4), first, second, third and fourth subparagraphs	Article 7(3), first, second, third and fourth subparagraphs
—	Article 7(3), fifth and sixth subparagraphs
—	Article 7(4)
Article 5(5),	Article 27(1), first subparagraph, point (c)
Article 5(6) and (7)	Article 7(5) and (6)
Article 6(1)	Article 8(1)
—	Article 8(2) and (3)

Article 6(2) and (3)	Article 8(4) and (5)
Article 7(1), (2), (3), (4) and (5)	Article 9(1), (2), (3), (4) and (5)
—	Article 9(6)
Article 8	Article 10
Article 9(1)	Article 11(1)
Article 9(2), first subparagraph, points (a), (b) and (c)	Article 11(2), first subparagraph, points (a), (b) and (c)
—	Article 11(2), first subparagraph, point (d)
Article 10	Article 12
Article 11(1), (2) and (3)	Article 13(1), (2) and (3)
—	Article 13(4)
Article 12	Article 14
Article 13(1), first subparagraph	Article 15(1), first subparagraph
Article 13(1), second subparagraph	Article 15(1), second subparagraph
Article 13(1), second subparagraph, points (a) and (b)	—
Article 13(1), second subparagraph, points (c), (d), (e) and (f)	Article 15(1), second subparagraph, points (a), (b), (c) and (d)
Article 13(2), (3), (4) and (5)	Article 15(2), (3), (4) and (5)
Article 13(6), first subparagraph	Article 15(6), first subparagraph
Article 13(6), second, third, fourth and fifth subparagraphs	—
—	Article 15, (7) and (8)
—	Article 16
—	Article 17
Article 14	Article 18
Article 15(1)	Article 19(1)
Article 15(2), first, second and third subparagraphs	Article 19(2) first, second and third subparagraphs
—	Article 19(2), fourth and fifth subparagraphs
Article 15(2), fourth subparagraph	Article 19(2), sixth subparagraph
Article 15(3)	—
—	Article 19(3) and (4)
Article 15(4) and (5)	Article 19(5) and (6)
Article 15(6), first subparagraph, point (a)	Article 19(7), first subparagraph, point (a)
Article 15(6), first subparagraph, point (b)(i)	Article 19(7), first subparagraph, point (b)(i)
—	Article 19(7), first subparagraph, point (b)(ii)
Article 15(6), first subparagraph, point (b)(ii)	Article 19(7), first subparagraph, point (b)(iii)

Article 15(6), first subparagraph, points (c), (d), (e) and (f)	Article 19(7), first subparagraph, points (c), (d), (e) and (f)
—	Article 19(7), second subparagraph
Article 15(7)	Article 19(8)
Article 15(8)	—
Article 15(9) and (10)	Article 19(9) and (10)
—	Article 19(11)
Article 15(11)	Article 19(12)
Article 15(12)	—
—	Article 19(13)
Article 16(1), (2), (3), (4), (5), (6), (7) and (8)	—
Article 16(9), (10) and (11)	Article 20(1), (2) and (3)
—	Article 21
—	Article 22
—	Article 23
—	Article 24
—	Article 25
—	Article 26
—	Article 27
—	Article 28
Article 17(1), first and second subparagraphs	Article 29(1), first and second subparagraphs
—	Article 29(1), third, fourth and fifth subparagraphs
—	Article 29(2)
Article 17(2), first and second subparagraphs	—
Article 17(2), third subparagraph	Article 29(10), third subparagraph
Article 17(3), first subparagraph, point (a)	Article 29(3), first subparagraph, point (a)
—	Article 29(3), first subparagraph, point (b)
Article 17(3), first subparagraph, points (b) and (c)	Article 29(3), first subparagraph, points (c) and (d)
—	Article 29(3), second subparagraph
Article 17(4)	Article 29(4)
Article 17(5)	Article 29(5)
Article 17(6) and (7)	—
—	Article 29(6), (7), (8), (9), (10) and (11)
Article 17(8)	Article 29(12)
Article 17(9)	—
—	Article 29(13) and (14)

Article 18(1), first subparagraph	Article 30(1), first subparagraph
Article 18(1), first subparagraph, points (a), (b) and (c)	Article 30(1), first subparagraph, points (a), (c) and (d)
—	Article 30(1), first subparagraph, point (b)
—	Article 30(1), second subparagraph
Article 18(2)	—
—	Article 30(2)
Article 18(3), first subparagraph	Article 30(3), first subparagraph
Article 18(3), second and third subparagraphs	—
Article 18(3), fourth and fifth subparagraphs	Article 30(3), second and third subparagraphs
Article 18(4), first subparagraph	—
Article 18(4), second and third subparagraphs	Article 30(4), first and second subparagraphs
Article 18(4), fourth subparagraph	—
Article 18(5), first and second subparagraphs	Article 30(7), first and second subparagraphs
Article 18(5), third subparagraph	Article 30(8), first and second subparagraphs
Article 18(5), fourth subparagraph	Article 30(5), third subparagraph
—	Article 30(6), first subparagraph
Article 18(5), fifth subparagraph	Article 30(6), second subparagraph
Article 18(6), first and second subparagraphs	Article 30(5), first and second subparagraphs
Article 18(6), third subparagraph	—
Article 18(6), fourth subparagraph	Article 30(6), third subparagraph
—	Article 30(6), fourth subparagraph
Article 18(6), fifth subparagraph	Article 30(6), fifth subparagraph
Article 18(7)	Article 30(9), first subparagraph
—	Article 30(9), second subparagraph
Article 18(8) and (9)	—
—	Article 30(10)
Article 19(1), first subparagraph	Article 31(1), first subparagraph
Article 19(1), first subparagraph, points (a), (b) and (c)	Article 31(1), first subparagraph, points (a), (b) and (c)
—	Article 31(1), first subparagraph, point (d)
Article 19(2), (3) and (4)	Article 31(2), (3) and (4)
Article 19(5)	—
Article 19(7), first subparagraph	Article 31(5), first subparagraph
Article 19(7), first subparagraph, first, second third and fourth indents	—
Article 19(7), second and third subparagraphs	Article 31(5), second and third subparagraphs

Article 19(8)	Article 31(6)
Article 20	Article 32
Article 22	—
Article 23(1) and (2)	Article 33(1) and (2)
Article 23(3), (4), (5), (6), (7) and (8)	—
Article 23(9)	Article 33(3)
Article 23(10)	Article 33(4)
Article 24	—
Article 25(1)	Article 34(1)
Article 25(2)	Article 34(2)
Article 25(3)	Article 34(3)
Article 25a(1)	Article 35(1)
Article 25a(2)	Article 35(2) and (3)
Article 25a(3)	Article 35(4)
—	Article 35(5)
Article 25a(4) and (5)	Article 35(6) and (7)
Article 26	—
Article 27	Article 36
—	Article 37
Article 28	Article 38
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Annex I	Annex I
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Annex III	Annex III
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—	Annex VI
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PART II

ACQUIS COMMUNAUTAIRE

ENERGY EFFICIENCY



DIRECTIVE 2012/27/EU of 25 October 2012 on energy efficiency

Incorporated and adapted by the Ministerial Council Decision 2021/14/MC-EnC on amending Article 20 and Annex I to the Treaty establishing the Energy Community and incorporating Directive (EU) 2018/2001, Directive (EU) 2018/2002, Regulation (EU) 2018/1999, Delegated Regulation (EU) 2020/1044, and Implementing Regulation (EU) 2020/1208 in the Energy Community acquis communautaire.

*The adaptations made by Ministerial Council Decisions 2021/14/MC-EnC and 2015/08/MC-EnC are highlighted in **bold and blue**.*

CHAPTER I

SUBJECT MATTER, SCOPE, DEFINITIONS AND ENERGY EFFICIENCY TARGETS

Article 1

Subject matter and scope¹

1. **This Directive establishes a common framework of measures to promote energy efficiency within the Energy Community, in order to ensure that the Energy Community 2020 headline target for energy efficiency and the Energy Community 2030 headline target for energy efficiency, as defined in Articles 2(1bis) and 2(1tris) are met.**

The Directive lays down rules designed to remove barriers in the energy market and overcome market failures that impede efficiency in the supply and use of energy, and provides for the establishment of indicative national energy efficiency targets and contributions for 2020 and 2030.

This Directive contributes to the implementation of the “energy efficiency first principle”.

2. The requirements laid down in this Directive are minimum requirements and shall not prevent any **Contracting Party** from maintaining or introducing more stringent measures. Such measures shall be compatible with **Energy Community** law. Where national legislation provides for more stringent measures, the **Contracting Party** shall notify such legislation to the **Energy Community Secretariat**.

Article 2

Definitions

For the purposes of this Directive, the following definitions shall apply:

(1) ‘energy’ means all forms of energy products, combustible fuels, heat, renewable energy, electricity, or any other form of energy, as defined in Article 2(d) of Regulation (EC) No 1099/2008 of the European Parliament and of the Council of 22 October 2008 on energy statistics, **as adapted and adopted by Ministerial Council Decision 2012/02/MC-EnC**;

¹ The text displayed here corresponds to Article 5(1) of Ministerial Council Decision 2021/14/MC-EnC

(1bis) 'the **Energy Community** 2020 headline target for energy efficiency' means the target for reduction of primary and/or final energy consumption of the **Contracting Parties** by 2020, in the terms to be adopted by the Ministerial Council, as appropriate, on the basis of the study(ies) carried out to this effect.

(1tris) 'the **Energy Community** 2030 headline target for energy efficiency' means a target for reduction of primary and/or final energy consumption of the **Contracting Parties** by 2030, in the terms to be adopted by the Ministerial Council, as appropriate, on the basis of the study (ies) carried out to this effect.

(1cis) 'Energy Community's energy consumption' means the energy consumption of the **Contracting Parties**.

(2) 'primary energy consumption' means gross inland consumption, excluding non-energy uses;

(3) 'final energy consumption' means all energy supplied to industry, transport, households, services and agriculture. It excludes deliveries to the energy transformation sector and the energy industries themselves;

(4) 'energy efficiency' means the ratio of output of performance, service, goods or energy, to input of energy;

(5) 'energy savings' means an amount of saved energy determined by measuring and/or estimating consumption before and after implementation of an energy efficiency improvement measure, whilst ensuring normalisation for external conditions that affect energy consumption;

(6) 'energy efficiency improvement' means an increase in energy efficiency as a result of technological, behavioural and/or economic changes;

(7) 'energy service' means the physical benefit, utility or good derived from a combination of energy with energy-efficient technology or with action, which may include the operations, maintenance and control necessary to deliver the service, which is delivered on the basis of a contract and in normal circumstances has proven to result in verifiable and measurable or estimable energy efficiency improvement or primary energy savings;

(8) 'public bodies' means 'contracting authorities' as defined in Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts;

(9) 'central government' means all administrative departments whose competence extends over the whole territory of a **Contracting Party**;

(10) 'total useful floor area' means the floor area of a building or part of a building, where energy is used to condition the indoor climate;

(11) 'energy management system' means a set of interrelated or interacting elements of a plan which sets an energy efficiency objective and a strategy to achieve that objective;

(12) 'European standard' means a standard adopted by the European Committee for Standardisation, the European Committee for Electrotechnical Standardisation or the European Telecommunications Standards Institute and made available for public use;

(13) 'international standard' means a standard adopted by the International Standardisation Organisation and made available to the public;

(14) 'obligated party' means an energy distributor or retail energy sales company that is bound by the national energy efficiency obligation schemes referred to in Article 7;

(15) 'entrusted party' means a legal entity with delegated power from a government or other public body

- to develop, manage or operate a financing scheme on behalf of the government or other public body;
- (16) ‘participating party’ means an enterprise or public body that has committed itself to reaching certain objectives under a voluntary agreement, or is covered by a national regulatory policy instrument;
- (17) ‘implementing public authority’ means a body governed by public law which is responsible for the carrying out or monitoring of energy or carbon taxation, financial schemes and instruments, fiscal incentives, standards and norms, energy labelling schemes, training or education;
- (18) ‘policy measure’ means a regulatory, financial, fiscal, voluntary or information provision instrument formally established and implemented in a **Contracting Party** to create a supportive framework, requirement or incentive for market actors to provide and purchase energy services and to undertake other energy efficiency improvement measures;
- (19) ‘individual action’ means an action that leads to verifiable, and measurable or estimable, energy efficiency improvements and is undertaken as a result of a policy measure;
- (20) ‘energy distributor’ means a natural or legal person, including a distribution system operator, responsible for transporting energy with a view to its delivery to final customers or to distribution stations that sell energy to final customers;
- (21) **‘distribution system operator’ means ‘distribution system operator’ as defined in Directive (EU) 2019/944, as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC and Directive 2009/73/EC, as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC;**
- (22) ‘retail energy sales company’ means a natural or legal person who sells energy to final customers;
- (23) ‘final customer’ means a natural or legal person who purchases energy for own end use;
- (24) ‘energy service provider’ means a natural or legal person who delivers energy services or other energy efficiency improvement measures in a final customer’s facility or premises;
- (25) ‘energy audit’ means a systematic procedure with the purpose of obtaining adequate knowledge of the existing energy consumption profile of a building or group of buildings, an industrial or commercial operation or installation or a private or public service, identifying and quantifying cost-effective energy savings opportunities, and reporting the findings;
- (26) ‘small and medium-sized enterprises’ or ‘SMEs’ means enterprises as defined in Title I of the Annex to Commission Recommendation 2003/361/EC of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises; the category of micro, small and medium-sized enterprises is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million;
- (27) ‘energy performance contracting’ means a contractual arrangement between the beneficiary and the provider of an energy efficiency improvement measure, verified and monitored during the whole term of the contract, where investments (work, supply or service) in that measure are paid for in relation to a contractually agreed level of energy efficiency improvement or other agreed energy performance criterion, such as financial savings;
- (28) ‘smart metering system’ or ‘intelligent metering system’ means an electronic system that can measure energy consumption, providing more information than a conventional meter, and can transmit and receive data using a form of electronic communication;

(29) **'transmission system operator' means 'transmission system operator' as defined in Directive (EU) 2019/944, as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC and Directive 2009/73/EC, as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC;**

(30) 'cogeneration' means the simultaneous generation in one process of thermal energy and electrical or mechanical energy;

(31) 'economically justifiable demand' means demand that does not exceed the needs for heating or cooling and which would otherwise be satisfied at market conditions by energy generation processes other than cogeneration;

(32) 'useful heat' means heat produced in a cogeneration process to satisfy economically justifiable demand for heating or cooling;

(33) 'electricity from cogeneration' means electricity generated in a process linked to the production of useful heat and calculated in accordance with the methodology laid down in Annex I;

(34) 'high-efficiency cogeneration' means cogeneration meeting the criteria laid down in Annex II;

(35) 'overall efficiency' means the annual sum of electricity and mechanical energy production and useful heat output divided by the fuel input used for heat produced in a cogeneration process and gross electricity and mechanical energy production;

(36) 'power-to-heat ratio' means the ratio of electricity from cogeneration to useful heat when operating in full cogeneration mode using operational data of the specific unit;

(37) 'cogeneration unit' means a unit that is able to operate in cogeneration mode;

(38) 'small-scale cogeneration unit' means a cogeneration unit with installed capacity below 1 MW_e;

(39) 'micro-cogeneration unit' means a cogeneration unit with a maximum capacity below 50 kW_e;

(40) 'plot ratio' means the ratio of the building floor area to the land area in a given territory;

(41) 'efficient district heating and cooling' means a district heating or cooling system using at least 50 % renewable energy, 50 % waste heat, 75 % cogenerated heat or 50 % of a combination of such energy and heat;

(42) 'efficient heating and cooling' means a heating and cooling option that, compared to a baseline scenario reflecting a business-as-usual situation, measurably reduces the input of primary energy needed to supply one unit of delivered energy within a relevant system boundary in a cost-effective way, as assessed in the cost-benefit analysis referred to in this Directive, taking into account the energy required for extraction, conversion, transport and distribution;

(43) 'efficient individual heating and cooling' means an individual heating and cooling supply option that, compared to efficient district heating and cooling, measurably reduces the input of non-renewable primary energy needed to supply one unit of delivered energy within a relevant system boundary or requires the same input of non-renewable primary energy but at a lower cost, taking into account the energy required for extraction, conversion, transport and distribution;

(44) 'substantial refurbishment' means a refurbishment whose cost exceeds 50 % of the investment cost for a new comparable unit;

(45) 'aggregator' means a demand service provider that combines multiple short-duration consumer loads for sale or auction in organised energy markets.

Article 3

Energy efficiency targets²

1. Each **Contracting Party** shall set an indicative national energy efficiency target for 2020, based on **either primary or final energy consumption, primary or final energy savings, or energy intensity**. **Contracting Parties** shall notify those targets to the **Energy Community Secretariat** in accordance with Article 24(1) and Annex XIV Part 1. When doing so, they shall also express those targets in terms of an absolute level of primary energy consumption and final energy consumption in 2020 and shall explain how, and on the basis of which data, this has been calculated.

When setting those targets, **Contracting Parties** shall take into account:

- (a) the **Energy Community's** energy consumption in 2020 ;
- (b) the measures provided for in this Directive;
- (c) the measures adopted to reach the national energy saving targets adopted pursuant to Article 4(1) of Directive 2006/32/EC, **as adapted and adopted by Ministerial Council Decision 2009/05/MC-EnC**; and
- (d) other measures to promote energy efficiency within **Contracting Parties**, and at the **Energy Community** level.

When setting those targets, **Contracting Parties** may also take into account national circumstances affecting primary energy consumption, such as:

- (a) remaining cost-effective energy-saving potential;
- (b) GDP evolution and forecast;
- (c) changes of energy imports and exports;
- (d) development of all sources of renewable energies, nuclear energy, carbon capture and storage; and
- (e) early action.

2. **By 30 June 2018, the Energy Community Secretariat shall assess progress achieved and whether the Energy Community is likely to achieve the Energy Community's energy consumption in 2020** as per decision of the Ministerial Council on the basis of the study(ies) carried out to this effect.

3. In carrying out the review referred to in paragraph 2, the **Energy Community Secretariat** shall:

- (a) sum the national indicative energy efficiency targets reported by **Contracting Parties**;
- (b) assess whether the sum of those targets can be considered a reliable guide to whether the **Energy Community** as a whole is on track, taking into account the evaluation of the first annual report in accordance with Article 24(1), and the evaluation of the National Energy Efficiency Action Plans in accordance with Article 24(2);
- (c) take into account complementary analysis arising from:
 - (i) an assessment of progress in energy consumption, and in energy consumption in relation to economic activity, at **Energy Community** level, including progress in the efficiency of energy supply in **Contracting Parties** that have based their national indicative targets on final energy consumption or final energy savings, including progress due to these **Contracting Parties'** compliance with Chapter III of this Directive;

² The text displayed here corresponds to Article 5(2) of Ministerial Council Decision 2021/14/MC-EnC

(ii) results from modelling exercises in relation to future trends in energy consumption at **Energy Community** level;

(d) compare the results under points (a) to (c) with the Energy Community's energy consumption of no more than 187 Mtoe of primary energy and/or no more than 133 Mtoe of final energy in 2020.

4. By 31 October 2022, the Secretariat shall assess whether the Energy Community has achieved its 2020 headline targets on energy efficiency.

5. Each Contracting Party shall set indicative national energy efficiency contributions towards the Energy Community 2030 headline target for energy efficiency set in Article 1(1) of this Directive in accordance with Articles 4 and 6 of Regulation (EU) 2018/1999, as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC. When setting those contributions, Contracting Parties shall take into account the Energy Community's energy consumption in 2030 in primary energy and/or final energy as decided by the Ministerial Council on the basis of the relevant study(ies) to this effect. Those contributions shall not be higher than the national benchmarks included in Annex XX to this Directive following decision by the Ministerial Council on the basis of the relevant study(ies) to this effect. The Contracting Parties shall notify those contributions to the Energy Community Secretariat as part of their integrated national energy and climate plans as referred to in, and in accordance with, Articles 3 and 7 to 12 of Regulation (EU) 2018/1999, as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC.

6. <...>³

³ Not applicable according to Article 5(2) of Ministerial Council Decision 2021/14/MC-EnC

CHAPTER II

EFFICIENCY IN ENERGY USE

Article 4

Building renovation

<...>⁴

Article 5

Exemplary role of public bodies' buildings⁵

1. Without prejudice to Article 7 of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC**, each **Contracting Party** shall ensure that, as from 1 December 2017, 1 %, and **from 1 January 2024 on, 3 %** of the total floor area of heated and/or cooled buildings owned and occupied by its central government is renovated each year to meet at least the minimum energy performance requirements that it has set in application of Article 4 of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC**. The 1 % rate shall be calculated on the total floor area of buildings with a total useful floor area over 500 m² owned and occupied by the central government of the Contracting Party concerned that, on 1 January of each year, do not meet the national minimum energy performance requirements set in application of Article 4 of Directive 2010/31/EU, **as adapted and adopted by the Ministerial Council Decision 2010/02/MC-EnC**. That threshold shall be lowered to 250 m² as of **1 January 2019**.

From 1 January 2024 on, the rate of 3 % shall be calculated on the total floor area of buildings with a total useful floor area over 250 m² owned and occupied by the central government of the Contracting Party concerned that, on 1 January of each year, do not meet the national minimum energy performance requirements set in application of Article 4 of Directive 2010/31/EU, as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC.

Where a **Contracting Party** requires that the obligation to renovate each year 1 % of the total floor area extends to floor area owned and occupied by administrative departments at a level below central government, the 1 %, and **respectively 3 %** rate shall be calculated on the total floor area of buildings with a total useful floor area over 500m² and, as of **1 January 2019, respectively as of 1 January 2024**, over 250 m² owned and occupied by central government and by these administrative departments of the **Contracting Party** concerned that, on 1 January of each year, do not meet the national minimum energy performance requirements set in application of Article 4 of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC**.

When implementing measures for the comprehensive renovation of central government buildings in accordance with the first subparagraph, **Contracting Parties** may choose to consider the building as a whole, including the building envelope, equipment, operation and maintenance.

⁴ Not applicable according to Article 6(53) of Ministerial Council Decision 2021/14/MC-EnC

⁵ The text displayed here corresponds to Article 5(16) of Ministerial Council Decision 2021/14/MC-EnC

Contracting Parties shall require that central government buildings with the poorest energy performance be a priority for energy efficiency measures, where cost-effective and technically feasible.

2. **Contracting Parties** may decide not to set or apply the requirements referred to in paragraph 1 to the following categories of buildings:

(a) buildings officially protected as part of a designated environment, or because of their special architectural or historical merit, in so far as compliance with certain minimum energy performance requirements would unacceptably alter their character or appearance;

(b) buildings owned by the armed forces or central government and serving national defence purposes, apart from single living quarters or office buildings for the armed forces and other staff employed by national defence authorities;

(c) buildings used as places of worship and for religious activities.

3. If a **Contracting Party** renovates more than **1 % from 1 December 2017, and respectively 3 % as of 1 January 2024**, of the total floor area of central government buildings in a given year, it may count the excess towards the annual renovation rate of any of the three previous or following years.

4. **Contracting Parties** may count towards the annual renovation rate of central government buildings new buildings occupied and owned as replacements for specific central government buildings demolished in any of the two previous years, or buildings that have been sold, demolished or taken out of use in any of the two previous years due to more intensive use of other buildings.

5. For the purposes of paragraph 1, by **1 January 2017, Contracting Parties** shall establish and make publicly available an inventory of heated and/or cooled central government buildings with a total useful floor area over 500 m² and, as of **1 January 2019**, over 250 m², excluding buildings exempted on the basis of paragraph 2. The inventory shall contain the following data:

(a) the floor area in m²; and

(b) the energy performance of each building or relevant energy data.

6. Without prejudice to Article 7 of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC, Contracting Parties** may opt for an alternative approach to paragraphs 1 to 5 of this Article, whereby they take other cost-effective measures, including deep renovations and measures for behavioural change of occupants, to achieve, by 2020, **respectively by 2030**, an amount of energy savings in eligible buildings owned and occupied by their central government that is at least equivalent to that required in paragraph 1, reported on an annual basis.

For the purpose of the alternative approach, **Contracting Parties** may estimate the energy savings that paragraphs 1 to 4 would generate by using appropriate standard values for the energy consumption of reference central government buildings before and after renovation and according to estimates of the surface of their stock. The categories of reference central government buildings shall be representative of the stock of such buildings.

Contracting Parties opting for the alternative approach shall notify to the **Energy Community Secretariat**, by 1 January 2017, **respectively 1 January 2024** the alternative measures that they plan to adopt, showing how they would achieve an equivalent improvement in the energy performance of the buildings within the central government estate.

7. **Contracting Parties** shall encourage public bodies, including at regional and local level, and social housing bodies governed by public law, with due regard for their respective competences and adminis-

trative set-up, to:

- (a) adopt an energy efficiency plan, freestanding or as part of a broader climate or environmental plan, containing specific energy saving and efficiency objectives and actions, with a view to following the exemplary role of central government buildings laid down in paragraphs 1, 5 and 6;
- (b) put in place an energy management system, including energy audits, as part of the implementation of their plan;
- (c) use, where appropriate, energy service companies, and energy performance contracting to finance renovations and implement plans to maintain or improve energy efficiency in the long term.

Article 6

Purchasing by public bodies

1. **Contracting Parties** shall ensure that central governments purchase only products, services and buildings with high energy-efficiency performance, insofar as that is consistent with cost-effectiveness, economical feasibility, wider sustainability, technical suitability, as well as sufficient competition, as referred to in Annex III.

The obligation set out in the first subparagraph shall apply to contracts for the purchase of products, services and buildings by public bodies in so far as such contracts have a value equal to or greater than the thresholds laid in each Contracting Party's national legislation. Each Contracting Party shall submit its national thresholds to the Energy Community Secretariat, by 15 October 2017.⁶

2. The obligation referred to in paragraph 1 shall apply to the contracts of the armed forces only to the extent that its application does not cause any conflict with the nature and primary aim of the activities of the armed forces.

3. **Contracting Parties** shall encourage public bodies, including at regional and local levels, with due regard to their respective competences and administrative set-up, to follow the exemplary role of their central governments to purchase only products, services and buildings with high energy-efficiency performance. **Contracting Parties** shall encourage public bodies, when tendering service contracts with significant energy content, to assess the possibility of concluding long-term energy performance contracts that provide long-term energy savings.

4. Without prejudice to paragraph 1, when purchasing a product package covered as a whole by a delegated act adopted under Directive 2010/30/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC, Contracting Parties** may require that the aggregate energy efficiency shall take priority over the energy efficiency of individual products within that package, by purchasing the product package that complies with the criterion of belonging to the highest energy efficiency class.

⁶ The text displayed here corresponds to Article 3(10) of Ministerial Council Decision 2015/08/MC-EnC

Article 7

Energy savings obligation⁷

1. Contracting Parties shall achieve cumulative end-use energy savings at least equivalent to:

(a) new savings each year from 1 January 2014 to 31 December 2020 of 0.7 % of annual energy sales to final customers by volume, averaged over the most recent three-year period prior to 1 January 2016. Sales of energy, by volume, used in transport may be excluded, in whole or in part, from that calculation;

(b) new savings each year from 1 January 2024 to 31 December 2030 of 0.8 % of annual final energy consumption, averaged over the most recent three-year period prior to 1 January 2022.

Contracting Parties may request that this rate for energy savings is evaluated annually for a possible revision by the Energy Community Ministerial Council based on the economic analysis provided by the ongoing studies carried out to this effect.

Contracting Parties may count energy savings that stem from policy measures, whether introduced by 31 December 2020 or after that date, provided that those measures result in new individual actions that are carried out after 31 December 2020.

Contracting Parties shall continue to achieve new annual savings in accordance with point (b) of the first subparagraph for ten-year periods after 2030.

Contracting Parties shall decide how to phase the calculated quantity of new savings over each period referred to in points (a) and (b) of the first subparagraph, provided that the required total cumulative end-use energy savings have been achieved by the end of each obligation period.

2. Provided that Contracting Parties achieve at least their cumulative end-use energy savings obligation referred to in point (b) of the first subparagraph of paragraph 1, they may calculate the required amount of energy savings by one or more of the following means:

(a) applying an annual savings rate on energy sales to final customers or on final energy consumption, averaged over the most recent three-year period prior to 1 January 2022;

(b) excluding, in whole or in part, energy used in transport from the calculation baseline;

(c) making use of any of the options set out in paragraph 4.

3. Where Contracting Parties make use of the possibilities provided for in point (a), (b) or (c) of paragraph 2, they shall establish:

(a) their own annual savings rate that will be applied in the calculation of their cumulative end-use energy savings, which shall ensure that the final amount of their net energy savings is no lower than those required under point (b) of the first subparagraph of paragraph 1; and

(b) Energy savings which can be measured and verified, granted after 2024, resulting from implementation of new policy measures and individual actions after 31 December 2020 and which have effects in 2024 and beyond, can be included in the advised cumulative energy savings for the period referred to in point (6) of the first paragraph for the Contracting Parties.

(c) their own calculation baseline, which may exclude, in whole or in part, energy used in

⁷ The text displayed here corresponds to Article 5(3) of Ministerial Council Decision 2021/14/MC-EnC

transport.

4. Subject to paragraph 5, each Contracting Party may:

(a) carry out the calculation required under point (a) of the first subparagraph of paragraph 1 using values of 0.5 % in 2017 and 2018; 0.7 % in 2019 and 2020;

(b) exclude from the calculation all or part of the sales of energy used, by volume, with respect to the obligation period referred to in point (a) of the first subparagraph of paragraph 1, or final energy consumed, with respect to the obligation period referred to in point (b) of that subparagraph, by industrial activities listed in Annex I to Directive 2003/87/EC;

(c) count towards the amount of required energy savings, energy savings achieved in the energy transformation, distribution and transmission sectors, including efficient district heating and cooling infrastructure, as a result of implementing the requirements set out in Article 14(4), point (b) of Article 14(5), and Article 15(1) to (6) and (9). Contracting Parties shall inform the Energy Community Secretariat about their intended policy measures under this point for the period from 1 January 2024 to 31 December 2030 as part of their integrated national energy and climate plans. The impact of those measures shall be calculated in accordance with Annex V and included in those plans;

(d) count towards the amount of required energy savings, energy savings resulting from individual actions newly implemented since 31 December 2008 that continue to have an impact in 2020 with respect to the obligation period referred to in point (a) of the first subparagraph of paragraph 1 and beyond 2020 with respect to the period referred to in point (b) of the first subparagraph of paragraph 1, and which can be measured and verified;

(e) count towards the amount of required energy savings, energy savings that stem from policy measures, provided that it can be demonstrated that those measures result in individual actions carried out from 1 January 2018 to 31 December 2020 for the first obligation period referred to in point (a) of the first subparagraph of paragraph 1, and beyond 2020 with respect to the period referred to in point (b) of the first subparagraph of paragraph 1, and which can be measured and verified;

(f) count towards the amount of required energy savings, energy savings that stem from policy measures, provided that it can be demonstrated that those measures result in individual actions carried out from 1 January 2018 to 31 December 2020 which deliver savings after 31 December 2020;

(g) exclude from the calculation of the amount of required energy savings, 30 % of the verifiable amount of energy generated on or in buildings for own use as a result of policy measures promoting new installation of renewable energy technologies;

(h) count towards the amount of required energy savings, energy savings that exceed the energy savings required for the obligation period from 1 January 2018 to 31 December 2020, respectively from 2021 to 2030 provided that those savings result from individual actions carried out under policy measures referred to in Articles 7a and 7b, notified by Contracting Parties in their National Energy Efficiency Action Plans and reported in their progress reports in accordance with Article 24.

5. Contracting Parties shall apply and calculate the effect of the options chosen under para-

graph 4 for the periods referred to in points (a) and (b) of the first subparagraph of paragraph 1 separately:

(a) for the calculation of the amount of energy savings required for the obligation period referred to in point (a) of the first subparagraph of paragraph 1, Contracting Parties may make use of points (a) to (d) of paragraph 4. All the options chosen under paragraph 4 taken together shall amount to no more than 25 % of the amount of energy savings referred to in point (a) of the first subparagraph of paragraph 1;

(b) for the calculation of the amount of energy savings required for the obligation period referred to in point (b) of the first subparagraph of paragraph 1, Contracting Parties may make use of points (b) to (g) of paragraph 4, provided individual actions referred to in point (d) of paragraph 4 continue to have a verifiable and measurable impact after 31 December 2020. All the options chosen under paragraph 4 taken together shall not lead to a reduction of more than 35 % of the amount of energy savings calculated in accordance with paragraphs 2 and 3.

Regardless of whether Contracting Parties exclude, in whole or in part, energy used in transport from their calculation baseline or make use of any of the options listed in paragraph 4, they shall ensure that the calculated net amount of new savings to be achieved in final energy consumption during the obligation period from 1 January 2024 to 31 December 2030 is not lower than the amount resulting from applying the annual savings rate referred to in point (b) of the first subparagraph of paragraph 1.

6. Contracting Parties shall describe in their integrated national energy and climate plans in accordance with Annex III to Regulation (EU) 2018/1999, as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC, the calculation of the amount of energy savings to be achieved over the period from 1 January 2024 to 31 December 2030 referred to in point (b) of the first subparagraph of paragraph 1 of this Article and shall, if relevant, explain how the annual savings rate and the calculation baseline were established, and how and to what extent the options referred to in paragraph 4 of this Article were applied.

7. Energy savings achieved after 31 December 2020 shall not count towards the amount of required energy savings for the period from 1 January 2014 to 31 December 2020.

8. <...>⁸.

9. Contracting Parties shall ensure that savings resulting from policy measures referred to in Articles 7a and 7b and Article 20(6) are calculated in accordance with Annex V.

10. Contracting Parties shall achieve the amount of energy savings required under paragraph 1 of this Article either by establishing an energy efficiency obligation scheme referred to in Article 7a or by adopting alternative policy measures referred to in Article 7b. Contracting Parties may combine an energy efficiency obligation scheme with alternative policy measures.

11. In designing policy measures to fulfil their obligations to achieve energy savings, Contracting Parties shall take into account the need to alleviate energy poverty in accordance with criteria established by them, taking into consideration their available practices in the field, by requiring, to the extent appropriate, a share of energy efficiency measures under their national energy efficiency obligation schemes, alternative policy measures, or programmes or measures financed under an Energy Efficiency National Fund, to be implemented as a pri-

⁸ Not applicable according to Article 5(B) of Ministerial Council Decision 2021/14/MC-EnC

ority among vulnerable households, including those affected by energy poverty and, where appropriate, in social housing.

12. Contracting Parties shall include information about the outcome of measures to alleviate energy poverty in the context of this Directive in the integrated national energy and climate progress reports in accordance with Regulation (EU) 2018/1999, as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC.

13. Contracting Parties shall demonstrate that where there is an overlap in the impact of policy measures or individual actions, there is no double counting of energy savings.

Article 7a

Energy efficiency obligation schemes⁹

1. Where Contracting Parties decide to fulfil their obligations to achieve the amount of savings required under Article 7(1) by way of an energy efficiency obligation scheme, they shall ensure that obligated parties as referred to in paragraph 2 of this Article operating in each Contracting Party's territory achieve, without prejudice to Article 7(4) and (5), their cumulative end-use energy savings requirement as set out in Article 7(1).

Where applicable, Contracting Parties may decide that obligated parties fulfil those savings, in whole or in part, as a contribution to the Energy Efficiency National Fund in accordance with Article 20(6).

2. Contracting Parties shall designate, on the basis of objective and non-discriminatory criteria, obligated parties among energy distributors, retail energy sales companies and transport fuel distributors or transport fuel retailers operating in their territory. The amount of energy savings needed to fulfil the obligation shall be achieved by the obligated parties among final customers, designated by the Contracting Party, independently of the calculation made pursuant to Article 7(1) or, if Contracting Parties so decide, through certified savings stemming from other parties as described in point (a) of paragraph 6 of this Article.

3. Where retail energy sales companies are designated as obligated parties under paragraph 2, Contracting Parties shall ensure that, in fulfilling their obligation, retail energy sales companies do not create any barriers that impede consumers from switching from one supplier to another.

4. Contracting Parties shall express the amount of energy savings required of each obligated party in terms of either final or primary energy consumption. The method chosen to express the amount of energy savings required shall also be used to calculate the savings claimed by obligated parties. The conversion factors set out in Annex IV shall apply.

5. Contracting Parties shall put in place measurement, control and verification systems under which documented verification is carried out on at least a statistically significant proportion and representative sample of the energy efficiency improvement measures put in place by the obligated parties. The measurement, control and verification shall be carried out independently of the obligated parties.

6. Within the energy efficiency obligation scheme, Contracting Parties may do one or both

⁹ The text displayed here corresponds to Article 5(4) of Ministerial Council Decision 2021/14/MC-EnC

of the following:

(a) permit obligated parties to count towards their obligation certified energy savings achieved by energy service providers or other third parties, including when obligated parties promote measures through other State- approved bodies or through public authorities that may involve formal partnerships and may be in combination with other sources of finance. Where Contracting Parties so permit, they shall ensure that the certification of energy savings follows an approval process that is put in place in the Contracting Parties, that is clear, transparent, and open to all market participants, and that aims to minimise the costs of certification;

(b) allow obligated parties to count savings obtained in a given year as if they had instead been obtained in any of the four previous or three following years as long as this is not beyond the end of the obligation periods set out in Article 7(1).

Contracting Parties shall assess and, if appropriate, take measures to minimise the impact of the direct and indirect costs of energy efficiency obligation schemes on the competitiveness of energy-intensive industries exposed to international competition.

7. Contracting Parties shall, on an annual basis, publish the energy savings achieved by each obligated party, or each sub-category of obligated party, and in total under the scheme.

Article 7b

Alternative policy measures¹⁰

1. Where Contracting Parties decide to fulfil their obligations to achieve the savings required under Article 7(1) by way of alternative policy measures, they shall ensure, without prejudice to Article 7(4) and (5), that the energy savings required under Article 7(1) are achieved among final customers.

2. For all measures other than those relating to taxation, Contracting Parties shall put in place measurement, control and verification systems under which documented verification is carried out on at least a statistically significant proportion and representative sample of the energy efficiency improvement measures put in place by the participating or entrusted parties. The measurement, control and verification shall be carried out independently of the participating or entrusted parties;

¹⁰ The text displayed here corresponds to Article 5(4) of Ministerial Council Decision 2021/14/MC-EnC

Article 8

Energy audits and energy management systems

1. **Contracting Parties** shall promote the availability to all final customers of high quality energy audits which are cost-effective and:

- (a) carried out in an independent manner by qualified and/or accredited experts according to qualification criteria; or
- (b) implemented and supervised by independent authorities under national legislation.

The energy audits referred to in the first subparagraph may be carried out by in-house experts or energy auditors provided that the **Contracting Party** concerned has put in place a scheme to assure and check their quality, including, if appropriate, an annual random selection of at least a statistically significant percentage of all the energy audits they carry out.

For the purpose of guaranteeing the high quality of the energy audits and energy management systems, **Contracting Parties** shall establish transparent and non-discriminatory minimum criteria for energy audits based on Annex VI.

Energy audits shall not include clauses preventing the findings of the audit from being transferred to any qualified/accredited energy service provider, on condition that the customer does not object.

2. **Contracting Parties** shall develop programmes to encourage SMEs to undergo energy audits and the subsequent implementation of the recommendations from these audits.

On the basis of transparent and non-discriminatory criteria and without prejudice to Union State aid law, **Contracting Parties** may set up support schemes for SMEs, including if they have concluded voluntary agreements, to cover costs of an energy audit and of the implementation of highly cost-effective recommendations from the energy audits, if the proposed measures are implemented.

Contracting Parties shall bring to the attention of SMEs, including through their respective representative intermediary organisations, concrete examples of how energy management systems could help their businesses. The Commission and the **Energy Community Secretariat**¹¹ shall assist **Contracting Parties** by supporting the exchange of best practices in this domain.

3. **Contracting Parties** shall also develop programmes to raise awareness among households about the benefits of such audits through appropriate advice services.

Contracting Parties shall encourage training programmes for the qualification of energy auditors in order to facilitate sufficient availability of experts.

4. **Contracting Parties** shall ensure that enterprises that are not SMEs are subject to an energy audit carried out in an independent and cost-effective manner by qualified and/or accredited experts or implemented and supervised by independent authorities under national legislation by **5 November 2018** and at least every four years from the date of the previous energy audit.

5. Energy audits shall be considered as fulfilling the requirements of paragraph 4 when they are carried out in an independent manner, on the basis of minimum criteria based on Annex VI, and implemented under voluntary agreements concluded between organisations of stakeholders and an appointed body and supervised by the **Contracting Party** concerned, or other bodies to which the competent authorities

¹¹ Exchange of best practices by the Commission and the **Energy Community Secretariat** is supported by the Ministerial Council and incorporated in conclusions of the meeting held on 16 October 2015.

have delegated the responsibility concerned, or by the Commission.

Access of market participants offering energy services shall be based on transparent and non-discriminatory criteria.

6. Enterprises that are not SMEs and that are implementing an energy or environmental management system - certified by an independent body according to the relevant European or International Standards - shall be exempted from the requirements of paragraph 4, provided that **Contracting Parties** ensure that the management system concerned includes an energy audit on the basis of the minimum criteria based on Annex VI.

7. Energy audits may stand alone or be part of a broader environmental audit. **Contracting Parties** may require that an assessment of the technical and economic feasibility of connection to an existing or planned district heating or cooling network shall be part of the energy audit.

Without prejudice to Union State aid law, **Contracting Parties** may implement incentive and support schemes for the implementation of recommendations from energy audits and similar measures.

Article 9

Metering for gas and electricity¹²

1. **Contracting Parties shall ensure that, in so far as it is technically possible, financially reasonable and proportionate in relation to the potential energy savings, for electricity and natural gas final customers are provided with competitively priced individual meters that accurately reflect their actual energy consumption and that provide information on the actual time of use.**

Such a competitively priced individual meter shall always be provided when:

(a) an existing meter is replaced, unless this is technically impossible or not cost-effective in relation to the estimated potential savings in the long term;

(b) a new connection is made in a new building or a building undergoes major renovations, as set out in Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC.**

2. Where, and to the extent that, **Contracting Parties** implement intelligent metering systems and roll out smart meters for natural gas and/or electricity in accordance with Directives 2009/72/EC and 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC:**

(a) they shall ensure that the metering systems provide to final customers information on actual time of use and that the objectives of energy efficiency and benefits for final customers are fully taken into account when establishing the minimum functionalities of the meters and the obligations imposed on market participants;

(b) they shall ensure the security of the smart meters and data communication, and the privacy of final customers, in compliance with relevant Union data protection and privacy legislation;

(c) in the case of electricity and at the request of the final customer, they shall require meter operators to ensure that the meter or meters can account for electricity put into the grid from the final customer's premises;

(d) they shall ensure that if final customers request it, metering data on their electricity input and off-take is

¹² The text displayed here corresponds to Article 5(5) of Ministerial Council Decision 2021/14/MC-EnC

made available to them or to a third party acting on behalf of the final customer in an easily understandable format that they can use to compare deals on a like-for-like basis;

(e) they shall require that appropriate advice and information be given to customers at the time of installation of smart meters, in particular about their full potential with regard to meter reading management and the monitoring of energy consumption.

<...>¹³

'Article 9a

Metering for heating, cooling and domestic hot water¹⁴

- 1. Contracting Parties shall ensure that, for district heating, district cooling and domestic hot water, final customers are provided with competitively priced meters that accurately reflect their actual energy consumption.**
- 2. Where heating, cooling or domestic hot water is supplied to a building from a central source that services multiple buildings or from a district heating or district cooling system, a meter shall be installed at the heat exchanger or point of delivery.**

Article 9b¹⁵

Sub-metering and cost allocation for heating, cooling and domestic hot water

1. In multi-apartment and multi-purpose buildings with a central heating or central cooling source or supplied from a district heating or district cooling system, individual meters shall be installed to measure the consumption of heating, cooling or domestic hot water for each building unit, where technically feasible and cost effective in terms of being proportionate in relation to the potential energy savings.

Where the use of individual meters is not technically feasible or where it is not cost-efficient to measure heat consumption in each building unit, individual heat cost allocators shall be used to measure heat consumption at each radiator unless it is shown by the Contracting Party in question that the installation of such heat cost allocators would not be cost-efficient. In those cases, alternative cost-efficient methods of heat consumption measurement may be considered. The general criteria, methodologies and/or procedures to determine technical non-feasibility and non-cost effectiveness shall be clearly set out and published by each Contracting Party.

2. In new multi-apartment buildings and in residential parts of new multi-purpose buildings that are equipped with a central heating source for domestic hot water or are supplied from district heating systems, individual meters shall, notwithstanding the first subparagraph of paragraph 1, be provided for domestic hot water.

3. Where multi-apartment or multi-purpose buildings are supplied from district heating or

¹³ Not applicable according to Article 5(5) of Ministerial Council Decision 2021/14/MC-EnC

¹⁴ The text here corresponds to Article 5(6) of Ministerial Council Decision 2021/14/MC-EnC

¹⁵ The text displayed here corresponds to Article 5(6) of Ministerial Council Decision 2021/14/MC-EnC

district cooling, or where own common heating or cooling systems for such buildings are prevalent, Contracting Parties shall ensure they have in place transparent, publicly available national rules on the allocation of the cost of heating, cooling and domestic hot water consumption in such buildings to ensure transparency and accuracy of accounting for individual consumption. Where appropriate, such rules shall include guidelines on the manner in which to allocate cost for energy that is used as follows:

- (a) domestic hot water;
- (b) heat radiated from the building installation and for the purpose of heating the common areas, where staircases and corridors are equipped with radiators;
- (c) for the purpose of heating or cooling apartments.

Article 9c¹⁶

Remote reading requirement

For the purposes of Articles 9a and 9b, meters and heat cost allocators installed after 30 October 2023 shall be remotely readable devices. The conditions of technical feasibility and cost effectiveness set out in Article 9b(1) shall continue to apply.

Meters and heat cost allocators which are not remotely readable but which have already been installed shall be rendered remotely readable or replaced with remotely readable devices by 1 January 2030, save where the Contracting Party in question shows that this is not cost-efficient.'

Article 10

Billing information for gas and electricity¹⁷

1. Where final customers do not have smart meters as referred to in Directive (EU) 2019/944/EC and 2009/73/EC, as adapted and adopted by Ministerial Council Decisions 2021/13/MC-EnC and 2011/02/MC-EnC, respectively, Contracting Parties shall ensure, by 30 November 2017, that billing information is reliable, accurate and based on actual consumption, in accordance with point 1.1 of Annex VII, for electricity and gas, where that is technically possible and economically justified;

This obligation may be fulfilled by a system of regular self-reading by the final customers whereby they communicate readings from their meter to the energy supplier. Only when the final customer has not provided a meter reading for a given billing interval shall billing be based on estimated consumption or a flat rate.

2. Meters installed in accordance with Directives 2009/72/EC and 2009/73/EC **as incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC**, shall enable accurate billing information based on actual consumption. **Contracting Parties** shall ensure that final customers have the possibility of easy access to complementary information on historical consumption allowing detailed self-checks.

¹⁶ The text displayed here corresponds to Article 5(6) of Ministerial Council Decision 2021/14/MC-EnC

¹⁷ The text displayed here corresponds to Article 5(7) of Ministerial Council Decision 2021/14/MC-EnC

Complementary information on historical consumption shall include:

(a) cumulative data for at least the three previous years or the period since the start of the supply contract if this is shorter. The data shall correspond to the intervals for which frequent billing information has been produced; and

(b) detailed data according to the time of use for any day, week, month and year. These data shall be made available to the final customer via the internet or the meter interface for the period of at least the previous 24 months or the period since the start of the supply contract if this is shorter.

3. Independently of whether smart meters have been installed or not, **Contracting Parties**:

(a) shall require that, to the extent that information on the energy billing and historical consumption of final customers is available, it be made available, at the request of the final customer, to an energy service provider designated by the final customer;

(b) shall ensure that final customers are offered the option of electronic billing information and bills and that they receive, on request, a clear and understandable explanation of how their bill was derived, especially where bills are not based on actual consumption;

(c) shall ensure that appropriate information is made available with the bill to provide final customers with a comprehensive account of current energy costs, in accordance with Annex VII;

(d) may lay down that, at the request of the final customer, the information contained in these bills shall not be considered to constitute a request for payment. In such cases, **Contracting Parties** shall ensure that suppliers of energy sources offer flexible arrangements for actual payments;

(e) shall require that information and estimates for energy costs are provided to consumers on demand in a timely manner and in an easily understandable format enabling consumers to compare deals on a like-for-like basis.

'Article 10a

Billing and consumption information for heating, cooling and domestic hot water¹⁸

1. Where meters or heat cost allocators are installed, Contracting Parties shall ensure that billing and consumption information is reliable, accurate and based on actual consumption or heat cost allocator readings, in accordance with points 1 and 2 of Annex VII a for all final users, namely for natural or legal persons purchasing heating, cooling or domestic hot water for their own end-use, or natural or legal persons occupying an individual building or a unit in a multi-apartment or multi-purpose building supplied with heating, cooling or domestic hot water from a central source who has no direct or individual contract with the energy supplier.

This obligation may, where a Contracting Party so provides, save in the case of sub-metered consumption based on heat cost allocators under Article 9b, be fulfilled by a system of regular self-reading by the final customer or final user whereby they communicate readings from their meter. Only where the final customer or final user has not provided a meter reading for a given billing interval shall billing be based on estimated consumption or a flat rate.

2. Contracting Parties shall:

¹⁸ The text displayed here corresponds to Article 5(8) of Ministerial Council Decision 2021/14/MC-EnC

- (a) require that, if information on the energy billing and historical consumption or heat cost allocator readings of final users is available, it be made available upon request by the final user, to an energy service provider designated by the final user;
- (b) ensure that final customers are offered the option of electronic billing information and bills;
- (c) ensure that clear and comprehensible information is provided with the bill to all final users in accordance with point 3 of Annex VIIa; and
- (d) promote cybersecurity and ensure the privacy and data protection of final users in accordance with applicable Union law.

Contracting Parties may provide that, at the request of the final customer, the provision of billing information shall not be considered to constitute a request for payment. In such cases, Contracting Parties shall ensure that flexible arrangements for actual payment are offered.

3. Contracting Parties shall decide who is to be responsible for providing the information referred to in paragraphs 1 and 2 to final users without a direct or individual contract with an energy supplier.

Article 11

Cost of access to metering and billing information for electricity and gas¹⁹

Contracting Parties shall ensure that final customers receive all their bills and billing information for energy consumption free of charge and that final customers have access to their consumption data in an appropriate way and free of charge.

Article 11a

Cost of access to metering and billing and consumption information for heating, cooling and domestic hot water²⁰

1. Contracting Parties shall ensure that final users receive all their bills and billing information for energy consumption free of charge and that final users have access to their consumption data in an appropriate way and free of charge.

2. Notwithstanding paragraph 1 of this Article, the distribution of costs of billing information for the individual consumption of heating, cooling and domestic hot water in multi-apartment and multi-purpose buildings pursuant to Article 9b shall be carried out on a non-profit basis. Costs resulting from the assignment of that task to a third party, such as a service provider or the local energy supplier, covering the measuring, allocation and accounting for actual individual consumption in such buildings, may be passed onto the final users to the extent that such costs are reasonable.

3. In order to ensure reasonable costs for sub-metering services as referred to in paragraph 2, Contracting Parties may stimulate competition in that service sector by taking appropriate

¹⁹ The text displayed here corresponds to Article 5(9) of Ministerial Council Decision 2021/14/MC-EnC

²⁰ The text displayed here corresponds to Article 5(10) of Ministerial Council Decision 2021/14/MC-EnC

measures, such as recommending or otherwise promoting the use of tendering and/or the use of interoperable devices and systems facilitating switching between service providers’.

Article 12

Consumer information and empowering programme

1. **Contracting Parties** shall take appropriate measures to promote and facilitate an efficient use of energy by small energy customers, including domestic customers. These measures may be part of a national strategy.

2. For the purposes of paragraph 1, these measures shall include one or more of the elements listed under point (a) or (b):

(a) a range of instruments and policies to promote behavioural change which may include:

- (i) fiscal incentives;
- (ii) access to finance, grants or subsidies;
- (iii) information provision;
- (iv) exemplary projects;
- (v) workplace activities;

(b) ways and means to engage consumers and consumer organisations during the possible roll-out of smart meters through communication of:

- (i) cost-effective and easy-to-achieve changes in energy use;
- (ii) information on energy efficiency measures.

Article 13

Penalties

Contracting Parties shall lay down the rules on penalties applicable in case of non-compliance with the national provisions adopted pursuant to Articles 7 to 11 and Article 18(3) and shall take the necessary measures to ensure that they are implemented. The penalties provided for shall be effective, proportionate and dissuasive. **Contracting Parties** shall notify those provisions to the Commission and the **Energy Community Secretariat** by **15 October 2017** and shall notify it without delay of any subsequent amendment affecting them.

CHAPTER III

EFFICIENCY IN ENERGY SUPPLY

*Article 14***Promotion of efficiency in heating and cooling**

1. **By 30 November 2018, Contracting Parties** shall carry out and notify to the **Energy Community Secretariat** a comprehensive assessment of the potential for the application of high-efficiency cogeneration and efficient district heating and cooling, containing the information set out in Annex VIII. If they have already carried out an equivalent assessment, they shall notify it to the **Energy Community Secretariat**.

<...>²¹

At the request of the Commission, the assessment shall be updated and notified to the Commission every five years. The Commission shall make any such request at least one year before the due date.

2. **Contracting Parties** shall adopt policies which encourage the due taking into account at local and regional levels of the potential of using efficient heating and cooling systems, in particular those using high-efficiency cogeneration. Account shall be taken of the potential for developing local and regional heat markets.

3. For the purpose of the assessment referred to in paragraph 1, **Contracting Parties** shall carry out a cost-benefit analysis covering their territory based on climate conditions, economic feasibility and technical suitability in accordance with Part 1 of Annex IX. The cost-benefit analysis shall be capable of facilitating the identification of the most resource- and cost-efficient solutions to meeting heating and cooling needs. That cost-benefit analysis may be part of an environmental assessment under Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment.

4. Where the assessment referred to in paragraph 1 and the analysis referred to in paragraph 3 identify a potential for the application of high-efficiency cogeneration and/or efficient district heating and cooling whose benefits exceed the costs, **Contracting Parties** shall take adequate measures for efficient district heating and cooling infrastructure to be developed and/or to accommodate the development of high-efficiency cogeneration and the use of heating and cooling from waste heat and renewable energy sources in accordance with paragraphs 1, 5, and 7.

Where the assessment referred to in paragraph 1 and the analysis referred to in paragraph 3 do not identify a potential whose benefits exceed the costs, including the administrative costs of carrying out the cost-benefit analysis referred to in paragraph 5, the **Contracting Party** concerned may exempt installations from the requirements laid down in that paragraph.

5. **Contracting Parties** shall ensure that a cost-benefit analysis in accordance with Part 2 of Annex IX is carried out when, after **15 October 2017**:

(a) a new thermal electricity generation installation with a total thermal input exceeding 20 MW is planned, in order to assess the cost and benefits of providing for the operation of the installation as a high-efficiency cogeneration installation;

²¹ Not applicable in accordance with Article 3(11) of Decision 2015/08/MC-EnC.

(b) an existing thermal electricity generation installation with a total thermal input exceeding 20 MW is substantially refurbished, in order to assess the cost and benefits of converting it to high-efficiency cogeneration;

(c) an industrial installation with a total thermal input exceeding 20 MW generating waste heat at a useful temperature level is planned or substantially refurbished, in order to assess the cost and benefits of utilising the waste heat to satisfy economically justified demand, including through cogeneration, and of the connection of that installation to a district heating and cooling network;

(d) a new district heating and cooling network is planned or in an existing district heating or cooling network a new energy production installation with a total thermal input exceeding 20 MW is planned or an existing such installation is to be substantially refurbished, in order to assess the cost and benefits of utilising the waste heat from nearby industrial installations.

The fitting of equipment to capture carbon dioxide produced by a combustion installation with a view to its being geologically stored as provided for in Directive 2009/31/EC shall not be considered as refurbishment for the purpose of points (b), (c) and (d) of this paragraph.

Contracting Parties may require the cost-benefit analysis referred to in points (c) and (d) to be carried out in cooperation with the companies responsible for the operation of the district heating and cooling networks.

6. **Contracting Parties** may exempt from paragraph 5:

(a) those peak load and back-up electricity generating installations which are planned to operate under 1500 operating hours per year as a rolling average over a period of five years, based on a verification procedure established by the **Contracting Parties** ensuring that this exemption criterion is met;

(b) nuclear power installations;

(c) installations that need to be located close to a geological storage site approved under Directive 2009/31/EC.

Contracting Parties may also lay down thresholds, expressed in terms of the amount of available useful waste heat, the demand for heat or the distances between industrial installations and district heating networks, for exempting individual installations from the provisions of points (c) and (d) of paragraph 5.

Contracting Parties shall notify exemptions adopted under this paragraph to the **Energy Community Secretariat** by **15 October 2017** and any subsequent changes to them thereafter.

7. **Contracting Parties** shall adopt authorisation criteria as referred to in Article 7 of Directive 2009/72/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**, or equivalent permit criteria, to:

(a) take into account the outcome of the comprehensive assessment referred to in paragraph 1;

(b) ensure that the requirements of paragraph 5 are fulfilled; and

(c) take into account the outcome of cost-benefit analysis referred to in paragraph 5.

8. **Contracting Parties** may exempt individual installations from being required, by the authorisation and permit criteria referred to in paragraph 7, to implement options whose benefits exceed their costs, if there are imperative reasons of law, ownership or finance for so doing. In these cases the **Contracting Party** concerned shall submit a reasoned notification of its decision to the **Energy Community Secretariat** within three months of the date of taking it.

9. Paragraphs 5, 6, 7 and 8 of this Article shall apply to installations covered by Directive 2010/75/EU, **as adapted and adopted by Ministerial Council Decision 2013/06/MC-EnC**, without prejudice to the requirements of that Directive.

10. On the basis of the harmonised efficiency reference values referred to in point (f) of Annex II, **Contracting Parties** shall ensure that the origin of electricity produced from high-efficiency cogeneration can be guaranteed according to objective, transparent and non-discriminatory criteria laid down by each **Contracting Party**. They shall ensure that this guarantee of origin complies with the requirements and contains at least the information specified in Annex X. **Contracting Parties** shall mutually recognise their guarantees of origin, exclusively as proof of the information referred to in this paragraph. Any refusal to recognise a guarantee of origin as such proof, in particular for reasons relating to the prevention of fraud, must be based on objective, transparent and non-discriminatory criteria. **Contracting Parties** shall notify the **Energy Community Secretariat** of such refusal and its justification. In the event of refusal to recognise a guarantee of origin, the Commission may adopt a decision to compel the refusing party to recognise it, in particular with regard to objective, transparent and non-discriminatory criteria on which such recognition is based.

The Commission shall be empowered to review, by means of delegated acts in accordance with Article 23 of this Directive, the harmonised efficiency reference values laid down in Commission Implementing Decision 2011/877/EU on the basis of Directive 2004/8/EC by 31 December 2014.

11. **Contracting Parties** shall ensure that any available support for cogeneration is subject to the electricity produced originating from high-efficiency cogeneration and the waste heat being effectively used to achieve primary energy savings. Public support to cogeneration and district heating generation and networks shall be subject to State aid rules, where applicable.

Article 15

Energy transformation, transmission and distribution²²

1. **Contracting Parties** shall ensure that national energy regulatory authorities pay due regard to energy efficiency in carrying out the regulatory tasks specified in Directives 2009/72/EC and 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**, regarding their decisions on the operation of the gas and electricity infrastructure.

Contracting Parties shall in particular ensure that national energy regulatory authorities, through the development of network tariffs and regulations, within the framework of Directive 2009/72/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**, and taking into account the costs and benefits of each measure, provide incentives for grid operators to make available system services to network users permitting them to implement energy efficiency improvement measures in the context of the continuing deployment of smart grids.

Such systems services may be determined by the system operator and shall not adversely impact the security of the system.

For electricity, **Contracting Parties** shall ensure that network regulation and network tariffs fulfil the criteria in Annex XI, taking into account guidelines and codes developed pursuant to Regulation (EC) No 714/2009, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**.

²² The text displayed here corresponds to Article 5(11) of Ministerial Council Decision 2021/14/MC-EnC

2. **Contracting Parties** shall ensure, by 15 October 2018, that:

(a) **concrete measures and investments are identified for the introduction of cost-effective energy efficiency improvements in the network infrastructure, with a timetable for their introduction, following the common methodology prepared by the European Commission in order to encourage network operators to reduce losses, implement a cost – efficient and energy –efficient infrastructure investment programme and properly account for the energy efficiency and flexibility of the grid.**

(b) concrete measures and investments are identified for the introduction of cost-effective energy efficiency improvements in the network infrastructure, with a timetable for their introduction.

3. **Contracting Parties** may permit components of schemes and tariff structures with a social aim for net-bound energy transmission and distribution, provided that any disruptive effects on the transmission and distribution system are kept to the minimum necessary and are not disproportionate to the social aim.

4. **Contracting Parties** shall ensure the removal of those incentives in transmission and distribution tariffs that are detrimental to the overall efficiency (including energy efficiency) of the generation, transmission, distribution and supply of electricity or those that might hamper participation of demand response, in balancing markets and ancillary services procurement. **Contracting Parties** shall ensure that network operators are incentivised to improve efficiency in infrastructure design and operation, and, within the framework of Directive 2009/72/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**, that tariffs allow suppliers to improve consumer participation in system efficiency, including demand response, depending on national circumstances.

5. Without prejudice to Article 16(2) of Directive 2009/28/EC and taking into account Article 15 of Directive 2009/72/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**, and the need to ensure continuity in heat supply, **Contracting Parties** shall ensure that, subject to requirements relating to the maintenance of the reliability and safety of the grid, based on transparent and non-discriminatory criteria set by the competent national authorities, transmission system operators and distribution system operators when they are in charge of dispatching the generating installations in their territory:

- (a) guarantee the transmission and distribution of electricity from high-efficiency cogeneration;
- (b) provide priority or guaranteed access to the grid of electricity from high-efficiency cogeneration;
- (c) when dispatching electricity generating installations, provide priority dispatch of electricity from high-efficiency cogeneration in so far as the secure operation of the national electricity system permits.

Contracting Parties shall ensure that rules relating to the ranking of the different access and dispatch priorities granted in their electricity systems are clearly explained in detail and published. When providing priority access or dispatch for high-efficiency cogeneration, **Contracting Parties** may set rankings as between, and within different types of, renewable energy and high-efficiency cogeneration and shall in any case ensure that priority access or dispatch for energy from variable renewable energy sources is not hampered.

In addition to the obligations laid down by the first subparagraph, transmission system operators and distribution system operators shall comply with the requirements set out in Annex XII.

Contracting Parties may particularly facilitate the connection to the grid system of electricity produced from high-efficiency cogeneration from small-scale and micro-cogeneration units. **Contracting Parties** shall, where appropriate, take steps to encourage network operators to adopt a simple notification 'install

and inform' process for the installation of micro-cogeneration units to simplify and shorten authorisation procedures for individual citizens and installers.

6. Subject to the requirements relating to the maintenance of the reliability and safety of the grid, **Contracting Parties** shall take the appropriate steps to ensure that, where this is technically and economically feasible with the mode of operation of the high-efficiency cogeneration installation, high-efficiency cogeneration operators can offer balancing services and other operational services at the level of transmission system operators or distribution system operators. Transmission system operators and distribution system operators shall ensure that such services are part of a services bidding process which is transparent, non-discriminatory and open to scrutiny.

Where appropriate, **Contracting Parties** may require transmission system operators and distribution system operators to encourage high-efficiency cogeneration to be sited close to areas of demand by reducing the connection and use-of-system charges.

7. **Contracting Parties** may allow producers of electricity from high-efficiency cogeneration wishing to be connected to the grid to issue a call for tender for the connection work.

8. **Contracting Parties** shall ensure that national energy regulatory authorities encourage demand side resources, such as demand response, to participate alongside supply in wholesale and retail markets.

Subject to technical constraints inherent in managing networks, **Contracting Parties** shall ensure that transmission system operators and distribution system operators, in meeting requirements for balancing and ancillary services, treat demand response providers, including aggregators, in a non-discriminatory manner, on the basis of their technical capabilities.

Subject to technical constraints inherent in managing networks, **Contracting Parties** shall promote access to and participation of demand response in balancing, reserve and other system services markets, inter alia by requiring national energy regulatory authorities or, where their national regulatory systems so require, transmission system operators and distribution system operators in close cooperation with demand service providers and consumers, to define technical modalities for participation in these markets on the basis of the technical requirements of these markets and the capabilities of demand response. Such specifications shall include the participation of aggregators.

9. When reporting under Directive 2010/75/EU, **as adapted and adopted by Ministerial Council Decision 2013/06/MC-EnC**, and without prejudice to Article 9(2) of that Directive, **Contracting Parties** shall consider including information on energy efficiency levels of installations undertaking the combustion of fuels with total rated thermal input of 50 MW or more in the light of the relevant best available techniques developed in accordance with Directive 2010/75/EU, **as adapted and adopted by the Ministerial Council Decision 2013/06/MC-EnC**, and Directive 2008/1/EC of the European Parliament and of the Council of 15 January 2008 concerning integrated pollution prevention and control.

Contracting Parties may encourage operators of installations referred to in the first subparagraph to improve their annual average net operational rates.

CHAPTER IV

HORIZONTAL PROVISIONS

Article 16

Availability of qualification, accreditation and certification schemes

1. Where a **Contracting Party** considers that the national level of technical competence, objectivity and reliability is insufficient, it shall ensure that, **by 31 December 2017**, certification and/or accreditation schemes and/or equivalent qualification schemes, including, where necessary, suitable training programmes, become or are available for providers of energy services, energy audits, energy managers and installers of energy-related building elements as defined in Article 2(9) of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC**.

2. **Contracting Parties** shall ensure that the schemes referred to in paragraph 1 provide transparency to consumers, are reliable and contribute to national energy efficiency objectives.

3. **Contracting Parties** shall make publicly available the certification and/or accreditation schemes or equivalent qualification schemes referred to in paragraph 1 and shall cooperate among themselves and with the Commission and the **Energy Community Secretariat** on comparisons between, and recognition of, the schemes.

Contracting Parties shall take appropriate measures to make consumers aware of the availability of qualification and/or certification schemes in accordance with Article 18(1).

Article 17

Information and training

1. **Contracting Parties** shall ensure that information on available energy efficiency mechanisms and financial and legal frameworks is transparent and widely disseminated to all relevant market actors, such as consumers, builders, architects, engineers, environmental and energy auditors, and installers of building elements as defined in Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC**.

Contracting Parties shall encourage the provision of information to banks and other financial institutions on possibilities of participating, including through the creation of public/private partnerships, in the financing of energy efficiency improvement measures.

2. **Contracting Parties** shall establish appropriate conditions for market operators to provide adequate and targeted information and advice to energy consumers on energy efficiency.

3. The Commission shall review the impact of its measures to support the development of platforms, involving, inter alia, the European social dialogue bodies in fostering training programmes for energy efficiency, and shall bring forward further measures if appropriate. The Commission shall encourage European social partners in their discussions on energy efficiency.

4. **Contracting Parties** shall, with the participation of stakeholders, including local and regional authorities, promote suitable information, awareness-raising and training initiatives to inform citizens of the benefits and practicalities of taking energy efficiency improvement measures.

5. The Commission shall encourage the exchange and wide dissemination of information on best energy efficiency practices in **Contracting Parties**.

Article 18

Energy services

1. **Contracting Parties** shall promote the energy services market and access for SMEs to this market by:

(a) disseminating clear and easily accessible information on:

(i) available energy service contracts and clauses that should be included in such contracts to guarantee energy savings and final customers' rights;

(ii) financial instruments, incentives, grants and loans to support energy efficiency service projects;

(b) encouraging the development of quality labels, inter alia, by trade associations;

(c) making publicly available and regularly updating a list of available energy service providers who are qualified and/or certified and their qualifications and/or certifications in accordance with Article 16, or providing an interface where energy service providers can provide information;

(d) supporting the public sector in taking up energy service offers, in particular for building refurbishment, by:

(i) providing model contracts for energy performance contracting which include at least the items listed in Annex XIII;

(ii) providing information on best practices for energy performance contracting, including, if available, cost-benefit analysis using a life-cycle approach;

(e) providing a qualitative review in the framework of the National Energy Efficiency Action Plan regarding the current and future development of the energy services market.

2. **Contracting Parties** shall support the proper functioning of the energy services market, where appropriate, by:

(a) identifying and publicising point(s) of contact where final customers can obtain the information referred to in paragraph 1;

(b) taking, if necessary, measures to remove the regulatory and non-regulatory barriers that impede the uptake of energy performance contracting and other energy efficiency service models for the identification and/or implementation of energy saving measures;

(c) considering putting in place or assigning the role of an independent mechanism, such as an ombudsman, to ensure the efficient handling of complaints and out-of-court settlement of disputes arising from energy service contracts;

(d) enabling independent market intermediaries to play a role in stimulating market development on the demand and supply sides.

3. **Contracting Parties** shall ensure that energy distributors, distribution system operators and retail

energy sales companies refrain from any activities that may impede the demand for and delivery of energy services or other energy efficiency improvement measures, or hinder the development of markets for such services or measures, including foreclosing the market for competitors or abusing dominant positions.

Article 19

Other measures to promote energy efficiency

1. **Contracting Parties** shall evaluate and if necessary take appropriate measures to remove regulatory and non-regulatory barriers to energy efficiency, without prejudice to the basic principles of the property and tenancy law of the **Contracting Parties**, in particular as regards:

(a) the split of incentives between the owner and the tenant of a building or among owners, with a view to ensuring that these parties are not deterred from making efficiency-improving investments that they would otherwise have made by the fact that they will not individually obtain the full benefits or by the absence of rules for dividing the costs and benefits between them, including national rules and measures regulating decision-making processes in multi-owner properties;

(b) legal and regulatory provisions, and administrative practices, regarding public purchasing and annual budgeting and accounting, with a view to ensuring that individual public bodies are not deterred from making investments in improving energy efficiency and minimising expected life-cycle costs and from using energy performance contracting and other third-party financing mechanisms on a long-term contractual basis.

Such measures to remove barriers may include providing incentives, repealing or amending legal or regulatory provisions, or adopting guidelines and interpretative communications, or simplifying administrative procedures. The measures may be combined with the provision of education, training and specific information and technical assistance on energy efficiency.

2. The evaluation of barriers and measures referred to in paragraph 1 shall be notified to the Commission **and the Energy Community Secretariat** in the first National Energy Efficiency Action Plan referred to in Article 24(2). The Commission **and the Energy Community Secretariat** shall encourage the sharing of national best practices in this regard.

Article 20

Energy Efficiency National Fund, Financing and Technical Support²³

1. Without prejudice to Articles 107 and 108 of the Treaty on the Functioning of the European Union, **Contracting Parties** shall facilitate the establishment of financing facilities, or use of existing ones, for energy efficiency improvement measures to maximise the benefits of multiple streams of financing.

2. The Commission shall, where appropriate, directly or via the European financial institutions, assist **Contracting Parties** in setting up financing facilities and technical support schemes with the aim of increasing energy efficiency in different sectors²⁴.

²³ The text displayed here corresponds to Article 5(12) of Ministerial Council Decision 2021/14/MC-EnC

²⁴ The 19th Ministerial Council tasked the Secretariat to assist Contracting Parties in finding the best suited solutions to implement the Directive, paying due respect to Contracting Parties' specific circumstances and the degree of implementation in the area of energy efficiency so far. The Secretariat is to propose how to best to support the implementation of the Directive, linking it to the appropriate financing.

3. The Commission **and the Energy Community Secretariat**²⁵ shall facilitate the exchange of best practice between the competent national or regional authorities or bodies, e.g. through annual meetings of the regulatory bodies, public databases with information on the implementation of measures by **Contracting Parties**, and country comparison.

(a) In order to mobilise private financing for energy efficiency measures and energy renovation, in accordance with Directive 2010/31/EU, the Secretariat shall conduct a dialogue with both public and private financial institutions in order to map out possible actions it can take.

(b) The actions referred to in paragraph 3a shall include the following:

- (i) mobilising capital investment into energy efficiency by considering the wider impacts of energy savings for financial risk management;**
- (ii) ensuring better energy and finance performance data by:**
- (iii) examining further how energy efficiency investments improve underlying asset values;**
- (iv) supporting studies to assess the monetisation of the non-energy benefits of energy efficiency investments.**

(c) For the purpose of mobilising private financing of energy efficiency measures and energy renovation, Contracting Parties shall, when implementing this Directive:

- (i) consider ways to make better use of energy audits under Article 8 to influence decision-making;**
- (ii) make optimal use of the possibilities and tools proposed in the smart finance for smart buildings initiative.**

(d) By 1 January 2023, the Energy Community Secretariat shall provide guidance for Contracting Parties on how to unlock private investment.

4. **Contracting Parties** may set up an Energy Efficiency National Fund. The purpose of this fund shall be to support national energy efficiency initiatives.

5. **Contracting Parties** may allow for the obligations set out in Article 5(1) to be fulfilled by annual contributions to the Energy Efficiency National Fund of an amount equal to the investments required to achieve those obligations.

6. **Contracting Parties** may provide that obligated parties can fulfil their obligations set out in Article 7(1) by contributing annually to the Energy Efficiency National Fund an amount equal to the investments required to achieve those obligations.

7. **Contracting Parties** may use their revenues from annual emission allocations under Decision No 406/2009/EC for the development of innovative financing mechanisms to give practical effect to the objective in Article 5 of improving the energy performance of buildings.

²⁵ The Ministerial Council's support for exchange of best practices by the Commission and the Energy Community Secretariat was written down in its conclusions at the meeting held on 16 October 2015.

Article 21**Conversion factors**

For the purpose of comparison of energy savings and conversion to a comparable unit, the conversion factors set out in Annex IV shall apply unless the use of other conversion factors can be justified.

CHAPTER V**FINAL PROVISIONS****Article 22****Delegated acts²⁶**

The Secretariat shall inform the Permanent High Level Group about any delegated acts adopted in accordance with Article 22 of Directive (EU) 2019/2002 within one week upon their adoption. The Permanent High Level Group shall be empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant delegated acts into the Energy Community acquis.

Article 23**Exercise of the delegation**

<...>²⁷

Article 24**Review and monitoring of implementation**

1. The Commission shall review the continued need for the possibility of exemptions set out in Article 14(6) for the first time in the assessment of the first National Energy Efficiency Action Plan and every three years thereafter. Where the review shows that any of the criteria for these exemptions can no longer be justified taking into account the availability of heat load and the real operating conditions of the exempted installations, the Commission shall propose appropriate measures.

2. **Contracting Parties** shall submit to the **Energy Community Secretariat** before 30 April each year statistics on national electricity and heat production from high and low efficiency cogeneration, in accordance with the methodology shown in Annex I, in relation to total heat and electricity production. They shall also submit annual statistics on cogeneration heat and electricity capacities and fuels for cogeneration, and on district heating and cooling production and capacities, in relation to total heat and electricity production and capacities. **Contracting Parties** shall submit statistics on primary energy savings achieved

²⁶ The text displayed here corresponds to Article 6 of Ministerial Council Decision 2021/14/MC-EnC

²⁷ Not applicable according to Article 3(27) of Ministerial Council Decision 2015/09/MC-EnC

by application of cogeneration in accordance with the methodology shown in Annex II.

3. By 30 June 2018 the **Energy Community Secretariat** shall submit the assessment referred to in Article 3(2) to the Ministerial Council of the **Energy Community**, accompanied, if necessary, by proposals for further measures.

4. The **Energy Community Secretariat** shall review the effectiveness of the implementation of Article 6 by 5 November 2018 and shall submit a report to the Ministerial Council of the **Energy Community**. That report shall be accompanied, if appropriate, by proposals for further measures.

5. By 30 May 2019, the **Energy Community Secretariat** shall submit a report to the Ministerial Council of the **Energy Community** on the implementation of Article 7. That report shall be accompanied, if appropriate, by a legislative proposal for one or more of the following purposes:

(a) to change the final date laid down in Article 7(1);

(b) to review the requirements laid down in Article 7(1), (2) and (3);

(c) to establish additional common requirements, in particular as regards the matters referred to in Article 7(7).

6. By 30 September 2020, the Commission shall assess the progress made by **Contracting Parties** in removing the regulatory and non-regulatory barriers referred to in Article 19(1). This assessment shall be followed, if appropriate, by proposals for further measures.

7. By 30 June 2018 the Energy Community Secretariat shall submit the assessment referred to in Article 3(2) to the Ministerial Council of the Energy Community, accompanied, if necessary, by proposals for further measures.

8. The Energy Community Secretariat shall review the effectiveness of the implementation of Article 6 by 5 November 2018 and shall submit a report to the Ministerial Council of the Energy Community. That report shall be accompanied, if appropriate, by proposals for further measures.

9. By 30 May 2019, the Energy Community Secretariat shall submit a report to the Ministerial Council of the Energy Community on the implementation of Article 7. That report shall be accompanied, if appropriate, by a legislative proposal for one or more of the following purposes:²⁸

(a) to change the final date laid down in Article 7(1);

(b) to review the requirements laid down in Article 7(1), (2) and (3);

(c) to establish additional common requirements, in particular as regards the matters referred to in Article 7(7).

10. By **30 September 2020**, the Commission shall assess the progress made by **Contracting Parties** in removing the regulatory and non-regulatory barriers referred to in Article 19(1). This assessment shall be followed, if appropriate, by proposals for further measures.

11. The Commission shall make the reports referred to in paragraphs 1 and 2 publicly available.

²⁸ The text displayed here corresponds to Article 3(31) to 3(33) of Ministerial Council Decision 2015/08/MC-EnC

Article 25**Online platform**

The Commission shall establish an online platform in order to foster the practical implementation of this Directive at national, regional and local levels. That platform shall support the exchange of experiences on practices, benchmarking, networking activities, as well as innovative practices.

Article 26**Committee procedure**

<...>²⁹

Article 27**Amendments and repeals³⁰**

1. **Article 1 of the Ministerial Council Decision 2009/05/MC-EnC is repealed from 15 October 2017. By way of exception, Article 4(1) to (4) of Directive 2006/32/EC as incorporated and adapted by Ministerial Council Decision 2009/05/MC-EnC thereof and Annexes I, III and IV thereto, shall continue to apply, without prejudice to the obligations of the Contracting Parties relating to the time-limit for its transposition into national law. Article 4(1) to (4) of, and Annexes I, III and IV of Directive 2006/32/EC as incorporated and adapted by Ministerial Council Decision 2009/05/MC-EnC, shall cease to apply with effect from 1 January 2020. References to Directive 2006/32/EC shall be construed as references to this Directive and shall be read in accordance with the correlation table set out in Annex XV.**
2. **Article 9(1) and (2) of Directive 2010/30/EU, as incorporated and adapted by Ministerial Council Decision 2010/01/MC-EnC shall cease to apply from 15 October 2017.**

Article 28**Transposition**

1. **Contracting Parties** shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 31 December 2022.

However, each Contracting Party shall bring into force the laws, regulations and administrative provisions necessary to comply with Articles 9 to 11a, and Annexes VII and VIIa of this Directive by 30 June 2023.³¹

2. **Notwithstanding the first paragraph, Article 1(1) and 3(5) shall not be implemented until the Ministerial Council of the Energy Community will adopt the 2030 headline targets on**

²⁹ Not applicable according to Article 3(35) of Ministerial Council Decision 2015/08/MC-EnC

³⁰ The text displayed here corresponds to Article 3(36) of Ministerial Council Decision 2015/08/MC-EnC.

³¹ The text displayed here corresponds to Article 2(1) of Ministerial Council Decision 2021/14/MC-EnC

energy efficiency for the Energy Community and Annex XX with the national benchmarks.³²

Notwithstanding the first subparagraph, **Contracting Parties** shall bring into force the laws, regulations and administrative provisions necessary to comply with the first subparagraph of Article 4(1), Article 4(5), Article 4(6), the last subparagraph of Article 8(9), Article 13(6), Article 18(2), Article 23(1) and Article 23(2) and point (4) of Annex V by the dates specified therein.

They shall forthwith communicate to the **Energy Community Secretariat**³³ the text of those provisions.

When **Contracting Parties** adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. **Contracting Parties** shall determine how such reference is to be made.

3. Contracting Parties shall communicate to the Secretariat on the text of the main provisions of national law which they adopt in the field covered by this Directive.³⁴**Article 29****Transitional provisions**³⁵

Until adoption by the Ministerial Council of the Energy Community 2030 targets, including the energy efficiency headline target, and/or the targets for energy and climate of each Contracting Party, as appropriate, this Directive shall be applied on the basis of Contracting Parties' National Domestic Contributions or targets or any other more ambitious contributions or targets that they have undertaken under any national or international legal and/or policy text.

Article 29 (bis)**Entry into force**

This Directive shall enter into force on the date of its adoption by the Ministerial Council.

³² The text displayed here corresponds to Article 5(15) of Ministerial Council Decision 2021/14/MC-EnC

³³ In accordance with the Article 1(2) of Ministerial Council Decision 2015/08/MC-EnC

³⁴ The text displayed here corresponds to Article 2(2) of Ministerial Council Decision 2021/14/MC-EnC

³⁵ The text displayed here corresponds to Article 5(15) of Ministerial Council Decision 2021/14/MC-EnC

ANNEX I

GENERAL PRINCIPLES FOR THE CALCULATION OF ELECTRICITY FROM COGENERATION

Part I

General principles

Values used for calculation of electricity from cogeneration shall be determined on the basis of the expected or actual operation of the unit under normal conditions of use. For micro- cogeneration units the calculation may be based on certified values.

(a) Electricity production from cogeneration shall be considered equal to total annual electricity production of the unit measured at the outlet of the main generators;

(i) in cogeneration units of types (b), (d), (e), (f), (g) and (h) referred to in Part II with an annual overall efficiency set by **Contracting Parties** at a level of at least 75 %, and

(ii) in cogeneration units of types (a) and (c) referred to in Part II with an annual overall efficiency set by **Contracting Parties** at a level of at least 80 %.

(b) In cogeneration units with an annual overall efficiency below the value referred to in point (i) of point (a) (cogeneration units of types (b), (d), (e), (f), (g), and (h) referred to in Part II) or with an annual overall efficiency below the value referred to in point (ii) of point (a) (cogeneration units of types (a) and (c) referred to in Part II) cogeneration is calculated according to the following formula:

$$E_{\text{CHP}} = H_{\text{CHP}} * C$$

where:

E_{CHP} is the amount of electricity from cogeneration;

C is the power-to-heat ratio;

H_{CHP} is the amount of useful heat from cogeneration (calculated for this purpose as total heat production minus any heat produced in separate boilers or by live steam extraction from the steam generator before the turbine).

The calculation of electricity from cogeneration must be based on the actual power-to-heat ratio. If the actual power-to-heat ratio of a cogeneration unit is not known, the following default values may be used, in particular for statistical purposes, for units of types (a), (b), (c), (d) and (e) referred to in Part II provided that the calculated cogeneration electricity is less or equal to total electricity production of the unit:

Type of the unit	Default power to heat ratio, C
Combined cycle gas turbine with heat recovery	0,95
Steam back pressure turbine	0,45
Steam condensing extraction turbine	0,45
Gas turbine with heat recovery	0,55
Internal combustion engine	0,75

If **Contracting Parties** introduce default values for power-to-heat ratios for units of types (f), (g), (h), (i), (j) and (k) referred to in Part II, such default values shall be published and shall be notified to the **Energy Community Secretariat**.

(c) If a share of the energy content of the fuel input to the cogeneration process is recovered in chemicals and recycled this share can be subtracted from the fuel input before calculating the overall efficiency used in points (a) and (b).

(d) **Contracting Parties** may determine the power-to-heat ratio as the ratio of electricity to useful heat when operating in cogeneration mode at a lower capacity using operational data of the specific unit.

(e) **Contracting Parties** may use other reporting periods than one year for the purpose of the calculations according to points (a) and (b).

Part II

Cogeneration technologies covered by this Directive

(a) Combined cycle gas turbine with heat recovery

(b) Steam back pressure turbine

(c) Steam condensing extraction turbine

(d) Gas turbine with heat recovery

(e) Internal combustion engine

(f) Microturbines

(g) Stirling engines

(h) Fuel cells

(i) Steam engines

(j) Organic Rankine cycles

(k) Any other type of technology or combination thereof falling under the definition laid down in Article 2(30).

When implementing and applying the general principles for the calculation of electricity from cogeneration, **Contracting Parties** shall use the detailed Guidelines established by Commission Decision 2008/952/EC of 19 November 2008 establishing detailed guidelines for the implementation and application of Annex II to Directive 2004/8/EC of the European Parliament and of the Council.

ANNEX II

METHODOLOGY FOR DETERMINING THE EFFICIENCY OF THE COGENERATION PROCESS

Values used for calculation of efficiency of cogeneration and primary energy savings shall be determined on the basis of the expected or actual operation of the unit under normal conditions of use.

(a) High-efficiency cogeneration

For the purpose of this Directive high-efficiency cogeneration shall fulfil the following criteria:

- cogeneration production from cogeneration units shall provide primary energy savings calculated according to point (b) of at least 10 % compared with the references for separate production of heat and electricity,
- production from small-scale and micro-cogeneration units providing primary energy savings may qualify as high-efficiency cogeneration.

(b) Calculation of primary energy savings

The amount of primary energy savings provided by cogeneration production defined in accordance with Annex I shall be calculated on the basis of the following formula:

$$PES = \left(1 - \frac{1}{\frac{CHP H_{\eta}}{Ref H_{\eta}} + \frac{CHP E_{\eta}}{Ref E_{\eta}}} \right) \times 100 \%$$

where:

PES is primary energy savings.

CHP H_{η} is the heat efficiency of the cogeneration production defined as annual useful heat output divided by the fuel input used to produce the sum of useful heat output and electricity from cogeneration.

Ref H_{η} is the efficiency reference value for separate heat production.

CHP E_{η} is the electrical efficiency of the cogeneration production defined as annual electricity from cogeneration divided by the fuel input used to produce the sum of useful heat output and electricity from cogeneration. Where a cogeneration unit generates mechanical energy, the annual electricity from cogeneration may be increased by an additional element representing the amount of electricity which is equivalent to that of mechanical energy. This additional element does not create a right to issue guarantees of origin in accordance with Article 14(10).

Ref E_{η} is the efficiency reference value for separate electricity production.

(c) Calculations of energy savings using alternative calculation

Contracting Parties may calculate primary energy savings from a production of heat and electricity and mechanical energy as indicated below without applying Annex I to exclude the non-cogenerated heat and electricity parts of the same process. Such a production can be regarded as high-efficiency cogeneration provided it fulfils the efficiency criteria in point (a) of this Annex and, for cogeneration units with an electrical capacity larger than 25 MW, the overall efficiency is above 70 %. However, specification of the quantity of electricity from cogeneration produced in such a production, for issuing a guarantee of origin and for statistical purposes, shall be determined in accordance with Annex I.

If primary energy savings for a process are calculated using alternative calculation as indicated above the primary energy savings shall be calculated using the formula in point (b) of this Annex replacing: 'CHP H_η' with 'H_η' and 'CHP E_η' with 'E_η', where:

H_η shall mean the heat efficiency of the process, defined as the annual heat output divided by the fuel input used to produce the sum of heat output and electricity output.

E_η shall mean the electricity efficiency of the process, defined as the annual electricity output divided by the fuel input used to produce the sum of heat output and electricity output. Where a cogeneration unit generates mechanical energy, the annual electricity from cogeneration may be increased by an additional element representing the amount of electricity which is equivalent to that of mechanical energy. This additional element will not create a right to issue guarantees of origin in accordance with Article 14(10).

(d) **Contracting Parties** may use other reporting periods than one year for the purpose of the calculations according to points (b) and (c) of this Annex.

(e) For micro-cogeneration units the calculation of primary energy savings may be based on certified data.

(f) Efficiency reference values for separate production of heat and electricity

The harmonised efficiency reference values shall consist of a matrix of values differentiated by relevant factors, including year of construction and types of fuel, and must be based on a well-documented analysis taking, inter alia, into account data from operational use under realistic conditions, fuel mix and climate conditions as well as applied cogeneration technologies.

The efficiency reference values for separate production of heat and electricity in accordance with the formula set out in point (b) shall establish the operating efficiency of the separate heat and electricity production that cogeneration is intended to substitute.

The efficiency reference values shall be calculated according to the following principles:

1. For cogeneration units the comparison with separate electricity production shall be based on the principle that the same fuel categories are compared.
2. Each cogeneration unit shall be compared with the best available and economically justifiable technology for separate production of heat and electricity on the market in the year of construction of the cogeneration unit.
3. The efficiency reference values for cogeneration units older than 10 years of age shall be fixed on the reference values of units of 10 years of age.
4. The efficiency reference values for separate electricity production and heat production shall reflect the climatic differences between **Contracting Parties**.

ANNEX III

**ENERGY EFFICIENCY REQUIREMENTS FOR PURCHASING PRODUCTS,
SERVICES AND BUILDINGS BY CENTRAL GOVERNMENT**

Central governments that purchase products, services or buildings, insofar as this is consistent with cost-effectiveness, economical feasibility, wider sustainability, technical suitability, as well as sufficient competition, shall:

(a) where a product is covered by a delegated act adopted under Directive 2010/30/EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** or by a related Commission implementing directive, purchase only the products that comply with the criterion of belonging to the highest energy efficiency class possible in the light of the need to ensure sufficient competition;

(b) <...>

(c) <...>

(d) <...>

(e) require in their tenders for service contracts that service providers use, for the purposes of providing the services in question, only products that comply with the requirements referred to in points (a) to (d), when providing the services in question. This requirement shall apply only to new products purchased by service providers partially or wholly for the purpose of providing the service in question;

(f) purchase, or make new rental agreements for, only buildings that comply at least with the minimum energy performance requirements referred to in Article 5(1) unless the purpose of the purchase is:

- (i) to undertake deep renovation or demolition;
- (ii) in the case of public bodies, to re-sell the building without using it for public body's own purposes; or
- (iii) to preserve it as a building officially protected as part of a designated environment, or because of its special architectural or historical merit.

Compliance with these requirements shall be verified by means of the energy performance certificates referred to in Article 11 of Directive 2010/31/EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC**.

ANNEX IV

ENERGY CONTENT OF SELECTED FUELS FOR END USE –
CONVERSION TABLE ⁽¹⁾

Energy commodity	kJ (NCV)	kgoe (NCV)	kWh (NCV)
1 kg coke	28 500	0,676	7,917
1 kg hard coal	17 200 — 30 700	0,411 — 0,733	4,778 — 8,528
1 kg brown coal briquettes	20 000	0,478	5,556
1 kg black lignite	10 500 — 21 000	0,251 — 0,502	2,917 — 5,833
1 kg brown coal	5 600 — 10 500	0,134 — 0,251	1,556 — 2,917
1 kg oil shale	8 000 — 9 000	0,191 — 0,215	2,222 — 2,500
1 kg peat	7 800 — 13 800	0,186 — 0,330	2,167 — 3,833
1 kg peat briquettes	16 000 — 16 800	0,382 — 0,401	4,444 — 4,667
1 kg residual fuel oil (heavy oil)	40 000	0,955	11,111
1 kg light fuel oil	42 300	1,010	11,750
1 kg motor spirit (petrol)	44 000	1,051	12,222
1 kg paraffin	40 000	0,955	11,111
1 kg liquefied petroleum gas	46 000	1,099	12,778
1 kg natural gas ⁽²⁾	47 200	1,126	13,10
1 kg liquefied natural gas	45 190	1,079	12,553
1 kg wood (25 % humidity) ⁽³⁾	13 800	0,330	3,833
1 kg pellets/wood bricks	16 800	0,401	4,667
1 kg waste	7 400 — 10 700	0,177 — 0,256	2,056 — 2,972
1 MJ derived heat	1 000	0,024	0,278
1 kWh electrical energy	3 600	0,086	1 ⁽⁴⁾

Source: EUROSTAT

⁽¹⁾ **Contracting Parties** may apply different conversion factors if these can be justified.

⁽²⁾ 93 % methane.

⁽³⁾ **Applicable when energy savings are calculated in primary energy terms using a bottom-up approach based on final energy consumption. For savings in kWh electricity, Contracting Parties shall apply a coefficient established through a transparent methodology on the basis of national circumstances affecting primary energy consumption, in order to ensure a precise calculation of real savings. Those circumstances shall be substantiated, verifiable and based on objective and non-discriminatory criteria. For savings in kWh electricity, Contracting Parties it. When doing so, Contracting Parties shall take into account the energy mix included in their integrated national energy and climate plans to be notified to the Commission in accordance with Regulation (EU) 2018/1999. By 25 December 2022 and every four years thereafter, the Commission shall revise the default coefficient on the basis of observed data. That revision shall be carried out taking into account its effects on other Union law such as Directive 2009/125/EC and Regulation (EU) 2017/1369 of the European Parliament and of the Council of 4 July 2017 setting a framework for energy labelling and repealing Directive 2010/30/EU**

⁽⁴⁾ Applicable when energy savings are calculated in primary energy terms using a bottom-up approach based on final energy consumption. For savings in kWh electricity **Contracting Parties** may apply a default coefficient of 2,5. **Contracting Parties** may apply a different coefficient provided they can justify it.

ANNEX V

COMMON METHODS AND PRINCIPLES FOR CALCULATING THE IMPACT OF ENERGY EFFICIENCY OBLIGATION SCHEMES OR OTHER POLICY MEASURES UNDER ARTICLES 7, 7A AND 7B AND ARTICLE 20 (6) METHODS FOR CALCULATING ENERGY SAVINGS OTHER THAN THOSE ARISING FROM TAXATION MEASURES FOR THE PURPOSES OF ARTICLES 7, 7A AND 7B AND ARTICLE 20(6).

1. Methods for calculating energy savings other than those arising from taxation measures for the purposes of Articles 7, 7a and 7b and Article 20(6).

Obligated, participating or entrusted parties, or implementing public authorities, may use the following methods for calculating energy savings:

(a) deemed savings, by reference to the results of previous independently monitored energy improvements in similar installations. The generic approach is termed “ex ante”;

(b) metered savings, whereby the savings from the installation of a measure, or package of measures, are determined by recording the actual reduction in energy use, taking due account of factors such as additionality, occupancy, production levels and the weather which may affect consumption. The generic approach is termed “ex post”;

(c) scaled savings, whereby engineering estimates of savings are used. This approach may be used only where establishing robust measured data for a specific installation is difficult or disproportionately expensive, e.g. replacing a compressor or electric motor with a different kWh rating from that for which independent information about savings has been measured, or where those estimates are carried out on the basis of nationally established methodologies and benchmarks by qualified or accredited experts that are independent of the obligated, participating or entrusted parties involved;

(d) surveyed savings, where consumers’ response to advice, information campaigns, labelling or certification schemes or smart metering is determined. This approach may be used only for savings resulting from changes in consumer behaviour. It shall not be used for savings resulting from the installation of physical measures.

2. In determining the energy savings for an energy efficiency measure for the purposes of Articles 7, 7a and 7b and Article 20(6), the following principles apply:

The savings shall be shown to be additional to those that would have occurred in any event without the activity of the obligated, participating or entrusted parties, or implementing public authorities. To determine the savings that can be claimed as additional, Contracting Parties shall have regard to how energy use and demand would evolve in the absence of the policy measure in question by taking into account at least the following factors: energy consumption trends, changes in consumer behaviour, technological progress and changes caused by other measures implemented at Union and national level.

(a) Savings resulting from the implementation of mandatory Union law shall be considered to be savings that would have occurred in any event, and thus shall not be claimed as en-

ergy savings for the purpose of Article 7(1). By way of derogation from that requirement, savings related to the renovation of existing buildings may be claimed as energy savings for the purpose of Article 7(1), provided that the materiality criterion referred to in point 3(h) of this Annex is ensured. Savings resulting from the implementation of national minimum requirements established for new buildings prior to the transposition of Directive 2010/31/EU can be claimed as energy savings for the purpose of point (a) of Article 7(1), provided that the materiality criterion referred to in point 3(h) of this Annex is ensured and those savings have been notified by Contracting Parties in their National Energy Efficiency Action Plans in accordance with Article 24(2).

(b) Credit may be given only for savings exceeding the following levels:

(i) Union emission performance standards for new passenger cars and new light commercial vehicles following the implementation of Regulations (EC) No 443/2009 (*) and (EU) No 510/2011 of the European Parliament and of the Council (**);

(ii) Union requirements relating to the removal from the market of certain energy related products following the implementation of implementing measures under Directive 2009/125/EC.

(c) Policies with the purpose of encouraging higher levels of energy efficiency of products, equipment, transport systems, vehicles and fuels, buildings and building elements, processes or markets shall be permitted.

(d) Measures promoting the installation of small-scale renewable energy technologies on or in buildings may be eligible to be taken into account for the fulfilment of energy savings required under Article 7(1), provided that they result in verifiable, and measurable or estimable, energy savings. The calculation of energy savings shall comply with the requirements of this Annex.

(e) For policies that accelerate the uptake of more efficient products and vehicles, full credit may be claimed, provided that it is shown that such uptake takes place before expiry of the average expected lifetime of the product or vehicle, or before the product or vehicle would usually be replaced, and the savings are claimed only for the period until end of the average expected lifetime of the product or vehicle to be replaced.

(f) In promoting the uptake of energy efficiency measures, Contracting Parties shall, where relevant, ensure that quality standards for products, services and installation of measures are maintained or introduced where such standards do not exist.

(g) To account for climatic variations between regions, Contracting Parties may choose to adjust the savings to a standard value or to accord different energy savings in accordance with temperature variations between regions.

(h) The calculation of energy savings shall take into account the lifetime of the measures and the rate at which the savings decline over time. That calculation shall count the savings each individual action will achieve during the period from its date of implementation to 31 December 2020 or 31 December 2030 as appropriate. Alternatively, Contracting Parties may adopt another method that is estimated to achieve at least the same total quantity of savings. When using another method, Contracting Parties shall ensure that the total amount of energy savings calculated using that method does not exceed the amount of energy savings that would have been the result of their calculation when counting the savings each individual action

will achieve during the period from its date of implementation to 31 December 2020 or 31 December 2030 as appropriate. Contracting Parties shall describe in detail in their integrated national energy and climate plans under Regulation (EU) 2018/1999 the other method and the provisions made to ensure that the binding calculation requirement is met.

3. Contracting Parties shall ensure that the following requirements for policy measures taken pursuant to Article 7b and Article 20(6) are met:

- (a) policy measures and individual actions produce verifiable end-use energy savings;
- (b) the responsibility of each participating party, entrusted party or implementing public authority, as relevant, is clearly defined;
- (c) the energy savings that are achieved or are to be achieved are determined in a transparent manner;
- (d) the amount of energy savings required or to be achieved by the policy measure is expressed in either final or primary energy consumption, using the conversion factors set out in Annex IV;
- (e) an annual report on the energy savings achieved by entrusted parties, participating parties and implementing public authorities be provided and made publicly available, as well as data on the annual trend of energy savings;
- (f) monitoring of the results and taking appropriate measures if progress is not satisfactory;
- (g) the energy savings from an individual action are not claimed by more than one party;
- (h) the activities of the participating party, entrusted party or implementing public authority are shown to be material to the achievement of the energy savings claimed.

4. In determining the energy saving from taxation related policy measures introduced under Article 7b, the following principles shall apply:

- (a) credit shall be given only for energy savings from taxation measures exceeding the minimum levels of taxation applicable to fuels as required in Council Directive 2003/96/EC (***) or 2006/112/EC (****);
- (b) price elasticities for the calculation of the impact of the (energy) taxation measures shall represent the responsiveness of energy demand to price changes, and shall be estimated on the basis of recent and representative official data sources;
- (c) the energy savings from accompanying taxation policy instruments, including fiscal incentives or payment to a fund, shall be accounted separately.

5. Notification of methodology

Contracting Parties shall in accordance with Regulation (EU) 2018/1999 notify to the Secretariat their proposed detailed methodology for the operation of the energy efficiency obligation schemes and alternative measures referred to in Articles 7a and 7b, and Article 20(6). Except in the case of taxation, such notification shall include details of:

- (a) the level of the energy savings required under point (b) of the first subparagraph of Article 7(1) or savings expected to be achieved over the whole period from 1 January 2021 to 31 December 2030;
- (b) the obligated, participating or entrusted parties, or implementing public authorities;

- (c) target sectors;
- (d) policy measures and individual actions, including the expected total amount of cumulative energy savings for each measure;
- (e) the duration of the obligation period for the energy efficiency obligation scheme;
- (f) the actions provided for by the policy measure;
- (g) the calculation methodology, including how additionality and materiality have been determined and which methodologies and benchmarks are used for deemed and scaled savings;
- (h) the lifetimes of measures, and how they are calculated or what they are based upon;
- (i) the approach taken to address climatic variations within the Member State;
- (j) the monitoring and verification systems for measures under Articles 7a and 7b and how their independence from the obligated, participating or entrusted parties is ensured;
- (k) in the case of taxation:
 - (i) the target sectors and segment of taxpayers;
 - (ii) the implementing public authority;
 - (iii) the savings expected to be achieved;
 - (iv) the duration of the taxation measure; and

(*) Regulation (EC) No 443/2009 of 23 April 2009 setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO₂ emissions from light-duty vehicles

(**) Regulation (EU) No 510/2011 of 11 May 2011 setting emission performance standards for new light commercial vehicles as part of the Union's integrated approach to reduce CO₂ emissions from light-duty vehicles

(***) Council Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity

(****) Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax

ANNEX VI

MINIMUM CRITERIA FOR ENERGY AUDITS INCLUDING THOSE CARRIED OUT AS PART OF ENERGY MANAGEMENT SYSTEMS

The energy audits referred to in Article 8 shall be based on the following guidelines:

- (a) be based on up-to-date, measured, traceable operational data on energy consumption and (for electricity) load profiles;
- (b) comprise a detailed review of the energy consumption profile of buildings or groups of buildings, industrial operations or installations, including transportation;
- (c) build, whenever possible, on life-cycle cost analysis (LCCA) instead of Simple Payback Periods (SPP) in order to take account of long-term savings, residual values of long-term investments and discount rates;
- (d) be proportionate, and sufficiently representative to permit the drawing of a reliable picture of overall energy performance and the reliable identification of the most significant opportunities for improvement.

Energy audits shall allow detailed and validated calculations for the proposed measures so as to provide clear information on potential savings.

The data used in energy audits shall be storable for historical analysis and tracking performance.

ANNEX VII

MINIMUM REQUIREMENTS FOR BILLING AND BILLING INFORMATION BASED ON ACTUAL CONSUMPTION OF ELECTRICITY AND GAS

1. Minimum requirements for billing

1.1. Billing based on actual consumption

In order to enable final customers to regulate their own energy consumption, billing should take place on the basis of actual consumption at least once a year, and billing information should be made available at least quarterly, on request or where the consumers have opted to receive electronic billing or else twice yearly. Gas used only for cooking purposes may be exempted from this requirement.

1.2. Minimum information contained in the bill

Contracting Parties shall ensure that, where appropriate, the following information is made available to final customers in clear and understandable terms in or with their bills, contracts, transactions, and receipts at distribution stations:

- (a) current actual prices and actual consumption of energy;
- (b) comparisons of the final customer's current energy consumption with consumption for the same period in the previous year, preferably in graphic form;
- (c) contact information for final customers' organisations, energy agencies or similar bodies, including website addresses, from which information may be obtained on available energy efficiency improvement measures, comparative end-user profiles and objective technical specifications for energy-using equipment.

In addition, wherever possible and useful, **Contracting Parties** shall ensure that comparisons with an average normalised or benchmarked final customer in the same user category are made available to final customers in clear and understandable terms, in, with or signposted to within, their bills, contracts, transactions, and receipts at distribution stations.

1.3. Advice on energy efficiency accompanying bills and other feedback to final customers

When sending contracts and contract changes, and in the bills customers receive or through websites addressing individual customers, energy distributors, distribution system operators and retail energy sales companies shall inform their customers in a clear and understandable manner of contact information for independent consumer advice centres, energy agencies or similar institutions, including their internet addresses, where they can obtain advice on available energy efficiency measures, benchmark profiles for their energy consumption and technical specifications of energy using appliances that can serve to reduce the consumption of these appliances.

ANNEX VIIa

MINIMUM REQUIREMENTS FOR BILLING AND CONSUMPTION INFORMATION FOR HEATING, COOLING AND DOMESTIC HOT WATER

1. Billing based on actual consumption or heat cost allocator readings

In order to enable final users to regulate their own energy consumption, billing shall take place on the basis of actual consumption or heat cost allocator readings at least once per year.

2. Minimum frequency of billing or consumption information

From 30 October 2023 where remotely readable meters or heat cost allocators have been installed, billing or consumption information based on actual consumption or heat cost allocator readings shall be provided to final users at least quarterly upon request or where final customers have opted to receive electronic billing, or else twice a year.

From 1 January 2025, where remotely readable meters or heat cost allocators have been installed, billing or consumption information based on actual consumption or heat cost allocator readings shall be provided to final users at least monthly. It may also be made available via the internet and be updated as frequently as allowed by the measurement devices and systems used. Heating and cooling may be exempted from that requirement outside the heating/cooling seasons.

3. Minimum information contained in the bill

Contracting Parties shall ensure that the following information is made available to final users in clear and comprehensible terms in or with their bills where those are based on actual consumption or heat cost allocator readings:

- (a) current actual prices and actual consumption of energy or total heat cost and heat cost allocator readings;
- (b) information about the fuel mix used and the related annual greenhouse gas emissions, including for final users supplied by district heating or district cooling, and a description of the different taxes, levies and tariffs applied. Contracting Parties may limit the scope of the requirement to provide information about greenhouse gas emissions to include only supplies from district heating systems with a total rated thermal input exceeding 20 MW;
- (c) comparisons of the final users current energy consumption with consumption for the same period in the previous year, in graphic form, climate corrected for heating and cooling;
- (d) contact information for final customers' organisations, energy agencies or similar bodies, including website addresses, from which information on available energy efficiency improvement measures, comparative end-user profiles and objective technical specifications for energy-using equipment may be obtained;
- (e) information about related complaints procedures, ombudsman services or alternative dispute resolution mechanisms, as applicable in the Contracting Parties;
- (f) comparisons with an average normalised or benchmarked final user in the same user category. In the case of electronic bills, such comparisons may instead be made available online

and signposted to within the bills.

Bills that are not based on actual consumption or heat cost allocator readings shall contain a clear and comprehensible explanation of how the amount set out in the bill was calculated, and at least the information referred to in points (d) and (e).

ANNEX VIII

POTENTIAL FOR EFFICIENCY IN HEATING AND COOLING

1. The comprehensive assessment of national heating and cooling potentials referred to in Article 14(1) shall include:

- (a) a description of heating and cooling demand;
- (b) a forecast of how this demand will change in the next 10 years, taking into account in particular the evolution of demand in buildings and the different sectors of industry;
- (c) a map of the national territory, identifying, while preserving commercially sensitive information:
 - (i) heating and cooling demand points, including:
 - municipalities and conurbations with a plot ratio of at least 0,3, and
 - industrial zones with a total annual heating and cooling consumption of more than 20 GWh;
 - (ii) existing and planned district heating and cooling infrastructure;
 - (iii) potential heating and cooling supply points, including:
 - electricity generation installations with a total annual electricity production of more than 20 GWh, and
 - waste incineration plants,
 - existing and planned cogeneration installations using technologies referred to in Part II of Annex I, and district heating installations;
- (d) identification of the heating and cooling demand that could be satisfied by high-efficiency cogeneration, including residential micro-cogeneration, and by district heating and cooling;
- (e) identification of the potential for additional high-efficiency cogeneration, including from the refurbishment of existing and the construction of new generation and industrial installations or other facilities generating waste heat;
- (f) identification of energy efficiency potentials of district heating and cooling infrastructure;
- (g) strategies, policies and measures that may be adopted up to 2020 and up to 2030 to realise the potential in point (e) in order to meet the demand in point (d), including, where appropriate, proposals to:
 - (i) increase the share of cogeneration in heating and cooling production and in electricity production;
 - (ii) develop efficient district heating and cooling infrastructure to accommodate the development of high-efficiency cogeneration and the use of heating and cooling from waste heat and renewable energy sources;
 - (iii) encourage new thermal electricity generation installations and industrial plants producing waste heat to be located in sites where a maximum amount of the available waste heat will be recovered to meet existing or forecasted heat and cooling demand;
 - (iv) encourage new residential zones or new industrial plants which consume heat in their production processes to be located where available waste heat, as identified in the comprehensive assessment, can contribute to meeting their heat and cooling demands. This could include proposals that support

the clustering of a number of individual installations in the same location with a view to ensuring an optimal matching between demand and supply for heat and cooling;

(v) encourage thermal electricity generating installations, industrial plants producing waste heat, waste incineration plants and other waste-to-energy plants to be connected to the local district heating or cooling network;

(vi) encourage residential zones and industrial plants which consume heat in their production processes to be connected to the local district heating or cooling network;

(h) the share of high-efficiency cogeneration and the potential established and progress achieved under Directive 2004/8/EC;

(i) an estimate of the primary energy to be saved;

(j) an estimate of public support measures to heating and cooling, if any, with the annual budget and identification of the potential aid element. This does not prejudice a separate notification of the public support schemes for a State aid assessment.

2. To the extent appropriate, the comprehensive assessment may be made up of an assembly of regional or local plans and strategies.

ANNEX IX

COST-BENEFIT ANALYSIS

Part 1

General principles of the cost-benefit analysis

The purpose of preparing cost-benefit analyses in relation to measures for promoting efficiency in heating and cooling as referred to in Article 14(3) is to provide a decision base for qualified prioritisation of limited resources at society level.

The cost-benefit analysis may either cover a project assessment or a group of projects for a broader local, regional or national assessment in order to establish the most cost-effective and beneficial heating or cooling option for a given geographical area for the purpose of heat planning.

Cost-benefit analyses for the purposes of Article 14(3) shall include an economic analysis covering socio-economic and environmental factors.

The cost-benefit analyses shall include the following steps and considerations:

(a) Establishing a system boundary and geographical boundary

The scope of the cost-benefit analyses in question determines the relevant energy system. The geographical boundary shall cover a suitable well-defined geographical area, e.g. a given region or metropolitan area, to avoid selecting sub-optimised solutions on a project by project basis.

(b) Integrated approach to demand and supply options

The cost-benefit analysis shall take into account all relevant supply resources available within the system and geographical boundary, using the data available, including waste heat from electricity generation and industrial installations and renewable energy, and the characteristics of, and trends in heat and cooling demand.

(c) Constructing a baseline

The purpose of the baseline is to serve as a reference point, to which the alternative scenarios are evaluated.

(d) Identifying alternative scenarios

All relevant alternatives to the baseline shall be considered. Scenarios that are not feasible due to technical reasons, financial reasons, national regulation or time constraints may be excluded at an early stage of the cost-benefit analysis if justified based on careful, explicit and well-documented considerations.

Only high-efficiency cogeneration, efficient district heating and cooling or efficient individual heating and cooling supply options should be taken into account in the cost-benefit analysis as alternative scenarios compared to the baseline.

(e) Method for the calculation of cost-benefit surplus

(i) The total long-term costs and benefits of heat or cooling supply options shall be assessed and compared.

(ii) The criterion for evaluation shall be the net present value (NPV) criterion.

(iii) The time horizon shall be chosen such that all relevant costs and benefits of the scenarios are included. For example, for a gas-fired power plant an appropriate time horizon could be 25 years, for

a district heating system, 30 years, or for heating equipment such as boilers 20 years.

(f) Calculation and forecast of prices and other assumptions for the economic analysis

(i) **Contracting Parties** shall provide assumptions, for the purpose of the cost-benefit analyses, on the prices of major input and output factors and the discount rate.

ii) The discount rate used in the economic analysis for the calculation of net present value shall be chosen according to European or national guidelines ⁽¹⁾.

(iii) **Contracting Parties** shall use national, European or international energy price development forecasts if appropriate in their national and/or regional/local context.

(iv) The prices used in the economic analysis shall reflect the true socio economic costs and benefits and should include external costs, such as environmental and health effects, to the extent possible, i.e. when a market price exists or when it is already included in European or national regulation.

(g) Economic analysis: Inventory of effects

The economic analyses shall take into account all relevant economic effects.

Contracting Parties may assess and take into account in decision making costs and energy savings from the increased flexibility in energy supply and from a more optimal operation of the electricity networks, including avoided costs and savings from reduced infrastructure investment, in the analysed scenarios.

The costs and benefits taken into account shall include at least the following:

(i) Benefits

— Value of output to the consumer (heat and electricity) — External benefits such as environmental, greenhouse gas emissions and health and safety benefits, to the extent possible

— Labor market effects, energy security and competitiveness, to the extend possible

(ii) Costs

— Capital costs of plants and equipment

— Capital costs of the associated energy networks

— Variable and fixed operating costs

— Energy costs

— Environmental, and health and safety costs, to the extent possible

— Labor market costs, energy security and competitiveness, to the extend possible.

(h) Sensitivity analysis:

A sensitivity analysis shall be included to assess the costs and benefits of a project or group of projects based on different energy prices, discount rates and other variable factors having a significant impact on the outcome of the calculations.

⁽¹⁾ The national discount rate chosen for the purpose of economic analysis should take into account data provided by the European Central Bank.

The **Contracting Parties** shall designate the competent authorities responsible for carrying out the cost-benefit analyses under Article 14. **Contracting Parties** may require competent local, regional and national authorities or operators of individual installations to carry out the economic and financial analysis. They shall provide the detailed methodologies and assumptions in accordance with this Annex and establish and make public the procedures for the economic analysis.

Part 2

Principles for the purpose of Article 14(5) and (7)

The cost-benefit analyses shall provide information for the purpose of the measures in Article 14(5) and (7): If an electricity-only installation or an installation without heat recovery is planned, a comparison shall be made between the planned installations or the planned refurbishment and an equivalent installation producing the same amount of electricity or process heat, but recovering the waste heat and supplying heat through high-efficiency cogeneration and/or district heating and cooling networks.

Within a given geographical boundary the assessment shall take into account the planned installation and any appropriate existing or potential heat demand points that could be supplied from it, taking into account rational possibilities (for example, technical feasibility and distance).

The system boundary shall be set to include the planned installation and the heat loads, such as building(s) and industrial process. Within this system boundary the total cost of providing heat and power shall be determined for both cases and compared.

Heat loads shall include existing heat loads, such as an industrial installation or an existing district heating system, and also, in urban areas, the heat load and costs that would exist if a group of buildings or part of a city were provided with and/or connected into a new district heating network.

The cost-benefit analysis shall be based on a description of the planned installation and the comparison installation(s), covering electrical and thermal capacity, as applicable, fuel type, planned usage and the number of planned operating hours annually, location and electricity and thermal demand.

For the purpose of the comparison, the thermal energy demand and the types of heating and cooling used by the nearby heat demand points shall be taken into account. The comparison shall cover infrastructure related costs for the planned and comparison installation.

Cost-benefit analyses for the purposes of Article 14(5) shall include an economic analysis covering a financial analysis reflecting actual cash flow transactions from investing in and operating individual installations.

Projects with positive cost-benefit outcome are those where the sum of discounted benefits in the economic and financial analysis exceeds the sum of discounted costs (cost-benefit surplus).

Contracting Parties shall set guiding principles for the methodology, assumptions and time horizon for the economic analysis.

Contracting Parties may require that the companies responsible for the operation of thermal electric generation installations, industrial companies, district heating and cooling networks, or other parties influenced by the defined system boundary and geographical boundary, contribute data for use in assessing the costs and benefits of an individual installation.

ANNEX X

GUARANTEE OF ORIGIN FOR ELECTRICITY PRODUCED FROM HIGH-EFFICIENCY COGENERATION

(a) **Contracting Parties** shall take measures to ensure that:

- (i) the guarantee of origin of the electricity produced from high-efficiency cogeneration:
 - enable producers to demonstrate that the electricity they sell is produced from high-efficiency cogeneration and is issued to this effect in response to a request from the producer,
 - is accurate, reliable and fraud-resistant,
 - is issued, transferred and cancelled electronically;
- (ii) the same unit of energy from high-efficiency cogeneration is taken into account only once.

(b) The guarantee of origin referred to in Article 14(10) shall contain at least the following information:

- (i) the identity, location, type and capacity (thermal and electrical) of the installation where the energy was produced;
- (ii) the dates and places of production;
- (iii) the lower calorific value of the fuel source from which the electricity was produced;
- (iv) the quantity and the use of the heat generated together with the electricity;
- (v) the quantity of electricity from high-efficiency cogeneration in accordance with Annex II that the guarantee represents;
- (vi) the primary energy savings calculated in accordance with Annex II based on the harmonised efficiency reference values indicated in point (f) of Annex II;
- (vii) the nominal electric and thermal efficiency of the plant;
- (viii) whether and to what extent the installation has benefited from investment support;
- (ix) whether and to what extent the unit of energy has benefited in any other way from a national support scheme, and the type of support scheme;
- (x) the date on which the installation became operational; and
- (xi) the date and country of issue and a unique identification number.

The guarantee of origin shall be of the standard size of 1 MWh. It shall relate to the net electricity output measured at the station boundary and exported to the grid.

ANNEX XI

ENERGY EFFICIENCY CRITERIA FOR ENERGY NETWORK REGULATION AND FOR ELECTRICITY NETWORK TARIFFS

1. Network tariffs shall be cost-reflective of cost-savings in networks achieved from demand-side and demand-response measures and distributed generation, including savings from lowering the cost of delivery or of network investment and a more optimal operation of the network.

2. Network regulation and tariffs shall not prevent network operators or energy retailers making available system services for demand response measures, demand management and distributed generation on organised electricity markets, in particular:

(a) the shifting of the load from peak to off-peak times by final customers taking into account the availability of renewable energy, energy from cogeneration and distributed generation;

(b) energy savings from demand response of distributed consumers by energy aggregators;

(c) demand reduction from energy efficiency measures undertaken by energy service providers, including energy service companies;

(d) the connection and dispatch of generation sources at lower voltage levels;

(e) the connection of generation sources from closer location to the consumption; and

(f) the storage of energy.

For the purposes of this provision the term 'organised electricity markets' shall include over-the-counter markets and electricity exchanges for trading energy, capacity, balancing and ancillary services in all time-frames, including forward, day-ahead and intra-day markets.

3. Network or retail tariffs may support dynamic pricing for demand response measures by final customers, such as:

(a) time-of-use tariffs;

(b) critical peak pricing;

(c) real time pricing; and

(d) peak time rebates.

ANNEX XII

ENERGY EFFICIENCY REQUIREMENTS FOR TRANSMISSION SYSTEM OPERATORS AND DISTRIBUTION SYSTEM OPERATORS

Transmission system operators and distribution system operators shall:

(a) **set up and make public their standard rules relating to the bearing and sharing of costs of technical adaptations, such as grid connections, grid reinforcements and the introduction of new grids, improved operation of the grid and rules on the non-discriminatory implementation of the grid codes, which are necessary in order to integrate new producers feeding electricity produced from high-efficiency cogeneration into the interconnected grid;**

(b) provide any new producer of electricity produced from high-efficiency cogeneration wishing to be connected to the system with the comprehensive and necessary information required, including:

- (i) a comprehensive and detailed estimate of the costs associated with the connection;
- (ii) a reasonable and precise timetable for receiving and processing the request for grid connection;
- (iii) a reasonable indicative timetable for any proposed grid connection. The overall process to become connected to the grid should be no longer than 24 months, bearing in mind what is reasonably practicable and non-discriminatory;

(c) provide standardised and simplified procedures for the connection of distributed high-efficiency cogeneration producers to facilitate their connection to the grid.

The standard rules referred to in point (a) shall be based on objective, transparent and non-discriminatory criteria taking particular account of all the costs and benefits associated with the connection of those producers to the grid. They may provide for different types of connection.

ANNEX XIII

MINIMUM ITEMS TO BE INCLUDED IN ENERGY PERFORMANCE CONTRACTS WITH THE PUBLIC SECTOR OR IN THE ASSOCIATED TENDER SPECIFICATIONS

- Clear and transparent list of the efficiency measures to be implemented or the efficiency results to be obtained.
- Guaranteed savings to be achieved by implementing the measures of the contract.
- Duration and milestones of the contract, terms and period of notice.
- Clear and transparent list of the obligations of each **Contracting Party**.
- Reference date(s) to establish achieved savings.
- Clear and transparent list of steps to be performed to implement a measure or package of measures and, where relevant, associated costs.
- Obligation to fully implement the measures in the contract and documentation of all changes made during the project.
- Regulations specifying the inclusion of equivalent requirements in any subcontracting with third parties.
- Clear and transparent display of financial implications of the project and distribution of the share of both parties in the monetary savings achieved (i.e. remuneration of the service provider).
- Clear and transparent provisions on measurement and verification of the guaranteed savings achieved, quality checks and guarantees.
- Provisions clarifying the procedure to deal with changing framework conditions that affect the content and the outcome of the contract (i.e. changing energy prices, use intensity of an installation).
- Detailed information on the obligations of each of the **Contracting Party** and of the penalties for their breach.

ANNEX XIV



ANNEX XV

CORRELATION TABLE

Directive 2004/8/EC	This Directive
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<...>³⁶

Directive 2006/32/EC	This Directive
Article 1	Article 1(1)
Article 2	Article 1(1)
Article 3, point (a)	Article 2, point (1)
Article 3, point (b)	Article 2, point (4)
Article 3, point (c)	Article 2, point (6)
Article 3, point (d)	Article 2, point (5)
—	Article 2, points (2) and (3)
Article 3, point (e)	Article 2, point (7)
Article 3, points (f), (g), (h) and (i)	—
—	Article 2, points (8) to (19)
Article 3, point (j)	Article 2, point (27)
—	Article 2, point (28)
Article 3, point (k)	—
Article 3, point (l)	Article 2, point (25)
—	Article 2, point (26)
Article 3, point (m)	—
Article 3, point (n)	Article 2, point (23)
Article 3, point (o)	Article 2, point (20)
Article 3, point (p)	Article 2, point (21)
Article 3, point (q)	Article 2, point (22)
Article 3, points (r) and (s)	—
—	Article 2, points (24), (29), (44) and (45)
—	Article 3
—	Article 4
Article 4	—
Article 5	Articles 5 and 6
Article 6(1)(a)	Article 7(8), points (a) and (b)

³⁶ In Annex XV, the correlation table rows relating to Directive 2004/8/EC shall not be applicable

Article 6(1)(b)	Article 18(3)
Article 6(2)	Article 7(1), (5), (6), (7), (9), (10), (11) and (12)
—	Article 7(2) and (3)
Article 6(3)	Article 18(2), points (b) and (c)
Article 6(5)	—
Article 7	Article 17
Article 8	Article 16(1)
—	Article 16(2) and (3)
Article 9(1)	Article 19
Article 9(2)	Article 18(1), point (d), subpoint (i)
—	Article 18(1), points (a), (b), (c), (d), subpoint (ii), and (e)
Article 10(1)	Article 15(4)
Article 10(2)	Article 15(3)
—	Article 15(7), (8) and (9)
Article 11	Article 20
Article 12(1)	Article 8(1)
Article 12(2)	—
—	Article 8(2), (3), (4), (5), (6) and (7)
Article 12(3)	—
Article 13(1)	Article 9
Article 13(2)	Article 10 and Annex VII, point 1.1
Article 13(3)	Annex VII, points 1.2 and 1.3
—	Article 11
—	Article 12
—	Article 13
—	Article 15(1) and (2)
—	Article 18(2), points (a) and (d)
—	Article 21
Article 14(1) and (2)	Article 24(1) and (2)
Article 14(3)	—
Article 14(4) and (5)	Article 24(3)
—	Article 24(4) and (7) to (11)
—	Article 22(1)
Article 15(1)	Article 22(2)
Article 15(2), (3) and (4)	—
—	Article 23

—	Article 25
Article 16	Article 26
Article 17	Article 27
Article 18	Article 28
Article 19	Article 29
Article 20	Article 30
Annex I	—
Annex II	Annex IV
Annex III	—
Annex IV	—
Annex V	—
Annex VI	Annex III
—	Annex V
—	Annex VI
—	Annex VII
—	Annex XI
—	Annex XII
—	Annex XIII
—	Annex XIV
—	Annex XV

ANNEX X

Guarantee of origin for electricity produced from high-efficiency cogeneration

(a) Contracting Parties shall take measures to ensure that:

(i) the guarantee of origin of the electricity produced from high-efficiency cogeneration:

- enable producers to demonstrate that the electricity they sell is produced from high-efficiency cogeneration and is issued to this effect in response to a request from the producer,
- is accurate, reliable and fraud-resistant,
- is issued, transferred and cancelled electronically;

(ii) the same unit of energy from high-efficiency cogeneration is taken into account only once.

(b) The guarantee of origin referred to in Article 14(10) shall contain at least the following information:

- (i) the identity, location, type and capacity (thermal and electrical) of the installation where the energy was produced;
- (ii) the dates and places of production;
- (iii) the lower calorific value of the fuel source from which the electricity was produced;
- (iv) the quantity and the use of the heat generated together with the electricity;

- (v) the quantity of electricity from high-efficiency cogeneration in accordance with Annex II that the guarantee represents;
- (vi) the primary energy savings calculated in accordance with Annex II based on the harmonised efficiency reference values indicated in point (f) of Annex II;
- (vii) the nominal electric and thermal efficiency of the plant;
- (viii) whether and to what extent the installation has benefited from investment support;
- (ix) whether and to what extent the unit of energy has benefited in any other way from a national support scheme, and the type of support scheme;
- (x) the date on which the installation became operational; and
- (xi) the date and country of issue and a unique identification number.

The guarantee of origin shall be of the standard size of 1 MWh. It shall relate to the net electricity output measured at the station boundary and exported to the grid.

ANNEX XI

Energy efficiency criteria for energy network regulation and for electricity network tariffs

1. Network tariffs shall be cost-reflective of cost-savings in networks achieved from demand-side and demand-response measures and distributed generation, including savings from lowering the cost of delivery or of network investment and a more optimal operation of the network.
2. Network regulation and tariffs shall not prevent network operators or energy retailers making available system services for demand response measures, demand management and distributed generation on organised electricity markets, in particular:
 - (a) the shifting of the load from peak to off-peak times by final customers taking into account the availability of renewable energy, energy from cogeneration and distributed generation;
 - (b) energy savings from demand response of distributed consumers by energy aggregators;
 - (c) demand reduction from energy efficiency measures undertaken by energy service providers, including energy service companies;
 - (d) the connection and dispatch of generation sources at lower voltage levels;
 - (e) the connection of generation sources from closer location to the consumption; and
 - (f) the storage of energy. For the purposes of this provision the term 'organised electricity markets' shall include over-the-counter markets and electricity exchanges for trading energy, capacity, balancing and ancillary services in all timeframes, including forward, day-ahead and intra-day markets.
3. Network or retail tariffs may support dynamic pricing for demand response measures by final customers, such as:
 - (a) time-of-use tariffs;
 - (b) critical peak pricing;
 - (c) real time pricing; and
 - (d) peak time rebates.

ANNEX XII

Energy efficiency requirements for transmission system operators and distribution system operators

Transmission system operators and distribution system operators shall:

(a) set up and make public their standard rules relating to the bearing and sharing of costs of technical adaptations, such as grid connections and grid reinforcements, improved operation of the grid and rules on the non-discriminatory implementation of the grid codes, which are necessary in order to integrate new producers feeding electricity produced from high-efficiency cogeneration into the interconnected grid;

(b) provide any new producer of electricity produced from high-efficiency cogeneration wishing to be connected to the system with the comprehensive and necessary information required, including:

(i) a comprehensive and detailed estimate of the costs associated with the connection;

(ii) a reasonable and precise timetable for receiving and processing the request for grid connection;

(iii) a reasonable indicative timetable for any proposed grid connection. The overall process to become connected to the grid should be no longer than 24 months, bearing in mind what is reasonably practicable and non-discriminatory;

(c) provide standardised and simplified procedures for the connection of distributed high-efficiency cogeneration producers to facilitate their connection to the grid.

The standard rules referred to in point (a) shall be based on objective, transparent and non-discriminatory criteria taking particular account of all the costs and benefits associated with the connection of those producers to the grid. They may provide for different types of connection.

ANNEX XIII

Minimum items to be included in energy performance contracts with the public sector or in the associated tender specifications

- Clear and transparent list of the efficiency measures to be implemented or the efficiency results to be obtained.
- Guaranteed savings to be achieved by implementing the measures of the contract.
- Duration and milestones of the contract, terms and period of notice.
- Clear and transparent list of the obligations of each contracting party.
- Reference date(s) to establish achieved savings.
- Clear and transparent list of steps to be performed to implement a measure or package of measures and, where relevant, associated costs.
- Obligation to fully implement the measures in the contract and documentation of all changes made during the project.
- Regulations specifying the inclusion of equivalent requirements in any subcontracting with third parties.
- Clear and transparent display of financial implications of the project and distribution of the share of both parties in the monetary savings achieved (i.e. remuneration of the service provider).
- Clear and transparent provisions on measurement and verification of the guaranteed savings achieved, quality checks and guarantees.
- Provisions clarifying the procedure to deal with changing framework conditions that affect the content and the outcome of the contract (i.e. changing energy prices, use intensity of an installation).
- Detailed information on the obligations of each of the contracting party and of the penalties for their breach.

ANNEX XIV

General framework for reporting

PART 1

General framework for annual reports

The annual reports referred to in Article 24(1) provide a basis for the monitoring of the progress towards national 2020 targets. **Contracting Parties** shall ensure that the reports include the following minimum information:

- (a) an estimate of following indicators in the year before last (year X³⁷ (1) - 2):
- (i) primary energy consumption;
 - (ii) total final energy consumption;
 - (iii) final energy consumption by sector
 - industry
 - transport (split between passenger and freight transport, if available)
 - households
 - services;
 - (iv) gross value added by sector
 - industry
 - services;
 - (v) disposable income of households;
 - (vi) gross domestic product (GDP);
 - (vii) electricity generation from thermal power generation;
 - (viii) electricity generation from combined heat and power;
 - (ix) heat generation from thermal power generation;
 - (x) heat generation from combined heat and power plants, including industrial waste heat;
 - (xi) fuel input for thermal power generation;
 - (xii) passenger kilometres (pkm), if available;
 - (xiii) tonne kilometres (tkm), if available;
 - (xiv) combined transport kilometres (pkm + tkm), in case (xii) and (xiii) are not available;
 - (xv) population.

In sectors where energy consumption remains stable or is growing, Contracting Parties shall analyse the reasons for it and attach their appraisal to the estimates.

The second and subsequent reports shall also include points (b) to (e):

- (b) updates on major legislative and non-legislative measures implemented in the previous year which contribute towards the overall national energy efficiency targets for 2020;

³⁷ X = current year

(c) the total building floor area of the buildings with a total useful floor area over 500 m² and as of **1 January 2019** over 250 m² owned and occupied by the **Contracting Parties** central government that, on 1 January of the year in which the report is due, did not meet the energy performance requirements referred to in Article 5(1);

(d) the total building floor area of heated and/or cooled buildings owned and occupied by the **Contracting Parties** central government that was renovated in the previous year referred to in Article 5(1) or the amount of energy savings in eligible buildings owned and occupied by their central government as referred to in Article 5(6);

(e) energy savings achieved through the national energy efficiency obligation schemes referred to in Article 7(1) or the alternative measures adopted in application of Article 7(9).

The first report shall also include the national target referred to in Article 3(1).

In the annual reports referred to in Article 24(1) **Contracting Parties** may also include additional national targets. These may be related in particular to the statistical indicators enumerated in point

(a) of this Part or combinations thereof, such as primary or final energy intensity or sectoral energy intensities.

PART 2

General framework for National Energy Efficiency Action Plans

National Energy Efficiency Action Plans referred to in Article 24(2) shall provide a framework for the development of national energy efficiency strategies.

The National Energy Efficiency Action Plans shall cover significant energy efficiency improvement measures and expected/achieved energy savings, including those in the supply, transmission and distribution of energy as well as energy end-use. Contracting Parties shall ensure that the National Energy Efficiency Action Plans include the following minimum information:

1. Targets and strategies

- the indicative national energy efficiency target for 2020 as required by Article 3(1),
- the national indicative energy savings target set in Article 4(1) of Directive 2006/32/EC, **as incorporated and adapted by the Ministerial Council Decision 2009/05/MC-EnC**,
- other existing energy efficiency targets addressing the whole economy or specific sectors.

2. Measures and energy savings

The National Energy Efficiency Action Plans shall provide information on measures adopted or planned to be adopted in view of implementing the main elements of this Directive and on their related savings.

(a) Primary energy savings

The National Energy Efficiency Action Plans shall list significant measures and actions taken towards primary energy saving in all sectors of the economy. For every measure or package of measures/ actions estimations of expected savings for 2020 and savings achieved by the time of the reporting shall be provided.

Where available, information on other impacts/benefits of the measures (greenhouse gas emissions reduction, improved air quality, job creation, etc.) and the budget for the implementation should be provided.

(b) Final energy savings

The first and second National Energy Efficiency Action Plans shall include the results with regard to the fulfilment of the final energy savings target set out in Article 4(1) and (2) of the Directive 2006/32/EC, **as**

incorporated and adapted by the Ministerial Council Decision 2009/05/MCEnC. If calculation/estimation of savings per measure is not available, sector level energy reduction shall be shown due to (the combination) of measures.

The first and second National Energy Efficiency Action Plans shall also include the measurement and/or calculation methodology used for calculating the energy savings. If the 'recommended methodology'³⁸ is applied, the National Energy Efficiency Action Plan should provide references to this.

3. *Specific information related to this Directive*

3.1. Public bodies (Article 5)

National Energy Efficiency Action Plans shall include the list of public bodies having developed an energy efficiency plan in accordance with Article 5(7).

3.2. Energy efficiency obligations (Article 7)

National Energy Efficiency Action Plans shall include the national coefficients chosen in accordance with Annex IV.

The first National Energy Efficiency Action Plan shall include a short description of the national scheme referred to in Article 7(1) or the alternative measures adopted in application of Article 7(9).

3.3. Energy audits and management systems (Article 8) National Energy Efficiency Action Plans shall include:

- (a) the number of energy audits carried out in the previous period;
- (b) the number of energy audits carried out in large enterprises in the previous period;
- (c) the number of large companies in their territory, with an indication of the number of those to which Article 8(5) is applicable.

3.4. Promotion of efficient heating and cooling (Article 14)

National Energy Efficiency Action Plans shall include an assessment of the progress achieved in implementing the comprehensive assessment referred to in Article 14(1).

3.5. Energy transmission and distribution (Article 15)

The first National Energy Efficiency Action Plan and the subsequent reports due every 10 years thereafter shall include the assessment made, the measures and investments identified to utilise the energy efficiency potentials of gas and electricity infrastructure referred to in Article 15(2).

3.6. **Contracting Parties** shall report, as part of their National Energy Efficiency Action Plans, on the measures undertaken to enable and develop demand response as referred to in Article 15.

3.7. Availability of qualification, accreditation and certification schemes (Article 16)

National Energy Efficiency Action Plans shall include information on the available qualification, accreditation and certification schemes or equivalent qualification schemes for the providers of energy services, energy audits and energy efficiency improvement measures.

3.8. Energy Services (Article 18)

National Energy Efficiency Action Plans shall include an internet link to the website where the list or the interface of energy services providers referred to in point (c) of Article 18(1) can be accessible.

3.9. Other measures to promote energy efficiency (Article 19)

The first National Energy Efficiency Action Plan shall include a list of the measures referred to in Article 19(1).

³⁸ Recommendations on Measurement and Verification Methods in the framework of the Directive 2006/32/EC on Energy End-Use Efficiency and Energy Services.

DIRECTIVE 2010/31/EU of 19 May 2010 on the energy performance of buildings

Incorporated and adapted by Ministerial Council Decision 2010/02/MC-EnC of 24 September 2010 amending Decision 2009/05/MC-EnC of 18 December 2009 on the implementation of certain Directives on Energy Efficiency.

*The adaptations made by Ministerial Council Decision 2010/02/MC-EnC are highlighted in **bold and blue**.*

Article 1

Subject matter

1. This Directive promotes the improvement of the energy performance of buildings within the **Energy Community**, taking into account outdoor climatic and local conditions, as well as indoor climate requirements and cost-effectiveness.
2. This Directive lays down requirements as regards:
 - (a) the common general framework for a methodology for calculating the integrated energy performance of buildings and building units;
 - (b) the application of minimum requirements to the energy performance of new buildings and new building units;
 - (c) the application of minimum requirements to the energy performance of:
 - (i) existing buildings, building units and building elements that are subject to major renovation;
 - (ii) building elements that form part of the building envelope and that have a significant impact on the energy performance of the building envelope when they are retrofitted or replaced; and
 - (iii) technical building systems whenever they are installed, replaced or upgraded;
 - (d) national plans for increasing the number of nearly zero-energy buildings;
 - (e) energy certification of buildings or building units;
 - (f) regular inspection of heating and air-conditioning systems in buildings; and
 - (g) independent control systems for energy performance certificates and inspection reports.
3. The requirements laid down in this Directive are minimum requirements and shall not prevent any **Contracting Party** from maintaining or introducing more stringent measures. Such measures shall be compatible with the Treaty on the Functioning of the European Union. They shall be notified to the **Secretariat**.

Article 2

Definitions

For the purpose of this Directive, the following definitions shall apply:

1. "building" means a roofed construction having walls, for which energy is used to condition the indoor climate;
2. "nearly zero-energy building" means a building that has a very high energy performance, as determined in accordance with Annex I. The nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby;
3. "technical building system" means technical equipment for the heating, cooling, ventilation, hot water, lighting or for a combination thereof, of a building or building unit;
4. "energy performance of a building" means the calculated or measured amount of energy needed to meet the energy demand associated with a typical use of the building, which includes, *inter alia*, energy used for heating, cooling, ventilation, hot water and lighting;
5. "primary energy" means energy from renewable and non-renewable sources which has not undergone any conversion or transformation process;
6. "energy from renewable sources" means energy from renewable non-fossil sources, namely wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases;
7. "building envelope" means the integrated elements of a building which separate its interior from the outdoor environment;
8. "building unit" means a section, floor or apartment within a building which is designed or altered to be used separately;
9. "building element" means a technical building system or an element of the building envelope;
10. "major renovation" means the renovation of a building where:
 - (a) the total cost of the renovation relating to the building envelope or the technical building systems is higher than 25% of the value of the building, excluding the value of the land upon which the building is situated; or
 - (b) more than 25% of the surface of the building envelope undergoes renovation; **Contracting Parties** may choose to apply option (a) or (b).
11. "European standard" means a standard adopted by the European Committee for Standardisation, the European Committee for Electrotechnical Standardisation or the European Telecommunications Standards Institute and made available for public use;
12. "energy performance certificate" means a certificate recognised by a **Contracting Party** or by a legal person designated by it, which indicates the energy performance of a building or building unit, calculated according to a methodology adopted in accordance with Article 3;
13. "cogeneration" means simultaneous generation in one process of thermal energy and electrical and/or mechanical energy;

14. “cost-optimal level” means the energy performance level which leads to the lowest cost during the estimated economic lifecycle, where:

(a) the lowest cost is determined taking into account energy-related investment costs, maintenance and operating costs (including energy costs and savings, the category of building concerned, earnings from energy produced), where applicable, and disposal costs, where applicable; and

(b) the estimated economic lifecycle is determined by each **Contracting Party**. It refers to the remaining estimated economic lifecycle of a building where energy performance requirements are set for the building as a whole, or to the estimated economic lifecycle of a building element where energy performance requirements are set for building elements.

The cost-optimal level shall lie within the range of performance levels where the cost benefit analysis calculated over the estimated economic lifecycle is positive;

15. “air-conditioning system” means a combination of the components required to provide a form of indoor air treatment, by which temperature is controlled or can be lowered;

16. “boiler” means the combined boiler body-burner unit, designed to transmit to fluids the heat released from burning;

17. “effective rated output” means the maximum calorific output, expressed in kW, specified and guaranteed by the manufacturer as being deliverable during continuous operation while complying with the useful efficiency indicated by the manufacturer;

18. “heat pump” means a machine, a device or installation that transfers heat from natural surroundings such as air, water or ground to buildings or industrial applications by reversing the natural flow of heat such that it flows from a lower to a higher temperature. For reversible heat pumps, it may also move heat from the building to the natural surroundings;

19. “district heating” or “district cooling” means the distribution of thermal energy in the form of steam, hot water or chilled liquids, from a central source of production through a network to multiple buildings or sites, for the use of space or process heating or cooling.

Article 3

Adoption of a methodology for calculating the energy performance of buildings

Contracting Parties shall apply a methodology for calculating the energy performance of buildings in accordance with the common general framework set out in Annex I.

This methodology shall be adopted at national or regional level.

Article 4

Setting of minimum energy performance requirements

1. **Contracting Parties** shall take the necessary measures to ensure that minimum energy performance requirements for buildings or building units are set with a view to achieving cost-optimal levels. The energy performance shall be calculated in accordance with the methodology referred to in Article 3. Cost-optimal

levels shall be calculated in accordance with the comparative methodology framework referred to in Article 5 once the framework is in place.

Contracting Parties shall take the necessary measures to ensure that minimum energy performance requirements are set for building elements that form part of the building envelope and that have a significant impact on the energy performance of the building envelope when they are replaced or retrofitted, with a view to achieving cost-optimal levels.

When setting requirements, **Contracting Parties** may differentiate between new and existing buildings and between different categories of buildings.

These requirements shall take account of general indoor climate conditions, in order to avoid possible negative effects such as inadequate ventilation, as well as local conditions and the designated function and the age of the building.

A **Contracting Party** shall not be required to set minimum energy performance requirements which are not cost-effective over the estimated economic lifecycle.

Minimum energy performance requirements shall be reviewed at regular intervals which shall not be longer than five years and, if necessary, shall be updated in order to reflect technical progress in the building sector.

2. **Contracting Parties** may decide not to set or apply the requirements referred to in paragraph 1 to the following categories of buildings:

(a) buildings officially protected as part of a designated environment or because of their special architectural or historical merit, in so far as compliance with certain minimum energy performance requirements would unacceptably alter their character or appearance;

(b) buildings used as places of worship and for religious activities;

(c) temporary buildings with a time of use of two years or less, industrial sites, workshops and non-residential agricultural buildings with low energy demand and non-residential agricultural buildings which are in use by a sector covered by a national sectoral agreement on energy performance;

(d) residential buildings which are used or intended to be used for either less than four months of the year or, alternatively, for a limited annual time of use and with an expected energy consumption of less than 25% of what would be the result of all-year use;

(e) stand-alone buildings with a total useful floor area of less than 50 m².

Article 5

Calculation of cost-optimal levels of minimum energy performance requirements

1. The Commission shall establish by means of delegated acts in accordance with Articles 23, 24 and 25 by 30 June 2011 a comparative methodology framework for calculating cost-optimal levels of minimum energy performance requirements for buildings and building elements.

The comparative methodology framework shall be established in accordance with Annex III and shall differentiate between new and existing buildings and between different categories of buildings.

2. **Contracting Parties** shall calculate cost-optimal levels of minimum energy performance requirements using the comparative methodology framework established in accordance with paragraph 1 and relevant

parameters, such as climatic conditions and the practical accessibility of energy infrastructure, and compare the results of this calculation with the minimum energy performance requirements in force.

Contracting Parties shall report to the **Secretariat** all input data and assumptions used for those calculations and the results of those calculations. The report may be included in the Energy Efficiency Action Plans referred to in Article 14(2) of Directive 2006/32/EC. **Contracting Parties** shall submit those reports to the **Secretariat** at regular intervals, which shall not be longer than five years. The first report shall be submitted by **30 June 2013**.

3. If the result of the comparison performed in accordance with paragraph 2 shows that the minimum energy performance requirements in force are significantly less energy efficient than cost-optimal levels of minimum energy performance requirements, the **Contracting Party** concerned shall justify this difference in writing to the **Secretariat** in the report referred to in paragraph 2, accompanied, to the extent that the gap cannot be justified, by a plan outlining appropriate steps to significantly reduce the gap by the next review of the energy performance requirements as referred to in Article 4(1).

4. The **Secretariat** shall publish a report on the progress of the **Contracting Parties** in reaching cost-optimal levels of minimum energy performance requirements.

Article 6

New buildings

1. **Contracting Parties** shall take the necessary measures to ensure that new buildings meet the minimum energy performance requirements set in accordance with Article 4.

For new buildings, **Contracting Parties** shall ensure that, before construction starts, the technical, environmental and economic feasibility of high-efficiency alternative systems such as those listed below, if available, is considered and taken into account:

- (a) decentralised energy supply systems based on energy from renewable sources;
- (b) cogeneration;
- (c) district or block heating or cooling, particularly where it is based entirely or partially on energy from renewable sources;
- (d) heat pumps.

2. **Contracting Parties** shall ensure that the analysis of alternative systems referred to in paragraph 1 is documented and available for verification purposes.

3. That analysis of alternative systems may be carried out for individual buildings or for groups of similar buildings or for common typologies of buildings in the same area. As far as collective heating and cooling systems are concerned, the analysis may be carried out for all buildings connected to the system in the same area.

Article 7

Existing buildings

Contracting Parties shall take the necessary measures to ensure that when buildings undergo major renovation, the energy performance of the building or the renovated part thereof is upgraded in order to meet minimum energy performance requirements set in accordance with Article 4 in so far as this is technically, functionally and economically feasible.

Those requirements shall be applied to the renovated building or building unit as a whole. Additionally or alternatively, requirements may be applied to the renovated building elements.

Contracting Parties shall in addition take the necessary measures to ensure that when a building element that forms part of the building envelope and has a significant impact on the energy performance of the building envelope, is retrofitted or replaced, the energy performance of the building element meets minimum energy performance requirements in so far as this is technically, functionally and economically feasible.

Contracting Parties shall determine these minimum energy performance requirements in accordance with Article 4.

Contracting Parties shall encourage, in relation to buildings undergoing major renovation, the consideration and taking into account of high-efficiency alternative systems, as referred to in Article 6(1), in so far as this is technically, functionally and economically feasible.

Article 8

Technical building systems

1. **Contracting Parties** shall, for the purpose of optimising the energy use of technical building systems, set system requirements in respect of the overall energy performance, the proper installation, and the appropriate dimensioning, adjustment and control of the technical building systems which are installed in existing buildings. **Contracting Parties** may also apply these system requirements to new buildings.

System requirements shall be set for new, replacement and upgrading of technical building systems and shall be applied in so far as they are technically, economically and functionally feasible.

The system requirements shall cover at least the following:

- (a) heating systems;
 - (b) hot water systems;
 - (c) air-conditioning systems;
 - (d) large ventilation systems;
- or a combination of such systems.

2. **Contracting Parties** shall encourage the introduction of intelligent metering systems whenever a building is constructed or undergoes major renovation, whilst ensuring that this encouragement is in line with point 2 of Annex I to Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity. **Contracting Parties** may furthermore encourage, where appropriate, the installation of active control systems such as automation, control and monitoring systems that aim to save energy.

Article 9

Nearly zero-energy buildings

1. **Contracting Parties** shall ensure that:

(a) by **30 June 2021**, all new buildings are nearly zero-energy buildings; and

(b) after **30 June 2019**, new buildings occupied and owned by public authorities are nearly zero-energy buildings.

Contracting Parties shall draw up national plans for increasing the number of nearly zero-energy buildings. These national plans may include targets differentiated according to the category of building.

2. **Contracting Parties** shall furthermore, following the leading example of the public sector, develop policies and take measures such as the setting of targets in order to stimulate the transformation of buildings that are refurbished into nearly zero-energy buildings, and inform the **Secretariat** thereof in their national plans referred to in paragraph 1.

3. The national plans shall include, *inter alia*, the following elements:

(a) the **Contracting Party's** detailed application in practice of the definition of nearly zero-energy buildings, reflecting their national, regional or local conditions, and including a numerical indicator of primary energy use expressed in kWh/m² per year. Primary energy factors used for the determination of the primary energy use may be based on national or regional yearly average values and may take into account relevant European standards;

(b) intermediate targets for improving the energy performance of new buildings, by 2015, with a view to preparing the implementation of paragraph 1;

(c) information on the policies and financial or other measures adopted in the context of paragraphs 1 and 2 for the promotion of nearly zero-energy buildings, including details of national requirements and measures concerning the use of energy from renewable sources in new buildings and existing buildings undergoing major renovation in the context of Article 13(4) of Directive 2009/28/EC and Articles 6 and 7 of this Directive.

4. The **Secretariat** shall evaluate the national plans referred to in paragraph 1, notably the adequacy of the measures envisaged by the **Contracting Party** in relation to the objectives of this Directive. The **Secretariat**, taking due account of the principle of subsidiarity, may request further specific information regarding the requirements set out in paragraphs 1, 2 and 3. In that case, the **Contracting Party** concerned shall submit the requested information or propose amendments within nine months following the request from the Secretariat. **Following its evaluation, the Secretariat may propose a recommendation to the Ministerial Council.**

5. The **Secretariat** shall by **31 December 2013** and every three years thereafter publish a report on the progress of **Contracting Parties** in increasing the number of nearly zero-energy buildings. On the basis of that report the **Secretariat** shall develop an action plan and, if necessary, propose measures to increase the number of those buildings and encourage best practices as regards the cost-effective transformation of existing buildings into nearly zero-energy buildings.

6. **Contracting Parties** may decide not to apply the requirements set out in points (a) and (b) of paragraph 1 in specific and justifiable cases where the cost-benefit analysis over the economic lifecycle of the

building in question is negative. **Contracting Parties** shall inform the **Secretariat** of the principles of the relevant legislative regimes.

Article 10

Financial incentives and market barriers

1. In view of the importance of providing appropriate financing and other instruments to catalyse the energy performance of buildings and the transition to nearly zero-energy buildings, **Contracting Parties** shall take appropriate steps to consider the most relevant such instruments in the light of national circumstances.

2. **Contracting Parties** shall draw up, by **30 June 2013**, a list of existing and, if appropriate, proposed measures and instruments including those of a financial nature, other than those required by this Directive, which promote the objectives of this Directive.

Contracting Parties shall update this list every three years. **Contracting Parties** shall communicate these lists to the **Secretariat**, which they may do by including them in the Energy Efficiency Action Plans referred to in Article 14(2) of Directive 2006/32/EC.

3. The **Secretariat** shall examine the effectiveness of the listed existing and proposed measures referred to in paragraph 2 as well as of relevant Union instruments, in supporting the implementation of this Directive. On the basis of that examination, and taking due account of the principle of subsidiarity, the **Secretariat** may provide advice < ... > as regards specific national schemes and coordination with Union and international financial institutions. The **Secretariat** may include its examination and possible advice or recommendations in its report on the National Energy Efficiency Plans referred to in Article 14(5) of Directive 2006/32/EC.

4. The **Secretariat** shall, where appropriate, assist upon request **Contracting Parties** in setting up national or regional financial support programmes with the aim of increasing energy efficiency in buildings, especially of existing buildings, by supporting the exchange of best practice between the responsible national or regional authorities or bodies.

5. In order to improve financing in support of the implementation of this Directive and taking due account of the principle of subsidiarity, the Commission shall, preferably by 2011, present an analysis on, in particular:

(a) the effectiveness, the appropriateness of the level, and the actual amount used, of structural funds and framework programmes that were used for increasing energy efficiency in buildings, especially in housing;

(b) the effectiveness of the use of funds from the EIB and other public finance institutions;

(c) the coordination of Union and national funding and other forms of support that can act as a leverage for stimulating investments in energy efficiency and the adequacy of such funds for achieving Union objectives.

On the basis of that analysis, and in accordance with the multiannual financial framework, the Commission may subsequently submit, if it considers this appropriate, proposals with respect to Union instruments to the European Parliament and the Council.

6. **Contracting Parties** shall take account of the cost-optimal levels of energy performance when providing incentives for the construction or major renovation of buildings.

7. The provisions of this Directive shall not prevent **Contracting Parties** from providing incentives for new buildings, renovations or building elements which go beyond the cost-optimal levels.

Article 11

Energy performance certificates

1. **Contracting Parties** shall lay down the necessary measures to establish a system of certification of the energy performance of buildings. The energy performance certificate shall include the energy performance of a building and reference values such as minimum energy performance requirements in order to make it possible for owners or tenants of the building or building unit to compare and assess its energy performance.

The energy performance certificate may include additional information such as the annual energy consumption for non-residential buildings and the percentage of energy from renewable sources in the total energy consumption.

2. The energy performance certificate shall include recommendations for the cost-optimal or cost-effective improvement of the energy performance of a building or building unit, unless there is no reasonable potential for such improvement compared to the energy performance requirements in force.

The recommendations included in the energy performance certificate shall cover:

(a) measures carried out in connection with a major renovation of the building envelope or technical building system(s); and

(b) measures for individual building elements independent of a major renovation of the building envelope or technical building system(s).

3. The recommendations included in the energy performance certificate shall be technically feasible for the specific building and may provide an estimate for the range of payback periods or cost-benefits over its economic lifecycle.

4. The energy performance certificate shall provide an indication as to where the owner or tenant can receive more detailed information, including as regards the cost-effectiveness of the recommendations made in the energy performance certificate. The evaluation of cost effectiveness shall be based on a set of standard conditions, such as the assessment of energy savings and underlying energy prices and a preliminary cost forecast. In addition, it shall contain information on the steps to be taken to implement the recommendations. Other information on related topics, such as energy audits or incentives of a financial or other nature and financing possibilities may also be provided to the owner or tenant.

5. Subject to national rules, **Contracting Parties** shall encourage public authorities to take into account the leading role which they should play in the field of energy performance of buildings, *inter alia*, by implementing the recommendations included in the energy performance certificate issued for buildings owned by them within its validity period.

6. Certification for building units may be based:

(a) on a common certification of the whole building; or

(b) on the assessment of another representative building unit with the same energy-relevant characteristics in the same building.

7. Certification for single-family houses may be based on the assessment of another representative building of similar design and size with a similar actual energy performance quality if such correspondence can be

guaranteed by the expert issuing the energy performance certificate.

8. The validity of the energy performance certificate shall not exceed 10 years.

9. The Commission shall, by 2011, in consultation with the relevant sectors, adopt a voluntary common European Union certification scheme for the energy performance of non-residential buildings. That measure shall be adopted in accordance with the advisory procedure referred to in Article 26(2). **Contracting Parties** are encouraged to recognise or use the scheme, or use part thereof by adapting it to national circumstances.

Article 12

Issue of energy performance certificates

1. **Contracting Parties** shall ensure that an energy performance certificate is issued for:

- (a) buildings or building units which are constructed, sold or rented out to a new tenant; and
- (b) buildings where a total useful floor area over 500 m² is occupied by a public authority and frequently visited by the public. On **30 September 2015**, this threshold of 500 m² shall be lowered to 250 m².

The requirement to issue an energy performance certificate does not apply where a certificate, issued in accordance with either Directive 2002/91/EC or this Directive, for the building or building unit concerned is available and valid.

2. **Contracting Parties** shall require that, when buildings or building units are constructed, sold or rented out, the energy performance certificate or a copy thereof is shown to the prospective new tenant or buyer and handed over to the buyer or new tenant.

3. Where a building is sold or rented out in advance of construction, **Contracting Parties** may require the seller to provide an assessment of its future energy performance, as a derogation from paragraphs 1 and 2; in this case, the energy performance certificate shall be issued at the latest once the building has been constructed.

4. **Contracting Parties** shall require that when:

- buildings having an energy performance certificate,
- building units in a building having an energy performance certificate, and
- building units having an energy performance certificate,

are offered for sale or for rent, the energy performance indicator of the energy performance certificate of the building or the building unit, as applicable, is stated in the advertisements in commercial media.

5. The provisions of this Article shall be implemented in accordance with applicable national rules on joint ownership or common property.

6. **Contracting Parties** may exclude the categories of buildings referred to in Article 4(2) from the application of paragraphs 1, 2, 4 and 5 of this Article.

7. The possible effects of energy performance certificates in terms of legal proceedings, if any, shall be decided in accordance with national rules.

Article 13

Display of energy performance certificates

1. **Contracting Parties** shall take measures to ensure that where a total useful floor area over 500 m² of a building for which an energy performance certificate has been issued in accordance with Article 12(1) is occupied by public authorities and frequently visited by the public, the energy performance certificate is displayed in a prominent place clearly visible to the public.

On **30 September 2015**, this threshold of 500 m² shall be lowered to 250 m².

2. **Contracting Parties** shall require that where a total useful floor area over 500 m² of a building for which an energy performance certificate has been issued in accordance with Article 12(1) is frequently visited by the public, the energy performance certificate is displayed in a prominent place clearly visible to the public.

3. The provisions of this Article do not include an obligation to display the recommendations included in the energy performance certificate.

Article 14

Inspection of heating systems

1. **Contracting Parties** shall lay down the necessary measures to establish a regular inspection of the accessible parts of systems used for heating buildings, such as the heat generator, control system and circulation pump(s), with boilers of an effective rated output for space heating purposes of more than 20 kW. That inspection shall include an assessment of the boiler efficiency and the boiler sizing compared with the heating requirements of the building. The assessment of the boiler sizing does not have to be repeated as long as no changes were made to the heating system or as regards the heating requirements of the building in the meantime.

Contracting Parties may reduce the frequency of such inspections or lighten them as appropriate, where an electronic monitoring and control system is in place.

2. **Contracting Parties** may set different inspection frequencies depending on the type and effective rated output of the heating system whilst taking into account the costs of the inspection of the heating system and the estimated energy cost savings that may result from the inspection.

3. Heating systems with boilers of an effective rated output of more than 100 kW shall be inspected at least every two years.

For gas boilers, this period may be extended to four years.

4. As an alternative to paragraphs 1, 2 and 3 **Contracting Parties** may opt to take measures to ensure the provision of advice to users concerning the replacement of boilers, other modifications to the heating system and alternative solutions to assess the efficiency and appropriate size of the boiler. The overall impact of this approach shall be equivalent to that arising from the provisions set out in paragraphs 1, 2 and 3.

Where **Contracting Parties** choose to apply the measures referred to in the first subparagraph, they shall submit to the **Secretariat** a report on the equivalence of those measures to measures referred to in paragraphs 1, 2 and 3 of this Article by **30 June 2013** at the latest. **Contracting Parties** shall submit these reports to the **Secretariat** every three years. The reports may be included in the Energy Efficiency

Action Plans referred to in Article 14(2) of Directive 2006/32/EC.

5. After receiving the national report from a **Contracting Party** about the application of the option as described in paragraph 4, the **Secretariat** may request further specific information regarding the requirements and equivalence of the measures set out in that paragraph. In that case, the **Contracting Party** concerned shall present the requested information or propose amendments within nine months.

Article 15

Inspection of air-conditioning systems

1. **Contracting Parties** shall lay down the necessary measures to establish a regular inspection of the accessible parts of air-conditioning systems of an effective rated output of more than 12 kW. The inspection shall include an assessment of the air-conditioning efficiency and the sizing compared to the cooling requirements of the building. The assessment of the sizing does not have to be repeated as long as no changes were made to this air-conditioning system or as regards the cooling requirements of the building in the meantime.

Contracting Parties may reduce the frequency of such inspections or lighten them, as appropriate, where an electronic monitoring and control system is in place.

2. The **Contracting Parties** may set different inspection frequencies depending on the type and effective rated output of the air-conditioning system, whilst taking into account the costs of the inspection of the air-conditioning system and the estimated energy cost savings that may result from the inspection.

3. In laying down the measures referred to in paragraphs 1 and 2 of this Article, **Contracting Parties** shall, as far as is economically and technically feasible, ensure that inspections are carried out in accordance with the inspection of heating systems and other technical systems referred to in Article 14 of this Directive and the inspection of leakages referred to in Regulation (EC) No 842/2006 of the European Parliament and of the Council of 17 May 2006 on certain fluorinated greenhouse gases.

4. As an alternative to paragraphs 1, 2 and 3 **Contracting Parties** may opt to take measures to ensure the provision of advice to users on the replacement of air-conditioning systems or on other modifications to the air-conditioning system which may include inspections to assess the efficiency and appropriate size of the air-conditioning system. The overall impact of this approach shall be equivalent to that arising from the provisions set out in paragraphs 1, 2 and 3.

Where **Contracting Parties** apply the measures referred to in the first subparagraph, they shall, by **30 June 2013** at the latest, submit to the Secretariat a report on the equivalence of those measures to the measures referred to in paragraphs 1, 2 and 3 of this Article. **Contracting Parties** shall submit these reports to the Secretariat every three years. The reports may be included in the Energy Efficiency Action Plans referred to in Article 14(2) of Directive 2006/32/EC.

5. After receiving the national report from a **Contracting Party** about the application of the option as described in paragraph 4, the **Secretariat** may request further specific information regarding the requirements and equivalence of the measures set in that paragraph. In this case, the **Contracting Party** concerned shall present the requested information or propose amendments within nine months.

Article 16

Reports on the inspection of heating and air-conditioning systems

1. An inspection report shall be issued after each inspection of a heating or air-conditioning system. The inspection report shall contain the result of the inspection performed in accordance with Article 14 or 15 and include recommendations for the cost-effective improvement of the energy performance of the inspected system.

The recommendations may be based on a comparison of the energy performance of the system inspected with that of the best available feasible system and a system of similar type for which all relevant components achieve the level of energy performance required by the applicable legislation.

2. The inspection report shall be handed over to the owner or tenant of the building.

Article 17

Independent experts

Contracting Parties shall ensure that the energy performance certification of buildings and the inspection of heating systems and air-conditioning systems are carried out in an independent manner by qualified and/or accredited experts, whether operating in a self-employed capacity or employed by public bodies or private enterprises.

Experts shall be accredited taking into account their competence.

Contracting Parties shall make available to the public information on training and accreditations. **Contracting Parties** shall ensure that either regularly updated lists of qualified and/or accredited experts or regularly updated lists of accredited companies which offer the services of such experts are made available to the public.

Article 18

Independent control system

1. **Contracting Parties** shall ensure that independent control systems for energy performance certificates and reports on the inspection of heating and air-conditioning systems are established in accordance with Annex II. **Contracting Parties** may establish separate systems for the control of energy performance certificates and for the control of reports on the inspection of heating and air-conditioning systems.

2. The **Contracting Parties** may delegate the responsibilities for implementing the independent control systems.

Where the **Contracting Parties** decide to do so, they shall ensure that the independent control systems are implemented in compliance with Annex II.

3. **Contracting Parties** shall require the energy performance certificates and the inspection reports referred to in paragraph 1 to be made available to the competent authorities or bodies on request.

Article 19

Review

The Commission, assisted by the Committee established by Article 26, shall evaluate this Directive by 1 January 2017 at the latest, in the light of the experience gained and progress made during its application, and, if necessary, make proposals.

Article 20

Information

1. **Contracting Parties** shall take the necessary measures to inform the owners or tenants of buildings or building units of the different methods and practices that serve to enhance energy performance.

2. **Contracting Parties** shall in particular provide information to the owners or tenants of buildings on energy performance certificates and inspection reports, their purpose and objectives, on cost-effective ways to improve the energy performance of the building and, where appropriate, on financial instruments available to improve the energy performance of the building.

At the request of the **Contracting Parties**, the **Secretariat** shall assist **Contracting Parties** in staging information campaigns for the purposes of paragraph 1 and the first subparagraph of this paragraph, which may be dealt with in Union programmes.

3. **Contracting Parties** shall ensure that guidance and training are made available for those responsible for implementing this Directive. Such guidance and training shall address the importance of improving energy performance, and shall enable consideration of the optimal combination of improvements in energy efficiency, use of energy from renewable sources and use of district heating and cooling when planning, designing, building and renovating industrial or residential areas.

4. The Commission is invited to continuously improve its information services, in particular the website that has been set up as a European portal for energy efficiency in buildings directed towards citizens, professionals and authorities, in order to assist **Contracting Parties** in their information and awareness-raising efforts. Information displayed on this website might include links to relevant European Union and national, regional and local legislation, links to Europa websites that display the National Energy Efficiency Action Plans, links to available financial instruments, as well as best practice examples at national, regional and local level. In the context of the European Regional Development Fund, the Commission shall continue and further intensify its information services with the aim of facilitating the use of available funds by providing assistance and information to interested stakeholders, including national, regional and local authorities, on funding possibilities, taking into account the latest changes in the regulatory framework.

Article 21

Consultation

In order to facilitate the effective implementation of the Directive, **Contracting Parties** shall consult the stakeholders involved, including local and regional authorities, in accordance with the national legislation

applicable and as relevant. Such consultation is of particular importance for the application of Articles 9 and 20.

Article 22

Adaptation of Annex I to technical progress

The Commission shall adapt points 3 and 4 of Annex I to technical progress by means of delegated acts in accordance with Articles 23, 24 and 25.

Article 23

Exercise of delegation

1. The powers to adopt the delegated acts referred to in Article 22 shall be conferred on the Commission for a period of five years beginning on 8 July 2010. The Commission shall make a report in respect of the delegated powers not later than six months before the end of the five-year period. The delegation of powers shall be automatically extended for periods of an identical duration, unless the European Parliament or the Council revokes it in accordance with Article 24.
2. Without prejudice to the deadline referred to in Article 5(1), the powers to adopt the delegated acts referred to in Article 5 shall be conferred on the Commission until 30 June 2012.
3. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the **Ministerial Council, who shall put it on the agenda of its next meeting.**
4. The powers to adopt delegated acts are conferred on the Commission subject to the conditions laid down in Articles 24 and 25.

Article 24

Revocation of the delegation

The Ministerial Council may object to the application of a delegated act to the Contracting Parties of the Energy Community at the meeting following notification. If, at that meeting, the Ministerial Council has not objected to the delegated act, it shall become binding on the Contracting Parties, subject to possible adaptation. If the Ministerial Council objects to a delegated act, it shall not be applicable in the Energy Community. The Ministerial Council shall state the reasons for objecting to the delegated act.

Article 25

Objections to delegated acts

1. The European Parliament or the Council may object to a delegated act within a period of two months from the date of notification.

At the initiative of the European Parliament or the Council that period shall be extended by two months.

2. If, on expiry of that period, neither the European Parliament nor the Council has objected to the delegated act it shall be published in the Official Journal of the European Union and shall enter into force on the date stated therein.

The delegated act may be published in the Official Journal of the European Union and enter into force before the expiry of that period, if the European Parliament and the Council have both informed the Commission of their intention not to raise objections.

3. If the European Parliament or the Council objects to a delegated act, it shall not enter into force. The institution which objects shall state the reasons for objecting to the delegated act.

Article 26

Committee procedure

1. The Commission shall be assisted by a Committee.

2. Where reference is made to this paragraph, Articles 3 and 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.

Article 27

Penalties

Contracting Parties shall lay down the rules on penalties applicable to infringements of the national provisions adopted pursuant to this Directive and shall take all measures necessary to ensure that they are implemented. The penalties provided for must be effective, proportionate and dissuasive. **Contracting Parties** shall communicate those provisions to the **Secretariat** by **31 March 2013** at the latest and shall notify it without delay of any subsequent amendment affecting them.

Article 28

Transposition

1. **Contracting Parties** shall adopt and publish, by **30 September 2012**¹ at the latest, the laws, regulations and administrative provisions necessary to comply with Articles 2 to 18, and with Articles 20 and 27. They shall apply those provisions as far as Articles 2, 3, 9, 11, 12, 13, 17, 18, 20 and 27 are concerned,

¹ In accordance with the Accession Protocol, the corresponding date for Georgia is 30 June 2019.

from **31 March 2013** at the latest.

They shall apply those provisions as far as Articles 4, 5, 6, 7, 8, 14, 15 and 16 are concerned, to buildings occupied by the public authorities from **31 March 2013** at the latest and to other buildings from **30 September 2013** at the latest.

They may defer the application of Article 12(1) and (2) to single building units that are rented out, until **31 March 2016**. This shall however not result in fewer certificates being issued than would have been the case under the application of the Directive 2002/91/EC in the **Contracting Party** concerned.

When **Contracting Parties** adopt measures, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. They shall also include a statement that references in existing laws, regulations and administrative provisions to Directive 2002/91/EC shall be construed as references to this Directive. **Contracting Parties** shall determine how such reference is to be made and how that statement is to be formulated.

2. **Contracting Parties** shall communicate to the **Secretariat** the text of the main provisions of national law which they adopt in the field covered by this Directive.

Article 29

Repeal

Directive 2002/91/EC, as amended by the Regulation indicated in Annex IV, Part A, is hereby repealed with effect from 1 February 2012, without prejudice to the obligations of the **Contracting Parties** relating to the time limit for transposition into national law and application of the Directive set out in Annex IV, Part B. References to Directive 2002/91/EC shall be construed as references to this Directive and shall be read in accordance with the correlation table in Annex V.

Articles 30 and 31

Entry into force and Addressees²

This Decision [2010/02/MC-EnC] enters into force upon its adoption and is addressed to the Contracting Parties.

The Secretariat shall monitor and review the implementation of Directive 2010/31/EU in the Contracting Parties and shall submit a progress report to the Permanent High Level Group by 31 March 2013.³

² The text displayed here corresponds to Article 3 of Decision 2010/02/MC-EnC.

³ The text displayed here corresponds to Article 1(4) of Decision 2010/02/MC-EnC.

ANNEX I

Common general framework for the calculation of energy performance of buildings (referred to in Article 3)

1. The energy performance of a building shall be determined on the basis of the calculated or actual annual energy that is consumed in order to meet the different needs associated with its typical use and shall reflect the heating energy needs and cooling energy needs (energy needed to avoid overheating) to maintain the envisaged temperature conditions of the building, and domestic hot water needs.

2. The energy performance of a building shall be expressed in a transparent manner and shall include an energy performance indicator and a numeric indicator of primary energy use, based on primary energy factors per energy carrier, which may be based on national or regional annual weighted averages or a specific value for on-site production.

The methodology for calculating the energy performance of buildings should take into account European standards and shall be consistent with relevant Union legislation, including Directive 2009/28/ EC.

3. The methodology shall be laid down taking into consideration at least the following aspects:

(a) the following actual thermal characteristics of the building including its internal partitions:

- (i) thermal capacity;
- (ii) insulation;
- (iii) passive heating;
- (iv) cooling elements; and
- (v) thermal bridges;

(b) heating installation and hot water supply, including their insulation characteristics;

(c) air-conditioning installations;

(d) natural and mechanical ventilation which may include air-tightness;

(e) built-in lighting installation (mainly in the non-residential sector);

(f) the design, positioning and orientation of the building, including outdoor climate;

(g) passive solar systems and solar protection;

(h) indoor climatic conditions, including the designed indoor climate;

(i) internal loads.

4. The positive influence of the following aspects shall, where relevant in the calculation, be taken into account:

(a) local solar exposure conditions, active solar systems and other heating and electricity systems based on energy from renewable sources;

(b) electricity produced by cogeneration;

(c) district or block heating and cooling systems;

(d) natural lighting.

5. For the purpose of the calculation buildings should be adequately classified into the following categories:

- (a) single-family houses of different types;
- (b) apartment blocks;
- (c) offices;
- (d) educational buildings;
- (e) hospitals;
- (f) hotels and restaurants;
- (g) sports facilities;
- (h) wholesale and retail trade services buildings;
- (i) other types of energy-consuming buildings.

ANNEX II

Independent control systems for energy performance certificates and inspection reports

1. The competent authorities or bodies to which the competent authorities have delegated the responsibility for implementing the independent control system shall make a random selection of at least a statistically significant percentage of all the energy performance certificates issued annually and subject those certificates to verification.

The verification shall be based on the options indicated below or on equivalent measures:

- (a) validity check of the input data of the building used to issue the energy performance certificate and the results stated in the certificate;
- (b) check of the input data and verification of the results of the energy performance certificate, including the recommendations made;
- (c) full check of the input data of the building used to issue the energy performance certificate, full verification of the results stated in the certificate, including the recommendations made, and on-site visit of the building, if possible, to check correspondence between specifications given in the energy performance certificate and the building certified.

2. The competent authorities or bodies to which the competent authorities have delegated the responsibility for implementing the independent control system shall make a random selection of at least a statistically significant percentage of all the inspection reports issued annually and subject those reports to verification.

ANNEX III

Comparative methodology framework to identify cost-optimal levels of energy performance requirements for buildings and building elements

The comparative methodology framework shall enable **Contracting Parties** to determine the energy performance of buildings and building elements and the economic aspects of measures relating to the energy performance, and to link them with a view to identifying the cost-optimal level.

The comparative methodology framework shall be accompanied by guidelines outlining how to apply this framework in the calculation of cost-optimal performance levels.

The comparative methodology framework shall allow for taking into account use patterns, outdoor climate conditions, investment costs, building category, maintenance and operating costs (including energy costs and savings), earnings from energy produced, where applicable, and disposal costs, where applicable. It should be based on relevant European standards relating to this Directive.

The Commission shall also provide:

- guidelines to accompany the comparative methodology framework; these guidelines will serve to enable the **Contracting Parties** to undertake the steps listed below,
- information on estimated long-term energy price developments.

For the application of the comparative methodology framework by **Contracting Parties**, general conditions, expressed by parameters, shall be laid down at **Contracting Party** level.

The comparative methodology framework shall require **Contracting Parties** to:

- define reference buildings that are characterised by and representative of their functionality and geographic location, including indoor and outdoor climate conditions. The reference buildings shall cover residential and non-residential buildings, both new and existing ones,
- define energy efficiency measures to be assessed for the reference buildings. These may be measures for individual buildings as a whole, for individual building elements, or for a combination of building elements,
- assess the final and primary energy need of the reference buildings and the reference buildings with the defined energy efficiency measures applied,
- calculate the costs (i.e. the net present value) of the energy efficiency measures (as referred to in the second indent) during the expected economic lifecycle applied to the reference buildings (as referred to in the first indent) by applying the comparative methodology framework principles.

By calculating the costs of the energy efficiency measures during the expected economic lifecycle, the cost-effectiveness of different levels of minimum energy performance requirements is assessed by the **Contracting Parties**. This will allow the determination of cost-optimal levels of energy performance requirements.

REGULATION (EU) 2017/1369 of 4 July 2017 setting a framework for energy labelling

Incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products

*The adaptations made by Ministerial Council Decision 2018/03/MC-EnC are highlighted in **bold and blue**.*

Article 1

Subject-matter and scope

1. This Regulation lays down a framework that applies to energy-related products ('products') placed on the market or put into service. It provides for the labelling of those products and the provision of standard product information regarding energy efficiency, the consumption of energy and of other resources by products during use and supplementary information concerning products, thereby enabling customers to choose more efficient products in order to reduce their energy consumption.

2. This Regulation does not apply to:

- (a) second-hand products, unless they are imported from a third country;
- (b) means of transport for persons or goods.

Article 2

Definitions

For the purposes of this Regulation the following definitions apply:

- (1) 'energy-related product' or 'product' means a good or system with an impact on energy consumption during use which is placed on the market or put into service, including parts with an impact on energy consumption during use which are placed on the market or put into service for customers and that are intended to be incorporated into products;
- (2) 'product group' means a group of products which have the same main functionality;
- (3) 'system' means a combination of several goods which when put together perform a specific function in an expected environment and of which the energy efficiency can then be determined as a single entity;
- (4) 'model' means a version of a product of which all units share the same technical characteristics relevant for the label and the product information sheet and the same model identifier;
- (5) 'model identifier' means the code, usually alphanumeric, which distinguishes a specific product model from other models with the same trade mark or the same supplier's name;
- (6) 'equivalent model' means a model which has the same technical characteristics relevant for the label and the same product information sheet, but which is placed on the market or put into service by the

same supplier as another model with a different model identifier;

(7) 'making available on the market' means the supply of a product for distribution or use on the **markets of the Contracting Parties** in the course of a commercial activity, whether in return for payment or free of charge;

(8) 'placing on the market' means the first making available of a product on the **markets of the Contracting Parties**;

(9) 'putting into service' means the first use of a product for its intended purpose on the **markets of the Contracting Parties**;

(10) 'manufacturer' means a natural or legal person who manufactures a product or has a product designed or manufactured, and markets that product under its name or trademark;

(11) 'authorised representative' means a natural or legal person established in the **Energy Community** who has received a written mandate from the manufacturer to act on its behalf in relation to specified tasks;

(12) 'importer' means a natural or legal person established in the **Energy Community** who places a product from a third country on the markets of the **Contracting Parties**;

(13) 'dealer' means a retailer or other natural or legal person who offers for sale, hire, or hire purchase, or displays products to customers or installers in the course of a commercial activity, whether or not in return for payment;

(14) 'supplier' means a manufacturer established in the **Energy Community**, the authorised representative of a manufacturer who is not established in the **Energy Community**, or an importer, who places a product on the **markets of the Contracting Parties**;

(15) 'distance selling' means the offer for sale, hire or hire purchase by mail order, catalogue, internet, telemarketing or by any other method by which the potential customer cannot be expected to see the product displayed;

(16) 'customer' means a natural or legal person who buys, hires or receives a product for own use whether or not acting for purposes which are outside its trade, business, craft or profession;

(17) 'energy efficiency' means the ratio of output of performance, service, goods or energy to input of energy;

(18) 'harmonised standard' means standard as defined in point (c) of Article 2(1) of Regulation (EU) No 1025/2012 of the European Parliament and of the Council;

(19) 'label' means a graphic diagram, either in printed or electronic form, including a closed scale using only letters from A to G, each letter representing a class and each class corresponding to energy savings, in seven different colours from dark green to red, in order to inform customers about energy efficiency and energy consumption; it includes rescaled labels and labels with fewer classes and colours in accordance with Article 11(10) and (11);

(20) 'rescaling' means an exercise making the requirements for achieving the energy class on a label for a particular product group more stringent;

(21) 'rescaled label' means a label for a particular product group that has undergone rescaling and is distinguishable from labels before rescaling while preserving a visual and perceptible coherence of all labels;

(22) 'product information sheet' means a standard document containing information relating to a product, in printed or electronic form;

(23) 'technical documentation' means documentation sufficient to enable market surveillance authorities to assess the accuracy of the label and the product information sheet of a product, including test reports or similar technical evidence;

(24) 'supplementary information' means information, as specified in a delegated act, on the functional and environmental performance of a product;

(25) <...>¹

(26) 'verification tolerance' means the maximum admissible deviation of the measurement and calculation results of the verification tests performed by, or on behalf of, market surveillance authorities, compared to the values of the declared or published parameters, reflecting deviation arising from interlaboratory variation.

Article 3

General obligations of suppliers

1. The supplier shall ensure that products that are placed on the market are accompanied, for each individual unit, free of charge, with accurate printed labels and with product information sheets in accordance with this Regulation and the relevant delegated acts.

<...>²

Delegated acts may provide that the label is printed on the packaging of the product.

2. The supplier shall deliver printed label, including any rescaled labels, and product information sheets, to the dealer free of charge, promptly and in any event within five working days upon the dealer's request.

3. The supplier shall ensure the accuracy of the labels and product information sheets that it provides and shall produce technical documentation sufficient to enable the accuracy to be assessed.

4. Once a unit of a model is in service, the supplier shall request explicit consent from the customer regarding any changes intended to be introduced to the unit by means of updates that would be detrimental to the parameters of the energy efficiency label for that unit, as set out in the relevant delegated act. The supplier shall inform the customer of the objective of the update and of the changes in the parameters, including any change in the label class. For a period proportionate to the average lifespan of the product, the supplier shall give the customer the option of refusing the update without avoidable loss of functionality.

5. The supplier shall not place on the market products that have been designed so that a model's performance is automatically altered in test conditions with the objective of reaching a more favourable level for any of the parameters specified in the relevant delegated act or included in any of the documentation provided with the product.

6. After the final unit of a model has been placed on the market, the supplier shall keep the information concerning that model for a period of 15 years. Where appropriate in relation to the average life span of a product, a shorter retention period may be provided for by relevant delegated acts.

¹ Not applicable in accordance with Article 3(1)(a) of Decision 2018/03/MC-EnC

² The second subparagraph of Article 3(1) is not applicable in accordance with Article 3(1)(a) of Decision 2018/03/MC-EnC

Article 4

<...>³

Article 5

Obligations of dealers

1. The dealer shall:

(a) display, in a visible manner, including for online distance selling, the label provided by the supplier or made available in accordance with paragraph 2 for units of a model covered by the relevant delegated act; and,
(b) make available to customers the product information sheet, including, upon request, in physical form at the point of sale.

2. Where, notwithstanding Article 3(1), the dealer does not have a label, it shall request one from the supplier in accordance with Article 3(2).

3. Where, notwithstanding Article 3(1), the dealer does not have a product information sheet, it shall request one from the supplier in accordance with Article 3(2); or, if it chooses to do so, print or download one for electronic display from the product database, if those functions are available for the relevant product.

Article 6

Other obligations of suppliers and dealers

The supplier and the dealer shall:

(a) make reference to the energy efficiency class of the product and the range of the efficiency classes available on the label in visual advertisements or technical promotional material for a specific model in accordance with the relevant delegated act;

(b) cooperate with market surveillance authorities and take immediate action to remedy any case of non-compliance with the requirements set out in this Regulation and the relevant delegated acts, which falls under their responsibility, at their own initiative or when required to do so by market surveillance authorities;

(c) for products covered by delegated acts, not provide or display other labels, marks, symbols or inscriptions which do not comply with the requirements of this Regulation and the relevant delegated acts, if doing so would be likely to mislead or confuse customers with respect to the consumption of energy or other resources during use;

(d) for products not covered by delegated acts, not supply or display labels which mimic the labels provided for under this Regulation and the relevant delegated acts;

(e) for non-energy related products, not supply or display labels which mimic the labels provided for in this Regulation or in delegated acts.

Point (d) in the first subparagraph shall not affect labels provided for in national law, unless those labels are provided for in delegated acts.

³ Not applicable in accordance with Article 3(1)(a) of Decision 2018/03/MC-EnC

Article 7

Obligations of Contracting Parties

1. **Contracting Parties** shall not impede the placing on the market or putting into service, within their territories, of products which comply with this Regulation and the relevant delegated acts.
2. Where **Contracting Parties** provide incentives for a product specified in a delegated act, those incentives shall aim at the highest two significantly populated classes of energy efficiency, or at higher classes as laid down in that delegated act.
3. **Contracting Parties** shall ensure that the introduction of labels and rescaling of labels is accompanied by educational and promotional information campaigns on energy labelling, if appropriate in cooperation with suppliers and dealers. The **Secretariat** shall support cooperation and the exchange of best practices in relation to those campaigns, including through the recommendation of common key messages.
4. **Contracting Parties** shall lay down the rules on penalties and enforcement mechanisms applicable to infringements of this Regulation and the delegated acts, and shall take all measures necessary to ensure that they are implemented. The penalties provided for shall be effective, proportionate and dissuasive. Rules which fulfil the requirements of Article 15 of **Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC**, shall be considered to fulfil the requirements of this paragraph as regards penalties.

Contracting Parties shall, by 1 January 2020, notify the **Secretariat** of the rules referred to in the first subparagraph that have not previously been notified to the **Secretariat**, and shall notify the **Secretariat**, without delay, of any subsequent amendment affecting them.

Article 8

Market surveillance and control of products entering the markets of Contracting Parties

1. **The Secretariat shall encourage and support cooperation and the exchange of information on market surveillance relating to the labelling of products between national authorities of the Contracting Parties that are responsible for market surveillance or in charge of the control of products entering the Contracting Parties' markets, and between them and the Secretariat, *inter alia*.**

Such exchanges of information shall also be conducted when test results indicate that the product complies with this Regulation and the relevant delegated act.

2. **Contracting Parties' general market surveillance programmes or sector specific programmes, where applicable, shall include actions to ensure the effective enforcement of this Regulation.**
3. **For the purposes of the preceding paragraphs, national market surveillance authorities and the Secretariat shall take into account guidelines for the enforcement of this Regulation, in particular as regards best practices for product testing and the sharing of information, developed under Article 8(4) of Regulation (EU) 2017/1369 in the European Union.**
4. **Market surveillance authorities shall have the right to recover from the supplier the costs of document inspection and physical product testing in case of non-compliance with this**

Regulation or the relevant delegated acts.**Article 9****Procedure at national level for dealing with products presenting a risk**

1. Where the market surveillance authorities of one **Contracting Party** have sufficient reason to believe that a product covered by this Regulation presents a risk to aspects of public interest protection covered by this Regulation, such as environmental and consumer protection aspects, they shall carry out an evaluation in relation to the product concerned covering all energy labelling requirements relevant to the risk and laid down in this Regulation or in the relevant delegated act. Suppliers and dealers shall cooperate as necessary with the market surveillance authorities for the purpose of that evaluation.

2. Where, in the course of the evaluation referred to in paragraph 1, the market surveillance authorities find that the product does not comply with the requirements laid down in this Regulation or in the relevant delegated act, they shall without delay require the supplier, or where appropriate, the dealer, to take all appropriate corrective action to bring the product into compliance with those requirements, where appropriate to withdraw the product from the market, or where appropriate, to recall it within a reasonable period, commensurate with the nature of the risk as they may prescribe.

<...>⁴

3. Where the market surveillance authorities consider that a case of non-compliance as referred to in paragraph 2 is not restricted to their national territory, they shall inform the **Secretariat** and the other **Contracting Parties** of the results of the evaluation and of the action which they have required the supplier or dealer to take.

4. The supplier or, where appropriate, the dealer shall ensure that all appropriate corrective or restrictive action in accordance with paragraph 2 is taken in respect of all the products concerned that it has made available on the market throughout the **Energy Community**.

5. Where the supplier or, where appropriate, the dealer does not take adequate corrective action within the period referred to in paragraph 2, the market surveillance authorities shall take all appropriate provisional measures to prohibit or restrict the availability of the product on their national market, to withdraw the product from that market, or to recall it.

6. The market surveillance authorities shall inform the **Secretariat** and the other **Contracting Parties** without delay of the measures taken pursuant to paragraph 5. That information shall include all available details, in particular:

- (a) the data necessary for the identification of the non-compliant product;
- (b) the origin of the product;
- (c) the nature of the non-compliance alleged and the risk involved;
- (d) the nature and duration of the national measures taken and the arguments put forward by the supplier or, where appropriate, the dealer.

In particular, the market surveillance authorities shall indicate whether the non-compliance is due to either failure of the product to meet requirements relating to aspects of public interest protection laid

⁴ The second subparagraph of Article 9(2) is not applicable, in accordance with Article 3(1)(a) of Decision 2018/03/MC-EnC

down in this Regulation or shortcomings in the harmonised standards referred to in Article 13 conferring a presumption of conformity.

7. **Contracting Parties** other than the **Contracting Party** initiating the procedure shall without delay inform the **Secretariat** and the other **Contracting Parties** of any measures adopted and of any additional information at their disposal relating to the non-compliance of the product concerned, and, in the event of disagreement with the notified national measure, of their objections.

8. Where, within 60 days of receipt of the information referred to in paragraph 6, no objection has been raised by either a **Contracting Party**, or the **Secretariat** in respect of a provisional measure taken by a **Contracting Party**, that measure shall be deemed to be justified.

9. **Contracting Parties** shall ensure that appropriate restrictive measures, such as withdrawal of the product from their market, are taken in respect of the product concerned, without delay.

Article 10

Energy Community safeguard procedure

1. Where, on completion of the procedure set out in Article 9(4) and (5), objections are raised against a measure taken by a Contracting Party, or where the Secretariat considers a national measure to be contrary to Energy Community law, the Secretariat shall, without delay, consult the Contracting Party, and the supplier or, where appropriate, the dealer and shall evaluate the national measure.

On the basis of the results of that evaluation, the Secretariat shall decide whether the national measure is justified or not and may suggest an appropriate alternative measure. The Secretariat shall seek consent from the European Commission before taking such decision.

2. The **Secretariat** shall address its decision to all **Contracting Parties** and shall immediately communicate it to them and to the supplier or dealer concerned.

3. If the national measure is considered to be justified, all **Contracting Parties** shall take the measures necessary to ensure that the non-compliant product is withdrawn from their market, and shall inform the **Secretariat** and Commission accordingly. If the national measure is considered to be unjustified, the **Contracting Party** concerned shall withdraw the measure.

4. Where the national measure is considered to be justified and the non-compliance of the product is attributed to shortcomings in the harmonised standards referred to in Article 9(6) of this Regulation, the Secretariat shall inform the Commission thereof.

5. Corrective or restrictive measures pursuant to Article 9(2), (4), (5) or (9), or Article 10(3) shall be extended to all units of a non-compliant model and of its equivalent models, except those units for which the supplier demonstrates that they are compliant.

Article 11**Use of rescaled labels**<...>⁵**13. Where, pursuant to Article 11(1) or (3) of Regulation (EU) 2017/1369 in the European Union, a label has been rescaled:**

(a) the supplier shall, when placing a product on the market, provide both the existing and the rescaled labels and the product information sheets to the dealer for a period beginning four months before the date specified in the relevant delegated act for starting the display of the rescaled label.

By way of derogation from the first subparagraph of this point, if the existing and the rescaled label require different testing of the model, the supplier may choose not to supply the existing label with units of models placed on the market or put into service during the four-month period before the date specified in the relevant delegated act for starting the display of the rescaled label if no units belonging to the same model or equivalent models were placed on the market or put into service before the start of the four-month period. In that case, the dealer shall not offer those units for sale before that date. The supplier shall notify the dealer concerned of that consequence as soon as possible, including when it includes such units in its offers to dealers.

(b) the supplier shall, for products placed on the market or put into service before the four-month period, deliver the rescaled label on request from the dealer in accordance with Article 3(2) as from the start of that period. For such products, the dealer shall obtain a rescaled label in accordance with Article 5(2).

By way of derogation from the first subparagraph of this point:

(i) a dealer who is unable to obtain a rescaled label in accordance with the first subparagraph of this point for units already in its stock because the supplier has ceased its activities shall be permitted to sell those units exclusively with the non-rescaled label until nine months after the date specified in the relevant delegated act for starting the display of the rescaled label; or

(ii) if the non-rescaled and the rescaled label require different testing of the model, the supplier is exempt from the obligation to supply a rescaled label for units placed on the market or put into service before the four month period, if no units belonging to same model or equivalent models are placed on the market or put into service after the start of the four-month period. In that case, the dealer shall be permitted to sell those units exclusively with the non-rescaled label until nine months after the date specified in the relevant delegated act for starting the display of the rescaled label.

(c) the dealer shall replace the existing labels on products on display, both in shops and online, with the rescaled labels within 14 working days after the date specified in the relevant delegated act for starting the display of the rescaled label. The dealer shall not display the rescaled labels before that date.

By way of derogation from points (a), (b) and (c) of this paragraph, relevant delegated acts may provide for specific rules for energy labels printed on the packaging.

⁵ Article 11(1) to (12) is not applicable, in accordance with Article 3(1)(a) of Decision 2018/03/MC-EnC

Article 12**Product database****Article 13****Harmonised standards**

Where harmonised standards referred to in Article 13 of Regulation (EU) 2017/1369 in the European Union are applied during the conformity assessment of a product, the model shall be presumed to be in conformity with the relevant measurement and calculation requirements of the delegated act.

Article 14**Consultation Forum****Article 15****Working plan****Article 16****Relevant delegated acts**

- 1. The European Commission may propose to the Ministerial Council the incorporation of relevant delegated acts supplementing Regulation (EU) 2017/1369 in the Energy Community.**
- 2. The Ministerial Council shall decide upon the incorporation and adaptation of these relevant delegated acts at the meeting following the proposal. Upon adoption of a relevant Decision, relevant delegated acts shall be transposed and implemented by all Contracting Parties.**

Article 17**Exercise of the delegation**

6 Not applicable in accordance with Article 3(1)(a) of Decision 2018/03/MC-EnC

7 Not applicable in accordance with Article 3(1)(a) of Decision 2018/03/MC-EnC

8 Not applicable in accordance with Article 3(1)(a) of Decision 2018/03/MC-EnC

9 Not applicable in accordance with Article 3(1)(a) of Decision 2018/03/MC-EnC

Article 18

Committee procedure

<...>¹⁰

Article 19

Evaluation and report

By 2 August 2025, the Secretariat shall assess the implementation of this Regulation and submit a report to the Ministerial Council.

Article 20

Repeal and transitional measures

1. Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC, is repealed with effect from 1 January 2020.

2. References to the repealed Directive shall be construed as references to this Regulation and shall be read in accordance with the correlation table set out in Annex II.

3. For models, the units of which were placed on the market or put into service in accordance with **Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC**, before **1 January 2020**, the supplier shall, for a period ending five years after the final unit was manufactured, make an electronic version of the technical documentation available for inspection within 10 days of a request received from **Contracting Parties** or the **Secretariat**.

4. Delegated acts adopted pursuant to Article 10 of Directive 2010/30/EU and Directive 96/60/EC, as incorporated and adapted by the Ministerial Council, shall remain in force until they are repealed by a Decision adopted by the Ministerial Council taken under Article 16 of this Regulation.

Obligations under this Regulation shall apply in relation to product groups covered by delegated acts adopted pursuant to Article 10 of **Directive 2010/30/EU and by Directive 96/60/EC, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC**.

5. With regard to product groups already covered by relevant delegated acts adopted pursuant to Directive 2010/30/EU as incorporated and adapted by the Ministerial Council, or to Directive 96/60/EC as incorporated and adapted by the Ministerial Council, the energy efficiency classification established by Directive 2010/30/EU, as incorporated and adapted by the

¹⁰ Not applicable in accordance with Article 3(1)(a) of Decision 2018/03/MC-EnC

Ministerial Council Decision 2010/02/MC-EnC, may continue to apply until the date on which the delegated acts introducing rescaled labels become applicable.

Article 21

Entry into force and application

This Regulation shall enter into force on the day of its adoption by the Ministerial Council. It shall be transposed, implemented and applicable by 1 January 2020.

Each Contracting Party shall notify the Secretariat of completed transposition within two weeks following the adoption of transposition measures.

ANNEX I
INFORMATION TO BE ENTERED IN THE PRODUCT DATABASE AND
FUNCTIONAL CRITERIA FOR THE PUBLIC PART OF THE DATABASE

<...>¹¹

¹¹ Not applicable in accordance with Article 3(1)(a) of Decision 2018/03/MC-EnC

ANNEX II CORRELATION TABLE

Directive 2010/30/EU	This Regulation
Article 1(1)	Article 1(1)
Article 1(2)	–
Article 1(3)(a) and (b)	Article 1(2)(a) and (b)
Article 1(3)(c)	–
Article 2	Article 2
Article 2(a)	Article 2, point 1
Article 2(b)	Article 2, point 22
Article 2(c)	–
Article 2(d)	–
Article 2(e)	–
Article 2(f)	–
Article 2(g)	Article 2, point 13
Article 2(h)	Article 2, point 14
Article 2(i)	Article 2, point 8
Article 2(j)	Article 2, point 9
Article 2(k)	–
Article 3	Article 7
Article 3(1)(a)	Article 7(3)
Article 3(1)(b)	Article 6(c)
Article 3(1)(c)	Article 7(3)
Article 3(1)(d)	Article 8(2)
Article 3(2)	Article 6(b) and Article 9
Article 3(3)	Article 8(1)
Article 3(4)	–
Article 4(a)	Article 5
Article 4(b)	–
Article 4(c)	Article 6(a)
Article 4(d)	Article 6(a)
Article 5	Article 3(1) and Article 6
Article 5(a)	Article 3(1)(a)
Article 5(b), points (i), (ii), (iii) and (iv)	Article 4(6) and Annex I
Article 5(c)	Article 4(6)
Article 5(d)	Article 3(1)
Article 5(d), second subparagraph	Article 3(1)

Article 5(e)	Article 3(1)
Article 5(f)	–
Article 5(g)	Article 3(1)
Article 5(h)	–
Article 6	Article 5(1) and Article 6
Article 6(a)	Article 5(1)(a)
Article 6(b)	Article 5(1)(a)
Article 7	Article 16(3)(e) and (g)
Article 8(1)	Article 7(1)
Article 8(2)	–
Article 9(3)	Article 7(2)
Article 9(4)	–
Article 10(1)	Article 16
Article 10(1), second paragraph	Article 16(2)
Article 10(1), third paragraph	–
Article 10(1), fourth paragraph	Article 16(3)(c)
Article 10(2)(a)	Article 16(2)(a)
Article 10(2)(b)	Article 16(2)(b)
Article 10(2)(c)	–
Article 10(3)(a)	–
Article 10(3)(b)	–
Article 10(3)(c)	Article 14
Article 10(3)(d)	–
Article 10(4)(a)	Article 16(3)(a)
Article 10(4)(b)	Article 16(3)(k)
Article 10(4)(c)	Article 16(3)(h)
Article 10(4)(d)	Article 16(3)(b)
Article 10(4)(d), second paragraph	–
Article 10(4)(d), third paragraph	Article 16(3)(b)
Article 10(4)(d), fourth paragraph	Article 11(3)
Article 10(4)(d), fifth paragraph	Article 11
Article 10(4)(e)	Article 16(3)(e)
Article 10(4)(f)	Article 16(3)(h)
Article 10(4)(g)	Article 16(3)(j)
Article 10(4)(h)	Article 11(3)
Article 10(4)(i)	Article 16(3)(i)
Article 10(4)(j)	Article 16(3)(o)

Article 11(1)	Article 17(2)
Article 11(2)	Article 17(5)
Article 11(3)	Article 17(1)
Article 12(1)	Article 17(3)
Article 12(2)	–
Article 12(3)	Article 17(3)
Article 13	Article 17(6)
Article 14	Article 19
Article 15	Article 7(4)
Article 16	–
Article 17	Article 20
Article 18	Article 21
Article 19	Article 21
Annex I	–
–	Annex I
Annex II	Annex II



DELEGATED REGULATION (EU) 2017/254 of 30 November 2016 on the use of tolerances in verification procedures

Incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products

*The adaptations made by Ministerial Council Decision 2018/03/MC-EnC are highlighted in **bold and blue**.*

Article 1

Amendments to Delegated Regulation (EU) No 1059/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Annex V to Delegated Regulation (EU) No 1059/2010, as **incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC**, is amended in accordance with Annex I to this Delegated Regulation.

Article 2

Amendments to Delegated Regulation (EU) No 1060/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Annex VII to Delegated Regulation (EU) No 1060/2010, as **incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC**, is amended in accordance with Annex II to this Delegated Regulation.

Article 3

Amendments to Delegated Regulation (EU) No 1061/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Annex V to Delegated Regulation (EU) No 1061/2010, as **incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC**, is amended in accordance with Annex III to this Delegated Regulation.

Article 4

Amendments to Delegated Regulation (EU) No 1062/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Annexes VII and VIII to Delegated Regulation (EU) No 1062/2010, as **incorporated and adapted by**

the **Ministerial Council Decision 2011/03/MC-EnC**, are amended in accordance with Annex IV to this Delegated Regulation.

Article 5

Amendments to Delegated Regulation (EU) No 626/2011, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Annex VIII to Delegated Regulation (EU) No 626/2011, **as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC**, is amended in accordance with Annex V to this Delegated Regulation.

Article 6

Amendments to Delegated Regulation (EU) No 392/2012, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Annex V to Delegated Regulation (EU) No 392/2012, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, is amended in accordance with Annex VI to this Delegated Regulation.

Article 7

Amendments to Delegated Regulation (EU) No 874/2012, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Annex V to Delegated Regulation (EU) No 874/2012, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, is amended in accordance with Annex VII to this Delegated Regulation.

Article 8

Amendments to Delegated Regulation (EU) No 665/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Annex VII to Delegated Regulation (EU) No 665/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, is amended in accordance with Annex VIII to this Delegated Regulation.

Article 9**Amendments to Delegated Regulation (EU) No 811/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**

Annex VIII to Delegated Regulation (EU) No 811/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, is amended in accordance with Annex IX to this Delegated Regulation.

Article 10**Amendments to Delegated Regulation (EU) No 812/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**

Annex IX to Delegated Regulation (EU) No 812/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, is amended in accordance with Annex X to this Delegated Regulation.

Article 11**Amendments to Delegated Regulation (EU) No 65/2014, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**

Annex VIII to Delegated Regulation (EU) No 65/2014, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, is amended in accordance with Annex XI to this Delegated Regulation.

Article 12**Amendments to Delegated Regulation (EU) No 1254/2014**

Annex IX to Delegated Regulation (EU) No 1254/2014 is amended in accordance with Annex XII to this Delegated Regulation.

Article 13**Amendments to Delegated Regulation (EU) 2015/1094**

Annex X to Delegated Regulation (EU) 2015/1094 is amended in accordance with Annex XIII to this Delegated Regulation.

Article 14

Amendments to Delegated Regulation (EU) 2015/1186

Annex IX to Delegated Regulation (EU) 2015/1186 is amended in accordance with Annex XIV to this Delegated Regulation.

Article 15

Amendments to Delegated Regulation (EU) 2015/1187

Annex X to Delegated Regulation (EU) 2015/1187 is amended in accordance with Annex XV to this Delegated Regulation.

Article 16

Entry into force and application

This Regulation shall enter into force on the date of its adoption by the Ministerial Council. It shall be transposed, implemented and applicable by 1 January 2020.

Each Contracting Party shall notify the Secretariat of completed transposition within two weeks following the adoption of transposition measures.

ANNEX I

Amendments to Annex V to Delegated Regulation (EU) No 1059/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Annex V is replaced by the following:

'ANNEX V

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

- (1) The **Contracting Parties** authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent household dishwasher models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.
- (5) The model shall be considered to comply with the applicable requirements if, for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 1.

(6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent household dishwasher models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

Contracting Parties' authorities shall use measurement procedures which take into account the generally recognised, state-of-the-art, reliable, accurate and reproducible measurement methods, including methods set out in documents whose reference numbers have been published for that purpose in *a dedicated section of the website of the Energy Community*. The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VII.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 1 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 1

Verification tolerances

Annual energy consumption (AE_c)	The determined value shall not exceed the declared value of AE_c by more than 10 %.
Water consumption (W_t)	The determined value shall not exceed the declared value of W_t by more than 10 %.
Drying efficiency index (I_D)	The determined value shall not be less than the declared value of I_D by more than 19 %.
Energy consumption (E_t)	The determined value shall not exceed the declared value of E_t by more than 10 %. Where three additional units need to be selected, the arithmetic mean of the determined values of these three units shall not exceed the declared value of E_t by more than 6 %.
Programme time (T_t)	The determined value shall not exceed the declared values T_t by more than 10 %.
Power consumption in off mode and left-on mode (P_o and P_l)	The determined value of power consumption P_o and P_l of more than 1,00 W shall not exceed the declared values of P_o and P_l by more than 10 %. The determined value of power consumption P_o and P_l of less than or equal to 1,00 W shall not exceed the declared value of P_o and P_l by more than 0,10 W.
Duration of left-on mode (T_l)	The determined value shall not exceed the declared value of T_l by more than 10 %.
Airborne acoustical noise emissions	The determined value shall meet the declared value.'

ANNEX II

Amendments to Annex VII to Delegated Regulation (EU) No 1060/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Annex VII is replaced by the following:

'ANNEX VII

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

- (1) The **Contracting Party** authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent household refrigerating appliance models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 1.

(6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent household refrigerating appliance models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annexes VI and VIII.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 1 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 1

Verification tolerances

Parameters	Verification tolerances
Gross volume	The determined value shall not be less than the declared value by more than 3 % or 1 litre, whichever is the greater value.
Storage volume	The determined value shall not be less than the declared value by more than 3 % or 1 litre, whichever is the greater value. Where the volumes of the cellar compartment and the fresh food storage compartment can be adjusted, relative to one another, by the user, the volume shall be tested when the cellar compartment is adjusted to its minimum volume.
Freezing capacity	The determined value shall not be less than the declared value by more than 10 %.
Energy consumption	The determined value shall not exceed the declared value (E_{24h}) by more than 10 %.
Humidity of wine storage appliances	The determined value for the relative humidity observed in testing shall not exceed the declared range by more than 10 % in any direction.
Airborne acoustical noise emissions	The determined value shall meet the declared value. ¹

ANNEX III

Amendments to Annex V to Delegated Regulation (EU) No 1061/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Annex V is replaced by the following:

'ANNEX V

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

- (1) The **Contracting Party** authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent household washing machine models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 1.
- (6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as

equivalent household washing machine models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

Contracting Parties' authorities shall use measurement procedures which take into account the generally recognised, state-of-the-art, reliable, accurate and reproducible measurement methods, including methods set out in documents whose reference numbers have been published for that purpose in the **a dedicated section of the website of the Energy Community**. The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VII.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 1 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 1

Verification tolerances

Parameters	Verification tolerances
Annual energy consumption (AE_c)	The determined value shall not exceed the declared value of AE_c by more than 10 %.
Energy consumption (E_t)	The determined value shall not exceed the declared value of E_t by more than 10 %. Where three additional units need to be selected, the arithmetic mean of the determined values of these three units shall not exceed the declared value of E_t by more than 6 %.
Programme time (T_t)	The determined value shall not exceed the declared values T_t by more than 10 %.
Water consumption (W_t)	The determined value shall not exceed the declared value of W_t by more than 10 %.
Remaining moisture content (D)	The determined value shall not exceed the declared value of D by more than 10 %.
Spin speed	The determined value shall not be less than the declared value by more than 10 %.
Power consumption in off mode and left-on mode (P_o and P_l)	Determined values of power consumption P_o and P_l of more than 1,00 W shall not exceed the declared values of P_o and P_l by more than 10 %. The determined values of power consumption P_o and P_l of less than or equal to 1,00 W shall not exceed the declared values of P_o and P_l by more than 0,10 W.
Duration of the left-on mode (T_l)	The determined value shall not exceed the declared value of T_l by more than 10 %.
Airborne acoustical noise emissions	The determined value shall meet the declared value.'

ANNEX IV

Amendments to Annexes VII and VIII to Delegated Regulation (EU) No 1062/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

(1) Annex VII is amended as follows:

(a) In part 2, subparagraph (iv) of paragraph (a) is deleted.

(b) Part 3 is deleted.

(c) In part 4, the title is replaced by the following:

'4. Measurements of peak luminance ratio referred to in Table 2 of Annex VIII'.

(2) Annex VIII is replaced by the following:

'ANNEX VIII

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

(1) The **Contracting Party** authorities shall verify one single unit of the model.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 2.

(3) If the result referred to in points 2(a) or (b) are not achieved, the model shall be considered not to comply with this Delegated Regulation.

(4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing.

(5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 2.

(6) If the result referred to in point 5 is not achieved, the model shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VII.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 2 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 2

Verification tolerances

Parameters	Verification tolerances
On-mode power consumption	The determined value shall not exceed the declared value by more than 7 %.
Off-mode/standby power consumption	The determined value shall not exceed the declared value by more than 0,10 W.
Peak luminance ratio	The determined value shall not be lower than 60 % of the peak luminance of the brightest on-mode condition provided by the television.'

ANNEX V

Amendments to Annex VIII to Delegated Regulation (EU) No 626/2011, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Annex VIII is replaced by the following:

'ANNEX VIII

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

- (1) The **Contracting Party** authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 1.
- (6) If the result referred to in point 5 is not achieved, the model shall be considered not to comply with this Delegated Regulation.
- (7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other

Contracting Parties and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VII.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 1 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 1

Verification tolerances

Parameters	Verification tolerances
Seasonal energy efficiency ratio (SEER)	The determined value shall not be lower than the declared value by more than 8 %.
Seasonal coefficient of performance (SCOP)	The determined value shall not be lower than the declared value by more than 8 %.
Power consumption in off mode	The determined value shall not exceed the declared value by more than 10 %.
Power consumption in standby mode	The determined value shall not exceed the declared value by more than 10 %.
Energy efficiency ratio (EER _{rated})	The determined value shall not be lower than the declared value by more than 10 %.
Coefficient of performance (COP _{rated})	The determined value shall not be lower than the declared value by more than 10 %.
Sound power level	The determined value shall not exceed the declared value by more than 2 dB(A).'

ANNEX VI

Amendments to Annex V to Delegated Regulation (EU) No 392/2012, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Annex V is replaced by the following:

'ANNEX V

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

- (1) The **Contracting Party** authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent household tumble drier models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 1.

(6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent household tumble drier models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

Contracting Parties' authorities shall use measurement procedures which take into account the generally recognised, state-of-the-art, reliable, accurate and reproducible measurement methods, including methods set out in documents whose reference numbers have been published for that purpose in *a dedicated section of the website of the Energy Community*. The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VII.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 1 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 1

Verification tolerances

Parameters	Verification tolerances
Weighted annual energy consumption (AE_c)	The determined value shall not exceed the declared value of AE_c by more than 6 %.
Weighted energy consumption (E_t)	The determined value shall not exceed the declared value of E_t by more than 6 %.
Weighted condensation efficiency (C_t)	The determined value shall not be less than the declared value of C_t by more than 6 %.
Weighted programme time (T_t)	The determined value shall not exceed the declared value of T_t by more than 6 %.
Power consumption in off mode and left-on mode (P_o and P_l)	The determined values of power consumption P_o and P_l of more than 1,00 W shall not exceed the declared values of P_o and P_l by more than 6 %. The determined value of power consumption P_o and P_l of less than or equal to 1,00 W shall not exceed the declared values of P_o and P_l by more than 0,10 W.
Duration of the left-on mode (T_l)	The determined value shall not exceed the declared value of T_l by more than 6 %.
Sound power level, L_{WA}	The determined value shall not exceed the declared value of L_{WA}' .

ANNEX VII

Amendments to Annex V to Delegated Regulation (EU) No 874/2012, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Annex V is replaced by the following:

'ANNEX V

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

1. VERIFICATION PROCEDURE FOR ELECTRICAL LAMPS AND LED MODULES MARKETED AS INDIVIDUAL PRODUCTS

(1) The **Contracting Party** authorities shall verify a sample batch of a minimum of 20 lamps of the same model from the same supplier, where possible obtained in equal proportions from four randomly selected sources.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when testing the units of model, the arithmetical mean of the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) is within the respective tolerance of 10 %.

(3) If the results referred to in points 2(a), (b) or (c) are not achieved, the model shall be considered not to comply with this Delegated Regulation.

(4) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to point 3.

The **Contracting Party** authorities shall use measurement procedures that reflect generally recognised, current best practice and are reliable, accurate and reproducible, including methods set out in documents whose reference numbers have been published for that purpose in *a dedicated section of the website of the Energy Community*. The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VII.

The **Contracting Party** authorities shall only apply the verification tolerance of 10 % and shall only use the procedure described in points 1 to 4 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

2. VERIFICATION PROCEDURE FOR LUMINAIRES INTENDED TO BE MARKETED OR MARKETED TO THE END-USER

The luminaire shall be considered to comply with the requirements laid down in this Regulation if it is accompanied by the required product information, if it is claimed to be compatible with all the lamp energy efficiency classes it is compatible with, and if, when applying state-of-the-art methods and criteria for assessing compatibility, it is found to be compatible with the lamp energy efficiency classes with which it is claimed to be compatible pursuant to points (2)(IV)(a) and (b) of part 2 of Annex I.'

ANNEX VIII

Amendments to Annex VII to Delegated Regulation (EU) No 665/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Annex VII is replaced by the following:

'ANNEX VII

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

- (1) The **Contracting Party** authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 4.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent vacuum cleaner models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent vacuum cleaner in the supplier's technical documentation.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 4.

(6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent vacuum cleaner models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VI.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 4 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex.

No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 4

Verification tolerances

Parameters	Verification tolerances
Annual energy consumption	The determined value shall not exceed the declared value by more than 10 %.
Dust pick-up on carpet	The determined value shall not be lower than the declared value by more than 0,03.
Dust pick-up on hard floor	The determined value shall not be lower than the declared value by more than 0,03.
Dust re-emission	The determined value shall not exceed the declared value by more than 15 %.
Sound power level	The determined value shall not exceed the declared value.'

ANNEX IX

Amendments to Annex VIII to Delegated Regulation (EU) No 811/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Annex VIII is replaced by the following:

'ANNEX VIII

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

- (1) The Contracting Party authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 16.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 16.

(6) If the result referred to in point 5 is not achieved, the model shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VII.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 16 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 16

Verification tolerances

Parameters	Verification tolerances
Space-heating energy efficiency, η_s	The determined value shall not be lower than the declared value by more than 8 %.
Water-heating energy efficiency, η_{wh}	The determined value shall not be lower than the declared value by more than 8 %.
Sound power level	The determined value shall not exceed the declared value by more than 2 dB(A).
Class of the temperature control	The class of the temperature controls corresponds to the declared class of the unit.
Collector efficiency, η_{col}	The determined value shall not be lower than the declared value by more than 5 %.
Standing loss, S	The determined value shall not exceed the declared value by more than 5 %.
Auxiliary electricity consumption, Q_{aux}	The determined value shall not exceed the declared value by more than 5 %.

ANNEX X

Amendments to Annex IX to Delegated Regulation (EU) No 812/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Annex IX is replaced by the following:

'ANNEX IX

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

- (1) The **Contracting Party** authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 9.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all other equivalent water heater models, hot water storage tanks models, solar device models or package of water heater and solar device models shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different equivalent models.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 9.
- (6) If the result referred to in point 5 is not achieved, the model and all other equivalent water heater

models, hot water storage tanks models, solar device models or package of water heater and solar device models shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VII and Annex VIII.

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 9 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 9

Verification tolerances

Parameters	Verification tolerances
Daily electricity consumption, Q_{elec}	The determined value shall not exceed the declared value by more than 5 %.
Sound power level, L_{WA} , indoors and/or outdoors	The determined value shall not exceed the declared value by more than 2 dB.
Daily fuel consumption, Q_{fuel}	The determined value shall not exceed the declared value by more than 5 %.
Weekly fuel consumption with smart controls, $Q_{fuel,week,smart}$	The determined value shall not exceed the declared value by more than 5 %.
Weekly electricity consumption with smart controls, $Q_{elec,week,smart}$	The determined value shall not exceed the declared value by more than 5 %.
Weekly fuel consumption without smart controls, $Q_{fuel,week}$	The determined value shall not exceed the declared value by more than 5 %.
Weekly electricity consumption without smart controls, $Q_{elec,week}$	The determined value shall not exceed the declared value by more than 5 %.
Storage volume, V	The determined value shall not be lower than the declared value by more than 2 %.
Collector aperture area, A_{sol}	The determined value shall not be lower than the declared value by more than 2 %.
Pump power consumption, sol_{pump}	The determined value shall not exceed the declared value by more than 3 %.
Standby power consumption, $sol_{standby}$	The determined value shall not exceed the declared value by more than 5 %.
Standing loss, S	The determined value shall not exceed the declared value by more than 5 %.

ANNEX XI

Amendments to Annex VIII to Delegated Regulation (EU) No 65/2014, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Annex VIII is replaced by the following:

'ANNEX VIII

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

- (1) The **Contracting Party** authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 6.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 6.

(6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex II.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 6 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 6

Verification tolerances

Parameters	Verification tolerances
Mass of the oven, M	The determined value shall not exceed the declared value of M by more than 5 %.
Volume of the cavity of the oven, V	The determined value shall not be lower than the declared value of V by more than 5 %.
$EC_{\text{electric cavity}}$, $EC_{\text{gas cavity}}$	The determined values shall not exceed the declared values of $EC_{\text{electric cavity}}$ and $EC_{\text{gas cavity}}$ by more than 5 %.
W_{BEP} , W_L	The determined values shall not exceed the declared values of W_{BEP} and W_L by more than 5 %.
Q_{BEP} , P_{BEP}	The determined values shall not be lower than the declared values of Q_{BEP} and P_{BEP} by more than 5 %.
Q_{max}	The determined value shall not exceed the declared value of Q_{max} by more than 8 %.
E_{middle}	The determined value shall not be lower than the declared value of E_{middle} by more than 5 %.
GFE_{hood}	The determined value shall not be lower than the declared value of GFE_{hood} by more than 5 %.
P_o , P_s	The determined values of power consumption P_o and P_s shall not exceed the declared values of P_o and P_s by more than 10 %. The determined values of power consumption P_o and P_s of less than or equal to 1,00 W shall not exceed the declared values of P_o and P_s by more than 0,10 W.
Sound power level, L_{WA}	The determined value shall not exceed the declared value of L_{WA} .

ANNEX XII

Amendments to Annex IX to Delegated Regulation (EU) No 1254/2014

Annex IX is replaced by the following:

'ANNEX IX

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

- (1) The **Contracting Party** authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all other equivalent models shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different equivalent models.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 1.
- (6) If the result referred to in point 5 is not achieved, the model and all other equivalent models shall be considered not to comply with this Delegated Regulation.
- (7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-com-

pliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VIII.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 1 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 1

Verification tolerances

Parameters	Verification tolerances
SPI	The determined value shall be no more than 1,07 times the declared value.
Thermal efficiency RVU	The determined value shall be no less than 0,93 times the declared value.
Sound power level	The determined value shall be no more than the declared value plus 2 dB.'

ANNEX XIII

Amendments to Annex X to Delegated Regulation (EU) 2015/1094

Annex X is replaced by the following:

‘ANNEX X

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

- (1) The **Contracting Party** authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 4.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all equivalent professional refrigerated storage cabinets that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the technical documentation.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 4.
- (6) If the result referred to in point 5 is not achieved, the model and all equivalent professional refrigerated storage cabinets that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annexes VIII and IX.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 4 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 4

Verification tolerances

Parameters	Verification tolerances
Net volume	The determined value shall not be lower than the declared value by more than 3 %.
Energy consumption (E_{24h})	The determined value shall not exceed the declared value by more than 10 %.

ANNEX XIV

Amendments to Annex IX to Delegated Regulation (EU) 2015/1186

Annex IX is replaced by the following:

'ANNEX IX

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

- (1) The **Contracting Party** authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 6. The unit shall be tested with a fuel with characteristics in the same range as the fuel that was used by the supplier to perform the measurements described in Annex VIII.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 6.

(6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VIII.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 6 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 6

Verification tolerances

Parameters	Verification tolerances
Energy efficiency index	The determined value shall not be lower than the declared value by more than 8 %.'

ANNEX XV

Amendments to Annex X to Delegated Regulation (EU) 2015/1187

Annex X is replaced by the following:

‘ANNEX X

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the **Contracting Parties** shall apply the following procedure:

- (1) The **Contracting Party** authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/ EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the **Contracting Party** authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 5. The unit shall be tested with a fuel with characteristics in the same range as the fuel that was used by the supplier to perform measurements according to Annex VIII.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent models in the supplier’s technical documentation shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier’s technical documentation.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective verification tolerances given in Table 5.

(6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

(7) The **Contracting Party** authorities shall provide all relevant information to the authorities of the other **Contracting Parties** and to the **Secretariat** without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The **Contracting Party** authorities shall use the measurement and calculation methods set out in Annex VIII and IX.

The **Contracting Party** authorities shall only apply the verification tolerances that are set out in Table 5 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 5

Verification tolerances

Parameters	Verification tolerances
Energy efficiency index	The determined value shall not be lower than the declared value by more than 6 %.'

DELEGATED REGULATION (EU) 518/2014 of 5 March 2014 on labelling of energy-related products on the internet

Incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products

*The adaptations made by Ministerial Council Decision 2018/03/MC-EnC are highlighted in **bold and blue**.*

Article 1

Amendments to Delegated Regulation (EU) No 1059/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Delegated Regulation (EU) No 1059/2010, **as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC**, is amended as follows:

(1) Article 3 is amended as follows:

(a) the following point (f) is added:

‘(f) an electronic label in the format and containing the information set out in Annex I is made available to dealers for each household dishwasher model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other household dishwasher models;’;

(b) the following point (g) is added:

‘(g) an electronic product fiche as set out in Annex II is made available to dealers for each household dishwasher model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other household dishwasher models.’;

(2) in Article 4, point (b) is replaced by the following:

‘(b) household dishwashers offered for sale, hire or hirepurchase where the end-user cannot be expected to see the household dishwasher displayed, are marketed with the information provided by suppliers in accordance with Annex IV. Where the offer is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with Article 3(f) and 3(g) the provisions of Annex VIII shall apply instead;’;

(3) a new Annex VIII is added in accordance with Annex I to this Regulation.

Article 2

Amendments to Delegated Regulation (EU) No 1060/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Delegated Regulation (EU) No 1060/2010, **as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC**, is amended as follows:

(1) Article 3 is amended as follows:

(a) the following point (f) is added:

‘(f) an electronic label in the format and containing the information set out in Annex II is made available to dealers for each household refrigerating appliance model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other household refrigerating appliance models;’;

(b) the following point (g) is added:

‘(g) an electronic product fiche as set out in Annex III is made available to dealers for each household refrigerating appliance model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other household refrigerating appliance models.’;

(2) in Article 4, point (b) is replaced by the following:

‘(b) household refrigerating appliances offered for sale, hire or hire purchase where the end-user cannot be expected to see the product displayed, are marketed with the information to be provided by the suppliers in accordance with Annex V. Where the offer for is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with Article 3(f) and 3(g) the provisions of Annex X shall apply instead;’;

(3) a new Annex X is added in accordance with Annex II to this Regulation.

Article 3

Amendments to Delegated Regulation (EU) No 1061/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Delegated Regulation (EU) No 1061/2010, **as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC**, is amended as follows:

(1) Article 3 is amended as follows:

(a) the following point (f) is added:

‘(f) an electronic label in the format and containing the information set out in Annex I is made available to dealers for each household washing machine model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other household washing machine models;’;

(b) the following point (g) is added:

‘(g) an electronic product fiche as set out in Annex II is made available to dealers for each house-

hold washing machine model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other household washing machine models.’;

(2) in Article 4, point (b) is replaced by the following:

‘(b) household washing machines offered for sale, hire or hire-purchase where the end-user cannot be expected to see the product displayed are marketed with the information to be provided by suppliers in accordance with Annex IV. Where the offer is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with Article 3(f) and 3(g) the provisions of Annex VIII shall apply instead.’;

(3) a new Annex VIII is added in accordance with Annex III to this Regulation.

Article 4

Amendments to Delegated Regulation (EU) No 1062/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Delegated Regulation (EU) No 1062/2010, **as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC**, is amended as follows:

(1) Article 3 is amended as follows:

(a) in paragraph 1, the following point (f) is added:

‘(f) an electronic label in the format and containing the information set out in Annex V is made available to dealers for each television model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other television models.’;

(b) in paragraph 1, the following point (g) is added:

‘(g) an electronic product fiche as set out in Annex III is made available to dealers for each television model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other television models.’;

(2) in Article 4, point (b) is replaced by the following:

‘(b) televisions offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the television displayed, are marketed with the information to be provided by the suppliers in accordance with Annex VI. Where the offer is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with Article 3(1)(f) and 3(1)(g) the provisions in Annex IX shall apply instead.’;

(3) a new Annex IX is added in accordance with Annex IV to this Regulation.

Article 5

Amendments to Delegated Regulation (EU) No 626/2011, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

Delegated Regulation (EU) No 626/2011, **as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC**, is amended as follows:

(1) Article 3 is amended as follows:

(a) in paragraph 1, the following point (h) is added:

‘(h) an electronic label in the format and containing the information set out in Annex III is made available to dealers for each air conditioner model placed on the market from 1 January 2020 with a new model identifier, respecting energy efficiency classes set out in Annex II. It may also be made available to dealers for other air conditioner models.’;

(b) in paragraph 1, the following point (i) is added:

‘(i) an electronic product fiche as set out in Annex IV is made available to dealers for each air conditioner model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other air conditioner models.’;

(2) in Article 4, point (b) is replaced by the following:

‘(b) air conditioners offered for sale, hire or hire purchase where the end-user cannot be expected to see the product displayed, are marketed with the information provided by suppliers in accordance with Annexes IV and VI. Where the offer is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with Article 3(1) (h) and 3(1)

(i) the provisions of Annex IX shall apply instead.’;

(3) a new Annex IX is added in accordance with Annex V to this Regulation.

Article 6

Amendments to Delegated Regulation (EU) No 392/2012, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Delegated Regulation (EU) No 392/2012, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, is amended as follows:

(1) Article 3 is amended as follows:

(a) the following point (f) is added:

‘(f) an electronic label in the format and containing the information set out in Annex I is made available to dealers for each household tumble drier model placed on the market from 1 January 2020 with a new model identifier. It may also be made available to dealers for other household tumble drier models.’;

(b) the following point (g) is added:

'(g) an electronic product fiche as set out in Annex II is made available to dealers for each household tumble drier model placed on the market from 1 January 2020 with a new model identifier. It may also be made available to dealers for other household tumble drier models.';

(2) in Article 4, point (b) is replaced by the following:

'(b) household tumble driers offered for sale, hire or hire-purchase where the end-user cannot be expected to see the product displayed, as specified in Article 7 of Directive 2010/30/EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC**, are marketed with the information provided by suppliers in accordance with Annex IV to this Regulation. Where the offer is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with Article 3(f) and 3(g) the provisions of Annex VIII shall apply instead.';

(3) a new Annex VIII is added in accordance with Annex VI to this Regulation.

Article 7

Amendments to Delegated Regulation (EU) No 874/2012, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Delegated Regulation (EU) No 874/2012, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, is amended as follows:

(1) Article 3 is amended as follows:

(a) in paragraph 1, the following point (f) is added:

'(f) an electronic label in the format and containing the information set out in point 1 of Annex I is made available to dealers for each lamp model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other lamp models.';

(b) in paragraph 2, the following point (e) is added:

'(e) an electronic label in the format and containing information set out in point 2 of Annex I is made available to dealers for each luminaire model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other luminaire models.';

(2) Article 4 is amended as follows:

(a) in paragraph 1, point (a) is replaced by the following:

'(a) each model offered for sale, hire or hire-purchase where the final owner cannot be expected to see the product displayed is marketed with the information to be provided by suppliers in accordance with Annex IV. Where the offer is made through the internet and an electronic label has been made available in accordance with Article 3(1)(f) the provisions in Annex VIII shall apply instead.';

(b) in paragraph 2, the following point (d) is added:

'(d) each model offered for sale, hire or hire-purchase through the internet and for which an electronic label has been made available in accordance with Article 3(2)(e) is accompanied by the label in accordance with Annex VIII.';

(3) a new Annex VIII is added in accordance with Annex VII to this Regulation.

Article 8

Amendments to Delegated Regulation (EU) No 665/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Delegated Regulation (EU) No 665/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, is amended as follows:

(1) Article 3 is amended as follows:

(a) in paragraph 1, the following point (f) is added:

‘(f) an electronic label in the format and containing the information set out in Annex II is made available to dealers for each vacuum cleaner model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other vacuum cleaner models;’;

(b) in paragraph 1, the following point (g) is added:

‘(g) an electronic product fiche as set out in Annex III is made available to dealers for each vacuum cleaner model placed on the market from **1 January 2020** with a new model identifier. It may also be made available to dealers for other vacuum cleaner models.’;

(2) in Article 4, point (b) is replaced by the following:

‘(b) vacuum cleaners offered for sale, hire or hire-purchase where the end-user cannot be expected to see the product displayed, as specified in Article 7 of Directive 2010/30/EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC**, are marketed with the information provided by suppliers in accordance with Annex V to this Regulation. Where the offer is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with Article 3(1)(f) and 3(1)(g) the provisions in Annex VIII shall apply instead;’;

(3) a new Annex VIII is added in accordance with Annex VIII to this Regulation.

Article 9

Amendments to Delegated Regulation (EU) No 811/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Delegated Regulation (EU) No 811/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, is amended as follows:

(1) Article 3 is amended as follows:

(a) in paragraph 1, the following point (f) is added in the first subparagraph:

‘(f) an electronic label in the format and containing the information set out in point 1.1 of Annex III is made available to dealers for each space heater model conforming to the seasonal space heating energy efficiency classes set out in point 1 of Annex II;’;

(b) in paragraph 1, the following point (g) is added in the first subparagraph:

'(g) an electronic product fiche as set out in point 1 of Annex IV is made available to dealers for each space heater model, whereby for heat pump space heaters models, the electronic product fiche is made available to dealers at least for the heat generator.';

(c) in paragraph 1, the following subparagraph is added:

'From **1 January 2020** an electronic label in the format and containing the information set out in point 1.2 of Annex III shall be made available to dealers for each space heater model conforming to the seasonal space heating energy efficiency classes set out in point 1 of Annex II.';

(d) in paragraph 2, the following point (f) is added in the first subparagraph:

'(f) an electronic label in the format and containing the information set out in point 2.1 of Annex III is made available to dealers for each combination heater model conforming to the seasonal space heating energy efficiency classes and water heating energy efficiency classes set out in points 1 and 2 of Annex II.';

(e) in paragraph 2, the following point (g) is added in the first subparagraph:

'(g) an electronic product fiche as set out in point 2 of Annex IV is made available to dealers for each combination heater model, whereby for heat pump combination heaters models, the electronic product fiche is made available to dealers at least for the heat generator.';

(f) in paragraph 2, the following subparagraph is added:

'From **1 January 2020** an electronic label in the format and containing the information set out in point 2.2 of Annex III shall be made available to dealers for each combination heater model conforming to the seasonal space heating energy efficiency classes and water heating energy efficiency classes set out in points 1 and 2 of Annex II.';

(g) in paragraph 3, the following point (c) is added:

'(c) an electronic product fiche, as set out in point 3 of Annex IV, is made available to dealers for each temperature control model.';

(h) in paragraph 4, the following point (c) is added:

'(c) an electronic product fiche, as set out in point 4 of Annex IV, is made available to dealers for each solar device model.';

(i) in paragraph 5, the following point (f) is added:

'(f) an electronic label in the format and containing the information set out in point 3 of Annex III is made available to dealers for each model comprising a package of space heater, temperature control and solar device conforming to the seasonal space heating energy efficiency classes set out in point 1 of Annex II.';

(j) in paragraph 5, the following point (g) is added:

'(g) an electronic product fiche as set out in point 5 of Annex IV is made available to dealers for each model comprising a package of space heater, temperature control and solar device.';

(k) in paragraph 6, the following point (f) is added:

'(f) an electronic label in the format and containing the information set out in point 4 of Annex III is made available to dealers for each model comprising a package of combination heater, temperature control and solar device conforming to the seasonal space heating energy efficiency

classes and water heating energy efficiency classes set out in points 1 and 2 of Annex II;';

(l) in paragraph 6, the following point (g) is added:

'(g) an electronic product fiche as set out in point 6 of Annex IV is made available to dealers for each model comprising a package of combination heater, temperature control and solar device;';

(2) Article 4 is amended as follows:

(a) in paragraph 1, point (b) is replaced by the following:

'(b) space heaters offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the space heater displayed, are marketed with the information provided by the suppliers in accordance with point 1 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex IX shall apply;';

(b) in paragraph 2, point (b) is replaced by the following:

'(b) combination heaters offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the combination heater displayed, are marketed with the information provided by the suppliers in accordance with point 2 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex IX shall apply;';

(c) in paragraph 3, point (b) is replaced by the following:

'(b) packages of space heater, temperature control and solar device offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the package of space heater, temperature control and solar device displayed, are marketed with the information provided in accordance with point 3 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex IX shall apply;';

(d) in paragraph 4, point (b) is replaced by the following:

'(b) packages of combination heater, temperature control and solar device offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the package of combination heater, temperature control and solar device displayed, are marketed with the information provided in accordance with point 4 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex IX shall apply;';

(3) Annex VI is amended in accordance with Annex IX to this Regulation;

(4) a new Annex IX is added in accordance with Annex IX to this Regulation.

Article 10

Amendments to Delegated Regulation (EU) No 812/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

Delegated Regulation (EU) No 812/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC, is amended as follows:

(1) Article 3 is amended as follows:

(a) in paragraph 1, the following point (f) is added in the first subparagraph:

'(f) an electronic label in the format and containing the information set out in point 1.1 of Annex

III is made available to dealers for each water heater model conforming to the water heating energy efficiency classes set out in point 1 of Annex II;';

(b) in paragraph 1, the following point (g) is added in the first subparagraph:

'(g) an electronic product fiche as set out in point 1 of Annex IV is made available to dealers for each water heater model, whereby for heat pump water heaters models, the electronic product fiche is made available to dealers at least for the heat generator.';

(c) in paragraph 1, the following subparagraph is added:

'From **1 January 2020** an electronic label in the format and containing the information set out in point 1.2 of Annex III shall be made available to dealers for each water heater model conforming to the water heating energy efficiency classes set out in point 1 of Annex II.';

(d) in paragraph 2, the following point (f) is added in the first subparagraph:

'(f) an electronic label in the format and containing the information set out in point 2.1 of Annex III is made available to dealers for each hot water storage tank model in accordance with the energy efficiency classes set out in point 2 of Annex II;';

(e) in paragraph 2, the following point (g) is added in the first subparagraph:

'(g) an electronic product fiche as set out in point 2 of Annex IV is made available to dealers for each hot water storage tank model.';

(f) in paragraph 2, the following subparagraph is added:

'From 1 January 2020 an electronic label in the format and containing the information set out in point 2.2 of Annex III shall be made available to dealers for each hot water storage tank model, in accordance with the energy efficiency classes set out in point 2 of Annex II.';

(g) in paragraph 3, the following point (c) is added:

'(c) an electronic product fiche, as set out in point 3 of Annex IV, is made available to dealers for each solar device model.';

(h) in paragraph 4, the following point (f) is added:

'(f) an electronic label in the format and containing the information set out in point 3 of Annex III is made available to dealers for each model comprising a package of water heater and solar device, in accordance with the water heating energy efficiency classes set out in point 1 of Annex II;';

(i) in paragraph 4, the following point (g) is added:

'(g) an electronic product fiche as set out in point 4 of Annex IV is made available to dealers for each model comprising a package of water heater and solar device.';

(2) Article 4 is amended as follows:

(a) in paragraph 1, point (b) is replaced by the following:

'(b) water heaters offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the water heater displayed, are marketed with the information provided by the suppliers in accordance with point 1 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex X shall apply;';

(b) in paragraph 2, point (b) is replaced by the following:

'(b) hot water storage tanks offered for sale, hire or hire-purchase, where the end user cannot be

expected to see the hot water storage tank displayed, are marketed with the information provided by the suppliers in accordance with point 2 of Annex VI; except where the offer is made through the internet in which case the provisions in Annex X shall apply;’;

(c) in paragraph 3, point (b) is replaced by the following:

‘(b) packages of water heater and solar device offered for sale, hire or hire purchase, where the end-user cannot be expected to see the package of water heater and solar device displayed, are marketed with the information provided in accordance with point 3 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex X shall apply;’;

(3) Annex VI is amended in accordance with Annex X to this Regulation;

(4) A new Annex X is added in accordance with Annex X to this Regulation.

Article 11

Entry into force and application

This Regulation shall enter into force on the date of its adoption by the Ministerial Council. It shall be transposed, implemented and applicable by 1 January 2020.

Each Contracting Party shall notify the Secretariat of completed transposition within two weeks following the adoption of transposition measures.

ANNEX I

Amendments to the Annexes to Delegated Regulation (EU) 1059/2010, as incorporated and adapted by the Ministerial Council Decision 2011/03/MC-EnC

The following Annex VIII is added:

'ANNEX VIII

Information to be provided in the case of sale, hire or hire-purchase through the internet

- (1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:
- (a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
 - (b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;
 - (c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
 - (d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.
- (2) The appropriate label made available by suppliers in accordance with Article 3(f) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 2 of Annex I. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.
- (3) The image used for accessing the label in the case of nested display shall:
- (a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;
 - (b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and
- (c) have one of the following two formats:



- (4) In the case of nested display, the sequence of display of the label shall be as follows:
- (a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;
 - (b) the image shall link to the label;
 - (c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

- (d) the label shall be displayed by pop up, new tab, new page or inset screen display;
- (e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;
- (f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;
- (g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3(g) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.'

ANNEX II**Amendments to the Annexes to Delegated Regulation (EU) No 1060/2010,
as incorporated and adapted by the Ministerial Council Decision
2011/03/MC- EnC**

The following Annex X is added:

'ANNEX X**Information to be provided in the case of sale, hire or hire-purchase through
the internet**

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

- (a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
- (b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;
- (c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
- (d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(f) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 3 of Annex II. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

- (a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;
- (b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and
- (c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

- (a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;
- (b) the image shall link to the label;

- (c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;
 - (d) the label shall be displayed by pop up, new tab, new page or inset screen display;
 - (e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;
 - (f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;
 - (g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.
- (5) The appropriate product fiche made available by suppliers in accordance with Article 3(g) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.'

ANNEX III**Amendments to the Annexes to Delegated Regulation (EU) No 1061/2010,
as incorporated and adapted by the Ministerial Council Decision
2011/03/MC- EnC**

The following Annex VIII is added:

'ANNEX VIII**Information to be provided in the case of sale, hire or hire-purchase through
the internet**

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

- (a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
- (b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;
- (c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
- (d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(f) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 2 of Annex I. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

- (a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;
- (b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and
- (c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

- (a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;
- (b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3(g) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.'

ANNEX IV**Amendments to the Annexes to Delegated Regulation (EU) No 1062/2010,
as incorporated and adapted by the Ministerial Council Decision
2011/03/MC- EnC**

The following Annex IX is added:

'ANNEX IX**Information to be provided in the case of sale, hire or hire-purchase through
the internet**

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

- (a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
- (b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;
- (c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
- (d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(1)(f) shall be shown on the display mechanism in proximity to the price of the product in accordance with the timetable set out in Article 3(3). The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 5 of Annex V. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

- (a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;
- (b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and
- (c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

- (a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3(1)(g) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.'

ANNEX V

Amendments to the Annexes to Delegated Regulation (EU) No 392/2012, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC- EnC

The following Annex IX is added:

'ANNEX IX

Information to be provided in the case of sale, hire or hire-purchase through the internet

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

- (a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
- (b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;
- (c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
- (d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(1)(h) shall be shown on the display mechanism in proximity to the price of the product in accordance with the timetable set out in Article 3(4) to 3(6). The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

- (a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;
- (b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and
- (c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

- (a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;
- (b) the image shall link to the label;

- (c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;
 - (d) the label shall be displayed by pop up, new tab, new page or inset screen display;
 - (e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;
 - (f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;
 - (g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.
- (5) The appropriate product fiche made available by suppliers in accordance with Article 3(1)(i) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.'

ANNEX VI**Amendments to the Annexes to Delegated Regulation (EU) No 392/2012,
as incorporated and adapted by the Ministerial Council Decision
2014/02/MC- EnC**

The following Annex VIII is added:

'ANNEX VIII**Information to be provided in the case of sale, hire or hire-purchase through
the internet**

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

- (a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
- (b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;
- (c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
- (d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(f) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 4 of Annex I. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

- (a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;
- (b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and
- (c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

- (a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;
- (b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3(g) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.'

ANNEX VII**Amendments to the Annexes to Delegated Regulation (EU) No 874/2012,
as incorporated and adapted by the Ministerial Council Decision
2014/02/MC- EnC**

The following Annex VIII is added:

'ANNEX VIII**Information to be provided in the case of sale, hire or hire-purchase through
the internet**

(1) For the purpose of points 2 to 4 of this Annex the following definitions shall apply:

- (a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
- (b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;
- (c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
- (d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(1)(f) or Article 3(2)(e) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex I. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

- (a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;
- (b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and
- (c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

- (a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;
- (b) the image shall link to the label;

- (c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;
- (d) the label shall be displayed by pop up, new tab, new page or inset screen display;
- (e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;
- (f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;
- (g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.'

ANNEX VIII

Amendments to the Annexes to Delegated Regulation (EU) No 665/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC- EnC

The following Annex VII is added:

'ANNEX VII

Information to be provided in the case of sale, hire or hire-purchase through the internet

- (1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:
- (a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
 - (b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;
 - (c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
 - (d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.
- (2) The appropriate label made available by suppliers in accordance with Article 3(1)(f) shall be shown on the display mechanism in proximity to the price of the product in accordance with the timetable set out in Article 3(2). The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 3 of Annex II. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.
- (3) The image used for accessing the label in the case of nested display shall:
- (a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;
 - (b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and
 - (c) have one of the following two formats:
-
- (4) In the case of nested display, the sequence of display of the label shall be as follows:
- (a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;
 - (b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3(1)(g) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.'

ANNEX IX

Amendments to the Annexes to Delegated Regulation (EU) No 811/2013, as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC

(a) In Annex VI the title is replaced by the following:

'Information to be provided in the cases where end-users cannot be expected to see the product displayed, except on the internet'

(b) The following Annex IX is added:

'ANNEX IX

Information to be provided in the case of sale, hire or hire-purchase through the internet

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

- (a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
- (b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;
- (c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
- (d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3 or in the case of a package where appropriate duly filled in based on the label and fiches provided by suppliers in accordance with Article 3, shall be shown on the display mechanism in proximity to the price of the product or package in accordance with the timetable set out in Article 3. If both a product and a package are shown, but with a price indicated only for the package, only the package label shall be displayed. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex

III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

- (a) be an arrow in the colour corresponding to the energy efficiency class of the product or package on the label;
- (b) indicate on the arrow the energy efficiency class of the product or package in white in a font size equivalent to that of the price; and
- (c) have one of the following two formats:



- (4) In the case of nested display, the sequence of display of the label shall be as follows:
- (a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product or package;
 - (b) the image shall link to the label;
 - (c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;
 - (d) the label shall be displayed by pop up, new tab, new page or inset screen display;
 - (e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;
 - (f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;
 - (g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product or package in a font size equivalent to that of the price.
- (5) The appropriate product fiche made available by suppliers in accordance with Article 3 shall be shown on the display mechanism in proximity to the price of the product or package. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.'

ANNEX X**Amendments to the Annexes to Delegated Regulation (EU) No 812/2013,
as incorporated and adapted by the Ministerial Council Decision
2014/02/MC-Enc**

(a) In Annex VI the title is replaced by the following:

'Information to be provided in the cases where end-users cannot be expected to see the product displayed, except on the internet'

(b) The following Annex X is added:

'ANNEX X**Information to be provided in the case of sale, hire or hire-purchase through
the internet**

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

(a) "display mechanism" means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) "nested display" means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) "tactile screen" means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) "alternative text" means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3 or in the case of a package where appropriate duly filled in based on the label and fiches provided by suppliers in accordance with Article 3, shall be shown on the display mechanism in proximity to the price of the product or package in accordance with the timetable set out in Article 3. If both a product and a package are shown, but with a price indicated only for the package, only the package label shall be displayed. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex

III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product or package on the label;

(b) indicate on the arrow the energy efficiency class of the product or package in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



- (4) In the case of nested display, the sequence of display of the label shall be as follows:
- (a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product or package;
 - (b) the image shall link to the label;
 - (c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;
 - (d) the label shall be displayed by pop up, new tab, new page or inset screen display;
 - (e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;
 - (f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;
 - (g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product or package in a font size equivalent to that of the price.
- (5) The appropriate product fiche made available by suppliers in accordance with Article 3 shall be shown on the display mechanism in proximity to the price of the product or package. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.'

DELEGATED REGULATION (EU) 2015/1094 of 5 May 2015 supplementing Directive 2010/30/EU with regard to the energy labelling of professional refrigerated storage cabinets

Incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products

*The adaptations made by Ministerial Council Decision 2018/03/MC-EnC are highlighted in **bold and blue**.*

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the labelling of, and the provision of supplementary product information on, professional refrigerated storage cabinets.
2. This Regulation shall apply to electric mains-operated professional refrigerated storage cabinets, including those sold for the refrigeration of foodstuffs and animal feed.
3. This Regulation shall not apply to the following products:
 - (a) professional refrigerated storage cabinets that are primarily powered by energy sources other than electricity;
 - (b) professional refrigerated storage cabinets operating with a remote condensing unit;
 - (c) open cabinets, where their openness is a fundamental requirement for their primary functionality;
 - (d) cabinets specifically designed for food processing, where the mere presence of one compartment, with a net volume equivalent to less than 20% of the cabinet's total net volume and specifically designed for food processing, is not sufficient for exemption;
 - (e) cabinets specifically designed only for the purpose of thawing frozen foodstuffs in a controlled manner, where the mere presence of one compartment specifically designed for thawing frozen foodstuffs in a controlled manner is not sufficient for exemption;
 - (f) saladettes;
 - (g) serve-over counters and other similar forms of cabinet primarily intended for display and sale of foodstuffs in addition to refrigeration and storage;
 - (h) cabinets that do not use a vapour compression refrigeration cycle;
 - (i) custom-made professional refrigerated storage cabinets, made on a one-off basis according to individual customer specification and not equivalent to other professional refrigerated storage cabinets as described in definition 9 of Annex I;
 - (j) refrigerator-freezers;
 - (k) static-air cabinets;
 - (l) built-in cabinets;

- (m) roll-in and pass-through cabinets;
- (n) chest freezers.

Article 2

Definitions

The following definitions shall apply for the purpose of this Regulation:

- (a) 'professional refrigerated storage cabinet' means an insulated refrigerating appliance integrating one or more compartments accessible via one or more doors or drawers, capable of continuously maintaining the temperature of foodstuffs within prescribed limits at chilled or frozen operating temperature, using a vapour compression cycle, and intended for the storage of foodstuffs in non-household environments but not for the display to or access by customers;
- (b) 'foodstuffs' means food, ingredients, beverages, including wine, and other items primarily intended for consumption which require refrigeration at specified temperatures;
- (c) 'built-in cabinet' means a fixed insulated refrigerating appliance intended to be installed in a cabinet, in a prepared recess in a wall or similar location, and requiring furniture finishing;
- (d) 'roll-in cabinet' means a professional refrigerated storage cabinet including one unique compartment that allows wheeled racks of product to be wheeled in;
- (e) 'pass-through cabinet' means a professional refrigerated storage cabinet accessible from both sides;
- (f) 'static-air cabinet' means a professional refrigerated storage cabinet without internal forced-air circulation, specifically designed to store temperature-sensitive foodstuffs or to avoid a drying effect on foodstuffs stored without a sealed enclosure, where a single static air compartment within the cabinet is not sufficient to designate the cabinet as a static air cabinet;
- (g) 'open cabinet' means a professional refrigerated storage cabinet whose refrigerated enclosure can be reached from the outside without opening a door or a drawer, where the mere presence of one compartment which can be reached from the outside without opening a door or a drawer, with a net volume equivalent to less than 20% of the professional refrigerated storage cabinet's total volume, is not sufficient to qualify it as such;
- (h) 'saladette' means a professional refrigerated storage cabinet with one or more doors or drawer fronts in the vertical plane that has cut-outs in the top surface into which temporary storage bins can be inserted for easy-access storage of foodstuffs such as, but not limited to, pizza toppings or salad items;
- (i) 'combined cabinet' means a professional refrigerated storage cabinet including two or more compartments with different temperatures for the refrigeration and storage of foodstuffs;
- (j) 'refrigerator-freezer' means a type of combined cabinet including at least one compartment exclusively intended for chilled operating temperature and one compartment exclusively intended for frozen operating temperature;
- (k) 'chest freezer' means a food freezer in which the compartment(s) is accessible from the top of the appliance or which has both top-opening type and upright type compartments but where the gross volume of the top-opening type compartment(s) exceeds 75% of the total gross volume of the appliance.

Article 3

Responsibilities of suppliers and timetable

1. From **1 January 2020**, suppliers placing professional refrigerated storage cabinets on the market or putting them into service shall ensure that the following requirements are met:

(a) a printed label in the format and containing the information set out in Annex III shall be provided for each professional refrigerated storage cabinet;

(b) an electronic label in the format and containing the information set out in Annex III shall be made available to dealers for each professional refrigerated storage cabinet model;

(c) a product fiche, as set out in Annex IV, shall be made available;

(d) an electronic product fiche, as set out in Annex IV, shall be made available to dealers for each professional refrigerated storage cabinet model;

(e) technical documentation, as set out in Annex V, shall be provided on request to the authorities of the **Contracting Parties**;

(f) any advertisement relating to a specific professional refrigerated storage cabinet model and containing energy-related or price information shall include a reference to the energy efficiency class of that model;

(g) any technical promotional material concerning a specific professional refrigerated storage cabinet model and describing its specific technical parameters shall include a reference to the energy efficiency class of that model.

2. The labels in Annex III shall accompany professional refrigerated storage cabinets placed on the market according to the following timetable:

- <...>¹

- from **1 January 2020**: label 2.

Article 4

Responsibilities of dealers

Dealers of professional refrigerated storage cabinets shall ensure that the following requirements are met:

(a) at the point of sale, each professional refrigerated storage cabinet shall bear the label provided by suppliers in accordance with Article 3(1) on the outside of the front or top of the appliance, so that it is clearly visible;

(b) professional refrigerated storage cabinets offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the product displayed, shall be marketed with the information provided by the suppliers in accordance with Annex VI, except where the offer is made on the internet, in which

(c) any advertisement relating to a specific professional refrigerated storage cabinet model and containing energy-related or price information shall include a reference to the energy efficiency class of that model;

(d) any technical promotional material concerning a specific professional refrigerated storage cabinet model and describing its specific technical parameters shall include a reference to the energy efficiency

¹ The first indent in Article 3(2) shall not be applicable in accordance with Article 3(4)(a) of Decision 2018/03/MC-EnC

class of that model.

Article 5

Measurement and calculation

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation procedures based on recognised state-of-the-art methods, as set out in Annex IX.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure set out in Annex X when assessing the conformity of the declared energy efficiency class, annual energy consumption and volumes.

Article 7

Review

<...>²

Article 8

Entry into force and application

This Regulation shall enter into force on the day of its adoption by the Ministerial Council. It shall be transposed, implemented and applicable by 1 January 2020.

Each Contracting Party shall notify the Secretariat of completed transposition within two weeks following the adoption of transposition measures.

² Not applicable in accordance with Article 3(4)(a) of Decision 2018/03/MC-EnC

ANNEX I

Definitions applicable for Annexes II to X

For the purposes of Annexes II to X, the following definitions shall apply:

- (1) 'net volume' means the volume containing foodstuffs within the load limit;
- (2) 'chilled operating temperature' means that the temperature of foodstuffs stored in the cabinet is continuously maintained at a temperature between $-1\text{ }^{\circ}\text{C}$ and $5\text{ }^{\circ}\text{C}$;
- (3) 'frozen operating temperature' means that the temperature of foodstuffs stored in the cabinet is continuously maintained at a temperature lower than $-15\text{ }^{\circ}\text{C}$, which is understood as the highest temperature of the warmest package test;
- (4) 'multi-use cabinet' means that a professional refrigerated storage cabinet or separate compartment of the same cabinet may be set at different temperatures for chilled or frozen foodstuffs;
- (5) 'vertical cabinet' means a professional refrigerated storage cabinet of overall height equal to or higher than 1050 mm with one or more front doors or drawers accessing the same compartment;
- (6) 'counter cabinet' means a professional refrigerated storage cabinet of overall height lower than 1050 mm with one or more front doors or drawers accessing the same compartment;
- (7) 'light-duty cabinet', also known as 'semi-professional cabinet', means a professional refrigerated storage cabinet only capable of continuously maintaining chilled or frozen operating temperature in all its compartment(s) in ambient conditions corresponding to climate class 3, as detailed in Table 3 of Annex IX; if the cabinet is able to maintain temperature in ambient conditions corresponding to climate class 4, it shall not be considered a light-duty cabinet;
- (8) 'heavy-duty cabinet' means a professional refrigerated storage cabinet capable of continuously maintaining chilled or frozen operating temperature in all its compartment(s) in ambient conditions corresponding to climate class 5, as detailed in Table 3 in Annex IX;
- (9) 'equivalent professional refrigerated storage cabinet' means a professional refrigerated storage cabinet model placed on the market with the same net volume, same technical, efficiency and performance characteristics, and same compartment types and volumes as another professional refrigerated storage cabinet model placed on the market under a different commercial code number by the same manufacturer.

ANNEX II

Energy efficiency classes

The energy efficiency class of a professional refrigerated storage cabinet shall be determined on the basis of its energy efficiency index (EEI), as set out in Table 1.

Table 1

Energy efficiency classes of professional refrigerated storage cabinets

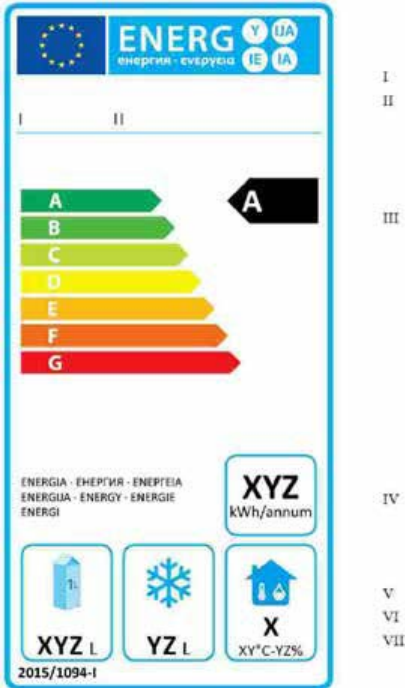
Energy efficiency class	EEI
A ⁺⁺⁺	$EEI < 5$
A ⁺⁺	$5 \leq EEI < 10$
A ⁺	$10 \leq EEI < 15$
A	$15 \leq EEI < 25$
B	$25 \leq EEI < 35$
C	$35 \leq EEI < 50$
D	$50 \leq EEI < 75$
E	$75 \leq EEI < 85$
F	$85 \leq EEI < 95$
G	$95 \leq EEI < 115$

The EEI shall be calculated as detailed in Annex VIII.

ANNEX III

Labels

1. Label 1 – Professional refrigerated storage cabinets in energy efficiency classes A to G



The following information shall be included in the label:

- I. supplier's name or trade mark;
- II. supplier's model identifier;
- III. the energy efficiency class, determined in accordance with Annex II; the head of the arrow containing the energy efficiency class shall be placed at the same height as that for the relevant energy efficiency class;
- IV. the annual electricity consumption in kWh in terms of final energy consumption per year, calculated in accordance with Annex IX and rounded to the nearest integer;
- V. the sum of the net volumes, expressed in litres, of all chilled compartments functioning at chilled operating temperature; where no compartments functioning at chilled operating temperature are present, the supplier shall declare '- L' instead of a value;
- VI. the sum of the net volumes, expressed in litres, of all compartments functioning at frozen operating temperature; where no compartments functioning at frozen operating temperature are present, the supplier shall declare '- L' instead of a value;
- VII. the climate class (3, 4 or 5), together with the associated dry bulb temperature (in °C) and the relative

humidity (in %), as referred to in Table 3, Annex IX.

The design of the label shall be in accordance with point 3. By way of derogation, where a model has been awarded an 'EU ecolabel', a copy of the ecolabel may be added.

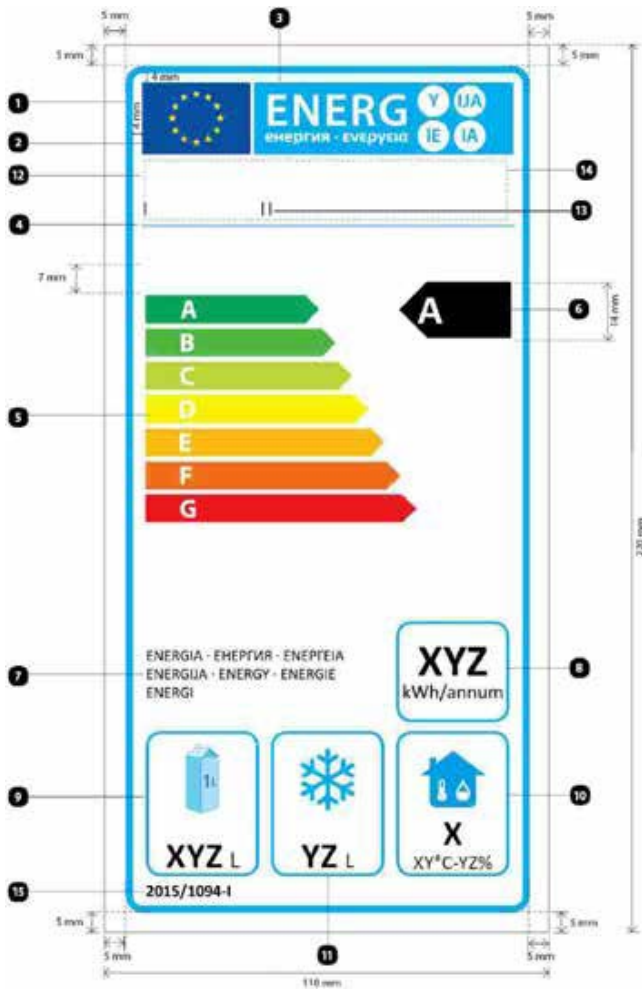
2. Label 2 – Professional refrigerated storage cabinets in energy efficiency classes A+++ to G



The information listed in point 1 shall be included in this label.

The design of the label shall be in accordance with point 3. By way of derogation, where a model has been awarded an 'EU eco-label', a copy of the eco-label may be added.

3. The design of the label for professional refrigerated storage cabinets shall be as follows:



Where:

- The label shall be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- The background of the label shall be white.
- Colours shall be CMYK – cyan, magenta, yellow and black; for example, 00-70-X-00 indicates 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- The label shall meet the following specifications (numbers refer to the figure above):

- 1 **EU label border stroke:** 5 pt – colour: Cyan 100 % – round corners: 3,5 mm;
 - 2 **EU logo:** colours: X-80-00-00 and 00-00-X-00;
 - 3 **Energy label:** colour: X-00-00-00;
- Pictogram as depicted (EU logo + energy label):** 92 mm wide × 17 mm high;
- 4 **Sub-logos border:** 1 pt – colour: Cyan 100 % – 92,5 mm long;
 - 5 **A-G scale**

Arrow: 7 mm high, gap 0,75 mm – colours:

Highest class: X-00-X-00,

Second class: 70-00-X-00,

Third class: 30-00-X-00,

Fourth class: 00-00-X-00,

Fifth class: 00-30-X-00,

Sixth class: 00-70-X-00,

Last classes: 00-X-X-00.

Text: Calibri bold 19 pt, capitals and white; '+' symbols: Calibri bold 13 pt, superscript, white, aligned on a single row;

6 Energy efficiency class

Arrow: 26 mm wide × 14 mm high, 100 % black;

Text: Calibri bold 29 pt, capitals and white; '+' symbols: Calibri bold 18 pt, superscript, white and aligned on a single row;

7 Energy

Text: Calibri regular 11 pt, capitals, 100 % black;

8 Annual energy consumption

Border: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm;

Value: Calibri bold 32 pt, 100 % black;

2nd line: Calibri regular 14 pt, 100 % black;

9 Sum of the net volumes of all compartments functioning at chilled operating temperature

Border: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm;

Value: Calibri bold 25 pt, 100 % black; Calibri regular 17 pt, 100 % black;

10 Climate class together with the associated dry bulb temperature and the relative humidity

Border: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm;

Value: Calibri bold 25 pt, 100 % black;

2nd line: Calibri regular 14 pt, 100 % black;

11 Sum of the net volumes of all compartments functioning at frozen operating temperature

Border: 2 pt – colour: Cyan 100 % – round corners: 3,5 mm;

Value: Calibri bold 25 pt, 100 % black; Calibri regular 17 pt, 100 % black;

- 12** Supplier's name or trademark
- 13** Supplier's model identifier
- 14** The supplier's name or trademark and model identifier shall fit in a space of 90 × 15 mm
- 15** Number of Regulation

Text: Calibri bold 11 pt.

ANNEX IV

Product fiche

1. The information in the product fiche of the professional refrigerated storage cabinet shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

(a) supplier's name or trade mark;

(b) supplier's model identifier;

(c) type of model in accordance with the definitions in Annex I;

(d) the energy efficiency class and energy efficiency index of the model, determined in accordance with Annex II;

(e) where the model has been awarded an 'EU eco-label' under Regulation (EC) No 66/2010, that information may be included;

(f) the energy consumption of the cabinet over 24 hours (E24h) and the annual energy consumption in kWh, calculated in accordance with Annex IX and rounded to the nearest integer;

(g) net volume of each compartment;

(h) climate class in accordance with Table 3 in Annex IX;

(i) for light-duty cabinets, the following sentence: 'This appliance is intended for use in ambient temperatures up to 25 °C and therefore is not suitable for use in hot professional kitchens';

(j) for heavy-duty cabinets, the following sentence: 'This appliance is intended for use in ambient temperatures up to 40 °C'.

2. A single fiche may cover a number of professional refrigerated storage cabinet models supplied by the same supplier.

3. The information in the fiche may be given in the form of a copy of the label, either in colour or in black and white, in which case information listed in point 1 and not displayed on the label shall also be provided.

ANNEX V

Technical documentation

1. The technical documentation referred to in Article 3(1)(c) shall include:

- (a) the name and address of the supplier;
- (b) sufficient description of the professional refrigerated storage cabinet model for it to be unambiguously identified;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) the results of the measurements and calculations for the technical parameters specified in Annex IX.

2. Where the information included in the technical documentation file for a professional refrigerated storage cabinet model has been obtained by a calculation based on an equivalent professional refrigerated storage cabinet model, the technical documentation shall include details of such calculations and of tests undertaken by suppliers to verify the accuracy of the calculations undertaken. The technical information shall also include a list of all other equivalent professional refrigerated storage cabinet models where the information was obtained on the same basis.

3. The information contained in this technical documentation may be merged with the technical documentation provided in accordance with measures under Directive 2009/125/EC.

ANNEX VI

Information to be provided where end-users cannot be expected to see the product displayed, except on the internet

1. Where end-users cannot be expected to see the product displayed, except on the internet, the information shall be provided in the following order:
 - (a) the energy efficiency class of the model, in accordance with Annex II;
 - (b) the annual energy consumption in kWh per year, rounded to the nearest integer and calculated in accordance with Annex IX;
 - (c) the net volume of each compartment;
 - (d) the climate class in accordance with Annex IX.
2. Where other information contained in the product fiche is provided, it shall be in the form and order specified in Annex IV.
3. The size and font in which the information referred in this Annex is printed or shown shall be such that it is legible.

ANNEX VII

Information to be provided in the case of sale, hire or hire-purchase through the internet

1. For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

- (a) 'display mechanism' means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
- (b) 'nested display' means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;
- (c) 'tactile screen' means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
- (d) 'alternative text' means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

2. The appropriate label made available by suppliers in accordance with Article 3(1)(b) shall be shown on the display mechanism near the price of the product in accordance with the timelines indicated in Article 3(2). The size of the label shall be such that it is clearly visible and legible and shall be proportionate to the size specified in point 3 of Annex III. The label may be displayed using a nested display, in which case the image used for accessing it shall comply with the specifications in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

3. The image used for accessing the label in the case of nested display shall:

- (a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;
- (b) indicate the energy efficiency class of the product in white in the same font size as that used for the price; and
- (c) be in one of the following two formats:



4. In the case of nested display, the sequence of display of the label shall be as follows:

- (a) the image referred to in point 3 of this Annex is shown on the display mechanism in proximity to the price of the product;
- (b) the image links to the label;
- (c) the label is displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;
- (d) the label is displayed by pop up, new tab, new page or inset screen display;
- (e) for magnification of the label on tactile screens, the device conventions for tactile magnification apply;
- (f) display of the label is closed by means of a close option or other standard closing mechanism;
- (g) the alternative text for the graphic, to be displayed on failure to display the label, is the energy efficiency class of the product in the same font size as that used for the price.

5. The appropriate product fiche made available by suppliers in accordance with Article 3(1)(d) shall be shown on the display mechanism near the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing it shall clearly and legibly indicate 'Product fiche'. If nested display is used, the fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

ANNEX VIII

Method for calculating the energy efficiency index for professional refrigerated storage cabinets

For the calculation of the energy efficiency index (EEI) of a professional refrigerated storage cabinet model, the annual energy consumption of the cabinet shall be compared to its standard annual energy consumption.

The EEI shall be calculated as:

$$\text{EEI} = (\text{AEC}/\text{SAEC}) \times 100$$

Where:

$$\text{AEC} = \text{E24h} \times \text{af} \times 365$$

AEC = annual energy consumption of the cabinet in kWh/year

E24h = energy consumption of the cabinet over 24 hours

af = adjustment factor

$$\text{SAEC} = \text{M} \times \text{Vn} + \text{N}$$

SAEC = standard annual energy consumption of the cabinet in kWh/year

Vn = net volume of the appliance, which is the sum of net volumes of all compartments of the cabinet, expressed in litres.

M and N are given in the Table 2.

Table 2

M and N coefficient values

Category	Value for M	Value for N
Vertical Chilled	1,643	609
Vertical Frozen	4,928	1 472
Counter Chilled	2,555	1 790
Counter Frozen	5,840	2 380

ANNEX IX

Measurement and calculation

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using harmonised standards the reference numbers of which have been published for that purpose **in a dedicated section of the website of the Energy Community**, or using other reliable, accurate and reproducible methods that take into account the generally recognised state-of-the-art methods. They shall meet the technical definitions, conditions, equations and parameters set out in this Annex.

2. For establishing the values of annual energy consumption and energy efficiency index for professional refrigerated storage cabinets, measurements shall be carried out under the following conditions:

- The temperature of test packages shall be between $-1\text{ }^{\circ}\text{C}$ and $5\text{ }^{\circ}\text{C}$ for chilled cabinets and lower than $-15\text{ }^{\circ}\text{C}$ for frozen cabinets.

- The ambient conditions shall correspond to climate class 4 as detailed in Table 3, except for light-duty cabinets, which shall be tested in ambient conditions corresponding to climate class 3. Adjustment factors of 1,2 for light-duty cabinets at chilled operating temperature and 1,1 for light-duty cabinets at frozen operating temperature shall then be applied to the testing results obtained for light-duty cabinets.

- Professional refrigerated storage cabinets shall be tested:

- at chilled operating temperature in the case of a combined cabinet containing at least one compartment exclusively intended for chilled operating temperature,
- at chilled operating temperature in the case of a professional refrigerated storage cabinet which has solely one compartment exclusively intended for chilled operating temperature,
- at frozen operating temperature in all other cases.

3. The ambient conditions of climate classes 3, 4 and 5 are shown in Table 3.

Table 3

Ambient conditions of climate classes 3, 4 and 5

Test room climate class	Dry bulb temperature, $^{\circ}\text{C}$	Relative humidity, %	Dew point, $^{\circ}\text{C}$	Water vapour mass in dry air, g/kg
3	25	60	16,7	12,0
4	30	55	20,0	14,8
5	40	40	23,9	18,8

ANNEX X³

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Contracting Parties shall apply the following procedure:

- (1) The Contracting Party authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MCEnC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 4.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all equivalent professional refrigerated storage cabinets that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the Contracting Party authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the technical documentation.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 4.
- (6) If the result referred to in point 5 is not achieved, the model and all equivalent professional refrigerated storage cabinets that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

³ Annex IX is amended in accordance with Article 13 and Annex XIII of Delegated Regulation (EU) 2017/254, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

(7) The Contracting Party authorities shall provide all relevant information to the authorities of the other Contracting Parties and to the Secretariat without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The Contracting Party authorities shall use the measurement and calculation methods set out in Annexes VIII and IX.

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 4 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 4
Verification tolerances

Parameters	Verification tolerances
Net volume	The determined value shall not be lower than the declared value by more than 3 %.
Energy consumption (E_{24h})	The determined value shall not exceed the declared value by more than 10 %.

DELEGATED REGULATION (EU) 2015/1186 of 24 April 2015 supplementing Directive 2010/30/EU with regard to the energy labelling of local space heaters

Incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products

*The adaptations made by Ministerial Council Decision 2018/03/MC-EnC are highlighted in **bold and blue**.*

Article 1

Subject matter and scope

This Regulation establishes requirements for the energy labelling of, and the provision of supplementary product information on local space heaters with a nominal heat output of 50 kW or less.

This Regulation shall not apply to:

- (a) electric local space heaters;
- (b) local space heaters using a vapour compression cycle or sorption cycle for the generation of heat driven by electric compressors or fuel;
- (c) solid fuel local space heaters that are specified for the combustion of non-woody biomass only;
- (d) local space heaters specified for purposes other than indoor space heating to reach and maintain a certain thermal comfort of human beings by means of heat convection or heat radiation;
- (e) local space heaters that are specified for outdoor use only;
- (f) local space heaters of which the direct heat output is less than 6 % of the combined direct and indirect heat output at nominal heat output;
- (g) solid fuel local space heaters that are not factory assembled, or are not provided as prefabricated components or parts by a single manufacturer which are to be assembled on site;
- (h) luminous local space heaters and tube local space heaters;
- (i) air heating products;
- (j) sauna stoves.

Article 2

Definitions

In addition to the definitions set out in Article 2 of Directive 2010/30/EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC**, the following definitions shall apply for the purposes of this Regulation:

- (1) 'local space heater' means a space heating device that emits heat by direct heat transfer or by direct

heat transfer in combination with heat transfer to a fluid, in order to reach and maintain a certain level of human thermal comfort within an enclosed space in which the product is situated, possibly combined with a heat output to other spaces and is equipped with one or more heat generators that convert electricity or gaseous, liquid or solid fuels directly into heat, through use of the Joule effect or combustion of fuels respectively;

(2) 'solid fuel local space heater' means an open fronted local space heater, closed fronted local space heater or cooker using solid fuels;

(3) 'gaseous fuel local space heater' means an open fronted local space heater or a closed fronted local space heater using gaseous fuel;

(4) 'liquid fuel local space heater' means an open fronted local space heater or a closed fronted local space heater using liquid fuel;

(5) 'electric local space heater' means a local space heater using the electric Joule effect to generate heat;

(6) 'open fronted local space heater' means a local space heater, using gaseous, liquid or solid fuels, of which the fire bed and combustion gases are not sealed from the space in which the product is fitted and which is sealed to a chimney or fireplace opening or requires a flue duct for the evacuation of products of combustion;

(7) 'closed fronted local space heater' means a local space heater, using gaseous, liquid or solid fuels, of which the fire bed and combustion gases can be sealed from the space in which the product is fitted and which is sealed to a chimney or fireplace opening or requires a flue duct for the evacuation of products of combustion;

(8) 'cooker' means a local space heater, using solid fuels, that integrates in one enclosure the function of a local space heater, and a hob, an oven or both to be used for preparation of food and which is sealed to a chimney or fireplace opening or requires a flue duct for the evacuation of products of combustion;

(9) 'fuel fired local space heater' means either an open fronted local space heater, closed fronted local space heater or cooker;

(10) 'luminous local space heater' means a local space heater, using gaseous or liquid fuel which is equipped with a burner; which is to be installed above head level, directed towards the place of use so that the heat emission of the burner, being predominantly infrared radiation, directly warms the subjects to be heated and which emits the products of combustion in the space where it is situated;

(11) 'tube local space heater' means a local space heater, using gaseous or liquid fuel, which is equipped with a burner; which is to be installed above head level, near the subjects to be heated, which heats the space primarily by infrared radiation from the tube or tubes heated by the internal passage of products of combustion and of which the products of combustion are to be evacuated through a flue duct;

(12) 'flueless heater' means a local space heater, using gaseous, liquid or solid fuel, emitting the products of combustion into the space where the product is situated, other than a luminous local space heater;

(13) 'open to chimney heater' means a local space heater, using gaseous, liquid or solid fuels intended to sit under a chimney or in a fireplace without sealing between the product and the chimney or fireplace opening, and allowing the products of combustion pass unrestricted from the fire bed to the chimney or flue;

(14) 'air heating product' means a product providing heat to an air-based heating system only that can be ducted and is designed to be used while fastened or secured in a specific location or wall mounted which distributes the air by means of an air moving device in order to reach and maintain a certain level

of human thermal comfort within an enclosed space in which the product is situated;

(15) 'sauna stove' means a local space heater, incorporated in, or declared to be used in, dry or wet sauna's or similar environments;

(16) 'solid fuel' means a fuel which is solid at normal indoor room temperatures, including solid biomass and solid fossil fuel;

(17) 'biomass' means the biodegradable fraction of products, waste and residues from biological origin from agriculture (including vegetal and animal substances), forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of industrial and municipal waste;

(18) 'woody biomass' means biomass originating from trees, bushes and shrubs, including log wood, chipped wood, compressed wood in the form of pellets, compressed wood in the form of briquettes, and sawdust;

(19) 'non-woody biomass' means biomass other than woody biomass, including, *inter alia*, straw, miscanthus, reeds, kernels, grains, olive stones, olive cakes and nut shells;

(20) 'preferred fuel' means the single fuel which is to be preferably used for the local space heater according to the supplier's instructions;

(21) 'fossil solid fuel' means solid fuel other than biomass, including anthracite and dry steam coal, hard coke, low temperature coke, bituminous coal, lignite, a blend of fossil fuels or a blend of biomass and fossil fuel; for the purposes of this Regulation it also includes peat;

(22) 'other suitable fuel' means a fuel, other than the preferred fuel, which can be used in the local space heater according to the supplier's instructions and includes any fuel that is mentioned in the instruction manual for installers and end-users, on free access websites of manufacturers and suppliers, in technical or promotional material and in advertisements;

(23) 'direct heat output' means the heat output of the product by radiation and convection of heat, as emitted by or from the product itself to air, excluding the heat output of the product to a heat transfer fluid, expressed in kW;

(24) 'indirect heat output' means the heat output of the product to a heat transfer fluid by the same heat generation process that provides the direct heat output of the product, expressed in kW;

(25) 'indirect heating functionality' means the product is capable of transferring part of the total heat output to a heat transfer fluid, for use as space heating or domestic hot water generation.

(26) 'nominal heat output' (P_{nom}) means the heat output of a local space heater comprising both direct heat output and indirect heat output (where applicable), when operating at the setting for the maximum heat output that can be maintained over an extended period, as declared by the supplier, expressed in kW;

(27) 'minimum heat output' (P_{min}) means the heat output of a local space heater comprising both direct heat output and indirect heat output (where applicable), when operating at the setting for the lowest heat output, as declared by the supplier, expressed in kW;

(28) 'intended for outdoor use' means the product is suitable for safe operation outside enclosed spaces, including possible use in outdoor conditions;

(29) 'equivalent model' means a model placed on the market with the same technical parameters set out in Table 2 or Table 3 of Annex V as another model placed on the market by the same supplier.

For the purposes of Annexes II to IX, additional definitions are set out in Annex I.

Article 3

Responsibilities of suppliers and timetable

1. From **1 January 2020** suppliers placing on the market or putting into service local space heaters that are not flueless heaters using solid fuels or open to chimney heaters using solid fuels shall ensure that:

(a) such local space heater is provided with a printed label in the format and containing the information set out in point 1 of Annex III and conforming to the energy efficiency classes set out in Annex II;

(b) an electronic label in the format and containing the information set out in point 1 of Annex III and conforming to the energy efficiency classes set out Annex II is made available to dealers for such local space heater model;

(c) a product fiche in accordance with Annex IV, is provided for such local space heater;

(d) an electronic product fiche, in accordance with Annex IV, is made available to dealers for such local space heater model;

(e) the technical documentation, as set out in Annex V, is provided on request to the authorities of the **Contracting Parties** and to the **Secretariat**;

(f) any advertisement related to a specific such local space heater model and containing energy-related or price information includes a reference to the energy efficiency class for that model;

(g) any technical promotional material concerning a specific such local space heater model and describing its specific technical parameters includes a reference to the energy efficiency class for that model.

2. From 1 January 2022 suppliers placing on the market or putting into service flueless heaters using solid fuels or open to chimney heaters using solid fuels shall ensure that:

(a) such local space heater is provided with a printed label in the format and containing the information set out in point 1 of Annex III and conforming to the energy efficiency classes set out in Annex II;

(b) an electronic label in the format and containing the information set out in point 1 of Annex III and conforming to the energy efficiency classes set out Annex II is made available to dealers for such local space heater model;

(c) a product fiche in accordance with Annex IV, is provided for such local space heater;

(d) an electronic product fiche, in accordance with Annex IV, is made available to dealers for such local space heater model;

(e) the technical documentation, as set out in Annex V, is provided on request to the authorities of the **Contracting Parties** and to the **Secretariat**;

(f) any advertisement related to a specific such local space heater model and containing energy-related or price information includes a reference to the energy efficiency class for that model;

(g) any technical promotional material concerning a specific such local space heater model and describing its specific technical parameters includes a reference to the energy efficiency class for that model.

Article 4

Responsibilities of dealers

Dealers of local space heaters shall ensure that:

- (a) each local space heater bears, at the point of sale, the label provided by suppliers in accordance with Article 3, on the outside of the front of the local space heater, in such a way as to be clearly visible;
- (b) local space heaters offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the product displayed, are marketed with the information provided by the suppliers in accordance with Annex VI, except where the offer is made through the internet, in which case the provisions of Annex VII shall apply;
- (c) any advertisement for a specific local space heater model which contains energy-related or price information includes a reference to the energy efficiency class of that model;
- (d) any technical promotional material concerning a specific local space heater model which describes its specific technical parameters includes a reference to the energy efficiency class of that model.

Article 5

Measurement and calculation methods

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation methods which take into account the recognised state-of-the-art measurement and calculation methods, set out in Annex VIII.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure laid down in Annex IX when assessing the conformity of the declared energy efficiency class of local space heaters.

Article 7

Review

<...>¹

Article 8

Entry into force and application

This Regulation shall enter into force on the day of its adoption by the Ministerial Council.

It shall be transposed, implemented and applicable by 1 January 2020.

¹ Not applicable in accordance with Article 3(3)(a) of Decision 2018/03/MC-EnC

For flueless heaters using solid fuels and open to chimney heaters using solid fuels, it shall apply from 1 January 2022 as set out in Article 3(2). However, Articles 3(2)(f) and (g) and Article 4(b), (c) and (d) shall apply from 1 April 2022.

Each Contracting Party shall notify the Secretariat of completed transposition within two weeks following the adoption of transposition measures.

ANNEX I

Definitions applicable for Annexes II to IX

For the purposes of Annexes II to IX the following definitions shall apply:

- (1) 'conversion coefficient' (CC) means a coefficient reflecting the estimated 40 % average EU generation efficiency referred to in Directive 2012/27/EU, **as incorporated and adapted by the Ministerial Council Decision 2015/08/MC-EnC²**; the value of the conversion coefficient is $CC = 2,5$
- (2) 'net calorific value' (NCV) means the total amount of heat released by a unit quantity of fuel containing the appropriate moisture of the fuel, when it is burned completely with oxygen, and when the products of combustion are not returned to ambient temperature;
- (3) 'useful efficiency, at either nominal or minimum heat output, ($\eta_{th,nom}$ or $\eta_{th,min}$ respectively)' means the ratio of the useful heat output and the total energy input expressed in terms of NCV of a local space heater, expressed in %;
- (4) 'electric power requirement at nominal heat output' (el_{max}) means the electric power consumption of the local space heater while providing the nominal heat output. The electric power consumption shall be established without consideration of the power consumption of a circulator in case the product offers indirect heating functionality and a circulator is incorporated, expressed in kW;
- (5) 'electric power requirement at minimum heat output' (el_{min}) means the electric power consumption of the local space heater while providing the minimum heat output. The electric power consumption shall be established without consideration of the power consumption of a circulator in case the product offers indirect heating functionality and a circulator is incorporated, expressed in kW;
- (6) 'electric power requirement in standby mode' (el_{sb}) means the electric power consumption of the product while in standby mode, expressed in kW;
- (7) 'permanent pilot flame power requirement' (P_{pilot}) means the fuel consumption of gaseous, liquid or solid fuel of the product for the provision of a flame to serve as an ignition source for the more powerful combustion process needed for nominal or part load heat output, when lit for more than 5 minutes before the main burner is on, expressed in kW;
- (8) 'single stage heat output, no room temperature control' means the product is not capable of varying its heat output automatically and that no feedback of room temperature is present to adapt the heat output automatically;
- (9) 'two or more manual stages, no room temperature control' means the product is capable of varying its heat output manually by two or more levels of heat output and is not equipped with a device that automatically regulates the heat output in relation to a desired indoor temperature;
- (10) 'with mechanic thermostat room temperature control' means the product is equipped with a non-electronic device that allows the product to automatically vary its heat output over a certain time period, in relation to a certain required level of indoor heating comfort;
- (11) 'with electronic room temperature control' means the product is equipped with an electronic device, either integrated or external, that allows the product to automatically vary its heat output over a certain time period, in relation to a certain required level of indoor heating comfort;

² Directive 2012/27/EU, of 25 October 2012 on energy efficiency, **as incorporated and adapted by the Ministerial Council Decision 2015/08/MC-EnC**

(12) 'with electronic room temperature control plus day timer' means the product is equipped with an electronic device, either integrated or external, that allows the product to automatically vary its heat output over a certain time period, in relation to a certain required level of indoor heating comfort, and allows the setting of timing and temperature level for a 24-hours timer interval;

(13) 'with electronic room temperature control plus week timer' means the product is equipped with an electronic device, either integrated or external, that allows the product to automatically vary its heat output over a certain time period, in relation to a certain required level of indoor heating comfort, and allows the setting of timing and temperature levels for a full week. During the 7-day period the settings must allow a variation on a day-to-day basis;

(14) 'room temperature control, with presence detection' means the product is equipped with an electronic device, either integrated or external, that automatically reduces the set-point for the room temperature when no person is detected in the room;

(15) 'room temperature control, with open window detection' means the product is equipped with an electronic device, either integrated or external, that reduces the heat output when a window or door has been opened. Whenever a sensor is used to detect the opening of a window or door, it can be installed with the product, externally to the product, built in the building structure or as a combination of those options;

(16) 'with distance control option' means the function that allows remote interaction from outside the building in which the product is installed with the control of the product;

(17) 'standby mode' means a condition where the product is connected to the mains power source, depends on energy input from the mains power source to work as intended and provides only the following functions, which may persist for an indefinite time: reactivation function, or reactivation function and only an indication of enabled reactivation function, and/or information or status display;

(18) 'model identifier' means the code, usually alphanumeric, which distinguishes a specific local space heater model from other models with the same trade mark, supplier's name or dealer's name;

(19) 'other fossil fuel' means fossil fuel other than anthracite and dry steam coal, hard coke, low temperature coke, bituminous coal, lignite, peat or blended fossil fuel briquettes;

(20) 'other woody biomass' means woody biomass other than log wood with a moisture content of 25 % or less, briquetted fuel with a moisture content below 14 % or compressed wood with a moisture content below 12 %;

(21) 'moisture content' means the mass of water in the fuel in relation to the total mass of the fuel as used in the local space heater.

ANNEX II

Energy efficiency classes

The energy efficiency class of a local space heater shall be determined on the basis of its energy efficiency index as set out in Table 1.

Table 1

Energy efficiency classes of local space heaters

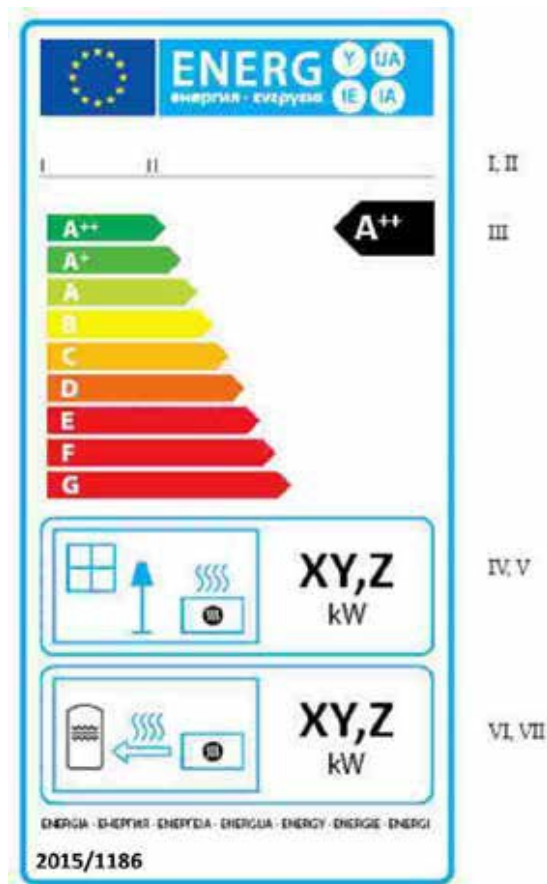
Energy efficiency class	Energy efficiency index (EEI)
A ⁺	$107 \leq EEI < 130$
A	$88 \leq EEI < 107$
B	$82 \leq EEI < 88$
C	$77 \leq EEI < 82$
D	$72 \leq EEI < 77$
E	$62 \leq EEI < 72$
F	$42 \leq EEI < 62$
G	$EEI < 42$

The energy efficiency index of a local space heater shall be calculated in accordance with Annex VIII.

ANNEX III

The label

(a) The following information shall be included in the label:



I. supplier's name or trade mark;

II. supplier's model identifier;

III. the energy efficiency class, determined in accordance with point 1 of Annex II; the head of the arrow containing the energy efficiency class of the local space heater shall be placed at the same height as the head of the relevant energy efficiency class;

IV. the symbol for direct heat output;

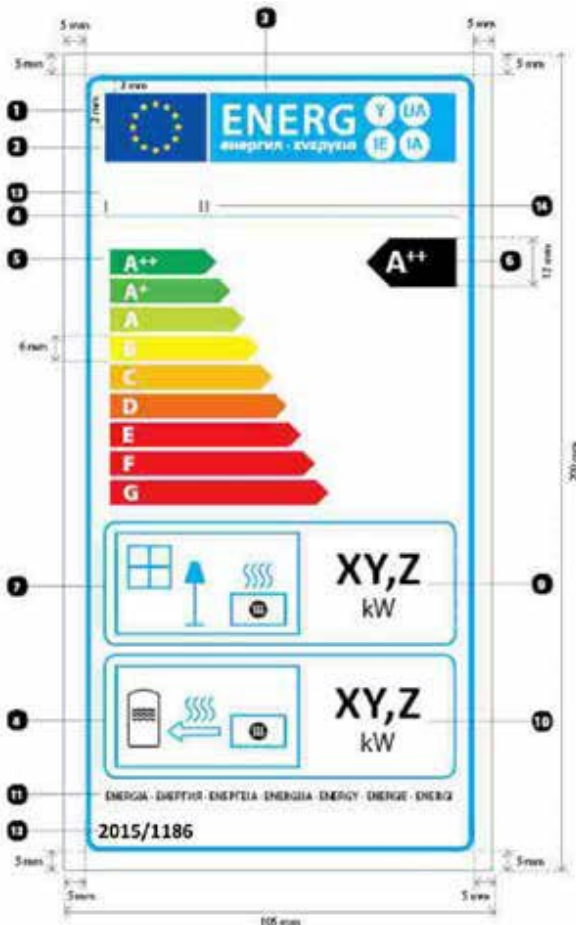
V. the direct heat output in kW, rounded to the nearest one decimal place;

VI. for local space heaters with heat transfer to a fluid, the symbol for indirect heat output;

VII. for local space heaters with heat transfer to a fluid, the indirect heat output in kW, rounded to the nearest one decimal place.

(b) The design aspects of the label for local space heaters shall be in accordance with point 2 of this Annex.

2. The design of the label for local space heaters shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- 1 **EU label border stroke:** 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 2 **EU logo:** Colours: X-80-00-00 and 00-00-X-00.
- 3 **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
- 4 **Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.
- 5 **Scale of energy classes**
 - Arrow: height: 6 mm, gap: 1,3 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Seventh class: 00-X-X-00,
 - Eighth class: 00-X-X-00,
 - Last class: 00-X-X-00,
 - Text: Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;
- 6 **Energy efficiency class:**
 - Arrow: width: 22 mm, height: 12 mm, 100 % black,
 - Text: Calibri bold 24 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- 7 **Direct heating functionality:**
 - Pictogram as depicted,
 - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 8 **If applicable, indirect heating functionality:**
 - Pictogram as depicted,
 - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 9 **Nominal direct heat output:**
 - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
 - Value 'XY,Z': Calibri bold 34 pt, 100 % black,
 - Text 'kW': Calibri regular 18 pt, 100 % black.
- 10 **If applicable, nominal indirect heat output:**
 - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
 - Value 'XY,Z': Calibri bold 34 pt, 100 % black,
 - Text 'kW': Calibri regular 18 pt, 100 % black.
- 11 **Energy:**
 - Text: Calibri regular 8 pt, 100 % black.

12 Year of label introduction and number of Regulation:

- Text: Calibri bold 10 pt.

13 Supplier's name or trademark.

14 Supplier's model identifier:

- The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

ANNEX IV

Product fiche

1. The information in the product fiche of the local space heater shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trademark;
- (b) supplier's model identifier;
- (c) the energy efficiency class of the model, determined in accordance with point 1 of Annex II;
- (d) the direct heat output in kW, rounded to the nearest one decimal place;
- (e) the indirect heat output in kW, rounded to the nearest one decimal place;
- (f) the energy efficiency index, rounded to the nearest integer and calculated in accordance with Annex VIII;
- (g) the useful energy efficiency at nominal heat output, and at minimum load if applicable, rounded to the nearest one decimal place and calculated in accordance with Annex VIII;
- (h) any specific precautions that shall be taken when the local space heater is assembled, installed or maintained.

2. One fiche may cover a number of local space heater models supplied by the same supplier.

3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1 not already displayed on the label shall also be provided.

ANNEX V

Technical documentation

For local space heaters, the technical documentation referred to in Article 3(1)(e) and Article 3(2)(e) shall include:

- (a) the name and address of the supplier;
- (b) the model identifier;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where the preferred fuel is other woody biomass, non-woody biomass, other fossil fuel or other blend of biomass and fossil fuel as referred to in Table 2, a description of the fuel sufficient for its unambiguous identification and the technical standard or specification of the fuel, including the measured moisture content and the measured ash content, and for other fossil fuel also the measured volatile content of the fuel;
- (e) where appropriate, the other technical standards and specifications used;
- (f) the identification and signature of the person empowered to bind the supplier;
- (g) the information included in Table 2 (for solid fuel local space heaters) and Table 3 (for gaseous/liquid fuel local space heaters), measured and calculated in accordance with Annex VIII;
- (h) reports of tests undertaken by suppliers or on their behalf, including the name and address of the body that conducted the tests;
- (i) any specific precautions that shall be taken when the local space heater is assembled, installed or maintained;
- (j) a list of equivalent models, if applicable. This information may be merged with the technical documentation provided in accordance with measures under Directive 2009/125/EC of the European Parliament and of the Council.

Table 2

Technical parameters for solid fuel local space heaters

Model identifier(s):		
Indirect heating functionality:[yes/no]		
Direct heat output: ...(kW)		
Indirect heat output: ...(kW)		
Fuel	Preferred fuel (only one):	Other suitable fuel(s):
Wood logs with moisture content ≤ 25 %	[yes/no]	[yes/no]
Compressed wood with moisture content < 12 %	[yes/no]	[yes/no]
Other woody biomass	[yes/no]	[yes/no]
Non-woody biomass	[yes/no]	[yes/no]
Anthracite and dry steam coal	[yes/no]	[yes/no]
Hard coke	[yes/no]	[yes/no]

Low temperature coke	[yes/no]	[yes/no]
Bituminous coal	[yes/no]	[yes/no]
Lignite briquettes	[yes/no]	[yes/no]
Peat briquettes	[yes/no]	[yes/no]
Blended fossil fuel briquettes	[yes/no]	[yes/no]
Other fossil fuel	[yes/no]	[yes/no]
Blended biomass and fossil fuel briquettes	[yes/no]	[yes/no]
Other blend of biomass and solid fuel	[yes/no]	[yes/no]

Characteristics when operating with the preferred fuel

Seasonal space heating energy efficiency η_s [%]:

Energy Efficiency Index (EEI):

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Heat output		Useful efficiency (NCV as received)					
Nominal heat output	P_{nom}	x,x	kW	Useful efficiency at nominal heat output	$\eta_{th,nom}$	x,x %	%
Minimum heat output (indicative)	P_{min}	[x,x/N.A.]	kW	Useful efficiency at minimum heat output (indicative)	$\eta_{th,min}$	[x,x-/N.A.]	%
Auxiliary electricity consumption				Type of heat output/room temperature control (select one)			
At nominal heat output	el_{max}	x,xxx	kW	single stage heat output, no room temperature control			[yes/no]
At minimum heat output	el_{min}	x,xxx	kW	two or more manual stages, no room temperature control			[yes/no]
In standby mode	el_{SB}	x,xxx	kW	with mechanic thermostat room temperature control			[yes/no]
				with electronic room temperature control			[yes/no]
				with electronic room temperature control plus day timer			[yes/no]
				with electronic room temperature control plus week timer			[yes/no]
				Other control options (multiple selections possible)			
				room temperature control, with presence detection			[yes/no]
				room temperature control, with open window detection			[yes/no]

Permanent pilot flame power requirement			with distance control option	[yes/no]
Pilot flame-power requirement (if applicable)	P_{pilot}	[x,xxx/N.A.]	kW	
Contact details	Name and address of the supplier			

Table 3

Technical parameters for gaseous/liquid fuel local space heaters

Model identifier(s):							
Indirect heating functionality:[yes/no]							
Direct heat output: ...(kW)							
Indirect heat output: ...(kW)							
Fuel							
Select fuel type	[gaseous/liquid]		[specify]				
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Heat output		Useful efficiency (NCV)					
Nominal heat output	P_{nom}	x,x	kW	Useful efficiency at nominal heat output	$\eta_{th,nom}$	x,x	%
Minimum heat output (indicative)	P_{min}	[x,x/N.A.]	kW	Useful efficiency at minimum heat output (indicative)	$\eta_{th,min}$	[x,x/N.A.]	%
Auxiliary electricity consumption				Type of heat output/room temperature control (select one)			
At nominal heat output	el_{max}	x,xxx	kW	single stage heat output, no room temperature control			[yes/no]
At minimum heat output	el_{min}	x,xxx	kW	two or more manual stages, no room temperature control			[yes/no]
In standby mode	el_{SB}	x,xxx	kW	with mechanic thermostat room temperature control			[yes/no]
				with electronic room temperature control			[yes/no]
				with electronic room temperature control plus day timer [yes/no]			[yes/no]
				with electronic room temperature control plus week timer [yes/no]			[yes/no]

				Other control options (multiple selections possible)	
				room temperature control, with presence detection	[yes/no]
				room temperature control, with open window detection	[yes/no]
				with distance control option	[yes/no]
Permanent pilot flame power requirement					
Pilot flame power requirement (if applicable)	P_{pilot}	[x,xxx/N.A.]	kW		
Contact details	Name and address of the supplier				

ANNEX VI

Information to be provided in cases where end-users cannot be expected to see the product displayed, except on the internet

1. The information referred to in Article 4(1)(b) shall be provided in the following order:
 - (a) the energy efficiency class of the model, determined in accordance with point 1 of Annex II;
 - (b) the direct heat output in kW, rounded to the nearest one decimal place;
 - (c) the indirect heat output in kW, rounded to the nearest one decimal place.
2. The size and font in which the information referred in point 1 is printed or shown shall be legible.

ANNEX VII

Information to be provided in the case of sale, hire or hire-purchase through the internet

1. For the purpose of points 2 to 5 of this Annex, the following definitions shall apply:

- (a) 'display mechanism' means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
- (b) 'nested display' means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;
- (c) 'tactile screen' means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
- (d) 'alternative text' means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

2. The appropriate label made available by suppliers in accordance with Article 3(1)(b) or Article 3(2)(b) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 2 of Annex III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

3. The image used for accessing the label in the case of nested display shall:

- (a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;
- (b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and
- (c) have one of the following two formats:



4. In the case of nested display, the sequence of display of the label shall be as follows:

- (a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;
- (b) the image shall link to the label;
- (c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;
- (d) the label shall be displayed by pop up, new tab, new page or inset screen display;
- (e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;
- (f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;
- (g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

5. The appropriate product fiche made available by suppliers in accordance with Article 3(1)(d) or Article 3(2)(d) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate 'Product fiche'. If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

ANNEX VIII

Measurements and calculations

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using harmonised standards the reference numbers of which have been published for this purpose in **a dedicated section of the website of the Energy Community**, or using other reliable, accurate and reproducible methods that take into account the generally recognised state-of-the-art methods. They shall meet the conditions set out in points 2 to 4.

2. General conditions for measurements and calculations

(a) Local space heaters shall be tested for the preferred fuel in order to determine the energy efficiency index, direct and indirect heat output.

(b) Declared values for direct and indirect heat output, and energy efficiency index, shall be rounded to the nearest one decimal place.

3. General conditions for energy efficiency index and consumption of local space heaters:

(a) The useful efficiency values $\eta_{th,nom}$, $\eta_{th,min}$ and the direct and indirect heat output values for P_{nom} , P_{min} are measured, where applicable.

(b) The energy efficiency index (*EEI*) shall be calculated as the seasonal space heating energy efficiency in active mode ($\eta_{s,on}$) corrected for local space heaters using biomass as preferred fuel by a factor taking into account the renewable character of the preferred fuel, and corrected by contributions accounting for temperature controls, auxiliary electricity consumption and permanent pilot flame energy consumption. The energy efficiency index (*EEI*) is expressed as a figure equivalent to its figure expressed in percentage.

4. Specific conditions for seasonal space heating energy efficiency

(a) The energy efficiency index (*EEI*) of all local space heaters is defined as:

$$EEI = (\eta_{s,on} \cdot BLF) - 10\% + F(2) + F(3) - F(4) - F(5)$$

Where

- $\eta_{s,on}$ is the seasonal space heating energy efficiency in active mode, expressed in %, calculated as set out in point 4(b),

- *BLF* is the biomass label factor, which is 1,45 for biomass local space heaters and 1 for fossil fuel local space heaters,

- *F(2)* is a correction factor accounting for a positive contribution to the energy efficiency index due to adjusted contributions of controls of indoor heating comfort, the values of which are mutually exclusive, cannot be added on top of each other, expressed in %,

- *F(3)* is a correction factor accounting for a positive contribution to the energy efficiency index due to adjusted contributions of controls for indoor heating comfort the values of which can be added on top of each other, expressed in %;

- *F(4)* is a correction factor accounting for a negative contribution to the energy efficiency index by auxiliary electricity consumption, expressed in %;

- *F(5)* is a correction factor accounting for a negative contribution to the energy efficiency index by energy consumption of a permanent pilot flame, expressed in %.

(b) The seasonal space heating energy efficiency in active mode is calculated as:

$$\eta_{s,on} = \eta_{th,nom}$$

Where

- $\eta_{th,nom}$ is the useful efficiency at nominal heat output, based on NCV.

(c) The correction factor $F(2)$ accounting for a positive contribution to the energy efficiency index due to adjusted contributions of controls for indoor heating comfort, the values of which are mutually exclusive or cannot be added to each other, is calculated as follows:

For all local space heaters the correction factor $F(2)$ is equal to one of the factors according to Table 4, depending on which control characteristic applies. Only one value can be selected.

Table 4
Correction factor $F(2)$

If the product is equipped with (only one option may apply):	$F(2)$
	Fuel fired local space heaters
single stage heat output, no room temperature control	0,0 %
two or more manual stages, no temperature control	1,0 %
with mechanic thermostat room temperature control	2,0 %
with electronic room temperature control	4,0 %
with electronic room temperature control plus day timer	6,0 %
with electronic room temperature control plus week timer	7,0 %

From 1 January 2022, $F(2)$ shall be zero for solid fuel local space heaters with emissions, where the temperature control is set at the minimum heat output, higher than those set out in Annex II, point 2 of Commission Regulation (EU) 2015/1185. The heat output in this setting must not be higher than 50 % of the nominal heat output. From 1 January 2022, if $F(2)$ is not zero the technical documentation shall include the relevant information on emissions at minimum heat output.

(d) The correction factor $F(3)$ accounting for a positive contribution to the energy efficiency index due to adjusted contributions of controls for indoor heating comfort, the values of which can be added to each other, is calculated as follows:

For all local space heaters the correction factor $F(3)$ is the summation of the values according to Table 5, depending on which control characteristic(s) applies.

Table 5

Correction factor $F(3)$

If the product is equipped with (multiple options may apply):	$F(3)$
	Fuel fired local space heaters
room temperature control with presence detection	1,0 %
room temperature control with open window detection	1,0 %
with distance control option	1,0 %

From 1 January 2022, $F(3)$ shall be zero for solid fuel local space heaters with emissions, where the temperature control is set at the minimum heat output, higher than those set out in Annex II, point 2 of Regulation (EU) 2015/1185. The heat output in this setting must not be higher than 50 % of the nominal heat output. From 1 January 2022, if $F(3)$ is not zero the technical documentation shall include the relevant information on emissions at minimum heat output.

(e) The auxiliary electricity use correction factor $F(4)$ is calculated as:

$$F(4) = CC \cdot \frac{0,2 \cdot el_{\max} + 0,8 \cdot el_{\min} + 1,3 \cdot el_{sb}}{P_{\text{nom}}} \cdot 100 [\%]$$

This correction factor takes into account the auxiliary electricity consumption during on-mode and stand-by-mode operation.

For all local space heaters the auxiliary electricity consumption correction is calculated as follows: Where

- el_{\max} is the electric power consumption at nominal heat output, expressed in kW;
- el_{\min} is the electric power consumption at minimum heat output, expressed in kW. In case the product does not offer a minimum heat output the value for the electric power consumption at nominal heat output shall be used;
- el_{sb} is the electric power consumption of the product while in standby mode, expressed in kW,
- P_{nom} is the nominal heat output of the product, expressed in kW.

(f) The correction factor $F(5)$ related to the energy consumption of a permanent pilot flame is calculated as follows:

This correction factor takes into account the permanent pilot flame power requirement. For all local space heaters the correction factor is calculated as:

$$F(5) = 0,5 \cdot \frac{P_{\text{pilot}}}{P_{\text{nom}}} \cdot 100 [\%]$$

Where

- P_{pilot} is the pilot flame consumption, expressed in kW,
- P_{nom} is the nominal heat output of the product, expressed in kW.

ANNEX IX³**Product compliance verification by market surveillance authorities**

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Contracting Parties shall apply the following procedure:

- (1) The Contracting Party authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MCEnC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 6. The unit shall be tested with a fuel with characteristics in the same range as the fuel that was used by the supplier to perform the measurements described in Annex VIII.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the Contracting Party authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 6.
- (6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

³ Annex IX is amended in accordance with Article 14 and Annex XIV of Delegated Regulation (EU) 2017/254, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

(7) The Contracting Party authorities shall provide all relevant information to the authorities of the other Contracting Parties and to the Secretariat without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The Contracting Party authorities shall use the measurement and calculation methods set out in Annex VIII.

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 6 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 6
Verification tolerances

Parameter	Verification tolerance
Energy efficiency index	The determined value shall not be lower than the declared value by more than 8 %.

DELEGATED REGULATION (EU) 2015/1187 of 27 April 2015 supplementing Directive 2010/30/EU with regard to energy labelling of solid fuel boilers and packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices

Incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products

*The adaptations made by Ministerial Council Decision 2018/03/MC-EnC are highlighted in **bold and blue**.*

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the energy labelling of and the provision of supplementary product information on solid fuel boilers with a rated heat output of 70 kW or less and packages of a solid fuel boiler with a rated heat output of 70 kW or less, supplementary heaters, temperature controls and solar devices.

2. This Regulation shall not apply to:

- (a) boilers generating heat only for the purpose of providing hot drinking or sanitary water;
- (b) boilers for heating and distributing gaseous heat transfer media such as vapour or air;
- (c) solid fuel cogeneration boilers with a maximum electrical capacity of 50 kW or more;
- (d) non-woody biomass boilers.

Article 2

Definitions

In addition to the definitions set out in Article 2 of Directive 2010/30/EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC**, the following definitions shall apply for the purposes of this Regulation:

- (1) 'solid fuel boiler' means a device equipped with one or more solid fuel heat generators that provides heat to a water-based central heating system in order to reach and maintain at a desired level the indoor temperature of one or more enclosed spaces, with a heat loss to its surrounding environment of not more than 6% of rated heat output;
- (2) 'water-based central heating system' means a system using water as a heat transfer medium to distribute centrally generated heat to heat emitting devices for the heating of enclosed spaces within buildings or parts thereof, including block heating or district heating networks;
- (3) 'solid fuel heat generator' means the part of a solid fuel boiler that generates the heat through the combustion of solid fuels;

- (4) 'rated heat output' or 'Pr' means the declared heat output of a solid fuel boiler when providing heating of enclosed spaces with the preferred fuel, expressed in kW;
- (5) 'solid fuel' means a fuel that is solid at normal indoor room temperatures, including solid biomass and solid fossil fuel;
- (6) 'biomass' means the biodegradable fraction of products, waste and residues from biological origin from agriculture (including vegetal and animal substances), forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of industrial and municipal waste;
- (7) 'woody biomass' means biomass originating from trees, bushes and shrubs, including log wood, chipped wood, compressed wood in the form of pellets, compressed wood in the form of briquettes, and sawdust;
- (8) 'non-woody biomass' means biomass other than woody biomass, including straw, miscanthus, reeds, kernels, grains, olive stones, olive cakes and nut shells;
- (9) 'fossil fuel' means fuel other than biomass, including anthracite, brown coal, coke, bituminous coal; for the purposes of this Regulation it also includes peat;
- (10) 'biomass boiler' means a solid fuel boiler that uses biomass as the preferred fuel;
- (11) 'non-woody biomass boiler' means a biomass boiler that uses non-woody biomass as the preferred fuel and for which woody biomass, fossil fuel or a blend of biomass and fossil fuel are not listed among its other suitable fuels;
- (12) 'preferred fuel' means the single solid fuel which is to be preferably used for the boiler according to the supplier's instructions;
- (13) 'other suitable fuel' means a solid fuel, other than the preferred fuel, which can be used in the solid fuel boiler according to the supplier's instructions and includes any fuel that is mentioned in the instruction manual for installers and end-users, on free access websites of suppliers, in technical promotional material and in advertisements;
- (14) 'solid fuel cogeneration boiler' means a solid fuel boiler capable of simultaneously generating heat and electricity;
- (15) 'supplementary heater' means a secondary boiler or heat pump falling within the scope of Delegated Regulation (EU) No 811/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**, or a secondary solid fuel boiler, which generates extra heat where the heat demand is greater than the rated heat output of the primary solid fuel boiler;
- (16) 'temperature control' means the equipment that interfaces with the end-user regarding the values and timing of the desired indoor temperature, and communicates relevant data to an interface of the solid fuel boiler such as a central processing unit, thus helping to regulate the indoor temperature(s);
- (17) 'solar device' means a solar-only system, a solar collector, a solar hot water storage tank or a pump in the collector loop, which are placed on the market separately;
- (18) 'solar-only system' means a device that is equipped with one or more solar collectors and solar hot water storage tanks and possibly pumps in the collector loop and other parts, which is placed on the market as one unit and is not equipped with any heat generator except possibly one or more back-up immersion heaters;
- (19) 'solar collector' means a device designed to absorb global solar irradiance and to transfer the heat energy so produced to a fluid passing through it;

(20) 'solar hot water storage tank' means a hot water storage tank storing heat energy produced by one or more solar collectors;

(21) 'hot water storage tank' means a vessel for storing hot water for water or space heating purposes, including any additives, which is not equipped with any heat generator except possibly one or more back-up immersion heaters;

(22) 'back-up immersion heater' means a Joule effect electric resistance heater that is part of a hot water storage tank and generates heat only when the external heat source supply is disrupted (including during maintenance periods) or out of order, or that is part of a solar hot water storage tank and provides heat when the solar heat source is not sufficient to satisfy required comfort levels;

(23) 'package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices' means a package offered to the end-user containing a solid fuel boiler combined with one or more supplementary heaters, one or more temperature controls or one or more solar devices;

(24) 'combination boiler' means a solid fuel boiler that is designed to also provide heat to deliver hot drinking or sanitary water at given temperature levels, quantities and flow rates during given intervals, and is connected to an external supply of drinking or sanitary water.

For the purposes of Annexes II to X, additional definitions are set out in Annex I.

Article 3

Responsibilities of suppliers and timetable

1. From **1 January 2020** suppliers placing solid fuel boilers on the market or putting them into service, including those integrated in packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices, shall ensure that:

(a) each solid fuel boiler is provided with a printed label in the format and containing the information set out in point 1.1 of Annex III and conforming to the energy efficiency classes set out in Annex II, and each solid fuel boiler intended for use in packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices is provided with a second label in the format and containing the information set out in point 2 of Annex III;

(b) an electronic label in the format and containing the information set out in point 1.1 of Annex III and conforming to the energy efficiency classes set out in Annex II is made available to dealers for each solid fuel boiler model;

(c) a product fiche, in accordance with point 1 of Annex IV, is provided for each solid fuel boiler, and a second fiche, in accordance with point 2 of Annex IV, is provided for each solid fuel boiler intended for use in packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices;

(d) an electronic product fiche, in accordance with point 1 of Annex IV, shall be made available to dealers for each solid fuel boiler model;

(e) the technical documentation, as set out in point 1 of Annex V, is provided on request to the authorities of the **Contracting Parties** and the **Secretariat**;

(f) any advertisement related to a specific solid fuel boiler model and containing energy-related information or price includes a reference to the energy efficiency class of that model;

(g) any technical promotional material concerning a specific solid fuel boiler model and describing its specific technical parameters includes a reference to the energy efficiency class of that model.

2. From **1 January 2020** suppliers placing solid fuel boilers on the market or putting them into service, including those integrated in packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices, shall ensure that:

(a) each solid fuel boiler is provided with a printed label in the format and containing the information set out in point 1.2 of Annex III and conforming to the energy efficiency classes set out in Annex II;

(b) an electronic label in the format and containing the information set out in point 1.2 of Annex III and conforming to the energy efficiency classes set out in Annex II is made available to dealers for each solid fuel boiler model.

3. From **1 January 2020** suppliers placing packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices on the market or putting them into service shall ensure that:

(a) a printed label in the format and containing the information set out in point 2 of Annex III and conforming to the energy efficiency classes set out in Annex II is provided for each package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices;

(b) an electronic label in the format and containing the information set out in point 2 of Annex III and conforming to the energy efficiency classes set out in Annex II is made available to dealers for each model comprising a package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices;

(c) a product fiche, in accordance with point 2 of Annex IV, is provided for each package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices;

(d) an electronic product fiche, in accordance with point 2 of Annex IV, is made available to dealers for each model comprising a package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices;

(e) the technical documentation, in accordance with point 2 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the **Secretariat**;

(f) any advertisement relating to a specific model comprising a package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices and which contains energy-related information or price includes a reference to the energy efficiency class for that model;

(g) any technical promotional material concerning a specific model comprising a package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices which describes its specific technical parameters includes a reference to the energy efficiency class for that model.

Article 4

Responsibilities of dealers

1. Dealers in solid fuel boilers shall ensure that:

- (a) each solid fuel boiler bears, at the point of sale, the label provided by suppliers in accordance with Article 3(1) or 3(2) on the outside of the front of the solid fuel boiler, in such a way as to be clearly visible;
- (b) solid fuel boilers offered for sale, hire or hire purchase, where the end-user cannot be expected to see the product displayed, are marketed with the information provided by the suppliers in accordance with point 1 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex VII shall apply;
- (c) any advertisement for a specific solid fuel boiler model which contains containing energy-related or price information includes a reference to the energy efficiency class of that model;
- (d) any technical promotional material concerning a specific solid fuel boiler model which describes its specific technical parameters includes a reference to the energy efficiency class of that model.

2. Dealers in packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices shall ensure that:

- (a) any offer for a specific package includes the energy efficiency class for that package, by displaying on the package the label provided by the supplier in accordance with Article 3(3)(a) and the product fiche provided by the supplier in accordance with Article 3(3)(c), duly filled with the characteristics of that package;
- (b) packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices offered for sale, hire or hire purchase, where the end-user cannot be expected to see the package displayed, are marketed with the information provided in accordance with point 2 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex VII shall apply;
- (c) any advertisement relating to a specific model comprising a package of a solid fuel boiler, supplementary heaters, temperature controls and solar device models and which contains energy-related information or price includes a reference to the energy efficiency class for that model;
- (d) any technical promotional material concerning a specific model comprising a package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices which describes its specific technical parameters includes a reference to the energy efficiency class for that model.

Article 5

Measurement and calculation methods

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation methods which take into account the recognised state-of-the-art measurement and calculation methods, set out in Annex VIII. The energy efficiency index shall be calculated as set out in Annex IX.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure laid down in Annex X when assessing the conformity with this Regulation of the declared energy efficiency class of solid fuel boilers and packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices.

Article 7

Review

<...>¹

Article 8

Entry into force and application

This Regulation shall enter into force on the day of its adoption by the Ministerial Council. It shall be transposed, implemented and applicable by 1 January 2020.

Each Contracting Party shall notify the Secretariat of completed transposition within two weeks following the adoption of transposition measures.

¹ Not applicable in accordance with Article 3(2)(a) of Decision 2018/03/MC-EnC

ANNEX I

Definitions applicable to Annexes II to X

For the purposes of Annexes II to X the following definitions shall apply:

- (1) 'model identifier' means the code, usually alphanumeric, which distinguishes a specific model comprising a solid fuel boiler or a package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices from other models with the same trade mark, supplier's name or dealer's name;
- (2) 'seasonal space heating energy efficiency' or ' η_s ' means the ratio between the space heating demand for a designated heating season, supplied by a solid fuel boiler and the annual energy consumption required to meet this demand, expressed in %;
- (3) 'electrical efficiency' or ' η_{el} ' means the ratio of the electricity output and the total energy input of a solid fuel cogeneration boiler, whereby the total energy input is expressed in terms of GCV or in terms of final energy multiplied by CC;
- (4) 'gross calorific value' or 'GCV' means the total amount of heat released by a unit quantity of fuel containing the appropriate moisture content, when it is burned completely with oxygen, and when the products of combustion are returned to ambient temperature; this quantity includes the condensation heat of the water vapour formed by the combustion of any hydrogen contained in the fuel;
- (5) 'conversion coefficient' or 'CC' means a coefficient reflecting the estimated 40 % average EU generation efficiency referred to in Directive 2012/27/EU of the European Parliament and of the Council, **as incorporated and adapted by the Ministerial Council Decision 2015/08/MC-EnC²**; the value of the conversion coefficient is $CC = 2,5$;
- (6) 'temperature control fiche' means the product fiche required to be provided for temperature controls by Article 3(3)(a) of Commission Delegated Regulation (EU) No 811/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**;
- (7) 'boiler fiche' means for solid fuel boilers the product fiche required to be provided by Article 3(1)(c) of this Regulation and for boilers other than solid fuel boilers the product fiche required to be provided for such boilers by Article 3(1)(b) of Commission Delegated Regulation (EU) No 811/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**;
- (8) 'solar device fiche' means the product fiche required to be provided for solar devices by Article 3(4)
 - (a) of Commission Delegated Regulation (EU) No 811/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**;
- (9) 'heat pump fiche' means the product fiche required to be provided for heat pumps by Article 3(1)
 - (b) of Commission Delegated Regulation (EU) No 811/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**;
- (10) 'condensing boiler' means a solid fuel boiler in which, under normal operating conditions and at given operating water temperatures, the water vapour in the combustion products is partially condensed, in order to make use of the latent heat of this water vapour for heating purposes;
- (11) 'other woody biomass' means woody biomass other than: log wood with a moisture content of 25 % or less, chipped wood with a moisture content of 15 % or higher, compressed wood in the form of pellets

² Directive 2012/27/EU on Energy Efficiency, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**

or briquettes, or sawdust with a moisture content equal or less than 50 %;

(12) 'moisture content' means the mass of water in the fuel in relation to the total mass of the fuel as used in solid fuel boilers;

(13) 'other fossil fuel' means fossil fuel other than bituminous coal, brown coal (including briquettes), coke, anthracite or blended fossil fuel briquettes;

(14) 'electric power requirement at maximum heat output' or ' e'_{max} ' means the electric power consumption of the solid fuel boiler at rated heat output, expressed in kW, excluding electricity consumption from a back-up heater and from incorporated secondary emission abatement equipment;

(15) 'electric power requirement at minimum heat output' or ' e'_{min} ' means the electric power consumption of the solid fuel boiler at applicable part load, expressed in kW, excluding electricity consumption from a back-up heater and from incorporated secondary emission abatement equipment;

(16) 'back-up heater' means a Joule-effect electric resistance element that generates heat only to prevent the solid fuel boiler or the water based central heating system from freezing or when the external heat source supply is disrupted (including during maintenance periods) or out of order;

(17) 'applicable part load' means for automatically stoked solid fuel boilers, operation at 30 % of rated heat output, and for manually stoked solid fuel boilers that can be operated at 50 % of rated heat output, operation at 50 % of rated heat output;

(18) 'standby mode power consumption' or ' P_{sb} ' means the power consumption of a solid fuel boiler in standby mode, excluding from incorporated secondary emission abatement equipment, expressed in kW;

(19) 'standby mode' means a condition where the solid fuel boiler is connected to the mains power source, depends on energy input from the mains power source to work as intended and provides only the following functions, which may persist for an indefinite time: reactivation function, or reactivation function and only an indication of enabled reactivation function, or information or status display;

(20) 'seasonal space heating energy efficiency in active mode' or ' η_{son} ' means

(a) for automatically stoked solid fuel boilers, a weighted average of the useful efficiency at rated heat output and the useful efficiency at 30 % of the rated heat output;

(b) for manually stoked solid fuel boilers that can be operated at 50 % of the rated heat output in continuous mode, a weighted average of the useful efficiency at rated heat output and the useful efficiency at 50 % of the rated heat output;

(c) for manually stoked solid fuel boilers that cannot be operated at 50 % or less of the rated heat output in continuous mode, the useful efficiency at rated heat output;

(d) for solid fuel cogeneration boilers, the useful efficiency at rated heat output;

(21) 'useful efficiency' or ' η ' means the ratio of the useful heat output and the total energy input of a solid fuel boiler, whereby the total energy input is expressed in terms of GCV or in terms of final energy multiplied by CC;

(22) 'useful heat output' or ' P ' means the heat output of a solid fuel boiler transmitted to the heat carrier, expressed in kW;

(23) 'fossil fuel boiler' means a solid fuel boiler that has fossil fuel or a blend of biomass and fossil fuel as the preferred fuel;

(24) 'gross calorific value moisture free' or ' GCV_{mf} ' means the total amount of heat released by a unit quan-

tity of fuel dried of inherent moisture, when it is burned completely with oxygen, and when the products of combustion are returned to ambient temperature; this quantity includes the condensation heat of the water vapour formed by the combustion of any hydrogen contained in the fuel;

(25) 'equivalent model' means a model placed on the market with the same technical parameters set out in Table 4 of point 1 of Annex V, as another model placed on the market by the same supplier.

ANNEX II

Energy efficiency classes

The energy efficiency class of a solid fuel boiler shall be determined on the basis of its energy efficiency index as set out in Table 1.

The energy efficiency index of a solid fuel boiler shall be calculated in accordance with Annex IX.

Table 1

Energy efficiency classes of solid fuel boilers

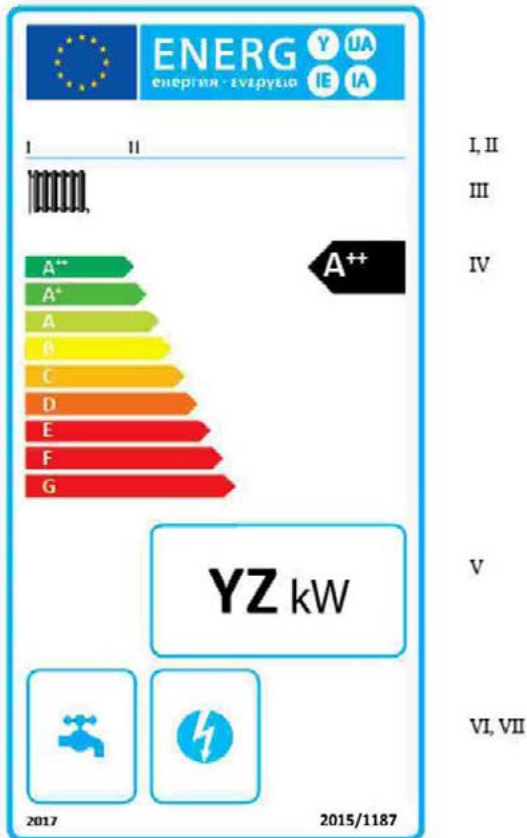
Energy efficiency class	Energy efficiency index (EEI)
A ⁺⁺⁺	$EEI \geq 150$
A ⁺⁺	$125 \leq EEI < 150$
A ⁺	$98 \leq EEI < 125$
A	$90 \leq EEI < 98$
B	$82 \leq EEI < 90$
C	$75 \leq EEI < 82$
D	$36 \leq EEI < 75$
E	$34 \leq EEI < 36$
F	$30 \leq EEI < 34$
G	$EEI < 30$

ANNEX III

The labels

1. SOLID FUEL BOILERS

1.1. Label 1



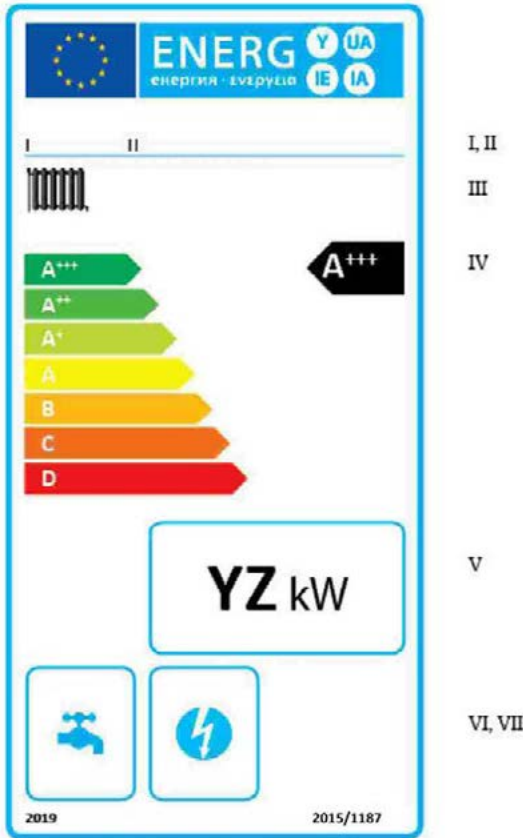
(a) The following information shall be included in the label:

- I. supplier's name or trade mark;
- II. supplier's model identifier;
- III. the space heating function;
- IV. the energy efficiency class, determined in accordance with Annex II; the head of the arrow containing the energy efficiency class of the solid fuel boiler shall be placed at the same height as the head of the relevant energy efficiency class;
- V. the rated heat output in kW, rounded to the nearest integer;
- VI. for combination boilers, also the additional water heating function;

VII. for solid fuel cogeneration boilers, also the additional electricity generation function.

(b) The design aspects of the label for solid fuel boilers shall be in accordance with point 3 of this Annex. By way of exception, where a model has been granted an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU Ecolabel may be added.

1.2. Label 2

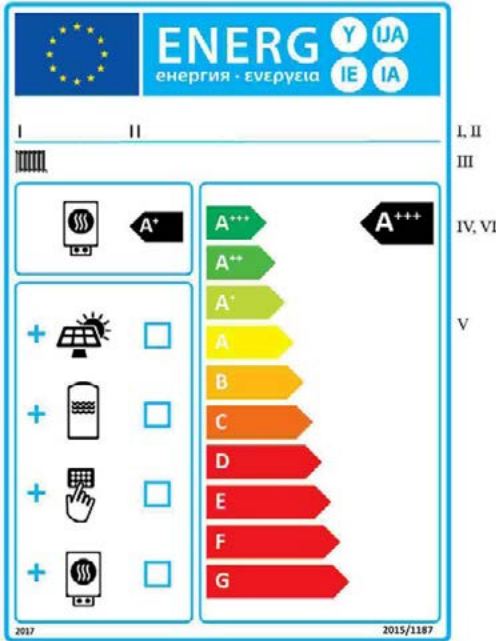


(a) The information listed in point 1.1(a) of this Annex shall be included in the label.

(b) The design aspects of the label for solid fuel boilers shall be in accordance with point 3 of this Annex. By way of exception, where a model has been granted an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU Ecolabel may be added.

2. PACKAGES OF A SOLID FUEL BOILER, SUPPLEMENTARY HEATERS, TEMPERATURE CONTROLS AND SOLAR DEVICES

Label for packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices in energy efficiency classes A⁺⁺⁺ to G

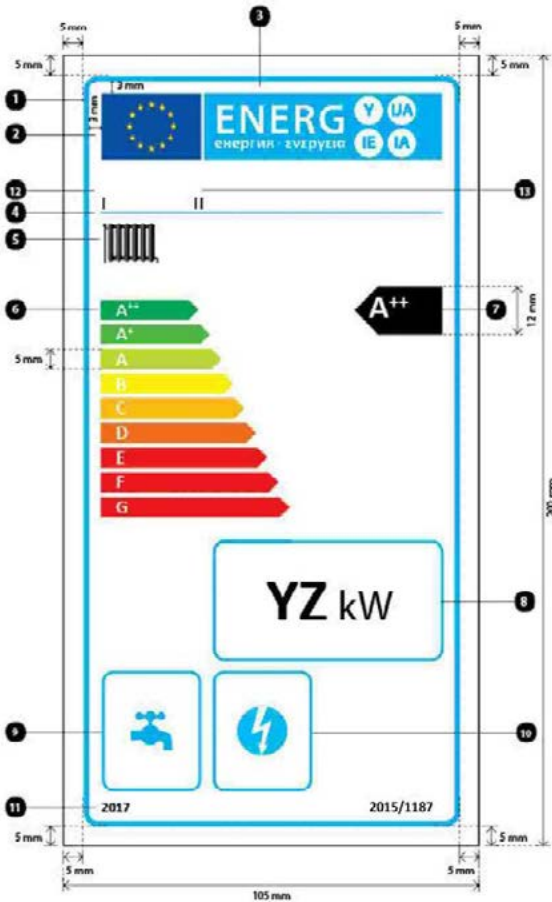


(a) The following information shall be included in the label:

- I. dealer's or supplier's name or trade mark;
- II. dealer's or supplier's model(s) identifier;
- III. the space heating function;
- IV. the energy efficiency class of the solid fuel boiler, determined in accordance with Annex II;
- V. indication of whether a solar collector, hot water storage tank, temperature control or supplementary heater may be included in the package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices;
- VI. the energy efficiency class of the package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices, determined in accordance with point 2 of Annex IV; the head of the arrow containing the energy efficiency class of the package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices shall be placed at the same height as the head of the relevant energy efficiency class.

(b) The design aspects of the label for packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices shall be in accordance with point 4 of this Annex. For packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices in energy efficiency classes A⁺⁺⁺ to D, the classes E to G in the A⁺⁺⁺ to G scale may be omitted.

3. THE DESIGN OF THE LABEL FOR SOLID FUEL BOILERS SHALL BE THE FOLLOWING:



whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfill all of the following requirements (numbers refer to the figure above):

- 1 **EU label border stroke:** 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 2 **EU logo:** Colours: X-80-00-00 and 00-00-X-00.
- 3 **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
- 4 **Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.

5 Space heating function:

- Pictogram as depicted.

6 A⁺⁺-G and A⁺⁺+D scales, respectively:

- **Arrow:** height: 5 mm, gap: 1,3 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Seventh class: 00-X-X-00,
 - Eighth class: 00-X-X-00,
 - Last class: 00-X-X-00,
- **Text:** Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;
- **Arrow:** height: 7 mm, gap: 1 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00,
- **Text:** Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row.

7 Energy efficiency class:

- **Arrow:** width: 22 mm, height: 12 mm, 100 % black,
- **Text:** Calibri bold 24 pt, capitals, white, '+' symbols: superscript, aligned on a single row.

8 Rated heat output:

- **Border:** 2 pt – colour: cyan 100 % – round corners: 3,5 mm,
- **Value 'YZ':** Calibri bold 45 pt, 100 % black,
- **Text 'kW':** Calibri regular 30 pt, 100 % black.

9 Water heating function

- **Pictogram** as depicted,
- **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm.

10 Electricity function:

- **Pictogram** as depicted,

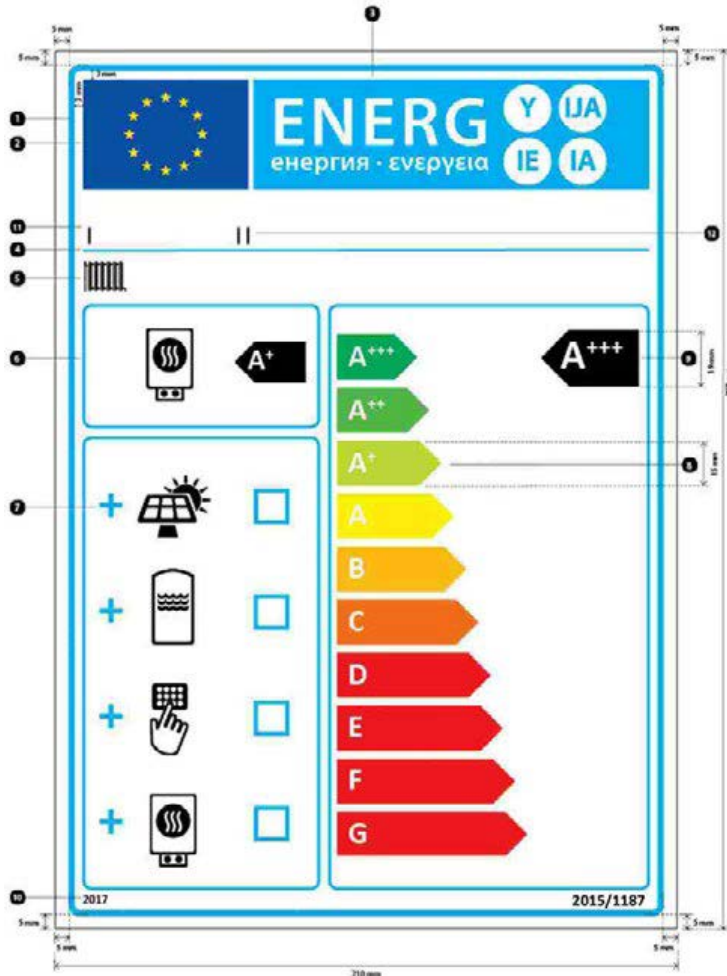
– **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm.

Year of label introduction and number of Regulation:

– **Text:** Calibri bold 10 pt. Supplier's name or trademark. Supplier's model identifier:

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

4. THE DESIGN OF THE LABEL FOR PACKAGES OF A SOLID FUEL BOILER, SUPPLEMENTARY HEATERS, TEMPERATURE CONTROLS AND SOLAR DEVICES SHALL BE THE FOLLOWING:



whereby:

(a) The label shall be at least 210 mm wide and 297 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- 1 EU label border stroke:** 6 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 2 EU logo: Colours:** X-80-00-00 and 00-00-X-00.
- 3 Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 191 mm, height: 37 mm.
- 4 Sub-logos border:** 2 pt, colour: cyan 100 %, length: 191 mm.
- 5 Space heating function:**
 - Pictogram as depicted.
- 6 Solid fuel boiler:**
 - Pictogram as depicted,
 - Energy efficiency class of solid fuel boiler:
 - Arrow: width: 24 mm, height: 14 mm, 100 % black;
 - Text: Calibri bold 28 pt, capitals, white, '+' symbols: superscript, aligned on a single row,
 - Border: 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 7 Package with solar collectors, hot water storage tanks, temperature controls and supplementary heaters:**
 - Pictograms as depicted,
 - '+' symbol: Calibri bold 50 pt, cyan 100 %,
 - Boxes: width: 12 mm, height: 12 mm, border: 4 pt, cyan 100 %,
 - Border: 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 8 A+++–G scale with border:**
 - Arrow: height: 15 mm, gap: 3 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Seventh class: 00-X-X-00,
 - If applicable, last classes: 00-X-X-00,
 - Text: Calibri bold 30 pt, capitals, white, '+' symbols: superscript, aligned on a single row,
 - Border: 3 pt, colour: cyan 100 %, round corners: 3,5 mm.

9 Energy efficiency class for the package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices:

– **Arrow:** width: 33 mm, height: 19 mm, 100 % black,

– **Text:** Calibri bold 40 pt, capitals, white, '+' symbols: superscript, aligned on a single row.

10 Year of label introduction and number of Regulation:

– **Text:** Calibri bold 12 pt.

11 Dealer's or supplier's name or trademark.

12 Dealer's or supplier's model identifier:

The dealer's or supplier's name or trade mark and model identifier shall fit in a space of 191 × 19 mm.

ANNEX IV

Product fiche

1. SOLID FUEL BOILERS

1.1. The information in the product fiche of the solid fuel boiler shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trademark;
- (b) supplier's model identifier;
- (c) the energy efficiency class of the model, determined in accordance with Annex II;
- (d) the rated heat output in kW, rounded to the nearest integer;
- (e) the energy efficiency index, rounded to the nearest integer and calculated in accordance with Annex IX;
- (f) the seasonal space heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with Annex VIII;
- (g) any specific precautions that shall be taken when the solid fuel boiler is assembled, installed or maintained;
- (h) in the case of solid fuel cogeneration boilers the electrical efficiency in %, rounded to the nearest integer;

1.2. One product fiche may cover a number of solid fuel boiler models supplied by the same supplier.

1.3. The information contained in the product fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1.1 not already displayed on the label shall also be provided.

2. PACKAGES OF A SOLID FUEL BOILER, SUPPLEMENTARY HEATERS, TEMPERATURE CONTROLS AND SOLAR DEVICES

The fiche for packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices shall contain the information set out in Figure 1 or Figure 2, as appropriate, for evaluating the energy efficiency index of the package offered, including the following information:

- (a) **I**: the value of the energy efficiency index of the primary solid fuel boiler;
- (b) **II**: the factor for weighting the heat output of primary solid fuel boiler and supplementary heaters of a package as set out in Tables 2 and 3 of this Annex, as appropriate;
- (c) **III**: the value of the mathematical expression: $294/(11 \eta_{Pr})$, whereby Pr refers to the primary solid fuel boiler;
- (d) **IV**: the value of the mathematical expression $115/(11 \eta_{Pr})$, whereby Pr refers to the primary solid fuel boiler.

Table 2

Weighting of primary solid fuel boiler and supplementary heater, for the purposes of Figure 1 of this Annex ⁽¹⁾

$P_{sup}/(Pr + P_{sup})$ ⁽²⁾	II, package without hot water storage tank	II, package with hot water storage tank
0	0	0
0,1	0,30	0,37
0,2	0,55	0,70
0,3	0,75	0,85
0,4	0,85	0,94
0,5	0,95	0,98
0,6	0,98	1,00
$\geq 0,7$	1,00	1,00

Table 3

Weighting of primary cogeneration solid fuel boiler and supplementary heater, for the purposes of Figure 2 of this Annex ⁽¹⁾

$Pr/(Pr + P_{sup})$ ⁽³⁾	II, package without hot water storage tank	II, package with hot water storage tank
0	1,00	1,00
0,1	0,70	0,63
0,2	0,45	0,30
0,3	0,25	0,15
0,4	0,15	0,06
0,5	0,05	0,02
0,6	0,02	0
$\geq 0,7$	0	0

⁽¹⁾ The intermediate values are calculated by linear interpolation between the two adjacent values.

⁽²⁾ Pr refers to the primary solid fuel boiler.

⁽³⁾ Pr refers to the primary solid fuel boiler.

Figure 1

For primary solid fuel boilers, information to be given on the product fiche for a package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices, indicating the energy efficiency index of the package offered

Energy efficiency index of solid fuel boiler ①

Temperature control
From temperature control fiche

Class I = 1, Class II = 2, Class III = 1.5,
 Class IV = 2, Class V = 3, Class VI = 4,
 Class VII = 3.5, Class VIII = 5

②

Supplementary boiler
From boiler fiche

Seasonal space heating energy efficiency
 (in %) or energy efficiency index

$$\left(\text{input} - '1' \right) \times 0.1 = \pm \text{input}$$
③

Solar contribution
From solar device fiche

Collector size (in m²)

Tank volume (in m³)

Collector efficiency (in %)

Tank rating
 A* = 0.95, A = 0.91,
 B = 0.86, C = 0.83,
 D-G = 0.81

$$\left('III' \times \text{input} + 'IV' \times \text{input} \right) \times 0.9 \times \left(\text{input} / 100 \right) \times \text{input} = + \text{input}$$
④

Supplementary heat pump
From heat pump fiche

Seasonal space heating energy efficiency
 (in %)

$$\left(\text{input} - '1' \right) \times 'II' = + \text{input}$$
⑤

Solar contribution AND supplementary heat pump
Select smaller value

$$0.5 \times \text{input} \text{ OR } 0.5 \times \text{input} = - \text{input}$$
⑥

Energy efficiency index of package ⑦

Energy efficiency class of package

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	F	E	D	C	B	A	A*	A**	A***
<30	≥30	≥34	≥36	≥75	≥82	≥90	≥98	≥125	≥150

The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as this efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

Figure 2

For primary solid fuel cogeneration boilers, information to be given on the product fiche for a package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices, indicating the energy efficiency index of the package offered

Energy efficiency index of solid fuel cogeneration boiler

Temperature control

From temperature control fiche

Class I = 1, Class II = 2, Class III = 1.5,
Class IV = 2, Class V = 3, Class VI = 4,
Class VII = 3.5, Class VIII = 5

Supplementary boiler

From boiler fiche

Seasonal space heating energy efficiency (in %) or energy efficiency index

$$\left(\text{[]} - \text{'I'} \right) \times \text{'II'} = \text{[]}$$

Solar contribution

From solar device fiche

Collector size (in m²)

Tank volume (in m³)

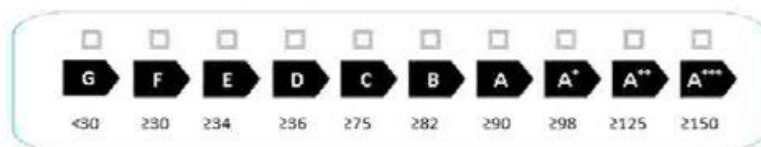
Collector efficiency (in %)

Tank rating
A* = 0.95, A = 0.91,
B = 0.86, C = 0.83,
D-G = 0.81

$$\left(\text{'III'} \times \text{[]} + \text{'IV'} \times \text{[]} \right) \times 0.7 \times \left(\text{[]} / 100 \right) \times \text{[]} = \text{[]}$$

Energy efficiency index of package

Energy efficiency class of package



The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as this efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

ANNEX V

Technical documentation

1. SOLID FUEL BOILERS

For solid fuel boilers, the technical documentation referred to in Article 3(1)(e) shall include:

- (a) the name and address of the supplier;
- (b) the model identifier;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where the preferred fuel is other woody biomass, non-woody biomass, other fossil fuel or other blend of biomass and fossil fuel as referred to in Table 4, a description of the fuel sufficient for its unambiguous identification and the technical standard or specification of the fuel, including the measured moisture content and the measured ash content, and for other fossil fuel also the measured volatile content of the fuel;
- (e) where appropriate, the other technical standards and specifications used;
- (f) the name and signature of the person empowered to bind the supplier;
- (g) the information included in Table 4, with its technical parameters measured and calculated in accordance with Annex VIII and IX;
- (h) reports of tests undertaken by suppliers or on their behalf, including the name and address of the body that conducted the test;
- (i) any specific precautions that must be taken when the solid fuel boiler is assembled, installed or maintained;
- (j) a list of equivalent models, if applicable.

This information may be merged with the technical documentation provided in accordance with measures under Directive 2009/125/EC of the European Parliament and of the Council.

Table 4

Technical parameters for solid fuel boilers and solid fuel cogeneration boilers

Model identifier		
Stoking mode: [Manual: the boiler should be operated with a hot water storage tank of a volume of at least x ⁽¹⁾ litre/Automatic: it is recommended that the boiler be operated with a hot water storage tank of a volume of at least x ⁽²⁾ litre]		
Condensing boiler: [yes/no]		
Solid fuel cogeneration boiler: [yes/no]		Combination boiler: [yes/no]
Fuel	Preferred fuel (only one):	Other suitable fuel(s):
Log wood, moisture content ≤ 25 %	[yes/no]	[yes/no]
Chipped wood, moisture content 15-35 %	[yes/no]	[yes/no]
Chipped wood, moisture content > 35 %	[yes/no]	[yes/no]
Compressed wood in the form of pellets or briquettes	[yes/no]	[yes/no]
Sawdust, moisture content ≤ 50 %	[yes/no]	[yes/no]
Other woody biomass	[yes/no]	[yes/no]
Non-woody biomass	[yes/no]	[yes/no]
Bituminous coal	[yes/no]	[yes/no]
Brown coal (including briquettes)	[yes/no]	[yes/no]
Coke	[yes/no]	[yes/no]
Anthracite	[yes/no]	[yes/no]
Blended fossil fuel briquettes	[yes/no]	[yes/no]
Other fossil fuel	[yes/no]	[yes/no]
Blended biomass (30-70 %) and fossil fuel briquettes	yes/no	[yes/no]
Other blend of biomass and fossil fuel	[yes/no]	[yes/no]

Characteristics when operating with the preferred fuel:							
Seasonal space heating energy efficiency η_s [%]:							
Energy efficiency index <i>EEI</i> :							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Useful heat output				Useful efficiency			
At rated heat output	$P_n^{(3)}$	x,x	kW	At rated heat output	η_n	x,x	%
At [30 %/50 %] of rated heat output, if applicable	P_p	[x,x-/N.A.]	kW	At [30 %/50 %] of rated heat output, if applicable	η_p	[x,x/ N.A.]	%
For solid fuel cogeneration boilers: Electrical efficiency				Auxiliary electricity consumption			
				At rated heat output	el_{max}	x,xxx	kW
				At [30 %/50 %] of rated heat output, if applicable	el_{min}	[x,xxx/ N.A.]	kW
At rated heat output	$\eta_{el,n}$	x,x	%	Of incorporated secondary emission abatement equipment, if applicable	[x,xxx/ N.A.]	kW	
				In standby mode	P_{SB}	x,xxx	kW
Contact details	Name and address of the supplier						

⁽¹⁾ Tank volume = $45 \times P_r \times (1 - 2,7/P_r)$ or 300 litres whichever is higher, with P_r indicated in kW

⁽²⁾ Tank volume = $20 \times P_r$ with P_r indicated in kW

⁽³⁾ For the preferred fuel P_n equals P_r

2. PACKAGES OF A SOLID FUEL BOILER, SUPPLEMENTARY HEATERS, TEMPERATURE CONTROLS AND SOLAR DEVICES

For packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices, the technical documentation referred to in Article 3(3)(e) shall include:

- the name and address of the supplier;
- a description of the model comprising the package of a solid fuel boiler, supplementary heaters, temperatures control and solar devices sufficient for its unambiguous identification;
- where appropriate, the references of the harmonised standards applied;
- where appropriate, the other technical standards and specifications used;
- the name and signature of the person empowered to bind the supplier;
- technical parameters:
 - the energy efficiency index, rounded to the nearest integer;
 - the technical parameters set out in point 1 of this Annex and, where appropriate, the technical

parameters set out in point 1 of Annex V of Commission Delegated Regulation (EU) No 811/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**;

(3) the technical parameters set out in points 3 and 4 of Annex V of Commission Delegated Regulation (EU) No 811/2013, **as incorporated and adapted by the Ministerial Council Decision 2014/02/ MC-EnC**;

(g) any specific precautions that must be taken when the package of a solid fuel boiler, supplementary heaters, temperature controls and solar devices is assembled, installed or maintained.

ANNEX VI

Information to be provided in cases where end-users cannot be expected to see the product displayed, except on the internet

1. SOLID FUEL BOILERS

1.1. The information referred to in Article 4(1)(b) shall be provided in the following order:

- (a) the energy efficiency class of the model, determined in accordance with Annex II;
- (b) the rated heat output in kW, rounded to the nearest integer;
- (c) the energy efficiency index, rounded to the nearest integer and calculated in accordance with Annex IX;
- (d) in the case of solid fuel cogeneration boilers the electrical efficiency in %, rounded to the nearest integer.

1.2. The size and font in which the information referred in point 1.1 is printed or shown shall be legible.

2. PACKAGES OF A SOLID FUEL BOILER, SUPPLEMENTARY HEATERS, TEMPERATURE CONTROLS AND SOLAR DEVICES

2.1. The information referred to in Article 4(2)(b) shall be provided in the following order:

- (a) the energy efficiency class of the model, determined in accordance with Annex II;
- (b) the energy efficiency index, rounded to the nearest integer;
- (c) the information set out in Figure 1 and Figure 2 of Annex IV, as appropriate.

The size and font in which the information referred in point 2.1 is printed or shown shall be legible.

ANNEX VII

Information to be provided in the case of sale, hire or hire-purchase through the internet

1. For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

(a) 'display mechanism' means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) 'nested display' means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) 'tactile screen' means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) 'alternative text' means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

2. The appropriate label made available by suppliers in accordance with Article 3 or in the case of a package where appropriate duly filled in based on the label and fiches provided by suppliers in accordance with Article 3, shall be shown on the display mechanism in proximity to the price of the product or package in accordance with the timetable set out in Article 3. If both a product and a package are shown, but with a price indicated only for the package, only the package label shall be displayed. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex

III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

3. The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product or package on the label;

(b) indicate on the arrow the energy efficiency class of the product or package in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



4. In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product or package;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop-up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

- (f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;
- (g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product or package in a font size equivalent to that of the price.

5. The appropriate product fiche made available by suppliers in accordance with Article 3 shall be shown on the display mechanism in proximity to the price of the product or package. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate 'Product fiche'. If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

ANNEX VIII

Measurements and calculations

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using harmonised standards the reference numbers of which have been published for this purpose in **a dedicated section of the website of the Energy Community**, or using other reliable, accurate and reproducible methods that take into account the generally recognised state-of-the-art methods. They shall meet the conditions and technical parameters set out in points 2 to 5.

2. General conditions for measurements and calculations

- (a) Solid fuel boilers shall be tested with the preferred fuel.
- (b) The declared value for the seasonal space heating energy efficiency shall be rounded to the nearest integer.

3. General conditions for the seasonal space heating energy efficiency of solid fuel boilers

- (a) The useful efficiency values η_n , η_p and the useful heat output values P_n , P_p shall be measured, as appropriate. For solid fuel cogeneration boilers the electrical efficiency value $\eta_{el,n}$ is also measured.
- (b) The seasonal space heating energy efficiency η_s shall be calculated as the seasonal space heating energy efficiency in active mode η_{son} , corrected by contributions accounting for temperature controls, auxiliary electricity consumption, and, for solid fuel cogeneration boilers, by adding the electrical efficiency multiplied by a conversion coefficient CC of 2,5;
- (c) The consumption of electricity shall be multiplied by a conversion coefficient CC of 2,5.

4. Specific conditions for the seasonal space heating energy efficiency of solid fuel boilers

- (a) Seasonal space heating energy efficiency η_s is defined as:

$$\eta_s = \eta_{son} - F(1) - F(2) + F(3)$$

where:

η_{son} is the seasonal space heating energy efficiency in active mode, expressed as a percentage, calculated as set out in point 4(b);

$F(1)$ accounts for a loss of seasonal space heating energy efficiency due to adjusted contributions of temperature controls; $F(1) = 3 \%$;

$F(2)$ accounts for a negative contribution to the seasonal space heating energy efficiency by auxiliary electricity consumption, expressed as a percentage, and is calculated as set out in point 4(c);

$F(3)$ accounts for a positive contribution to the seasonal space heating energy efficiency by the electrical efficiency of solid fuel cogeneration boilers, expressed as a percentage, and is calculated as follows:

$$F(3) = 2,5 \times \eta_{el,n}$$

- (b) the seasonal space heating energy efficiency in active mode, η_{son} , is calculated as follows:

- (1) for manually stoked solid fuel boilers that can be operated at 50 % of the rated heat output in continuous mode, and for automatically stoked solid fuel boilers:

$$\eta_{son} = 0,85 \times \eta_p + 0,15 \times \eta_n$$

(2) for manually stoked solid fuel boilers that cannot be operated at 50 % or less of the rated heat output in continuous mode, and for solid fuel cogeneration boilers:

$$\eta_{son} = \eta_n$$

(c) $F(2)$ is calculated as follows:

(1) for manually stoked solid fuel boilers that can be operated at 50 % of the rated heat output in continuous mode, and for automatically stoked solid fuel boilers:

$$F(2) = 2,5 \times (0,15 \times el_{max} + 0,85 \times el_{min} + 1,3 \times P_{SB}) / (0,15 \times P_n + 0,85 \times P_p)$$

(2) for manually stoked solid fuel boilers that cannot be operated at 50 % or less of the rated heat output in continuous mode, and for solid fuel cogeneration boilers:

$$F(2) = 2,5 \times (el_{max} + 1,3 \times P_{SB}) / P_n$$

5. Calculation of gross calorific value

The gross calorific value (GCV) shall be obtained from the gross calorific value moisture free (GCV_{mf}) by applying the following conversion:

$$GCV = GCV_{mf} \times (1 - M)$$

where:

(a) GCV and GCV_{mf} are expressed in megajoules per kilogram;

(b) M is the moisture content of the fuel, expressed as a proportion.

ANNEX IX

Method for calculating the Energy Efficiency Index

1. The Energy Efficiency Index (*EEI*) of solid fuel boilers shall be calculated for the preferred fuel and rounded to the nearest integer as:

$$EEI = \eta_{son} \times 100 \times BLF - F(1) - F(2) \times 100 + F(3) \times 100$$

where:

η_{son} is the seasonal space heating energy efficiency in active mode, calculated as set out in point 4(b) of Annex VIII;

BLF is the biomass label factor, which is 1,45 for biomass boilers and 1 for fossil fuel boilers;

F(1) accounts for a negative contribution to the energy efficiency index due to adjusted contributions of temperature controls; $F(1) = 3$;

F(2) accounts for a negative contribution to the energy efficiency index by auxiliary electricity consumption, and is calculated as set out in point 4(c) of Annex VIII;

F(3) accounts for a positive contribution to the energy efficiency index by the electrical efficiency of solid fuel cogeneration boilers, and is calculated as follows:

$$F(3) = 2,5 \times \eta_{el,n}$$

2. The Energy Efficiency Index (*EEI*) of packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices shall determined in accordance with point 2 of Annex IV.

ANNEX X³

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Contracting Parties shall apply the following procedure:

- (1) The Contracting Party authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MCEnC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 5. The unit shall be tested with a fuel with characteristics in the same range as the fuel that was used by the supplier to perform measurements according to Annex VIII.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the Contracting Party authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective verification tolerances given in Table 5.
- (6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.

³ Annex X is amended in accordance with Article 15 and Annex XV of Delegated Regulation (EU) 2017/254, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

(7) The Contracting Party authorities shall provide all relevant information to the authorities of the other Contracting Parties and to the Secretariat without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The Contracting Party authorities shall use the measurement and calculation methods set out in Annex VIII and IX.

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 5 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 5
Verification tolerances

Parameter	Verification tolerance
Energy efficiency index	The determined value shall not be lower than the declared value by more than 6 %.

DELEGATED REGULATION (EU) 1254/2014 of 11 July 2014 supplementing Directive 2010/30/EU with regard to energy labelling of residential ventilation units

Incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products

*The adaptations made by Ministerial Council Decision 2018/03/MC-EnC are highlighted in **bold and blue**.*

Article 1

Subject matter and scope

1. This Regulation establishes energy labelling requirements for residential ventilation units.
2. This Regulation shall not apply to residential ventilation units which:
 - (a) are unidirectional (exhaust or supply) with an electric power input of less than 30 W;
 - (b) are exclusively specified as operating in a potentially explosive atmosphere as defined in Directive 94/9/EC of the European Parliament and of the Council;
 - (c) are exclusively specified as operating for emergency use, for short periods of time, and which comply with the basic requirements for construction works with regard to safety in case of fire as set out in Regulation (EU) No 305/2011 of the European Parliament and of the Council;
 - (d) are exclusively specified as operating:
 - (i) where operating temperatures of the air being moved exceed 100 °C;
 - (ii) where the operating ambient temperature for the motor, if located outside the air stream, driving the fan exceeds 65 °C;
 - (iii) where the temperature of the air being moved or the operating ambient temperature for the motor, if located outside the air stream, are lower than – 40 °C;
 - (iv) where the supply voltage exceeds 1000 V AC or 1500 V DC;
 - (v) in toxic, highly corrosive or flammable environments or in environments with abrasive substances;
 - (e) include a heat exchanger and a heat pump for heat recovery, or allowing heat transfer or extraction being additional to that of the heat recovery system, except heat transfer for frost protection or defrosting;
 - (f) are classified as range hoods covered by Commission Delegated Regulation (EU) No 65/2014, **as incorporated and adapted by the Ministerial Council Decision 2014/02/MC-EnC**.

Article 2

Definitions

For the purposes of this Regulation the following definitions shall apply:

- (1) 'ventilation unit' (VU) means an electricity driven appliance equipped with at least one impeller, one motor and a casing and intended to replace utilised air by outdoor air in a building or a part of a building;
- (2) 'residential ventilation unit' (RVU) means a ventilation unit where:
 - (a) the maximum flow rate does not exceed 250 m³/h;
 - (b) the maximum flow rate is between 250 and 1 000 m³/h, and the manufacturer declares its intended use as being exclusively for a residential ventilation application;
- (3) 'maximum flow rate' is the declared maximum air volume flow rate of a ventilation unit that can be achieved with integrated or separately co-supplied controls at standard air conditions (20 °C) and 101325 Pa, where the unit is installed complete (e.g. including clean filters) and according to the manufacturer's instructions, for ducted RVUs the maximum flow is related to the air flow at 100 Pa of external static pressure difference, and for non-ducted RVUs to the air flow at the lowest achievable total pressure difference to be chosen from a set of values of 10 (minimum)-20-50-100-150-200-250 Pa, whichever is equal or just below the measured pressure difference value;
- (4) 'unidirectional ventilation unit' (UVU) means a ventilation unit producing an air flow in one direction only, either from indoors to outdoors (exhaust) or from outdoors to indoors (supply), where the mechanically produced air flow is balanced by natural air supply or exhaust;
- (5) 'bidirectional ventilation unit' (BVU) means a ventilation unit producing an air flow between indoors and outdoors and which is equipped with both exhaust and supply fans;
- (6) 'equivalent ventilation unit model' means a ventilation unit with the same technical characteristics according to the applicable product information requirements, but placed on the market as a different ventilation unit model by the same manufacturer, authorised representative or importer.

For the purposes of Annexes II to IX, additional definitions are set out in Annex I.

Article 3

Responsibilities of suppliers

1. Suppliers placing residential ventilation units on the market shall ensure that from **1 January 2020** the following requirements are fulfilled:

- (a) each residential ventilation unit is accompanied by a printed label in the format and containing the information set out in Annex III, the label must be provided at least in the packaging of the unit. For each model of residential ventilation units an electronic label in the format and containing the information set out in Annex III shall be made available to dealers;
- (b) a product fiche, as set out in Annex IV, is made available. The fiche must be provided at least in the packaging of the unit. For each model of residential ventilation units an electronic product fiche, as set out in Annex IV, shall be made available to dealers, and on free access websites;

- (c) technical documentation, as set out in Annex V, is made available on request to the **Contracting Party** authorities and the **Secretariat**;
- (d) instructions for use are made available;
- (e) any advertisement for a specific model of residential ventilation units that discloses energy-related or price information contains the specific energy consumption class of that model;
- (f) any technical promotional material concerning a specific model of residential ventilation unit which describes its specific technical parameters states the specific energy consumption class of that model.
2. From **1 January 2020** residential ventilation units placed on the market shall be provided with a label in the format set out in Annex III, point 1, if they are unidirectional residential ventilation units, and with a label in the format set out in Annex III, point 2, if they are bidirectional ventilation units.

Article 4

Responsibilities of dealers

Dealers shall ensure that:

- (a) each residential ventilation unit, at the point of sale, bears the label provided by suppliers in accordance with Article 3(1)(a) on the outside of the front or top of the appliance in such a way as to be clearly visible;
- (b) residential ventilation units offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the product displayed, are marketed with the information provided by suppliers in accordance with Annex VI, except where the offer is made on the internet, in which case the provisions of Annex VII shall apply;
- (c) any advertisement for a specific model of residential ventilation unit that discloses energy-related or price information contains a reference to the specific energy consumption class of the unit;
- (d) any technical promotional material concerning a specific model which describes the technical parameters of a residential ventilation unit includes the specific energy consumption class of the model and the instructions for use provided by the supplier.

Article 5

Measurement methods

For the purposes of information to be provided under Articles 3 and 4, the specific energy consumption class shall be determined in accordance with the table set out in Annex II. The specific energy consumption, the annual electricity consumption, the annual heating saved, the maximum flow rate and the sound power level shall be determined in accordance with measurement and calculation methods as set out in Annex VIII, and take into account recognised state-of-the-art measurement and calculation methods.

Article 6

Verification procedure for market surveillance purposes

When assessing the conformity of the ventilation unit, **Contracting Parties** shall apply the procedure laid down in Annex IX.

Article 7

Review

<...>¹

Article 8

Entry into force and application

This Regulation shall enter into force on the day of its adoption by the Ministerial Council. It shall be transposed, implemented and applicable by 1 January 2020.

Each Contracting Party shall notify the Secretariat of completed transposition within two weeks following the adoption of transposition measures.

¹ Not applicable in accordance with Article 3(5)(a) of Decision 2018/03/MC-EnC

ANNEX I

Definitions applicable for Annexes II to IX

- (1) 'specific energy consumption (*SEC*)' (expressed in kWh/(m².a)) means a coefficient to express the energy consumed for ventilation per m²heated floor area of a dwelling or building, calculated for RVUs in accordance with Annex VIII;
- (2) 'sound power level (L_{WA})' means the casing-radiated A-weighted sound power level expressed in decibels (dB) with reference to the sound power of one picowatt (1 pW), transmitted by the air at reference airflow;
- (3) 'multi-speed drive' means a fan motor that can be operated at three or more fixed speeds plus zero ('off');
- (4) 'variable speed drive (*VSD*)' means an electronic controller, integrated or functioning as one system or as a separate delivery with the motor and the fan, which continuously adapts the electrical power supplied to the motor in order to control the flow rate;
- (5) 'heat recovery system (*HRS*)' means the part of a bidirectional ventilation unit equipped with a heat exchanger designed to transfer the heat contained in the (contaminated) exhaust air to the (fresh) supply air;
- (6) 'thermal efficiency of a residential HRS (η_t)' means the ratio between supply air temperature gain and exhaust air temperature loss, both relative to the outdoor temperature, measured under dry conditions of the HRS, and standard air conditions, with balanced mass flow at reference flow rate, an indoor-outdoor temperature difference of 13 K, no correction for thermal heat gain from fan motors;
- (7) 'internal leakage rate' means the fraction of extract air present in the supply air of ventilation units with HRS as a result of leakage between extract and supply airflows inside the casing when the unit is operated at reference air volume flow, measured at the ducts, the test shall be performed at 100 Pa;
- (8) 'carry over' means the percentage of the exhaust air which is returned to the supply air for a regenerative heat exchanger according to the reference flow;
- (9) 'external leakage rate' means the fraction of reference air volume flow escaping from the casing of a unit when it is subjected to a pressure test, the test shall be performed at 250 Pa for both under and over pressure;
- (10) 'mixing' means the immediate recirculation or short-circuiting of airflows between discharge and intake ports at both the indoor and outdoor terminals so that they do not contribute to the effective ventilation of a building space, when the unit is operated at reference air volume rate;
- (11) 'mixing rate' means the fraction of extract airflow, as part of the total reference air volume, that recirculates between discharge and intake ports at both the indoor and outdoor terminals and thus does not contribute to the effective ventilation of a building space, when the unit is operated at reference air volume (measured at 1 m distance from the indoor supply duct), less the internal leakage rate;
- (12) 'effective power input' (expressed in W) means the electric power input at reference flow rate and corresponding external total pressure difference and includes the electrical demand for fans, controls (including remote controls) and the heat pump (if integrated);
- (13) 'specific power input (*SPI*)' (expressed in W/(m³/h)) means the ratio between the effective power input (in W) and the reference flow rate (in m³/h);
- (14) 'flow rate/pressure diagram' means a set of curves for flow rate (horizontal axis) and pressure difference of a unidirectional RVU or the supply side of a bidirectional RVU, where each curve represents one

fan speed with at least eight equidistant test-points and the number of curves is given by the number of discrete fan speed options (one, two or three) or, in the case of a variable fan speed drive, includes at least a minimum, maximum and appropriate intermediate curve close to the reference air volume and pressure difference for SPI testing;

(15) 'reference flow rate' (expressed in m^3/s) is the abscissa value to a point on a curve in the flow rate/pressure diagram which is on or closest to a reference point at 70 % at least of the maximum flow rate and 50 Pa for ducted units and at a minimum pressure for non-ducted units. For bidirectional ventilation units, the reference air volume flow rate applies to the air supply outlet;

(16) 'control factor (*CTRL*)' means a correction factor for the SEC calculation depending on the type of control that is part of the ventilation unit, according to the description in Annex VIII Table 1;

(17) 'control parameter' means a measurable parameter or set of measurable parameters that are assumed to be representative of the ventilation demand, e.g. the level of relative humidity (RH), carbon dioxide (CO_2), volatile organic compounds (VOC) or other gases, presence, motion or occupancy detection from infrared body heat or from reflection of ultrasonic waves, electrical signals from human operation of lights or equipment;

(18) 'manual control' means any control type that does not use demand control;

(19) 'demand control' means a device or set of devices, integrated or as a separate delivery, that measures a control parameter and uses the result to regulate automatically the flow rate of the unit and/or the flow rates of the ducts;

(20) 'clock control' means a clocked (daytime-controlled) human interface to control the fan speed/flow rate of the ventilation unit, with at least seven weekday manual settings of the adjustable flow rate for at least two setback periods, i.e. periods in which a reduced or no flow rate applies;

(21) 'demand controlled ventilation (*DCV*)' means a ventilation unit that uses demand control;

(22) 'ducted unit' means a ventilation unit intended to ventilate one or more rooms or enclosed space in a building through the use of air ducts, intended to be equipped with duct connections;

(23) 'non-ducted unit' means a single room ventilation unit intended to ventilate a single room or enclosed space in a building, and not intended to be equipped with duct connections;

(24) 'central demand control' means a demand control of a ducted ventilation unit that continuously regulates the fan speed(s) and flow rate based on one sensor for the whole ventilated building or part of the building at central level;

(25) 'local demand control' means a demand control for a ventilation unit that continuously regulates the fan speed(s) and flow rates based on more than one sensor for a ducted ventilation unit or one sensor for a non-ducted unit;

(26) 'static pressure (p_{st})' means the total pressure minus the fan dynamic pressure;

(27) 'total pressure (p_f)' means the difference between the stagnation pressure at the fan outlet and that at the fan inlet;

(28) 'stagnation pressure' means the pressure measured at a point in a flowing gas if it were to be brought to rest by means of an isentropic process;

(29) 'dynamic pressure' means the pressure calculated from the mass flow rate and the average gas density at the outlet and the unit outlet area;

(30) 'recuperative heat exchanger' means a heat exchanger intended to transfer thermal energy from one air stream to another without moving parts, such as a plate or tubular heat exchanger with parallel flow, cross flow or counter flow, or a combination of these, or a plate or tubular heat exchanger with vapour diffusion;

(31) 'regenerative heat exchanger' means a rotary heat exchanger incorporating a rotating wheel for the purpose of transferring thermal energy from one air stream to the other, including material allowing latent heat transfer, a drive mechanism, a casing or frame, and seals to reduce bypassing and leakage of air from one stream or another; such heat exchangers have varying degrees of moisture recovery depending on the material used;

(32) 'airflow sensitivity to pressure variations' of a non-ducted RVU is the ratio between the maximum deviation from the maximum RVU flow rate at + 20 Pa and that at – 20 Pa external total pressure difference;

(33) 'indoor/outdoor air tightness' of a non-ducted RVU is the flow rate (expressed in m³/h) between indoors and outdoors when the fan(s) is(are) switched off.

ANNEX II

Specific energy consumption classes

Specific energy consumption (SEC) classes of residential ventilation units calculated for average climate:

Table 1

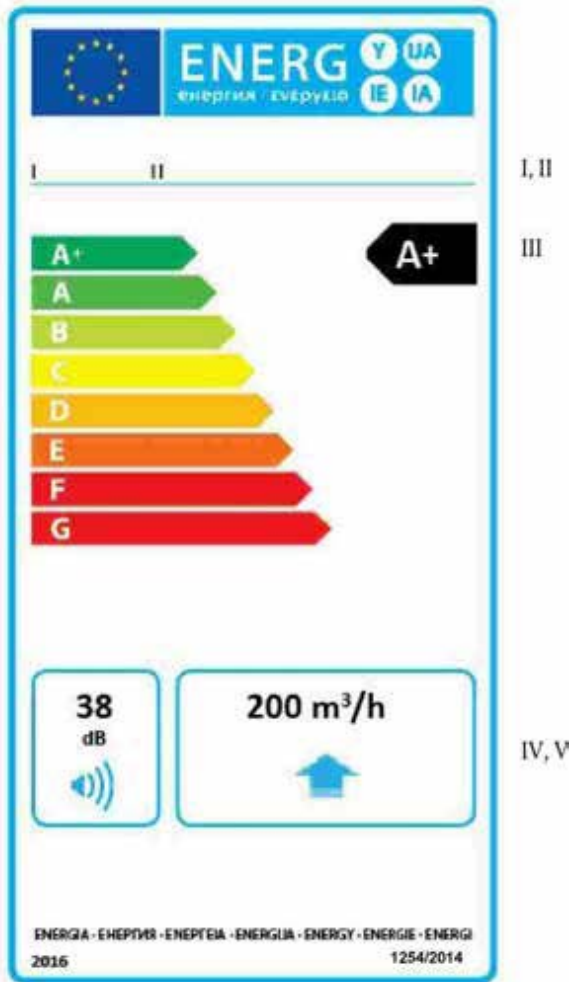
Classification from 1 January 2020

SEC class	SEC in kWh/a.m ²
A* (most efficient)	$SEC < - 42$
A	$- 42 \leq SEC < - 34$
B	$- 34 \leq SEC < - 26$
C	$- 26 \leq SEC < - 23$
D	$- 23 \leq SEC < - 20$
E	$- 20 \leq SEC < - 10$
F	$- 10 \leq SEC < 0$
G (least efficient)	$0 \leq SEC$

ANNEX III

The label

1. Label for UVUs marketed after **1 January 2020**:



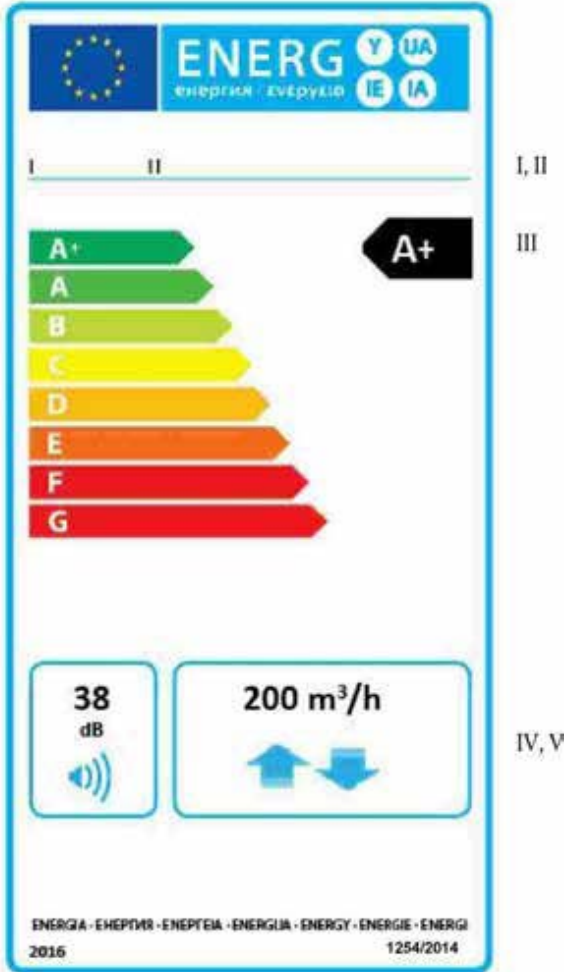
The label shall provide the following information:

- I. supplier's name or trade mark;
- II. supplier's model identifier;
- III. energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class. Energy efficiency is indicated for an 'average' climate;

IV. sound power level (L_{WA}) in dB rounded to the nearest integer;

V. maximum flow rate in m^3/h rounded to the nearest integer, accompanied by one arrow representing UVUs.

2. Label for BVUs marketed after **1 January 2020**:



The label shall provide the following information:

I. supplier's name or trade mark;

II. supplier's model identifier;

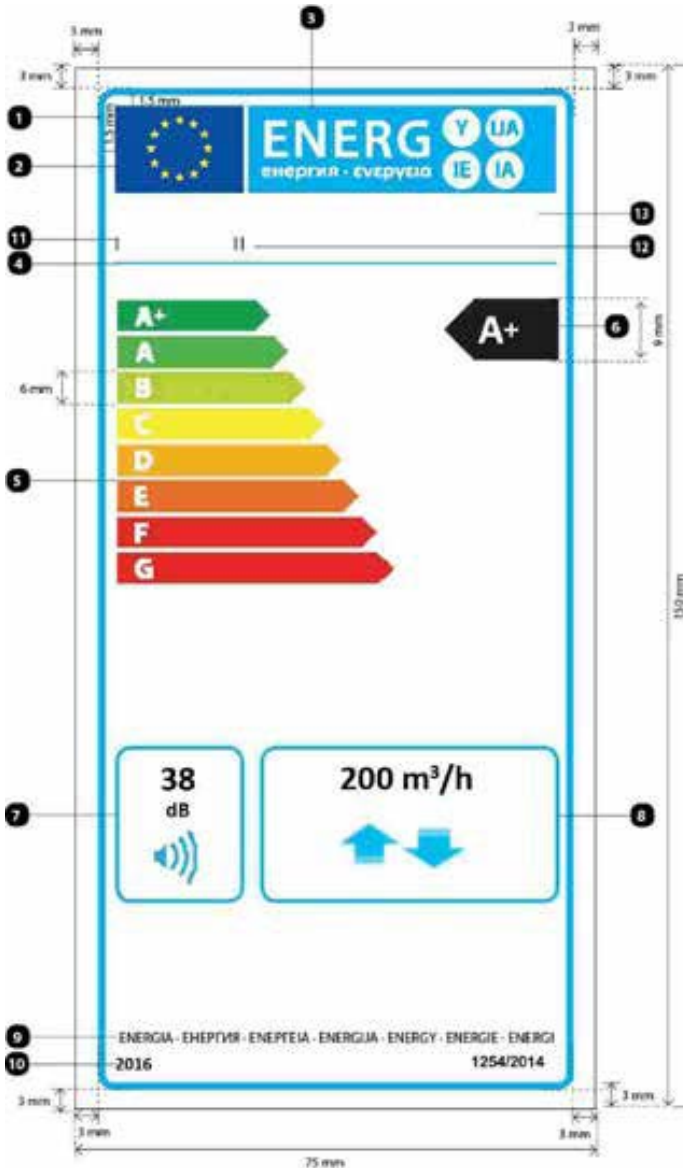
III. energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class. Energy

efficiency is indicated for an 'average' climate;

IV. sound power level (L_{WA}) in dB rounded to the nearest integer;

V. maximum flow rate in m^3/h rounded to the nearest integer, accompanied by two arrows in opposite directions representing BVUs.

3. The design of the labels for residential ventilation units set out in points 1 to 2 shall be the following:



Whereby:

The label shall be at least 75 mm wide and 150 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

The background shall be white.

Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

The label shall fulfil all of the following requirements (numbers refer to the figure above):

- 1 **EU label border stroke:** 3,5 pt – colour: Cyan 100 % – round corners: 2,5 mm. EU logo: Colours: X-80-00-00 and 00-00-X-00.
- 2 **Energy logo:** Colour: X-00-00-00.
- 3 **Pictogram as depicted:** EU logo + energy logo: width: 62 mm, height: 12 mm.
- 4 **Sub-logos border:** 1 pt – colour: cyan 100 % – length: 62 mm.
- 5 **A⁺–G scales:**
 - Arrow: height: 6 mm, gap: 1 mm – colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Seventh class 00-X-X-00,
 - Last class: 00-X-X-00,
 - Text: Calibri bold 13 pt, capitals, white.
- 6 **Specific energy consumption class**
 - Arrow: width: 17 mm, height: 9 mm, 100 % black;
 - Text: Calibri bold 18,5 pt, capitals, white; ‘+’ symbols: Calibri bold 11 pt, white aligned on a single row.
- 7 **Sound power level in dB:**
 - Border: 1,5 pt – colour: cyan 100 % – round corners: 2,5 mm;
 - Value: Calibri bold 16 pt, 100 % black;
 - ‘dB’: Calibri regular 10 pt, 100 % black.
- 8 **Maximum flow rate in m³/h:**
 - Border: 1,5 pt – colour: cyan 100 % – round corners: 2,5 mm;
 - Value: Calibri bold 16 pt, 100 % black;
 - ‘m³/h’: Calibri bold 16 pt, 100 % black;
 - One or two arrows
 - each width: 10 mm, each height: 10 mm.

– Colour: cyan 100 %.

9 Energy:

– Text: Calibri regular 6 pt, capitals, black.

10 Reference period:

– Text: Calibri bold 8 pt.

11 Supplier's name or trademark

12 Supplier's model identifier

13 The suppliers' name or trade mark and model identifier shall fit in a space of 62 × 10 mm.

ANNEX IV

Product fiche

The information in the product fiche of the residential ventilation unit referred to in Article 3(1)(b) shall be given in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trade mark;
- (b) supplier's model identifier i.e. the code, usually alphanumeric, used to distinguish a specific residential ventilation unit model from other models with the same trade mark or supplier's name;
- (c) specific energy consumption (*SEC*) in kWh/(m².a) for each applicable climate zone and *SEC* class;
- (d) declared typology in accordance with Article 2 of this Regulation (unidirectional or bidirectional);
- (e) type of drive installed or intended to be installed (multi-speed drive or variable speed drive);
- (f) type of heat recovery system (recuperative, regenerative, none);
- (g) thermal efficiency of heat recovery (in % or 'not applicable' if the product has no heat recovery system);
- (h) maximum flow rate in m³/h;
- (i) electric power input of the fan drive, including any motor control equipment, at maximum flow rate (W);
- (j) sound power level (L_{WA}), rounded to the nearest integer;
- (k) reference flow rate in m³/s;
- (l) reference pressure difference in Pa;
- (m) SPI in W/(m³/h);
- (n) control factor and control typology in accordance with the relevant definitions and classification in Annex VIII Table 1;
- (o) declared maximum internal and external leakage rates (%) for bidirectional ventilation units or carry over (for regenerative heat exchangers only), and external leakage rates (%) for ducted unidirectional ventilation units;
- (p) mixing rate of non-ducted bidirectional ventilation units not intended to be equipped with one duct connection on either supply or extract air side;
- (q) position and description of visual filter warning for RVUs intended for use with filters, including text pointing out the importance of regular filter changes for performance and energy efficiency of the unit;
- (r) for unidirectional ventilation systems, instructions to install regulated supply/exhaust grilles in the façade for natural air supply/extraction;
- (s) internet address for pre-/dis-assembly instructions;
- (t) for non-ducted units only: the airflow sensitivity to pressure variations at + 20 Pa and – 20 Pa;
- (u) for non-ducted units only: the indoor/outdoor air tightness in m³/h;
- (v) the annual electricity consumption (AEC) (in kWh electricity/a);
- (w) the annual heating saved (AHS) (in kWh primary energy/a) for each type of climate ('average', 'warm', 'cold').

ANNEX V

Technical documentation

The technical documentation referred to in Article 3(1)(c) shall include at least the following:

- (a) the name and address of the supplier;
- (b) supplier's model identifier i.e. the code, usually alphanumeric, used to distinguish a specific residential ventilation unit model from other models with the same trade mark or supplier's name;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other calculation methods, measurement standards and specifications used;
- (e) identification and signature of the person empowered to bind the supplier;
- (f) where appropriate, the technical parameters for measurements, established in accordance with Annex VIII;
- (g) overall dimensions;
- (h) specification of the type of RVU;
- (i) the specific energy consumption class of the model as defined in Annex II;
- (j) the specific energy consumption (*SEC*) for each applicable climate zone;
- (k) sound power level (L_{WA});
- (l) the results of calculations carried out in accordance with Annex VIII. Suppliers may include additional information at the end of the above list.

ANNEX VI

Information to be provided where end-users cannot be expected to see the product displayed, except on the internet

1. Where end-users cannot be expected to see the product displayed, except on the internet, the information shall be provided in the following order:

- (a) the specific energy consumption class of the model as defined in Annex II;
- (b) the specific energy consumption (*SEC*) in kWh/(m².a) for each applicable climate zone;
- (c) the maximum flow rate (in m³/h);
- (d) sound power level (L_{WA}) in dB(A) rounded to the nearest integer.

2. Where other information contained in the product information fiche is provided, it shall be in the form and order specified in Annex IV.

3. The size and font in which the information referred in this Annex is printed or shown shall be such that it is legible.

ANNEX VII

Information to be provided in the case of sale, hire or hire-purchase through the internet

1. For the purpose of points 2 to 5 of this Annex, the following definitions shall apply:

(a) 'display mechanism' means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) 'nested display' means a visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) 'tactile screen' means a screen responding to touch, such as that of a tablet computer, slate computer or smartphone;

(d) 'alternative text' means text provided as an alternative to a graphic, allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

2. The appropriate label made available by suppliers in accordance with Article 3(1)(a) shall be shown on the display mechanism near the price of the product in accordance with the timelines indicated in Article 3(2) and (3). The size of the label shall be such that it is clearly visible and legible and shall be proportionate to the size specified in Annex III. The label may be displayed using a nested display, in which case the image used for accessing it shall comply with the specifications in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

3. The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

(b) indicate the energy efficiency class of the product in white in the same font size as that used for the price; and

(c) be in one of the following two formats:



4. In the case of nested display, the sequence of display of the label shall be as follows:

a) the image referred to in point 3 of this Annex is shown on the display mechanism in proximity to the price of the product;

b) the image links to the label;

c) the label is displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

d) the label is displayed by pop-up, new tab, new page or inset screen display;

e) for magnification of the label on tactile screens, the device conventions for tactile magnification apply;

f) display of the label is closed by means of a close option or other standard closing mechanism;

g) the alternative text for the graphic, to be displayed on failure to display the label, is the energy efficiency class of the product in the same font size as that used for the price.

5. The appropriate product fiche made available by suppliers in accordance with Article 3(1)(b) shall be

shown on the display mechanism near the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing it shall clearly and legibly indicate 'Product fiche'. If nested display is used, the fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

ANNEX VIII

Measurements and calculations

1. The specific energy consumption (SEC) is calculated using the following equation:

$$SEC = t_a \cdot p_{ef} \cdot q_{net} \cdot MISC \cdot CTRL^X \cdot SPI - t_h \cdot \Delta T_h \cdot \eta_{hs}^{0.8} \cdot c_{air} \cdot (q_{ref} - q_{net} \cdot CTRL \cdot MISC \cdot (1 - \eta_h)) + Q_{defr}$$

where:

- SEC is the specific energy consumption for ventilation per m^2 heated floor area of a dwelling or building [$kWh/m^2 \cdot a$];
- t_a is annual operating hours [h/a];
- p_{ef} is the primary energy factor for electric power generation and distribution [-];
- q_{net} is net ventilation rate demand per m^2 heated floor area [$m^3/h \cdot m^2$];
- $MISC$ is an aggregated general typology factor, incorporating factors for ventilation effectiveness, duct leakage and extra infiltration [-];
- $CTRL$ is the ventilation control factor [-];
- X is an exponent that takes into account non-linearity between thermal energy and electricity saving, depending on motor and drive characteristics [-];
- SPI is specific power input [$kW/(m^3/h)$];
- t_h is total hours heating season [h];
- ΔT_h is the average difference in indoor ($19^\circ C$) and outdoor temperature over a heating season, minus $3 K$ correction for solar and internal gains [K];
- η_h is the average space heating efficiency [-];
- c_{air} is the specific heat capacity of air at constant pressure and density [$kWh/(m^3 K)$];
- q_{ref} is the reference natural ventilation rate per m^2 heated floor area [$m^3/h \cdot m^2$];
- η_r is the thermal efficiency of heat recovery [-];
- Q_{defr} is the annual heating energy per m^2 heated floor area [$kWh/m^2 \cdot a$] for defrosting, based on a variable electric resistance heating.

$$Q_{defr} = t_{defr} \cdot \Delta T_{defr} \cdot c_{air} \cdot q_{net} \cdot p_{ef}$$

where:

- t_{defr} is the duration of the defrosting period, i.e. when the outdoor temperature is below $-4^\circ C$ [h/a]; and
- ΔT_{defr} is the average difference in K between the outdoor temperature and $-4^\circ C$ during the defrosting period.

Q_{defr} applies only to bidirectional units with recuperative heat exchanger; for unidirectional units or units with regenerative heat exchangers, $Q_{defr} = 0$.

- SPI and η_r are values derived from tests and calculation methods.

Other parameters and their defaults are given in Table 1. The SEC for label classification is based on the 'average' climate.

2. The annual electricity consumption per 100 m² floor area (AEC) (in kWh/a electric per year); and the annual heating saved ((AHS), which means the annual saving in consumption of energy for heating (in kWh fuel gross calorific value per year) are calculated as follows, using the definitions in point 1, and the default values given in Table 1, for each type of climate (average, warm and cold):

$$AEC = t_a \cdot q_{net} \cdot MISC \cdot CTRL^x \cdot SPI + Q_{defr}$$

$$AHS = t_h \cdot \Delta T_h \cdot \eta_h^{\text{AAS}^1} \cdot c_{air} \cdot (q_{ref} - q_{net} \cdot CTRL \cdot MISC \cdot (1 - \eta_t)) \cdot$$

Table 1

SEC calculation parameters

General typology					MISC
Ducted ventilation units					1,1
Non-ducted ventilation units					1,21
Ventilation control					CTRL
Manual control (no DCV)					1
Clock control (no DCV)					0,95
Central demand control					0,85
Local demand control					0,65
Motor & drive					x-value
on/off & single speed					1
2-speed					1,2
3-speed					1,5
variable speed					2
Climate	t_h in h	ΔT_h in K	t_{defr} in h	ΔT_{defr} in K	Q_{defr}* in kWh/a.m²
Cold	6 552	14,5	1 003	5,2	5,82
Average	5 112	9,5	168	2,4	0,45
Warm	4 392	5	–	–	–
Defaults					value
Cospecific heat capacity of air, c _{air} in kWh/(m ³ K)					0,000344
net ventilation requirement per m ² heated floor area, q _{net} in m ³ /h.m ²					1,3
reference natural ventilation rate per m ² heated floor area, q _{ref} in m ³ /h.m ²					2,2
annual operating hours, t _o in h					8 760
primary energy factor electric power generation & distribution, p _{ef}					2,5
space heating efficiency, η _h					75 %

* Defrosting applies only to bidirectional units with recuperative heat exchanger and is calculated as $Q_{defr} = t_{defr} \cdot \Delta t_{defr} \cdot c_{air} \cdot q_{net} \cdot p_{ef}$. For unidirectional units or units with regenerative heat exchangers, $Q_{defr} = 0$

ANNEX IX²

Product compliance verification by market surveillance authorities

The verification tolerances defined in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish values in the technical documentation. The values and classes on the label or in the (electronic) product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Contracting Parties shall apply the following procedure:

- (1) The Contracting Party authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all other equivalent models shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the Contracting Party authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different equivalent models.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 1.

² Annex IX is amended in accordance with Article 12 and Annex XII of Delegated Regulation (EU) 2017/254, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

(6) If the result referred to in point 5 is not achieved, the model and all other equivalent models shall be considered not to comply with this Delegated Regulation.

(7) The Contracting Party authorities shall provide all relevant information to the authorities of the other Contracting Parties and to the Secretariat without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The Contracting Party authorities shall use the measurement and calculation methods set out in Annex VIII.

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 1 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 1
Verification tolerances

Parameters	Verification tolerances
SPI	The determined value shall be no more than 1,07 times the declared value.
Thermal efficiency RVU	The determined value shall be no less than 0,93 times the declared value.
Sound power level	The determined value shall be no more than the declared value plus 2 dB.

DELEGATED REGULATION (EU) 65/2014 of 1 October 2013 supplementing Directive 2010/30/EU with regard to the energy labelling of domestic ovens and range hoods

Incorporated and adapted by Ministerial Council Decision 2014/02/MC-EnC of 23 September 2014 adapting certain Delegated Regulations on energy related products, and amended by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products.

*The adaptations made by Ministerial Council Decisions 2014/02/MC-EnC and 2018/03/MC-EnC are highlighted in **bold and blue**.*

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the labelling and the provision of supplementary product information for domestic electric and gas ovens (including when incorporated into cookers) and for domestic electric range hoods, including when sold for non-domestic purposes.
2. This Regulation shall not apply to:
 - (a) ovens that use energy sources other than electricity or gas;
 - (b) ovens which offer a 'microwave heating' function;
 - (c) small ovens;
 - (d) portable ovens;
 - (e) heat storage ovens;
 - (f) ovens which are heated with steam as a primary heating function;
 - (g) ovens designed for use only with gases of the 'third family' (propane and butane).

Article 2

Definitions

In addition to the definitions set out in Article 2 of Directive 2010/30/EU, the following definitions shall apply for the purposes of this Regulation:

- (1) 'oven' means an appliance or part of an appliance which incorporates one or more cavities using electricity and/or gas in which food is prepared by use of a conventional or fan-forced mode;
- (2) 'cavity' means the enclosed compartment in which the temperature can be controlled for preparation of food;
- (3) 'multi-cavity oven' means an oven with two or more cavities, each of which is heated separately;
- (4) 'small oven' means an oven where all cavities have a width and depth of less than 250 mm or a height less than 120 mm;

- (5) 'portable oven' means an oven with a product mass of less than 18 kilograms, provided it is not designed for built-in installations;
- (6) 'microwave heating' means heating of food using electromagnetic energy;
- (7) 'conventional mode' means the operation mode of an oven only using natural convection for circulation of heated air inside the cavity of the oven;
- (8) 'fan-forced mode' means a mode of an oven when a built-in fan circulates heated air inside the cavity of the oven;
- (9) 'cycle' means the period of heating a standardised load in a cavity of an oven under defined conditions;
- (10) 'cooker' means an appliance consisting of an oven and a hob using gas or electricity;
- (11) 'operation mode' means the status of an oven during use;
- (12) 'heat source' means the main energy form for heating an oven;
- (13) 'range hood' means an appliance, operated by a motor which it controls, intended to collect contaminated air from above a hob, or which includes a downdraft system intended for installation adjacent to cooking ranges, hobs and similar cooking products, that draws vapour down into an internal exhaust duct;
- (14) 'automatic functioning mode during the cooking period' means a condition in which the air flow of the range hood during the cooking period is automatically controlled through sensor(s), including as regards humidity, temperature, etc.;
- (15) 'fully automatic range hood' means a range hood in which the air flow and/or other functions are automatically controlled through sensor(s) during 24 hours including the cooking period;
- (16) 'best efficiency point' (BEP) means the range hood operating point with maximum fluid dynamic efficiency (FDE_{hood});
- (17) 'lighting efficiency' (LE_{hood}) means the ratio between the average illumination of the lighting system of the domestic range hood and the power of the lighting system in lux/W;
- (18) 'grease filtering efficiency' (GFE_{hood}) means the relative share of grease retained within the range hood grease filters;
- (19) 'off mode' means a condition in which the appliance is connected to the mains power source but is not providing any function or only provides an indication of off mode condition, or only provides functionalities intended to ensure electromagnetic compatibility pursuant to Directive 2004/108/EC of the European Parliament and of the Council;
- (20) 'standby mode' means a condition where the appliance is connected to the mains power source, depends on energy input from the mains power source to work as intended and provides only reactivation function, or reactivation function and only an indication of enabled reactivation function, and/or information or status display which may persist for an indefinite time;
- (21) 'reactivation function' means a function facilitating the activation of other modes, including the active mode, by remote switch including remote control, internal sensor, or timer to a condition providing additional functions, including the main function;
- (22) 'information or status display' means a continuous function providing information or indicating the status of the equipment on a display, including clocks;

- (23) 'end-user' means a consumer buying or expected to buy a product;
- (24) 'point of sale' means a location where appliances are displayed and/or offered for sale or hire;
- (25) 'equivalent model' means a model placed on the market with the same technical parameters as another model placed on the market under a different commercial code number by the same manufacturer or importer.

Article 3

Responsibilities of suppliers and timetable

Suppliers shall ensure that:

(1) as regards labels, fiches and technical documentation:

(a) for domestic ovens:

- (i) each domestic oven is supplied with (a) printed label(s) containing information in the format set out in point 1 of Annex III for each cavity of the oven;
- (ii) a product fiche, as set out in point A of Annex IV, is made available for domestic ovens placed on the market;
- (iii) the technical documentation, as set out in point A of Annex V, is made available on request to the authorities of the **Contracting Parties**;
- (iv) any advertisement for a specific model of domestic oven contains the energy efficiency class, if the advertisement discloses energy-related or price information;
- (v) any technical promotional material concerning a specific model of domestic oven which describes its specific technical parameters includes the energy efficiency class of that model;
- (vi) an electronic label in the format and containing the information set out in point 1 of Annex III is made available to dealers for each cavity of each domestic oven model;
- (vii) an electronic product fiche as set out in point A of Annex IV is made available to dealers for each domestic oven model;

(b) for domestic range hoods:

- (i) each domestic range hood is supplied with a printed label containing information in the format set out in point 2 of Annex III;
- (ii) a product fiche, as set out in point B of Annex IV, is made available for domestic range hoods placed on the market;
- (iii) the technical documentation as set out in point B of Annex V, is made available on request to the authorities of the **Contracting Parties**;
- (iv) any advertisement for a specific model of domestic range hood contains the energy efficiency class, if the advertisement discloses energy-related or price information;
- (v) any technical promotional material concerning a specific model of domestic range hood which describes its specific technical parameters includes the energy efficiency class of that model;

- (vi) an electronic label in the format and containing the information set out in point 2 of Annex III is made available to dealers for each domestic range hood model;
- (vii) an electronic product fiche as set out in point B of Annex IV is made available to dealers for each domestic range hood model;

(2) as regards efficiency classes:

- (a) for domestic ovens, the energy efficiency class of the cavity of the oven shall be determined in accordance with point 1 of Annex I, and point 1 of Annex II;
- (b) for domestic range hoods:
 - (i) the energy efficiency classes shall be determined in accordance with point 2(a) of Annex I and point 2.1 of Annex II;
 - (ii) the fluid dynamic efficiency classes shall be determined in accordance with point 2(b) of Annex I and point 2.2 of Annex II;
 - (iii) the lighting efficiency classes shall be determined in accordance with point 2(c) of Annex I and point 2.3 of Annex II;
 - (iv) the grease filtering efficiency classes shall be determined in accordance with point 2(d) of Annex I and point 2.4 of Annex II;

(3) as regards formats of the labels:

- (a) for domestic ovens, the format of the label for the cavity of the oven shall be as set out in point 1 of Annex III, for appliances placed on the market from 1 January 2016;
- (b) for domestic range hoods, the format of the label shall be as set out in point 2 of Annex III, according to the following timetable:
 - (i) <...>¹
 - (ii) for domestic range hoods placed on the market from 1 January 2016 with energy efficiency classes A⁺, A, B, C, D, E and F, labels shall be in accordance with point 2.1.2 of Annex III (Label 2) or, where suppliers deem appropriate, with point 2.1.3 of that Annex (Label 3);
 - (iii) for domestic range hoods placed on the market from 1 January 2018 with energy efficiency classes A⁺⁺, A⁺, A, B, C, D and E, labels shall be in accordance with point 2.1.3 of Annex III (Label 3) or, where suppliers deem appropriate, with point 2.1.4 of that Annex (Label 4);
 - (iv) for domestic range hoods placed on the market from 1 January 2020 with energy efficiency classes A⁺⁺⁺, A⁺⁺, A⁺, A, B, C and D, labels shall be in accordance with point 2.1.4 of Annex III (Label 4).

¹ Not applicable

Article 4

Responsibilities of dealers

Dealers shall ensure that:

(1) for domestic ovens:

(a) each oven presented at the point of sale carries the label for each cavity provided by suppliers in accordance with Article 3(1)(a)(i) displayed on the front or top of the appliance, or in the immediacy of the appliance, so as to be clearly visible and identifiable as the label belonging to the model without having to read the brand name and model number on the label;

(b) ovens offered for sale or hire where the end-user cannot be expected to see the product displayed, as specified in Article 7 of Directive 2010/30/EU, are marketed with the information provided by suppliers in accordance with Part A of Annex VI to this Regulation, except where the offer is made through the internet in which case the provisions of Annex VII shall apply;

(c) any advertisement for any form or medium of distance selling and marketing concerning a specific model of oven contains a reference to the energy efficiency class, if the advertisement discloses energy-related or price information;

(d) any technical promotional material concerning a specific model which describes the technical parameters of an oven includes the energy efficiency class of the model;

(2) for domestic range hoods:

(a) each domestic range hood presented at the point of sale is accompanied by the label provided by suppliers in accordance with Article 3(1)(b)(i) displayed on the front or top of the appliance, or in the immediacy of the appliance, so as to be clearly visible and identifiable as the label belonging to the model without having to read the brand name and model number on the label;

(b) domestic range hoods offered for sale or hire where the end-user cannot be expected to see the product displayed, as specified in Article 7 of Directive 2010/30/EU, are marketed with the information provided by suppliers in accordance with Part B of Annex VI to this Regulation, except where the offer is made through the internet in which case the provisions of Annex VII shall apply;

(c) any advertisement for any form or medium of distance selling and marketing concerning a specific model of domestic range hood contains a reference to the energy efficiency class, if the advertisement discloses energy-related or price information;

(d) any technical promotional material concerning a specific model which describes the technical parameters of a domestic range hood includes the energy efficiency class of the model.

Article 5

Measurement and calculation methods

The information to be provided under Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement procedures, which take into account the recognised state-of-the-art calculation and measurement methods.

Article 6

Verification procedure for market surveillance purposes

When performing the market surveillance checks for compliance with requirements set out in this Regulation, the **Contracting Parties'** authorities shall apply the verification procedure described in Annex VIII.

Article 7

Review

<...>

Article 8

Repeal

<...>

Article 9

Transitional provisions

1. Domestic ovens which comply with the provisions of this Regulation and which are placed on the market or offered for sale, hire or hire-purchase before **1 January 2016** shall be regarded as complying with the requirements of Directive 2002/40/EC.
2. From **1 January 2016 to 1 April 2016**, dealers may apply Article 4(1)(b) to specific ovens that fall under that provision.
3. From **1 January 2016 to 1 April 2016**, dealers may apply Article 4(2)(b) to specific range hoods that fall under that provision.

Article 10

Entry into force and application

1. **This Decision (2014/02/MC-EnC) enters into force upon its adoption (23 September 2014) and it is addressed to the Contracting Parties².**
2. It shall apply from **1 January 2016**. However, Article 3(1)(a)(iv) and (v), Article 3(1)(b)(iv) and (v), Article 4(1)(b), (c) and (d), and Article 4(2)(b), (c) and (d) shall apply from **1 April 2016**.

This Regulation shall be binding in its entirety and directly applicable in all **Contracting Parties**.

² The text displayed here corresponds to Article 3(1) of Decision 2014/02/MC-EnC

The Secretariat shall monitor and review the implementation of the Delegated Regulations referred to in Article 1 in the Contracting Parties. Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by these Delegated Regulations, in the next year of the deadline for the overall implementation³.

³ The text displayed here corresponds to Article 2(3) of Decision 2014/02/MC-EnC

ANNEX I

Efficiency classes

1. DOMESTIC OVENS

The energy efficiency classes of domestic ovens shall be determined separately for each cavity in accordance with values as set out in Table 1 of this Annex. The energy efficiency of ovens shall be determined in accordance with point 1 of Annex II.

Table 1

Energy efficiency classes of domestic ovens

Energy Efficiency Class	Energy Efficiency Index (EEI_{cavity})
A ⁺⁺⁺ (most efficient)	$EEI_{cavity} < 45$
A ⁺⁺	$45 \leq EEI_{cavity} < 62$
A ⁺	$62 \leq EEI_{cavity} < 82$
A	$82 \leq EEI_{cavity} < 107$
B	$107 \leq EEI_{cavity} < 132$
C	$132 \leq EEI_{cavity} < 159$
D (least efficient)	$EEI_{cavity} \leq 159$

2. DOMESTIC RANGE HOODS

(a) The energy efficiency classes of domestic range hoods shall be determined in accordance with values as set out in Table 2 of this Annex. The Energy Efficiency Index (EEI_{hood}) of domestic range hoods shall be calculated in accordance with point 2.1 of Annex II.

Table 2

Energy efficiency classes of domestic range hoods

Energy Efficiency Class	Energy Efficiency Index (EEI _{hood})			
	Label 1	Label 2	Label 3	Label 4
A+++ (most efficient)				$EEI_{hood} < 30$
A++			$EEI_{hood} < 37$	$30 \leq EEI_{hood} < 37$
A+		$EEI_{hood} < 45$	$37 \leq EEI_{hood} < 45$	$37 \leq EEI_{hood} < 45$
A	$EEI_{hood} < 55$	$45 \leq EEI_{hood} < 55$	$45 \leq EEI_{hood} < 55$	$45 \leq EEI_{hood} < 55$
B	$55 \leq EEI_{hood} < 70$	$55 \leq EEI_{hood} < 70$	$55 \leq EEI_{hood} < 70$	$55 \leq EEI_{hood} < 70$
C	$70 \leq EEI_{hood} < 85$	$70 \leq EEI_{hood} < 85$	$70 \leq EEI_{hood} < 85$	$70 \leq EEI_{hood} < 85$
D	$85 \leq EEI_{hood} < 100$	$85 \leq EEI_{hood} < 100$	$85 \leq EEI_{hood} < 100$	$EEI_{hood} \leq 85$
E	$100 \leq EEI_{hood} < 110$	$100 \leq EEI_{hood} < 110$	$EEI_{hood} \leq 100$	
F	$110 \leq EEI_{hood} < 120$	$EEI_{hood} \leq 110$		
G (least efficient)	$EEI_{hood} \leq 120$			

(b) The fluid dynamic efficiency classes of a domestic range hood shall be determined in accordance with its Fluid Dynamic Efficiency (FDE_{hood}) as in the following Table 3. The Fluid Dynamic Efficiency of domestic range hoods shall be determined in accordance with point 2.2 of Annex II.

Table 3

Fluid Dynamic Efficiency classes for domestic range hoods

Fluid Dynamic Efficiency Class	Fluid Dynamic Efficiency (FDE _{hood})
A (most efficient)	$FDE_{hood} > 28$
B	$23 < FDE_{hood} \leq 28$
C	$18 < FDE_{hood} \leq 23$
D	$13 < FDE_{hood} \leq 18$
E	$8 < FDE_{hood} \leq 13$
F	$4 < FDE_{hood} \leq 8$
G (least efficient)	$FDE_{hood} \leq 4$

(c) The lighting efficiency classes of a domestic range hood shall be determined in accordance with its Lighting Efficiency (LE_{hood}) as in the following Table 4. The Lighting Efficiency of domestic range hoods shall be determined in accordance with point 2.3 of Annex II.

Table 4

The Lighting Efficiency classes for domestic range hoods

Lighting Efficiency Class	Lighting Efficiency (LE_{hood})
A (most efficient)	$LE_{hood} > 28$
B	$20 < LE_{hood} \leq 28$
C	$16 < LE_{hood} \leq 20$
D	$12 < LE_{hood} \leq 16$
E	$8 < LE_{hood} \leq 12$
F	$4 < LE_{hood} \leq 8$
G (least efficient)	$LE_{hood} \leq 4$

(d) The grease filtering efficiency classes of a domestic range hood shall be determined in accordance with its Grease Filtering Efficiency (GFE_{hood}) as in the following Table 5. The Grease Filtering Efficiency of domestic range hoods shall be determined in accordance with point 2.4 of Annex II.

Table 5

Grease Filtering Efficiency (GFE_{hood}) classes for domestic range hoods

Grease Filtering Efficiency Class	Grease Filtering Efficiency (%)
A (most efficient)	$GFE_{hood} > 95$
B	$85 < GFE_{hood} \leq 95$
C	$75 < GFE_{hood} \leq 85$
D	$65 < GFE_{hood} \leq 75$
E	$55 < GFE_{hood} \leq 65$
F	$45 < GFE_{hood} \leq 55$
G (least efficient)	$GFE_{hood} \leq 45$

ANNEX II

Measurements and calculations

For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using a reliable, accurate and reproducible method that take into account the generally recognised state-of-the-art measurement and calculation methods, including harmonised standards the reference numbers of which have been published for the purpose in the *Official Journal of the European Union*. They shall meet the technical definitions, conditions, equations and parameters set out in this Annex.

1. DOMESTIC OVENS

The energy consumption of a cavity of a domestic oven shall be measured for one standardised cycle, in a conventional mode and in a fan-forced mode, if available, by heating a standardised load soaked with water. It shall be verified that the temperature inside the oven cavity reaches the temperature setting of the thermostat and/or the oven control display within the duration of the test cycle. The energy consumption per cycle corresponding to the best performing mode (conventional mode or fan-forced mode) shall be used in the following calculations.

For each cavity of a domestic oven, the Energy Efficiency Index (EEI_{cavity}) shall be calculated according to the following formulas:

for domestic electric ovens:

$$EEI_{\text{cavity}} = \frac{EC_{\text{electric cavity}}}{SEC_{\text{electric cavity}}} \times 100$$

$$SEC_{\text{electric cavity}} = 0,0042 \times V + 0,55 \quad (\text{in kWh})$$

for domestic gas ovens:

$$EEI_{\text{cavity}} = \frac{EC_{\text{gas cavity}}}{SEC_{\text{gas cavity}}} \times 100$$

$$SEC_{\text{gas cavity}} = 0,044 \times V + 3,53 \quad (\text{in MJ})$$

Where:

- EEI_{cavity} = Energy Efficiency Index for each cavity of a domestic oven, in %, rounded to the first decimal place,
- $SEC_{\text{electric cavity}}$ = Standard Energy Consumption (electricity) required to heat a standardised load in a cavity of an electric heated domestic oven during a cycle, expressed in kWh, rounded to the second decimal place,
- $SEC_{\text{gas cavity}}$ = Standard Energy Consumption required to heat a standardised load in a cavity of a domestic gas-fired oven during a cycle, expressed in MJ, rounded to the second decimal place,
- V = Volume of the cavity of the domestic oven in litres (L), rounded to the nearest integer,

- $EC_{\text{electric cavity}}$ = Energy consumption required to heat a standardised load in a cavity of an electric heated domestic oven during a cycle, expressed in kWh, rounded to the second decimal place,
- $EC_{\text{gas cavity}}$ = Energy consumption required to heat a standardised load in a gas-fired cavity of a domestic oven during a cycle, expressed in MJ, rounded to the second decimal place.

2. DOMESTIC RANGE HOODS

2.1. Calculation of the Energy Efficiency Index (EEI_{hood})

The Energy Efficiency Index (EEI_{hood}) is calculated as:

$$EEI_{\text{hood}} = \frac{AEC_{\text{hood}}}{SAEC_{\text{hood}}} \times 100$$

and is rounded to the first decimal place.

Where:

- $SAEC_{\text{hood}}$ is the Standard Annual Energy consumption of the domestic range hood in kWh/a, rounded to the first decimal place,
- AEC_{hood} is the Annual Energy Consumption of the domestic range hood in kWh/a, rounded to the first decimal place.

The Standard Annual Energy Consumption ($SAEC_{\text{hood}}$) of a domestic range hood shall be calculated as:

$$SAEC_{\text{hood}} = 0,55 \times (W_{\text{BEP}} + W_L) + 15,3$$

Where:

- W_{BEP} is the electric power input of the domestic range hood at the best efficiency point, in Watt and rounded to the first decimal place,
- W_L is the nominal electric power input of the lighting system of the domestic range hood on the cooking surface, in Watt and rounded to the first decimal place.

The Annual Energy Consumption (AEC_{hood}) of a domestic range hood is calculated as:

(i) for the fully automatic domestic range hoods:

$$AEC_{\text{hood}} = \left[\frac{(W_{\text{BEP}} \times t_{\text{H}} \times f) + (W_L \times t_L)}{60 + 1000} + \frac{P_{\text{G}} \times (1440 - t_{\text{H}} \times f)}{2 \times 60 \times 1000} + \frac{P_{\text{S}} \times (1440 - t_{\text{H}} \times f)}{2 \times 60 \times 1000} \right] \times 365$$

(b) for all other domestic range hoods:

$$AEC_{\text{hood}} = \frac{W_{\text{BEP}} \times (t_{\text{H}} \times f) + W_L \times t_L}{60 \times 1000} \times 365$$

Where:

- t_L is the average lighting time per day, in minutes ($t_L = 120$),

- t_H is the average running time per day for domestic range hoods, in minutes ($t_H = 60$),
- P_o is the electric power input in off-mode of the domestic range hood, in Watt and rounded to the second decimal place,
- P_s is the electric power input in standby mode of the domestic range hood, in Watt and rounded to the second decimal place,
- f is the time increase factor, calculated and rounded to the first decimal place, as:

$$f = 2 - (FDE_{hood} \times 3,6) / 100$$

2.2. Calculation of the Fluid Dynamic Efficiency (FDE_{hood})

The Fluid Dynamic Efficiency (FDE_{hood}) at the best efficiency point is calculated by the following formula, and is rounded to the first decimal place:

$$FDE_{hood} = \frac{Q_{BEP} \times P_{BEP}}{3600 \times W_{BEP}} \times 100$$

Where:

- Q_{BEP} is the flow rate of the domestic range hood at best efficiency point, expressed in m^3/h and rounded to the first decimal place,
- P_{BEP} is the static pressure difference of the domestic range hood at best efficiency point, expressed in Pa and rounded to the nearest integer,
- W_{BEP} is the electric power input of the domestic range hood at the best efficiency point, expressed in Watt and rounded to the first decimal place.

2.3. Calculation of the Lighting Efficiency (LE_{hood})

The Lighting Efficiency (LE_{hood}) of a domestic range hood means the ratio between the average illumination and the nominal electric power input of the lighting system. It shall be calculated in lux per Watt and rounded at the nearest integer, as:

$$LE_{hood} = \frac{E_{middle}}{W_L}$$

Where:

- E_{middle} is the average illumination of the lighting system on the cooking surface measured under standard conditions, in lux and rounded to the nearest integer,
- W_L is the nominal electric power input of the lighting system of the domestic range hood on the cooking surface, in Watt and rounded to the first decimal place.

2.4. Calculation of the Grease Filtering Efficiency (GFE_{hood})

The Grease Filtering Efficiency (GFE_{hood}) of a domestic range hood means the relative amount of grease retained within the range hood grease filters. It shall be calculated and rounded to the first decimal place as:

$$GFE_{\text{hood}} = [w_g / (w_r + w_t + w_g)] \times 100 \text{ [\%]}$$

Where:

- w_g = the mass of oil in the grease filter, including all detachable coverings, in g and rounded to the first decimal place,
- w_r = the mass of oil retained in the airways of the range hood, in g and rounded to the first decimal place,
- w_t = the mass of oil retained in the absolute filter, in g and rounded to the first decimal place.

2.5. Noise

The Noise Value (in dB) is measured as the airborne acoustical A-weighted sound power emissions (weighted average value – L_{WA}) of a domestic range hood at the highest setting for normal use, rounded to the nearest integer.

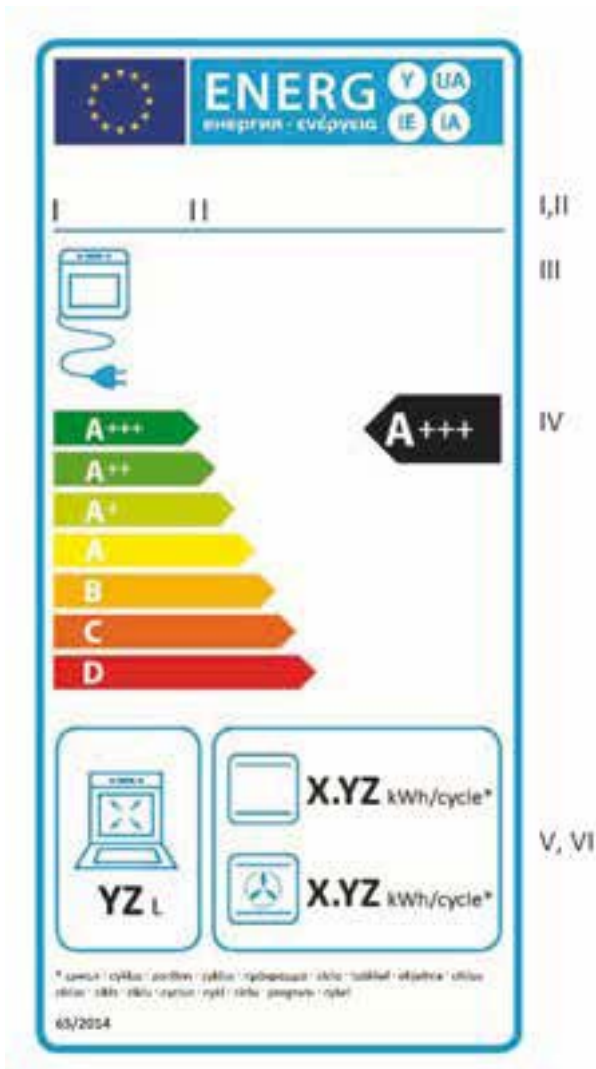
ANNEX III

The label

1. LABEL FOR DOMESTIC OVENS

1.1. Domestic electric ovens

1.1.1. Label presentation – for each cavity of a domestic electric oven



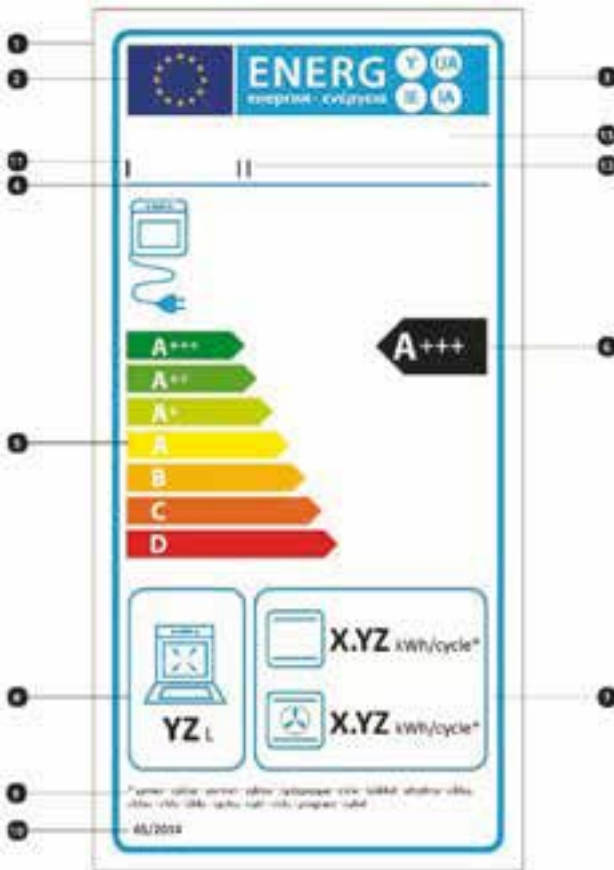
1.1.2. Label information – domestic electric ovens

The following information shall be included in the label:

- I. Supplier's name or trade mark;
- II. Supplier's model identifier, where 'model identifier' means the code, usually alphanumeric, which distinguishes a specific domestic oven model from other models with the same trade mark or supplier's name;
- III. Energy source of the domestic oven;
- IV. The energy efficiency class of the cavity determined in accordance with Annex I. The head of the arrow containing the indicator letter shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;
- V. Usable volume of the cavity in litres, rounded to the nearest integer;
- VI. Energy consumption per cycle expressed in kWh/cycle (electricity consumption) for the heating function(s) (conventional and if available the forced air convection) of the cavity based on standard load determined in accordance with the test procedures, rounded to the second decimal place ($EC_{\text{electric cavity}}$).

1.1.3. Label design – domestic electric ovens

The design of the label for each cavity of a domestic electric oven shall be as in the following figure:



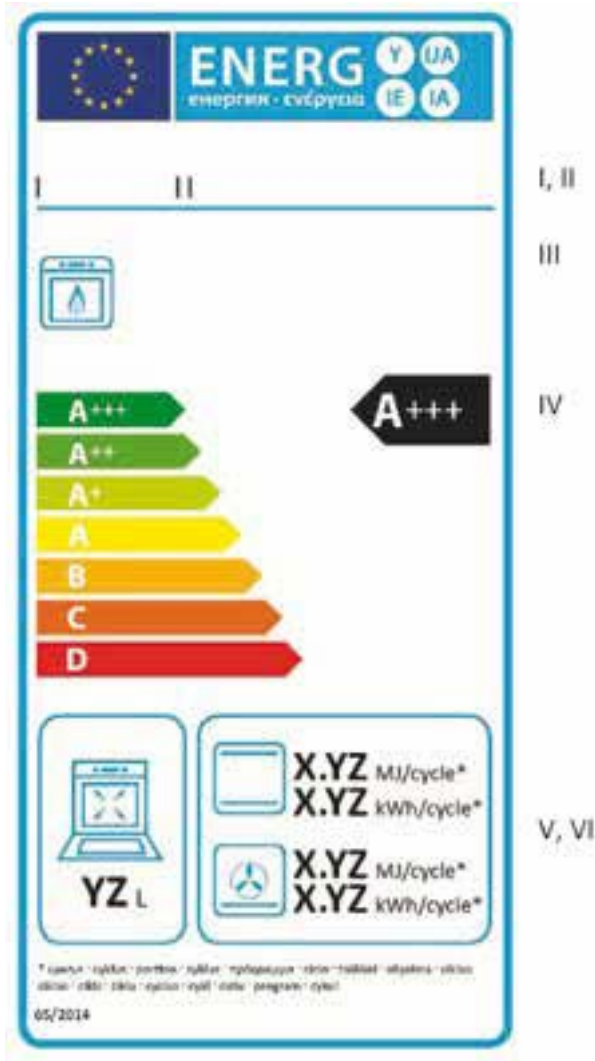
Whereby:

- (i) The label shall be at least 85 mm wide and 170 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (ii) The background shall be white.
- (iii) Colours shall be CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- (iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- 1 **Border stroke:** 4 pt – colour: cyan 100 % – round corners: 3 mm.
- 2 **EU logo:** colours: X-80-00-00 and 00-00-X-00.
- 3 **Energy logo:** colour: X-00-00-00; pictogram as depicted: EU logo + energy label: width: 70 mm, height: 14 mm.
- 4 **Sub-logos border:** 1,5 pt – colour: cyan 100 % – length: 70 mm.
- 5 **Scale of energy classes**
 - **Arrow:** height: 5,5 mm, gap: 1 mm – colours:
 - Highest class: X-00-X-00
 - Second class: 70-00-X-00
 - Third class: 30-00-X-00
 - Fourth class: 00-00-X-00
 - Fifth class: 00-30-X-00
 - Sixth class: 00-70-X-00
 - Last class: 00-X-X-00
 - **Text:** Calibri bold 18 pt, capitals and white; ‘+’ symbol: Calibri bold 12 pt, white, aligned on a single row.
- 6 **Energy efficiency class**
 - **Arrow:** width: 20 mm, height: 10 mm, 100 % black;
 - **Text:** Calibri bold 24 pt, capitals and white; ‘+’ symbol: Calibri bold 18 pt, white, aligned on a single row.
- 7 **Energy consumption per cycle**
 - **Border:** 1,5 pt – colour: cyan 100 % – round corners: 3 mm.
 - **Value:** Calibri bold 19 pt, 100 % black; and Calibri regular 10 pt, 100 % black.
- 8 **Volume**
 - **Border:** 1,5 pt – colour: cyan 100 % – round corners: 3 mm.
 - **Value:** Calibri bold 20 pt, 100 % black; and Calibri regular 10 pt, 100 % black.
- 9 **Asterisk:** Calibri regular 6 pt, 100 % black.
- 10 **Numbering of the Regulation:** Calibri bold 10 pt, 100 % black
- 11 **Supplier’s name or trademark**
- 12 **Supplier’s model identifier**
- 13 The suppliers’ name or trade mark and model identifier should fit in a space of 70 × 13 mm.

1.2. Domestic gas ovens

1.2.1. Label presentation – for each cavity of a domestic gas oven



1.2.2. Label information

The following information shall be included in the label:

I. Supplier's name or trade mark;

II. Supplier's model identifier, where 'model identifier' means the code, usually alphanumeric, which distinguishes a specific domestic oven model from other models with the same trade mark or supplier's name;

III. Energy source of the domestic oven;

IV. The energy efficiency class of the cavity determined in accordance with Annex I. The head of the arrow containing the indicator letter shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

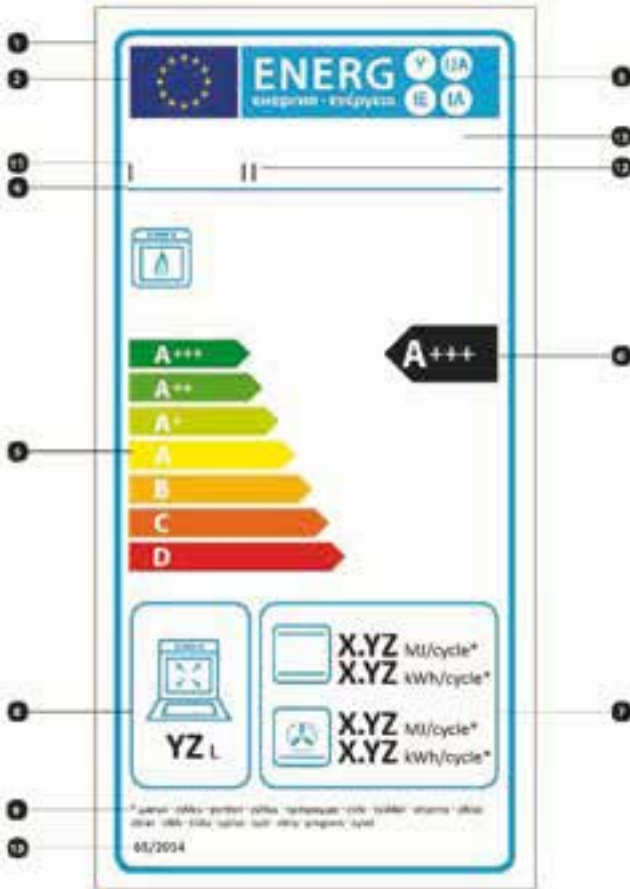
V. Usable volume of the cavity in litres, rounded to the nearest integer;

VI. Energy consumption per cycle expressed in MJ/cycle and in kWh/cycle⁴ (gas consumption) for the heating function(s) (conventional and if available the forced air convection) of the cavity based on standard load determined in accordance with the test procedures, rounded to the second decimal place ($EC_{\text{gas cavity}}$).

⁴ 1 kWh/cycle = 3,6 MJ/cycl

1.2.3. Label design – domestic gas ovens

The design of the label for each cavity of a domestic gas oven shall be as in the following figure:



Whereby:

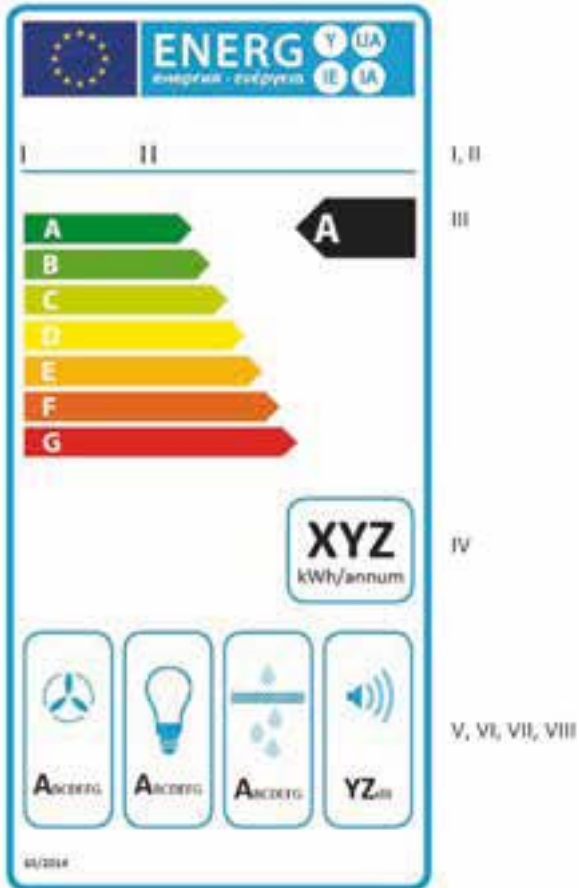
- (i) The label shall be at least 85 mm wide and 170 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (ii) The background shall be white.
- (iii) Colours shall be CMYK – cyan, magenta, yellow and black, following this example: 00-70- X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- (iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- 1 **Border stroke:** 4 pt – colour: cyan 100 % – round corners: 3 mm.
- 2 **EU logo:** colours: X-80-00-00 and 00-00-X-00.
- 3 **Energy logo:** colour: X-00-00-00; pictogram as depicted: EU logo + energy label: width: 70 mm, height: 14 mm.
- 4 **Sub-logos border:** 1,5 pt – colour: cyan 100 % – length: 70 mm.
- 5 **Scale of energy classes**
 - **Arrow:** height: 5,5 mm, gap: 1 mm – colours:
 - Highest class: X-00-X-00
 - Second class: 70-00-X-00
 - Third class: 30-00-X-00
 - Fourth class: 00-00-X-00
 - Fifth class: 00-30-X-00
 - Sixth class: 00-70-X-00
 - Last class: 00-X-X-00
 - **Text:** Calibri bold 18 pt, capitals and white; ‘+’ symbol: Calibri bold 12 pt, white, aligned on a single row.
- 6 **Energy efficiency class**
 - **Arrow:** width: 20 mm, height: 10 mm, 100 % black;
 - **Text:** Calibri bold 24 pt, capitals and white; ‘+’ symbol: Calibri bold 18 pt, white, aligned on a single row.
- 7 **Energy consumption per cycle**
 - **Border:** 1,5 pt – colour: cyan 100 % – round corners: 3 mm.
 - **Value:** Calibri bold 19 pt, 100 % black; and Calibri regular 10 pt, 100 % black.
- 8 **Volume**
 - **Border:** 1,5 pt – colour: cyan 100 % – round corners: 3 mm.
 - **Value:** Calibri bold 20 pt, 100 % black; and Calibri regular 10 pt, 100 % black.
- 9 **Asterisk:** Calibri regular 6 pt, 100 % black.
- 10 **Numbering of the Regulation:** Calibri bold 10 pt, 100 % black
- 11 **Supplier’s name or trademark**
- 12 **Supplier’s model identifier**
- 13 The suppliers’ name or trade mark and model identifier should fit in a space of 70 × 13 mm.

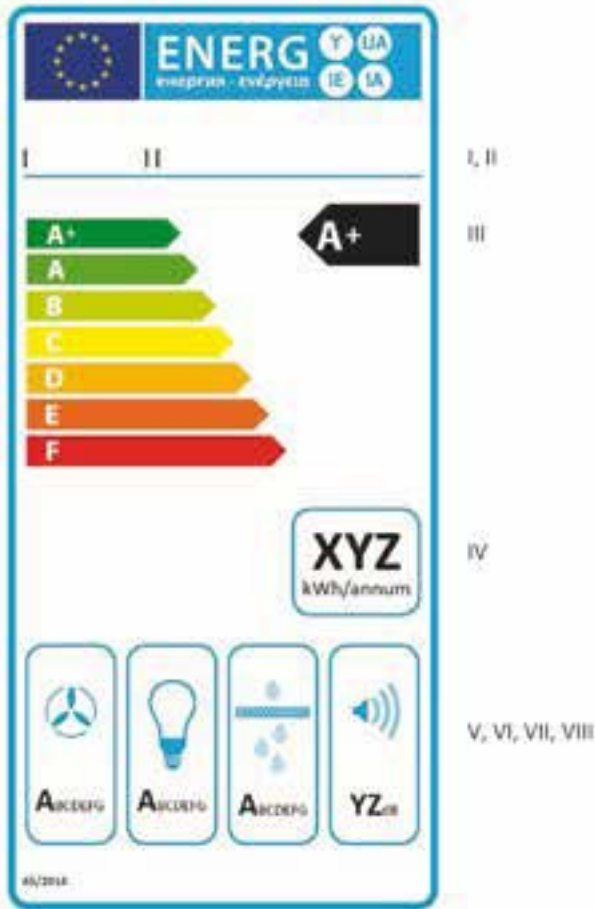
2. LABEL FOR DOMESTIC RANGE HOODS

2.1. Label formats

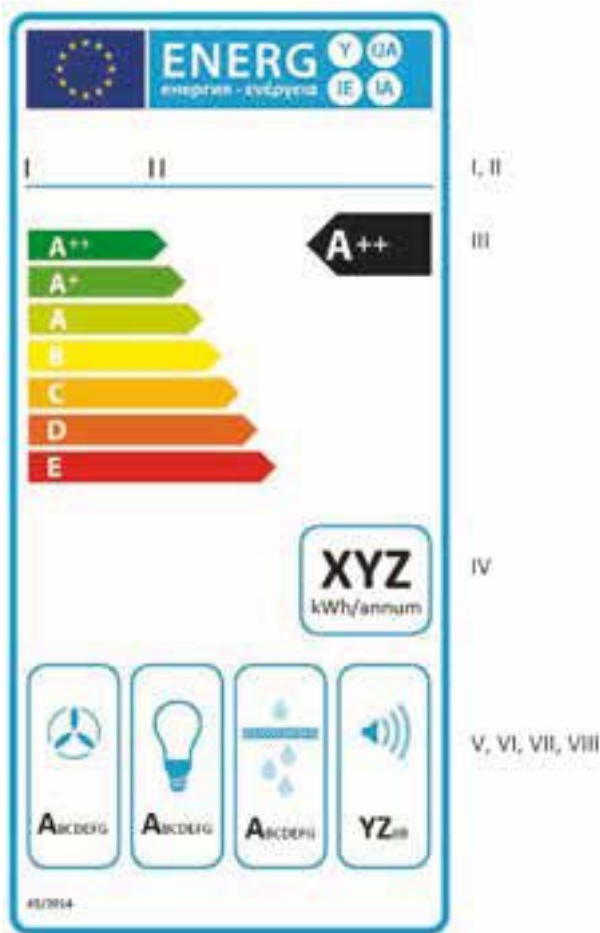
2.1.1. Domestic range hoods in energy efficiency classes A to G (label 1)



2.1.2. Domestic range hoods in energy efficiency classes A+ to F (label 2)



2.1.3. Domestic range hoods in energy efficiency classes A++ to E (label 3)



2.1.4. Domestic range hoods in energy efficiency classes A+++ to D (label 4)



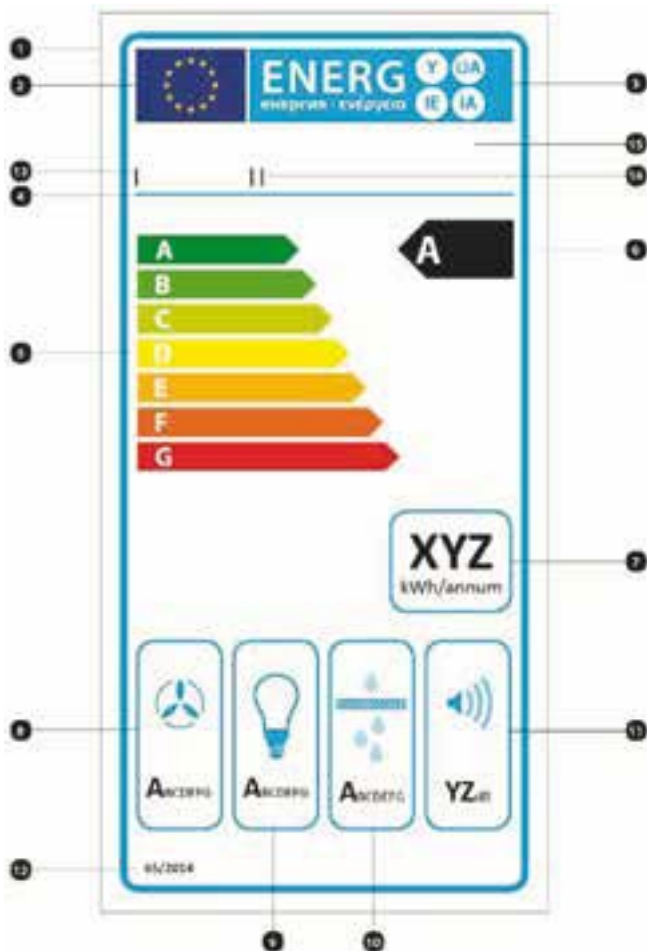
2.2. Label information – domestic range hoods

The following information shall be included in the label:

- I. Supplier's name or trade mark;
- II. Supplier's model identifier, where 'model identifier' means the code, usually alphanumeric, which distinguishes a specific domestic range hood model from other models with the same trade mark or supplier's name;
- III. The energy efficiency class of the domestic range hood, determined in accordance with Annex I.
 - I. The head of the arrow containing the energy efficiency class of the domestic range hood shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;
- IV. Annual energy consumption (AEC_{hood}) calculated in accordance with Annex II, in kWh rounded to the nearest integer;
- V. The Fluid Dynamic Efficiency class determined in accordance with Annex I;
- VI. The Lighting Efficiency class determined in accordance with Annex I;
- VII. The Grease Filtering Efficiency class determined in accordance with Annex I;
- VIII. The Noise Value, determined in accordance with point 2.5 of Annex II, rounded to the nearest integer.

2.3. Label design – domestic range hoods

The design of the label shall be as in the following figure:



Whereby:

- (i) The label shall be at least 60 mm wide and 120 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (ii) The background shall be white.
- (iii) Colours shall be CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- (iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- 1 **Border stroke:** 3 pt – colour: Cyan 100 % – round corners: 2 mm.
- 2 **EU logo: colours:** X-80-00-00 and 00-00-X-00.
- 3 **Energy logo: colour:** X-00-00-00; pictogram as depicted: EU logo + energy label: width: 51 mm, height: 10 mm.
- 4 **Sub-logos border:** 1 pt – colour: Cyan 100 % – length: 51 mm.
- 5 **Scale of energy classes**
 - **Arrow:** height: 4 mm, gap: 0,75 mm – colours:
 - Highest class: X-00-X-00
 - Second class: 70-00-X-00
 - Third class: 30-00-X-00
 - Fourth class: 00-00-X-00
 - Fifth class: 00-30-X-00
 - Sixth class: 00-70-X-00
 - Last class: 00-X-X-00
 - **Text:** Calibri bold 10 pt, capitals and white; ‘+’ symbol: Calibri bold 7 pt, white, aligned on a single row.
- 6 **Energy efficiency class**
 - **Arrow:** width: 15 mm, height: 8 mm, 100 % black;
 - **Text:** Calibri bold 17 pt, capitals and white; ‘+’ symbol: Calibri bold 12 pt, white, aligned on a single row.
- 7 **Annual energy consumption**
 - **Border:** 1 pt – colour: cyan 100 % – round corners: 2,5 mm.
 - **Value:** Calibri bold 21 pt, 100 % black; and Calibri regular 8 pt, 100 % black.
- 8 **Fluid Dynamic Efficiency**
 - **Pictogram** as depicted
 - **Border:** 1 pt – colour: cyan 100 % – round corners: 2,5 mm.
 - **Value:** Calibri regular 6 pt, 100 % black; and Calibri bold 11,5 pt, 100 % black.
- 9 **Lighting Efficiency**
 - **Pictogram** as depicted
 - **Border:** 1 pt – colour: cyan 100 % – round corners: 2,5 mm.
 - **Value:** Calibri regular 6 pt, 100 % black; and Calibri bold 11,5 pt, 100 % black.
- 10 **Grease Filtering Efficiency**
 - **Pictogram** as depicted
 - **Border:** 1 pt – colour: cyan 100 % – round corners: 2,5 mm.
 - **Value:** Calibri regular 10 pt, 100 % black; and Calibri bold 14 pt, 100 % black.
- 11 **Noise level**
 - **Pictogram** as depicted

- **Border:** 1 pt – colour: cyan 100 % – round corners: 2,5 mm.
- **Value:** Calibri regular 6 pt, 100 % black; and Calibri bold 11,5 pt, 100 % black.

12 **Numbering of the Regulation: Calibri bold 8 pt, 100 % black**

13 **Supplier's name or trademark**

14 **Supplier's model identifier**

15 The suppliers' name or trade mark and model identifier should fit in a space of 51 × 9 mm.

ANNEX IV

Fiche

A. FICHE FOR DOMESTIC OVENS

1. The information in the product fiche of the domestic ovens referred to in Article 3(1)(a)(ii) shall be given as defined below and in the order specified below, and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trade mark;
- (b) supplier's model identifier which means the code, usually alphanumeric, which distinguishes a specific domestic oven model from other models with the same trade mark or supplier's name and with different declared values for any of the parameters included in the label for the domestic oven (point 1 of Annex III);
- (c) the energy efficiency index (EEI_{cavity}) for each cavity of the model calculated in accordance with point 1 of Annex II and rounded to the first decimal place; the declared energy efficiency index shall not exceed the index reported in the technical documentation in Annex V;
- (d) the energy efficiency class of the model for each cavity as defined in Table 1 of Annex I; the declared class shall not be more favourable than the class reported in the technical documentation in Annex V;
- (e) the energy consumption per cycle for each cavity if available in conventional mode and in fanforced convection mode (the measured energy consumption shall be expressed in kWh (electric and gas ovens) and in MJ (gas ovens), rounded to two decimal place); the declared value shall not be lower than the value reported in the technical documentation in Annex V;
- (f) the number of cavities; the heat source(s) per cavity; and the volume of each cavity.

2. Without prejudice to any requirements under the Community eco-label scheme, where a model has been granted a European Union eco-label under Regulation (EC) No 66/2010 of the European Parliament and of the Council of 25 November 2009, a copy of the eco-label may be added.

3. One fiche may cover a number of domestic oven models supplied by the same supplier.

4. The information contained in the fiche may be given in the form of a copy of the label of each cavity (either in colour or in black and white). Where this is the case, the information listed in point 1, not already displayed on the label, shall also be provided.

B. FICHE FOR DOMESTIC RANGE HOODS

1. The information in the product fiche of the domestic range hoods referred to in Article 3(1)(b)(ii) shall be given as defined below and in the order specified below, and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trade mark;
- (b) supplier's model identifier which means the code, usually alphanumeric, which distinguishes a specific domestic range hood model from other models with the same trade mark or supplier's name and with different declared values for any of the parameters included in the label for the domestic range hood (point 2 of Annex III);

- (c) the Annual Energy Consumption (AEC_{hood}) calculated according to point 2 of Annex II, in kWh/a and rounded to the first decimal place; the declared value shall not be lower than the value reported in the technical documentation in Annex V;
- (d) the Energy Efficiency class, as defined in Table 2 of Annex I; the declared class shall not be more favourable than the class reported in the technical documentation in Annex V;
- (e) the Fluid Dynamic Efficiency (FDE_{hood}) calculated according to point 2 of Annex II, rounded to the first decimal place; the declared value shall not be higher than the value reported in the technical documentation in Annex V;
- (f) the Fluid Dynamic Efficiency class, as defined in Table 3 of Annex I; the declared class shall not be better than the class reported in the technical documentation in Annex V;
- (g) the Lighting Efficiency (LE_{hood}) calculated according to point 2 of Annex II, in lux/Watt and rounded to the first decimal place; the declared value shall not be higher than the value reported in the technical documentation in Annex V;
- (h) the Lighting Efficiency class, as defined in Table 4 of Annex I, the declared class shall not be better than the class reported in the technical documentation in Annex V;
- (i) the Grease Filtering Efficiency calculated according to point 2 of Annex II, in percentage and rounded to the first decimal place; the declared value shall not be higher than the value reported in the technical documentation in Annex V;
- (j) the Grease Filtering Efficiency class, as defined in Table 5 of Annex I; the declared class shall not be better than the class reported in the technical documentation in Annex V;
- (k) the air flow (in m^3/h , and rounded to the nearest integer), at minimum and maximum speed in normal use, intensive or boost excluded; the declared values shall not be higher than the values reported in the technical documentation in Annex V;
- (l) if available, the air flow (in m^3/h and rounded to the nearest integer), at intensive or boost setting; the declared value shall not be higher than the values reported in the technical documentation in Annex V;
- (m) the airborne acoustical A-weighted sound power emissions (in dB rounded to the nearest integer), at minimum and maximum speed available in normal use; the declared value shall not be lower than the value reported in the technical documentation in Annex V;
- (n) if available, the airborne acoustical A-weighted sound power emissions (in dB rounded to the nearest integer), at intensive or boost setting; the declared value shall not be lower than the value reported in the technical documentation in Annex V;
- (o) if applicable, the power consumption in off mode (P_o), in Watt and rounded to the second decimal place; the declared values shall not be lower than the values reported in the technical documentation in Annex V;
- (p) if applicable, the power consumption in standby mode (P_s), in Watt and rounded to the second decimal place; the declared values shall not be lower than the values reported in the technical documentation in Annex V.
2. One fiche may cover a number of domestic range hood models supplied by the same supplier.
3. The information contained in the fiche may be given in the form of a copy of the label (either in colour or in black and white). Where this is the case, the information listed in point 1, not already displayed on the label, shall also be provided.

ANNEX V

Technical documentation

A. TECHNICAL DOCUMENTATION FOR DOMESTIC OVENS

1. The technical documentation referred to in Article 3(1)(a)(iii) shall include at minimum:

- (a) the name and address of the supplier;
- (b) a general description of the appliance model, sufficient for it to be unequivocally and easily identified, including the supplier's model identifier (i.e. the code, usually alphanumeric) which distinguishes a specific domestic oven model from other models with the same trade mark or supplier's name and with different declared values for any of the parameters included in the label for the domestic oven (point 1 of Annex III);
- (c) technical parameters for measurements as follows:
 - (i) the number of cavities; the volume of each cavity; the heat source(s) per cavity; the heating function(s) (conventional and/or the forced air convection) per cavity;
 - (ii) the energy consumption per cycle for each cavity if available in conventional mode and in fan-forced convection mode; the measured energy consumption shall be expressed in kWh (electric and gas ovens) and in MJ (gas ovens), rounded to the second decimal place;
 - (iii) the energy efficiency index (EEI_{cavity}) for each cavity of the domestic oven calculated in accordance with point 1 of Annex II and rounded to the first decimal place;
 - (iv) the energy efficiency class for each cavity of the domestic oven as defined in Table 1 of Annex I;
- (d) a copy of the calculation and the results of the calculations performed in accordance with Annex II;
- (e) where appropriate, the references of the harmonised standards applied;
- (f) where appropriate, the other technical standards and specifications used;
- (g) identification and signature of the person empowered to bind the supplier.

2. Suppliers may include additional information at the end of the above list.

ANNEX VI

Information to be provided in the cases where end-users cannot be expected to see the product displayed, except on the internet

A. DOMESTIC OVENS

1. The information referred to in Article 4(1)(b) shall be provided in the following order:
 - (a) supplier's name or trade mark;
 - (b) supplier's model identifier, i.e. the model identifier of the specific domestic oven to which the figures quoted below apply;
 - (c) the energy efficiency class of the model for each cavity as defined in Annex I, Table 1; the declared class shall not be more favourable than the class reported in the technical documentation in Annex V;
 - (d) the energy consumption per cycle for each cavity if available in conventional mode and in fanforced convection mode; the measured energy consumption shall be expressed in kWh (electric and gas ovens) and in MJ (gas ovens), rounded to two decimal places; the declared value shall not be lower than the value reported in the technical documentation in Annex V;
 - (e) the number of cavities; the heat source(s) per cavity; the volume of each cavity.
2. Where other information contained in the product information fiche is also provided, it shall be in the form and order specified in Annex IV.
3. The size and font in which all the information referred to in this Annex is printed or shown, shall be legible.

B. DOMESTIC RANGE HOODS

1. The information referred to in Article 4(2)(b) shall be provided in the following order:
 - (a) supplier's name or trade mark;
 - (b) supplier's model identifier, i.e. the model identifier of the specific range hood to which the figures quoted below apply;
 - (c) the energy efficiency class of the model as defined in Table 2 of Annex I; the declared class shall not be more favourable than the class reported in the technical documentation in Annex V;
 - (d) the annual energy consumption of the model in kWh, as defined in point 2.1 of Annex II; the declared value shall not be lower than the value reported in the technical documentation in Annex V;
 - (e) the fluid dynamic efficiency class of the model as defined in Table 3 of Annex I; the declared class shall not be more favourable than the class reported in the technical documentation in Annex V;
 - (f) the lighting efficiency class of the model as defined in Table 4 of Annex I; the declared class shall not be more favourable than the class reported in the technical documentation in Annex V;
 - (g) the grease filtering efficiency class of the model as defined in Table 5 of Annex I; the declared class shall not be more favourable than the class reported in the technical documentation in Annex V;
 - (h) the airborne acoustical A-weighted sound power emissions (weighted average value – L_{WA}) of a domestic range hood at minimum and maximum speed available in normal use, in dB rounded to the nearest integer; the declared value shall not be lower than the value reported in the technical

documentation in Annex V.

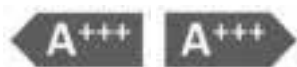
2. Where other information contained in the product information fiche is also provided, it shall be in the form and order specified in Annex IV.

3. The size and font in which all the information referred to in this Annex is printed or shown, shall be legible.

ANNEX VII

Information to be provided in the case of sale, hire or hire-purchase through the internet

1. For the purpose of points 2 to 5 of this Annex the following definitions shall apply:
 - (a) 'display mechanism' means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
 - (b) 'nested display' means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;
 - (c) 'tactile screen' means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
 - (d) 'alternative text' means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.
2. The appropriate label made available by suppliers in accordance with Article 3(1)(a)(vi) or 3(1)(b)(vi) shall be shown on the display mechanism in proximity to the price of the product in accordance with the timetable set out in Article 3(3). For ovens, the appropriate label shall be shown for each cavity of the oven. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.
3. The image used for accessing the label in the case of nested display shall:
 - (a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;
 - (b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and
 - (c) have one of the following two formats:



4. In the case of nested display, the sequence of display of the label shall be as follows:
 - (a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;
 - (b) the image shall link to the label;
 - (c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;
 - (d) the label shall be displayed by pop up, new tab, new page or inset screen display;
 - (e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;
 - (f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

5. The appropriate product fiche made available by suppliers in accordance with Article 3(1)(a)(vii) or 3(1)(b)(vii) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate 'Product fiche'. If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

ANNEX VIII⁵

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Contracting Parties shall apply the following procedure:

- (1) The Contracting Party authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 6.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the Contracting Party authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 6.
- (6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (7) The Contracting Party authorities shall provide all relevant information to the authorities of the other Contracting Parties and to the Secretariat without delay after a decision being

⁵ Annex VIII is replaced in accordance with Article 11 and Annex XI of Delegated Regulation (EU) 2017/254, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

taken on the non-compliance of the model according to points 3 and 6. The Contracting Party authorities shall use the measurement and calculation methods set out in Annex II.

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 6 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 6
Verification tolerances

Parameters	Verification tolerances
Mass of the oven, M	The determined value shall not exceed the declared value of M by more than 5 %.
Volume of the cavity of the oven, V	The determined value shall not be lower than the declared value of V by more than 5 %.
EC _{electric cavity} , EC _{gas cavity}	The determined values shall not exceed the declared values of EC _{electric cavity} and EC _{gas cavity} by more than 5 %.
W _{BEP} , W _L	The determined values shall not exceed the declared values of W _{BEP} and W _L by more than 5 %.
Q _{BEP} , P _{BEP}	The determined values shall not be lower than the declared values of Q _{BEP} and P _{BEP} by more than 5 %.
Q _{max}	The determined value shall not exceed the declared value of Q _{max} by more than 8 %.
E _{middle}	The determined value shall not be lower than the declared value of E _{middle} by more than 5 %.
GFE _{hood}	The determined value shall not be lower than the declared value of GFE _{hood} by more than 5 %.
P _o , P _s	The determined values of power consumption P _o and P _s shall not exceed the declared values of P _o and P _s by more than 10 %. The determined values of power consumption P _o and P _s of less than or equal to 1,00 W shall not exceed the declared values of P _o and P _s by more than 0,10 W.
Sound power level, L _{WA}	The determined value shall not exceed the declared value of L _{WA} '



DELEGATED REGULATION (EU) 812/2013 of 18 February 2013 supplementing Directive 2010/30/EU with regard to the energy labelling of water heaters, hot water storage tanks and packages of water heater and solar device

Incorporated and adapted by Ministerial Council Decision 2014/02/MC-EnC of 23 September 2014 adapting certain Delegated Regulations on energy related products, and amended by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products.

*The adaptations made by Ministerial Council Decisions 2014/02/MC-EnC and 2018/03/MC-EnC are highlighted in **bold and blue**.*

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the energy labelling of, and the provision of supplementary product information on, water heaters with a rated heat output ≤ 70 kW, hot water storage tanks with a storage volume ≤ 500 litres and packages of water heater ≤ 70 kW and solar device.

2. This Regulation shall not apply to:

- (a) water heaters specifically designed for using gaseous or liquid fuels predominantly produced from biomass;
- (b) water heaters using solid fuels;
- (c) water heaters within the scope of Directive 2010/75/EU of the European Parliament and of the Council;
- (d) combination heaters as defined in Article 2 of Delegated Regulation (EU) No 811/2013¹;
- (e) water heaters which do not meet at least the load profile with the smallest reference energy, as specified in Annex VII, Table 3;
- (f) water heaters designed for making hot drinks and/or food only.

Article 2

Definitions

In addition to the definitions set out in Article 2 of Directive 2010/30/EU, the following definitions shall apply for the purposes of this Regulation:

(1) 'water heater' means a device that:

- (a) is connected to an external supply of drinking or sanitary water;
- (b) generates and transfers heat to deliver drinking or sanitary hot water at given temperature levels, quantities and flow rates during given intervals; and
- (c) is equipped with one or more heat generators;

¹ Incorporated and adapted by Ministerial Council Decision 2014/02/MC-EnC of 23 September 2014

(2) 'heat generator' means the part of a water heater that generates the heat using one or more of the following processes:

(a) combustion of fossil fuels and/or biomass fuels;

(b) use of the Joule effect in electric resistance heating elements;

(c) capture of ambient heat from an air source, water source or ground source, and/or waste heat;

(3) 'rated heat output' means the declared heat output of the water heater when providing water heating at standard rating conditions, expressed in kW;

(4) 'storage volume' (V) means the rated volume of a hot water storage tank, expressed in litres;

(5) 'standard rating conditions' means the operating conditions of water heaters for establishing the rated heat output, water heating energy efficiency and sound power level, and of hot water storage tanks for establishing the standing loss;

(6) 'biomass' means the biodegradable fraction of products, waste and residues from biological origin from agriculture (including vegetal and animal substances), forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of industrial and municipal waste;

(7) 'biomass fuel' means a gaseous or liquid fuel produced from biomass;

(8) 'fossil fuel' means a gaseous or liquid fuel of fossil origin;

(9) 'hot water storage tank' means a vessel for storing hot water for water and/or space heating purposes, including any additives, which is not equipped with any heat generator except possibly one or more back-up immersion heaters;

(10) 'back-up immersion heater' means a Joule effect electric resistance heater that is part of a hot water storage tank and generates heat only when the external heat source is disrupted (including during maintenance periods) or out of order, or that is part of a solar hot water storage tank and provides heat when the solar heat source is not sufficient to satisfy required comfort levels;

(11) 'solar device' means a solar-only system, a solar collector, a solar hot water storage tank or a pump in the collector loop, which are placed on the market separately;

(12) 'solar-only system' means a device that is equipped with one or more solar collectors and solar hot water storage tanks and possibly pumps in the collector loop and other parts, which is placed on the market as one unit and is not equipped with any heat generator except possibly one or more back-up immersion heaters;

(13) 'package of water heater and solar device' means a package offered to the end-user containing one or more water heaters and one or more solar devices;

(14) 'water heating energy efficiency' (η_{wh}) means the ratio between the useful energy provided by a water heater or a package of water heater and solar device and the energy required for its generation, expressed in %;

(15) 'sound power level' (L_{WA}) means the A-weighted sound power level, indoors and/or outdoors, expressed in dB;

(16) 'standing loss' (S) means the heating power dissipated from a hot water storage tank at given water and ambient temperatures, expressed in W;

(17) 'heat pump water heater' means a water heater that uses ambient heat from an air source, water

source or ground source, and/or waste heat for heat generation.

For the purposes of Annexes II to IX, additional definitions are set out in Annex I.

Article 3

Responsibilities of suppliers and timetable

1. From **1 January 2018** suppliers placing water heaters on the market and/or putting them into service, including those integrated in packages of water heater and solar device, shall ensure that:

(a) <...> for water heaters intended for use in packages of water heater and solar device, a second label complying with the format and content of information set out in point 3 of Annex III is provided for each water heater;

(b) a product fiche, as set out in point 1 of Annex IV, is provided for each water heater, whereby: for heat pump water heaters, the product fiche is provided at least for the heat generator; for water heaters intended for use in packages of water heater and solar device, a second fiche, as set out in point 4 of Annex IV, is provided;

(c) the technical documentation, as set out in point 1 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;

(d) any advertisement relating to a specific water heater model and containing energy-related or price information includes a reference to the water heating energy efficiency class under average climate conditions for that model;

(e) any technical promotional material concerning a specific water heater model and describing its specific technical parameters includes a reference to the water heating energy efficiency class under average climate conditions for that model;

(f) an electronic label in the format and containing the information set out in point 1.1 of Annex III is made available to dealers for each water heater model conforming to the water heating energy efficiency classes set out in point 1 of Annex II;

(g) an electronic product fiche as set out in point 1 of Annex IV is made available to dealers for each water heater model, whereby for heat pump water heaters models, the electronic product fiche is made available to dealers at least for the heat generator.²

From **1 January 2018** a printed label complying with the format and content of information set out in point 1.2 of Annex III shall be provided for each water heater conforming to the water heating energy efficiency classes set out in point 1 of Annex II, whereby: for heat pump water heaters, the printed label shall be provided at least in the packaging of the heat generator.

From 1 January 2020 an electronic label in the format and containing the information set out in point 1.2 of Annex III shall be made available to dealers for each water heater model conforming to the water heating energy efficiency classes set out in point 1 of Annex II.³

² Article 3, paragraph 1, points (f) and (g) are added in accordance with Article 10(1) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-Enc**

³ Added in accordance with Article 10(1) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-Enc**

2. From 1 January 2018 suppliers placing hot water storage tanks on the market and/or putting them into service shall ensure that:

- (a) <...>
- (b) a product fiche, as set out in point 2 of Annex IV, is provided;
- (c) the technical documentation, as set out in point 2 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;
- (d) any advertisement relating to a specific hot water storage tank model and containing energy-related or price information includes a reference to the energy efficiency class for that model;
- (e) any technical promotional material concerning a specific hot water storage tank model and describing its specific technical parameters includes a reference to the energy efficiency class for that model;
- (f) an electronic label in the format and containing the information set out in point 2.1 of Annex III is made available to dealers for each hot water storage tank model in accordance with the energy efficiency classes set out in point 2 of Annex II;**
- (g) an electronic product fiche as set out in point 2 of Annex IV is made available to dealers for each hot water storage tank model.⁴**

From 1 January 2018 a printed label complying with the format and content of information as set out in point 2.2 of Annex III shall be provided for each hot water storage tank conforming to the energy efficiency classes set out in point 2 of Annex II.

From 1 January 2020 an electronic label in the format and containing the information set out in point 2.2 of Annex III shall be made available to dealers for each hot water storage tank model, in accordance with the energy efficiency classes set out in point 2 of Annex II.⁵

3. From **1 January 2018** suppliers placing solar devices on the market and/or putting them into service shall ensure that:

- (a) a product fiche, as set out in point 3 of Annex IV, is provided;
- (b) the technical documentation, as set out in point 3 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;
- (c) an electronic product fiche, as set out in point 3 of Annex IV, is made available to dealers for each solar device model.⁶**

4. From **1 January 2018** suppliers placing packages of water heater and solar device on the market and/or putting them into service shall ensure that:

- (a) a printed label complying with the format and content of information set out in point 3 of Annex III is provided for each package of water heater and solar device conforming to the water heating energy efficiency classes set out in point 1 of Annex II;
- (b) a product fiche, as set out in point 4 of Annex IV, is provided for each package of water heater and solar device;
- (c) the technical documentation, as set out in point 4 of Annex V, is provided on request to the authorities

⁴ Article 3, paragraph 2, points (f) and (g) are added in accordance with Article 10(1) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC**

⁵ Added in accordance with Article 10(1) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC**

⁶ Article 3, paragraph 3, point (c) is added in accordance with Article 10(1) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC**

of the **Contracting Parties** and to the Commission;

(d) any advertisement relating to a specific package of water heater and solar device model and containing energy-related or price information includes a reference to the water heating energy efficiency class under average climate conditions for that model;

(e) any technical promotional material concerning a specific package of water heater and solar device model and describing its specific technical parameters includes a reference to the water heating energy efficiency class under average climate conditions for that model;

(f) an electronic label in the format and containing the information set out in point 3 of Annex III is made available to dealers for each model comprising a package of water heater and solar device, in accordance with the water heating energy efficiency classes set out in point 1 of Annex II;

(g) an electronic product fiche as set out in point 4 of Annex IV is made available to dealers for each model comprising a package of water heater and solar device.⁷

Article 4

Responsibilities of dealers

1. Dealers of water heaters shall ensure that:

(a) each water heater, at the point of sale, bears the label provided by suppliers in accordance with Article 3(1), as set out in point 1 of Annex III, on the outside of the front of the appliance, in such a way as to be clearly visible;

(b) water heaters offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the water heater displayed, are marketed with the information provided by the suppliers in accordance with point 1 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex X shall apply;⁸

(c) any advertisement relating to a specific water heater model and containing energy-related or price information includes a reference to the water heating energy efficiency class under average climate conditions for that model;

(d) any technical promotional material concerning a specific water heater model and describing its specific technical parameters includes a reference to the water heating energy efficiency class under average climate conditions for that model.

2. Dealers of hot water storage tanks shall ensure that:

(a) each hot water storage tank, at the point of sale, bears the label provided by suppliers in accordance with Article 3(2), as set out in point 2 of Annex III, on the outside of the front of the appliance, in such a way as to be clearly visible;

(b) hot water storage tanks offered for sale, hire or hire-purchase, where the end user cannot be expected to see the hot water storage tank displayed, are marketed with the information provided by the suppliers in accordance with point 2 of Annex VI; except where the offer is

⁷ Article 3, paragraph 4, points (f) and (g) are added in accordance with Article 10(1) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC**

⁸ Article 4, paragraph 1, point (b) is replaced in accordance with Article 10(2) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC**

made through the internet in which case the provisions in Annex X shall apply;⁹

(c) any advertisement relating to a specific hot water storage tank model and containing energy-related or price information includes a reference to the energy efficiency class for that model;

(d) any technical promotional material concerning a specific hot water storage tank model and describing its specific technical parameters includes a reference to the energy efficiency class for that model.

3. Dealers of packages of water heater and solar device shall ensure, based on the label and fiches provided by suppliers in accordance with Article 3(1), (3) and (4), that:

(a) any offer for a specific package includes the water heating energy efficiency and the water heating energy efficiency class for that package under average, colder or warmer climate conditions, as applicable, by displaying with the package the label set out in point 3 of Annex III and providing the fiche set out in point 4 of Annex IV, duly filled in according to the characteristics of that package;

(b) packages of water heater and solar device offered for sale, hire or hire purchase, where the end-user cannot be expected to see the package of water heater and solar device displayed, are marketed with the information provided in accordance with point 3 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex X shall apply;¹⁰

(c) any advertisement relating to a specific package of water heater and solar device model and containing energy-related or price information includes a reference to the water heating energy efficiency class under average climate conditions for that model;

(d) any technical promotional material concerning a specific package of water heater and solar device model and describing its specific technical parameters includes a reference to the water heating energy efficiency class under average climate conditions for that model.

Article 5

Measurement and calculation methods

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation methods which take into account the recognised state-of-the-art measurement and calculation methods, as set out in Annex VII and Annex VIII.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure set out in Annex IX when assessing the conformity of the declared water heating energy efficiency class, water heating energy efficiency, annual energy consumption and sound power level of water heaters and the declared energy efficiency class and standing loss of hot water storage tanks.

⁹ Article 4, paragraph 2, point (b) is replaced in accordance with Article 10(2) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC**

¹⁰ Article 4, paragraph 3, point (b) is replaced in accordance with Article 10(2) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC**

Article 7**Review**<...>¹¹**Article 8****Entry into force and application**

This Regulation shall apply from 1 January 2016¹².

The Secretariat shall monitor and review the implementation of the Delegated Regulations referred to in Article 1 in the Contracting Parties. Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by these Delegated Regulations, in the next year of the deadline for the overall implementation¹³.

This Decision (2014/02/MC-EnC) enters into force upon its adoption (23 September 2014) and it is addressed to the Contracting Parties¹⁴.

ANNEX I**Definitions applicable for Annexes II to IX**

For the purposes of Annexes II to IX, the following definitions shall apply:

- (1) 'conventional water heater' means a water heater that generates heat using the combustion of fossil and/or biomass fuels and/or the Joule effect in electric resistance heating elements;
- (2) 'solar water heater' means a water heater equipped with one or more solar collectors, solar hot water storage tanks, heat generators and possibly pumps in the collector loop and other parts, a solar water heater is placed on the market as one unit;
- (3) 'load profile' means a given sequence of water draw-offs, as specified in Annex VII, Table 3; each water heater meets at least one load profile;
- (4) 'water draw-off' means a given combination of useful water flow rate, useful water temperature, useful energy content and peak temperature, as specified in Annex VII, Table 3;
- (5) 'useful water flow rate' (*f*) means the minimum flow rate, expressed in litres per minute, for which hot water is contributing to the reference energy, as specified in Annex VII, Table 3;

¹¹ Not applicable

¹² The text displayed here corresponds to Article 2(2) of Decision 2014/02/MC-EnC

¹³ The text displayed here corresponds to Article 2(3) of Decision 2014/02/MC-EnC

¹⁴ The text displayed here corresponds to Article 3(1) of Decision 2014/02/MC-EnC

- (6) 'useful water temperature' (T_m) means the water temperature, expressed in degrees Celsius, at which hot water starts contributing to the reference energy, as specified in Annex VII, Table 3;
- (7) 'useful energy content' (Q_{tap}) means the energy content of hot water, expressed in kWh, provided at a temperature equal to, or above, the useful water temperature, and at water flow rates equal to, or above, the useful water flow rate, as specified in Annex VII, Table 3;
- (8) 'energy content of hot water' means the product of the specific heat capacity of water, the average temperature difference between the hot water output and cold water input, and the total mass of the hot water delivered;
- (9) 'peak temperature' (T_p) means the minimum water temperature, expressed in degrees Celsius, to be achieved during water draw-off, as specified in Annex VII, Table 3;
- (10) 'reference energy' (Q_{ref}) means the sum of the useful energy content of water draw-offs, expressed in kWh, in a particular load profile, as specified in Annex VII, Table 3;
- (11) 'maximum load profile' means the load profile with the greatest reference energy that a water heater is able to provide while fulfilling the temperature and flow rate conditions of that load profile;
- (12) 'declared load profile' means the load profile applied when determining water heating energy efficiency;
- (13) 'conversion coefficient' (CC) means a coefficient reflecting the estimated 40 % average EU generation efficiency referred to in Directive 2012/27/EU of the European Parliament and of the Council; the value of the conversion coefficient is $CC = 2,5$;
- (14) 'daily electricity consumption' (Q_{elec}) means the consumption of electricity over 24 consecutive hours under the declared load profile and under given climate conditions, expressed in kWh in terms of final energy;
- (15) 'daily fuel consumption' (Q_{fuel}) means the consumption of fuels over 24 consecutive hours under the declared load profile and under given climate conditions, expressed in kWh in terms of GCV, and for the purposes of point 4 in Annex VIII expressed in GJ in terms of GCV;
- (16) 'gross calorific value' (GCV) means the total amount of heat released by a unit quantity of fuel when it is burned completely with oxygen and when the products of combustion are returned to ambient temperature; this quantity includes the condensation heat of any water vapour contained in the fuel and of the water vapour formed by the combustion of any hydrogen contained in the fuel;
- (17) 'smart control' means a device that automatically adapts the water heating process to individual usage conditions with the aim of reducing energy consumption;
- (18) 'smart control compliance' (smart) means the measure of whether a water heater equipped with smart controls fulfils the criterion set out in point 5 of Annex VIII;
- (19) 'smart control factor' (SCF) means the water heating energy efficiency gain due to smart control under the conditions set out in point 3 of Annex VII;
- (20) 'weekly electricity consumption with smart controls' ($Q_{elec,week,smart}$) means the weekly electricity consumption of a water heater with the smart control function enabled, expressed in kWh in terms of final energy;
- (21) 'weekly fuel consumption with smart controls' ($Q_{fuel,week,smart}$) means the weekly fuel consumption of a

water heater with the smart control function enabled, expressed in kWh in terms of GCV;

(22) 'weekly electricity consumption without smart controls' ($Q_{elec,week}$) means the weekly electricity consumption of a water heater with the smart control function disabled, expressed in kWh in terms of final energy;

(23) 'weekly fuel consumption without smart controls' ($Q_{fuel,week}$) means the weekly fuel consumption of a water heater with the smart control function disabled, expressed in kWh in terms of GCV;

(24) 'annual electricity consumption' (AEC) means the annual electricity consumption of a water heater under the declared load profile and under given climate conditions, expressed in kWh in terms of final energy;

(25) 'annual fuel consumption' (AFC) means the annual fossil and/or biomass fuel consumption of a water heater under the declared load profile and under given climate conditions, expressed in GJ in terms of GCV;

(26) 'ambient correction term' (Q_{co}) means a term which takes into account the fact that the place where the water heater is installed is not an isothermal place, expressed in kWh;

(27) 'standby heat loss' (P_{stby}) means the heat loss of a heat pump water heater in operating modes without heat demand, expressed in kW;

(28) 'average climate conditions', 'colder climate conditions' and 'warmer climate conditions' mean the temperatures and global solar irradiance conditions characteristic for the cities of Strasbourg, Helsinki and Athens, respectively;

(29) 'annual energy consumption' (Q_{total}) means the annual energy consumption of a solar water heater, expressed in kWh in terms of primary energy and/or kWh in terms of GCV;

(30) 'annual non-solar heat contribution' (Q_{nonsol}), means the annual contribution of electricity (expressed in kWh in terms of primary energy) and/or fuels (expressed in kWh in terms of GCV) to the useful heat output of a solar water heater or a package of water heater and solar device, taking into account the annual amount of heat captured by the solar collector and the heat losses of the solar hot water storage tank;

(31) 'solar collector' means a device designed to absorb global solar irradiance and to transfer the heat energy so produced to a fluid passing through it; it is characterised by the collector aperture area, the zero-loss efficiency, the first order coefficient, the second-order coefficient and the incidence angle modifier;

(32) 'global solar irradiance' means the rate of total incoming solar energy, both direct and diffuse, on a collector plane with an inclination of 45 degrees and southward orientation at the Earth's surface, expressed in W/m^2 ;

(33) 'collector aperture area' (A_{sol}) means the maximum projected area through which unconcentrated solar radiation enters the collector, expressed in m^2 ;

(34) 'zero-loss efficiency' (η_0) means the efficiency of the solar collector, when the solar collector mean fluid temperature is equal to the ambient temperature;

(35) 'first-order coefficient' (a_1) means the heat loss coefficient of a solar collector, expressed in $W/(m^2 K)$;

(36) 'second-order coefficient' (a_2) means the coefficient measuring the temperature dependence of the first order coefficient, expressed in $W/(m^2 K^2)$;

(37) 'incidence angle modifier' (IAM) means the ratio of the useful heat output of the solar collector at a given incidence angle and its useful heat output at an incidence angle of 0 degrees;

(38) 'incidence angle' means the angle between the direction to the sun and the direction perpendicular to the solar collector aperture;

(39) 'solar hot water storage tank' means a hot water storage tank storing heat energy produced by one or more solar collectors;

(40) 'heat generator water heating energy efficiency' ($\eta_{wh,nonso}$) means the water heating energy efficiency of a heat generator which is part of a solar water heater, expressed in %, established under average climate conditions and without using solar heat input;

(41) 'auxiliary electricity consumption' (Q_{aux}), for the purpose of Figure 1 in Annex IV referred to as 'auxiliary electricity', means the annual electricity consumption of a solar water heater or a solar-only system that is due to the pump power consumption and the standby power consumption, expressed in kWh in terms of final energy;

(42) 'pump power consumption' (sol_{pump}) means the rated electrical power consumption of the pump in the collector loop of a solar water heater or solar-only system, expressed in W;

(43) 'standby power consumption' ($sol_{standby}$) means the rated electrical power consumption of a solar water heater or solar-only system when the pump and the heat generator are inactive, expressed in W;

(44) 'model identifier' means the code, usually alphanumeric, which distinguishes a specific water heater, hot water storage tank, solar device or package of water heater and solar device model from other models with the same trade mark, supplier's name or dealer's name.

ANNEX II

Energy efficiency classes

1. WATER HEATING ENERGY EFFICIENCY CLASSES OF WATER HEATERS

The water heating energy efficiency class of a water heater shall be determined on the basis of its water heating energy efficiency as set out in Table 1.

The water heating energy efficiency of a water heater shall be calculated in accordance with point 3 of Annex VIII, for solar water heaters and heat pump water heaters under average climate conditions.

Table 1

Water heating energy efficiency classes of water heaters, categorised by declared load profiles, η_{wh} in %

	3XS	XXS	XS	S	M	L	XL	XXL
A⁺⁺⁺	$\eta_{wh} \geq 62$	$\eta_{wh} \geq 62$	$\eta_{wh} \geq 69$	$\eta_{wh} \geq 90$	$\eta_{wh} \geq 163$	$\eta_{wh} \geq 188$	$\eta_{wh} \geq 200$	$\eta_{wh} \geq 213$
A⁺⁺	$53 \leq \eta_{wh} < 62$	$53 \leq \eta_{wh} < 62$	$61 \leq \eta_{wh} < 69$	$72 \leq \eta_{wh} < 90$	$130 \leq \eta_{wh} < 163$	$150 \leq \eta_{wh} < 188$	$160 \leq \eta_{wh} < 200$	$170 \leq \eta_{wh} < 213$
A⁺	$44 \leq \eta_{wh} < 53$	$44 \leq \eta_{wh} < 53$	$53 \leq \eta_{wh} < 61$	$55 \leq \eta_{wh} < 72$	$100 \leq \eta_{wh} < 130$	$115 \leq \eta_{wh} < 150$	$123 \leq \eta_{wh} < 160$	$131 \leq \eta_{wh} < 170$
A	$35 \leq \eta_{wh} < 44$	$35 \leq \eta_{wh} < 44$	$38 \leq \eta_{wh} < 53$	$38 \leq \eta_{wh} < 55$	$65 \leq \eta_{wh} < 100$	$75 \leq \eta_{wh} < 115$	$80 \leq \eta_{wh} < 123$	$85 \leq \eta_{wh} < 131$
B	$32 \leq \eta_{wh} < 35$	$32 \leq \eta_{wh} < 35$	$35 \leq \eta_{wh} < 38$	$35 \leq \eta_{wh} < 38$	$39 \leq \eta_{wh} < 65$	$50 \leq \eta_{wh} < 75$	$55 \leq \eta_{wh} < 80$	$60 \leq \eta_{wh} < 85$
C	$29 \leq \eta_{wh} < 32$	$29 \leq \eta_{wh} < 32$	$32 \leq \eta_{wh} < 35$	$32 \leq \eta_{wh} < 35$	$36 \leq \eta_{wh} < 39$	$37 \leq \eta_{wh} < 50$	$38 \leq \eta_{wh} < 55$	$40 \leq \eta_{wh} < 60$
D	$26 \leq \eta_{wh} < 29$	$26 \leq \eta_{wh} < 29$	$29 \leq \eta_{wh} < 32$	$29 \leq \eta_{wh} < 32$	$33 \leq \eta_{wh} < 36$	$34 \leq \eta_{wh} < 37$	$35 \leq \eta_{wh} < 38$	$36 \leq \eta_{wh} < 40$
E	$22 \leq \eta_{wh} < 26$	$23 \leq \eta_{wh} < 26$	$26 \leq \eta_{wh} < 29$	$26 \leq \eta_{wh} < 29$	$30 \leq \eta_{wh} < 33$	$30 \leq \eta_{wh} < 34$	$30 \leq \eta_{wh} < 35$	$32 \leq \eta_{wh} < 36$
F	$19 \leq \eta_{wh} < 22$	$20 \leq \eta_{wh} < 23$	$23 \leq \eta_{wh} < 26$	$23 \leq \eta_{wh} < 26$	$27 \leq \eta_{wh} < 30$	$27 \leq \eta_{wh} < 30$	$27 \leq \eta_{wh} < 30$	$28 \leq \eta_{wh} < 32$
G	$\eta_{wh} < 19$	$\eta_{wh} < 20$	$\eta_{wh} < 23$	$\eta_{wh} < 23$	$\eta_{wh} < 27$	$\eta_{wh} < 27$	$\eta_{wh} < 27$	$\eta_{wh} < 28$

2. ENERGY EFFICIENCY CLASSES OF HOT WATER STORAGE TANKS

The energy efficiency class of a hot water storage tank shall be determined on the basis of its standing loss as set out in Table 2.

Table 2

Energy efficiency classes of hot water storage tanks

Energy efficiency class	Standing loss S in Watts, with storage volume V in litres
A⁺	$S < 5,5 + 3,16 \cdot V^{0,4}$
A	$5,5 + 3,16 \cdot V^{0,4} \leq S < 8,5 + 4,25 \cdot V^{0,4}$
B	$8,5 + 4,25 \cdot V^{0,4} \leq S < 12 + 5,93 \cdot V^{0,4}$
C	$12 + 5,93 \cdot V^{0,4} \leq S < 16,66 + 8,33 \cdot V^{0,4}$
D	$16,66 + 8,33 \cdot V^{0,4} \leq S < 21 + 10,33 \cdot V^{0,4}$
E	$21 + 10,33 \cdot V^{0,4} \leq S < 26 + 13,66 \cdot V^{0,4}$
F	$26 + 13,66 \cdot V^{0,4} \leq S < 31 + 16,66 \cdot V^{0,4}$
G	$S > 31 + 16,66 \cdot V^{0,4}$

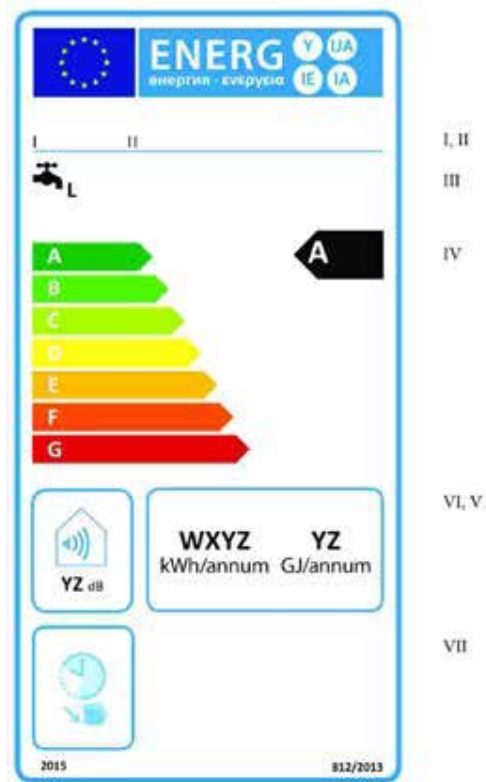
ANNEX III

The labels

1. WATER HEATERS

1.1. Label 1

1.1.1. Conventional water heaters in water heating energy efficiency classes A to G



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII;

IV. the water heating energy efficiency class, determined in accordance with point 1 of Annex II; the head of the arrow containing the water heating energy efficiency class of the water heater shall be placed at the same height as the head of the relevant energy efficiency class;

V. the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in

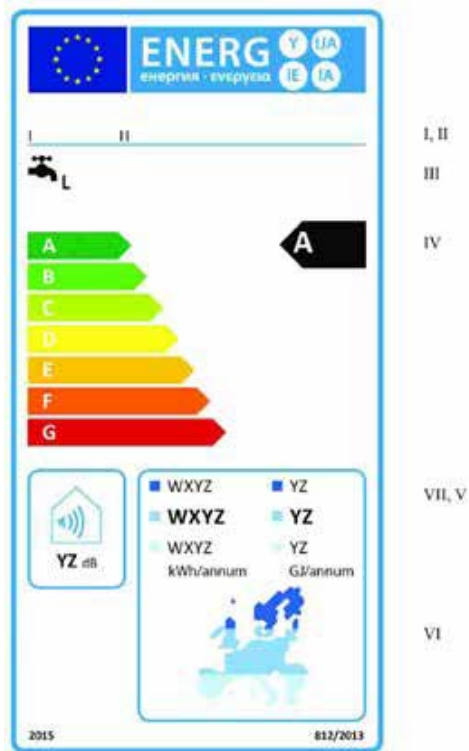
GJ in terms of GCV, rounded to the nearest integer and calculated in accordance with point 4 of Annex VIII;

VI. the sound power level L_{WA} , indoors, in dB, rounded to the nearest integer;

VII. for conventional water heaters able to work only during off-peak hours, the pictogram referred to in point 4(d)(10) of this Annex may be added.

(b) The design aspects of the label for conventional water heaters shall be in accordance with point 4 of this Annex.

1.1.2. Solar water heaters in water heating energy efficiency classes A to G



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII;

IV. the water heating energy efficiency class under average climate conditions, determined in accordance with point 1 of Annex II; the head of the arrow containing the water heating energy efficiency class of the water heater shall be placed at the same height as the head of the relevant energy efficiency class;

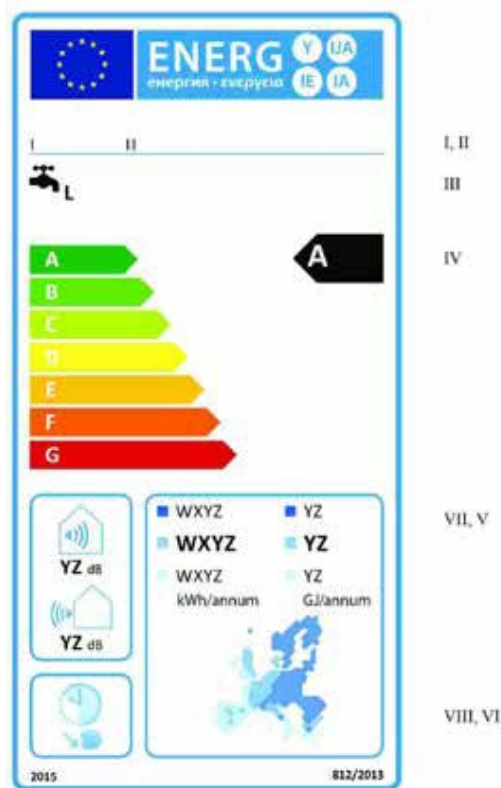
V. the annual electricity consumption in kWh in terms of final energy or the annual fuel consumption in GJ in terms of GCV, under average, colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VIII;

VI. European solar map displaying three indicative global solar irradiance zones;

VII. the sound power level L_{WA} , indoors, in dB, rounded to the nearest integer.

(b) The design aspects of the label for solar water heaters shall be in accordance with point 5 of this Annex.

1.1.3. Heat pump water heaters in water heating energy efficiency classes A to G



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

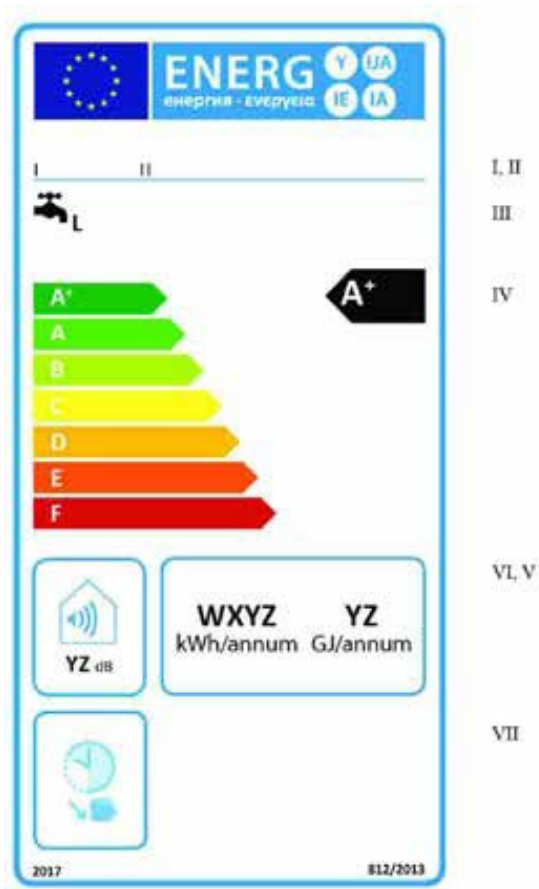
III. the water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII;

IV. the water heating energy efficiency class under average climate conditions, determined in accordance with point 1 of Annex II; the head of the arrow containing the water heating energy efficiency class of

- the water heater shall be placed at the same height as the head of the relevant energy efficiency class;
 - V. the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of GCV, under average, colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VIII;
 - VI. European temperature map displaying three indicative temperature zones;
 - VII. the sound power level L_{WA} , indoors (if applicable) and outdoors, in dB, rounded to the nearest integer;
 - VIII. for heat pump water heaters able to work only during off-peak hours, the pictogram referred to in point 6(d)(11) of this Annex may be added.
- (b) The design aspects of the label for heat pump water heaters shall be in accordance with point 6 of this Annex. By way of exception, where a model has been granted an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU Ecolabel may be added.

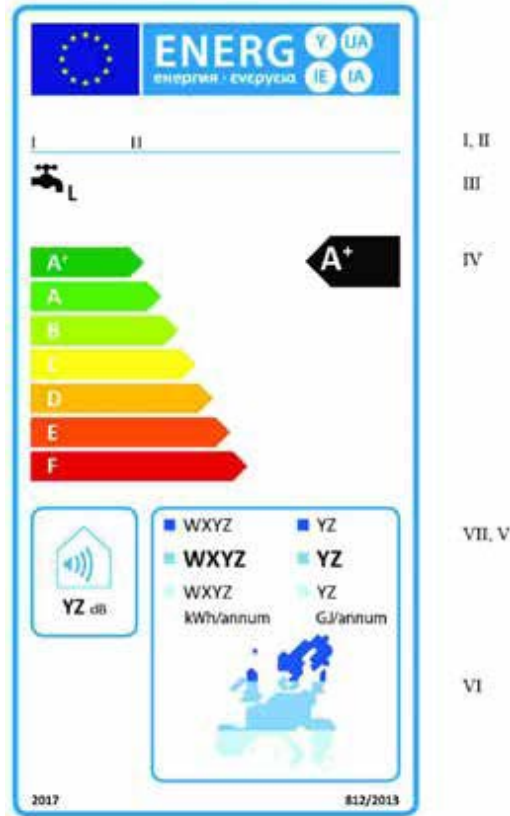
1.2. Label 2

1.2.1. Conventional water heaters in water heating energy efficiency classes A+ to F



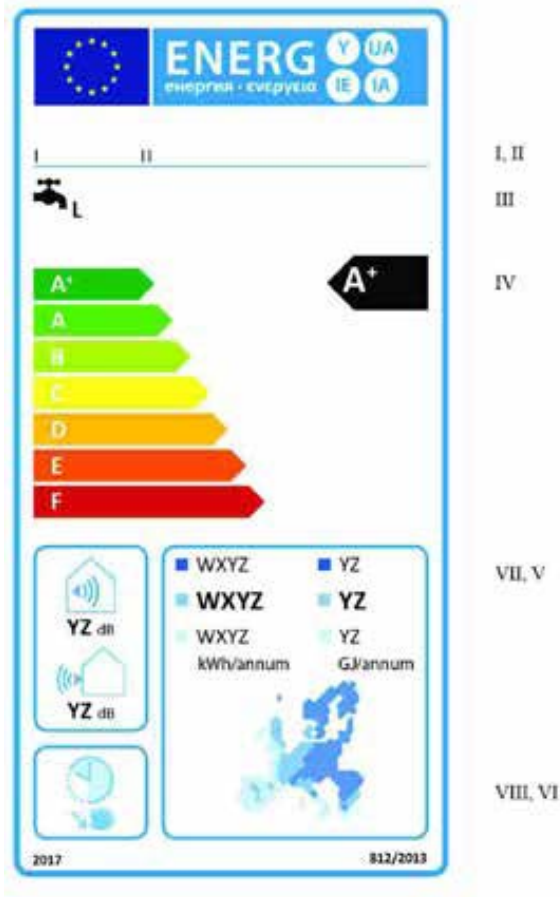
- (a) The information listed in point 1.1.1(a) of this Annex shall be included in the label.
- (b) The design aspects of the label for conventional water heaters shall be in accordance with point 4 of this Annex.

1.2.2. Solar water heaters in water heating energy efficiency classes A+ to F



- (a) The information listed in point 1.1.2(a) of this Annex shall be included in the label.
- (b) The design aspects of the label for solar water heaters shall be in accordance with point 5 of this Annex.

1.2.3. Heat pump water heaters in water heating energy efficiency classes A+ to F



I, II

III

IV

VII, V

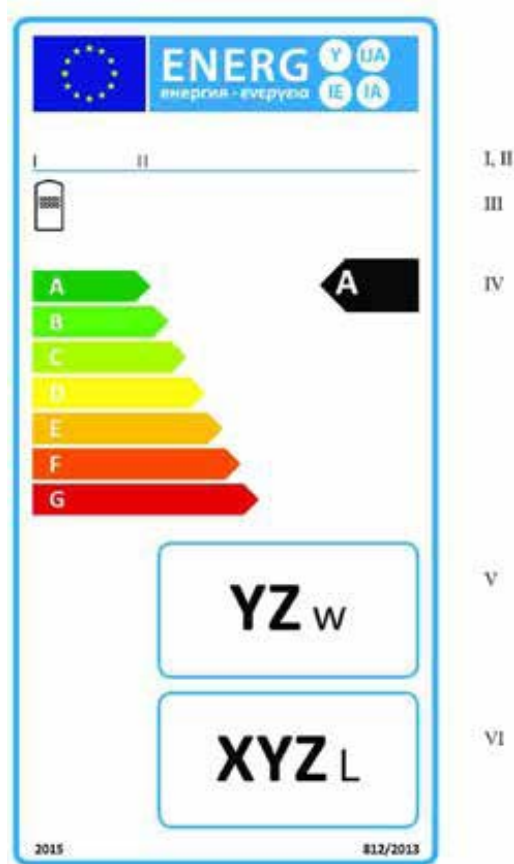
VIII, VI

(a) The information listed in point 1.1.3(a) of this Annex shall be included in the label.

(b) The design aspects of the label for heat pump water heaters shall be in accordance with point 6 of this Annex.

2. HOT WATER STORAGE TANKS

2.1. Label 1 for hot water storage tanks in energy efficiency classes A to G



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the water storage function;

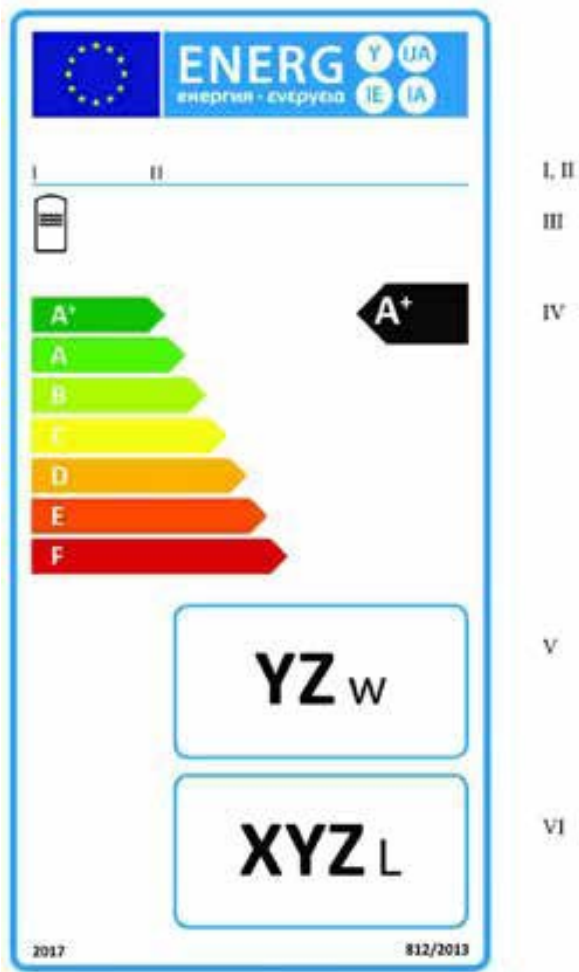
IV. the energy efficiency class, determined in accordance with point 2 of Annex II; the head of the arrow containing the energy efficiency class of the hot water storage tank shall be placed at the same height as the head of the relevant energy efficiency class;

V. the standing loss in W, rounded to the nearest integer;

VI. the hot water storage tank volume in litres, rounded to the nearest integer.

(b) The design aspects of the label for hot water storage tanks shall be in accordance with point 7 of this Annex.

2.2. Label 2 for hot water storage tanks in energy efficiency classes A+ to F

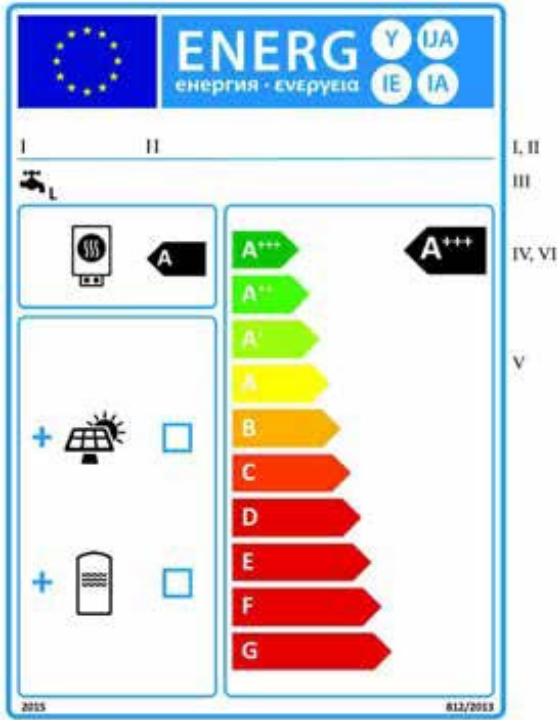


(a) The information listed in point 2.1(a) of this Annex shall be included in the label.

(b) The design aspects of the label for hot water storage tanks shall be in accordance with point 7 of this Annex.

3. PACKAGES OF WATER HEATER AND SOLAR DEVICE

Label for packages of water heater and solar device in water heating energy efficiency classes A⁺⁺⁺ to G



(a) The following information shall be included in the label:

I. dealer's and/or supplier's name or trade mark;

II. dealer's and/or supplier's model(s) identifier;

III. the water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII;

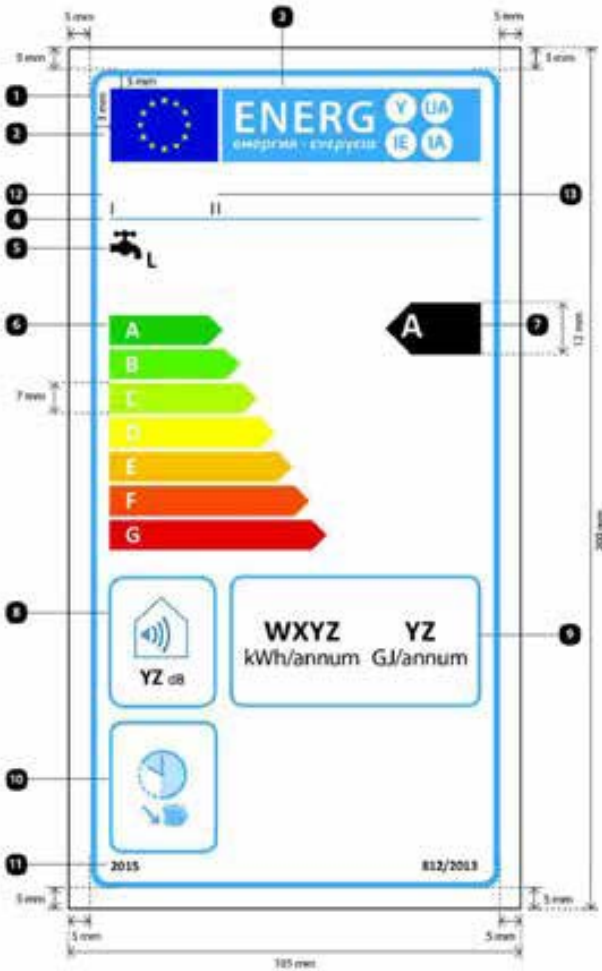
IV. the water heating energy efficiency class of the water heater, determined in accordance with point 1 of Annex II;

V. indication of whether a solar collector and hot water storage tank may be included in the package of water heater and solar device;

VI. the water heating energy efficiency class of the package of water heater and solar device, determined in accordance with point 4 of Annex IV; the head of the arrow containing the water heating energy efficiency class of the package of water heater and solar device shall be placed at the same height as the head of the relevant energy efficiency class.

(b) The design aspects of the label for packages of water heater and solar device shall be in accordance with point 8 of this Annex. For packages of water heater and solar device in water heating energy efficiency classes A⁺⁺⁺ to D, the last classes E to G in the A⁺⁺⁺ to G scale may be omitted.

4. The design of the label for conventional water heaters shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 EU label border stroke: 4 pt, colour: cyan 100 %, round corners: 3,5 mm.

2 EU logo: Colours: X-80-00-00 and 00-00-X-00.

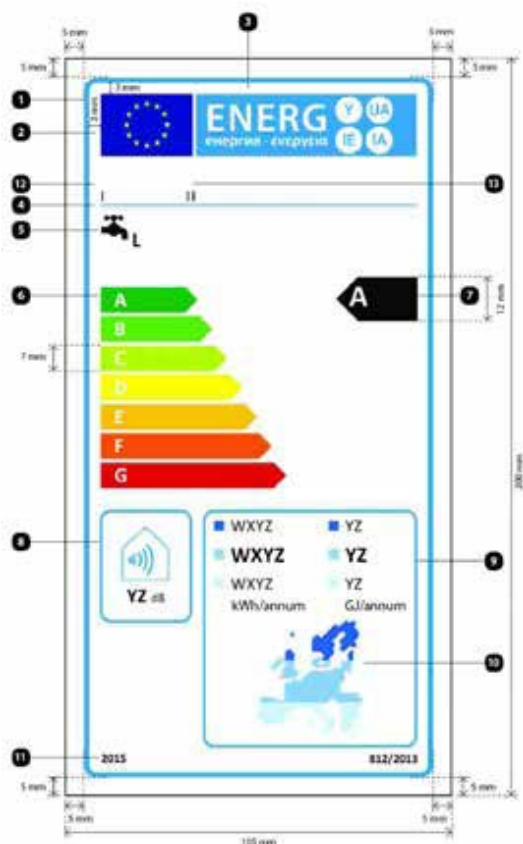
3 Energy label: Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm,

height: 17 mm.

- 4 Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.
- 5 Water heating function:**
- **Pictogram** as depicted, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII: Calibri bold 16 pt, 100 % black.
- 6 A-G or A⁺-F scale:**
- **Arrow:** height: 7 mm, gap: 1 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00,
 - **Text:** Calibri bold 16 pt, capitals, white, ‘+’ symbol: superscript.
- 7 Water heating energy efficiency class:**
- **Arrow:** width: 22 mm, height: 12 mm, 100 % black,
 - **Text:** Calibri bold 24 pt, capitals, white, ‘+’ symbol: superscript.
- 8 Sound power level, indoors:**
- **Pictogram** as depicted,
 - **Border:** 2 pt – colour: cyan 100 % – round corners: 3,5 mm,
 - **Value ‘YZ’:** Calibri bold 15 pt, 100 % black,
 - **Text ‘dB’:** Calibri regular 10 pt, 100 % black.
- 9 Annual energy consumption in kWh/annum or GJ/annum:**
- **Border:** 2 pt – colour: cyan 100 % – round corners: 3,5 mm,
 - **Value ‘WXYZ’ or ‘YZ’:** Calibri bold at least 20 pt, 100 % black,
 - **Text ‘kWh/annum’ or ‘GJ/annum’:** Calibri regular at least 15 pt, 100 % black.
- 10 If applicable, off-peak fitness:**
- **Pictogram** as depicted,
 - **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 11 Year of label introduction and number of Regulation:**
- **Text:** Calibri bold 10 pt.
- 12 Supplier’s name or trademark.**
- 13 Supplier’s model identifier:**

The supplier’s name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

5. The design of the label for solar water heaters shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- 1 EU label border stroke:** 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 2 EU logo: Colours:** X-80-00-00 and 00-00-X-00.
- 3 Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
- 4 Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.
- 5 Water heating function:**

– **Pictogram** as depicted, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII: Calibri bold 16 pt, 100 % black.

6 A-G or A⁺-F scale:

- **Arrow:** height: 7 mm, gap: 1 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00,
- **Text:** Calibri bold 16 pt, capitals, white, '+' symbol: superscript.

7 Water heating energy efficiency class:

- **Arrow:** width: 22 mm, height: 12 mm, 100 % black,
- **Text:** Calibri bold 24 pt, capitals, white, '+' symbol: superscript.

8 Sound power level, indoors:

- **Pictogram** as depicted,
- **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
- **Value 'YZ':** Calibri bold 15 pt, 100 % black,
- **Text 'dB':** Calibri regular 10 pt, 100 % black.

9 Annual energy consumption in kWh/annum or GJ/annum:

- **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
- **Values 'WXYZ' or 'YZ':** Calibri at least 13 pt, 100 % black,
- **Text 'kWh/annum' or 'GJ/annum':** Calibri regular at least 11 pt, 100 % black.

10 European solar map and colour squares:

- **Pictogram** as depicted,
- **Colours:** Dark blue: 86-51-00-00,
Middle blue: 53-08-00-00,
Light blue: 25-00-02-00.

11 Year of label introduction and number of Regulation:

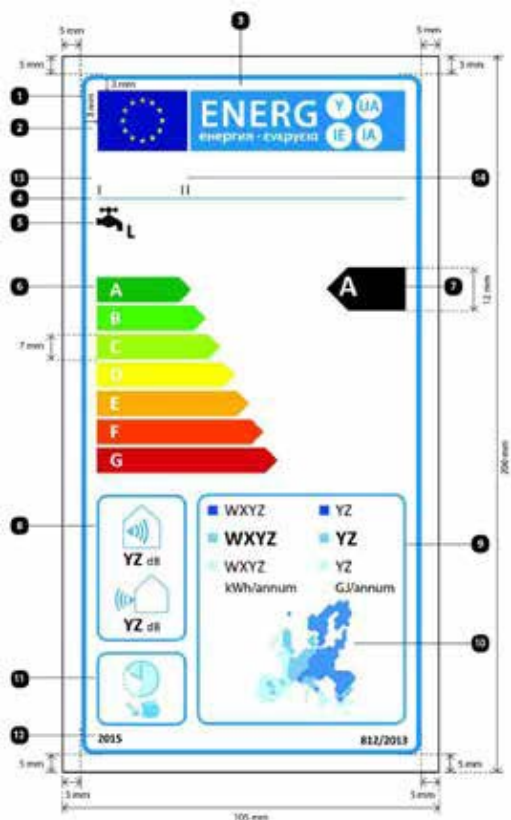
- **Text:** Calibri bold 10 pt.

12 Supplier's name or trademark.

13 Supplier's model identifier:

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

6. The design of the label for heat pump water heaters shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- 1 **EU label border stroke:** 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 2 **EU logo: Colours:** X-80-00-00 and 00-00-X-00.
- 3 **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
- 4 **Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.
- 5 **Water heating function:**
 - **Pictogram** as depicted, including the declared load profile expressed as the appropriate letter in

accordance with Table 3 of Annex VII: Calibri bold 16 pt, 100 % black.

6 A-G or A⁺-F scale:

- **Arrow:** height: 7 mm, gap: 1 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00,
- **Text:** Calibri bold 16 pt, capitals, white, ‘+’ symbol: superscript.

7 Water heating energy efficiency class:

- **Arrow:** width: 22 mm, height: 12 mm, 100 % black,
- **Text:** Calibri bold 24 pt, capitals, white, ‘+’ symbol: superscript.

8 Sound power level, indoors (if applicable) and outdoors:

- **Pictogram** as depicted,
- **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
- **Value ‘YZ’:** Calibri bold 15 pt, 100 % black,
- **Text ‘dB’:** Calibri regular 10 pt, 100 % black.

9 Annual energy consumption in kWh/annum or GJ/annum:

- **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
- **Values ‘WXYZ’ or ‘YZ’:** Calibri at least 13 pt, 100 % black,
- **Text ‘kWh/annum’ or ‘GJ/annum’:** Calibri regular at least 11 pt, 100 % black.

10 European temperature map and colour squares:

- **Pictogram** as depicted,
- **Colours:** Dark blue: 86-51-00-00,
Middle blue: 53-08-00-00,
Light blue: 25-00-02-00.

11 If applicable, off-peak fitness:

- **Pictogram** as depicted,
- **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm.

12 Year of label introduction and number of Regulation:

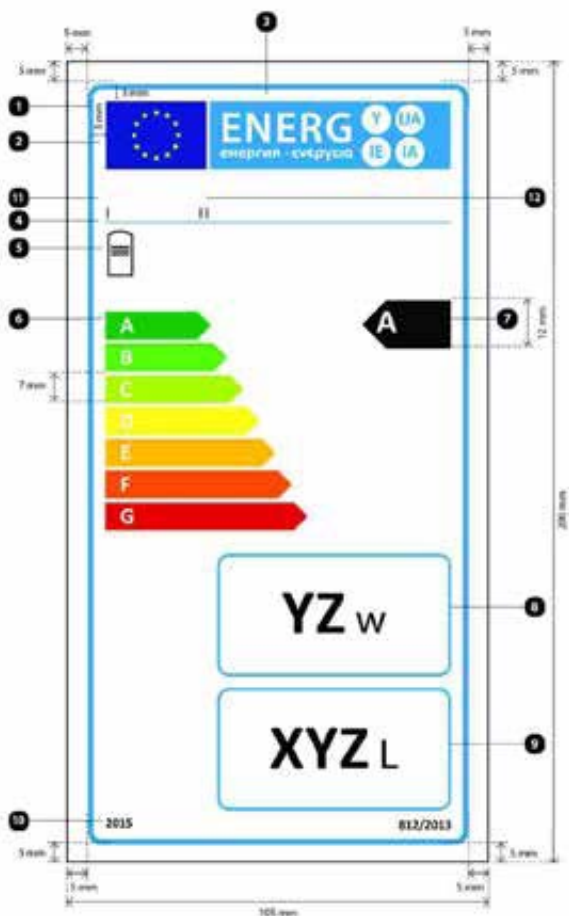
- **Text:** Calibri bold 10 pt.

13 Supplier’s name or trademark.

14 Supplier’s model identifier:

The supplier’s name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

7. The design of the label for hot water storage tanks shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

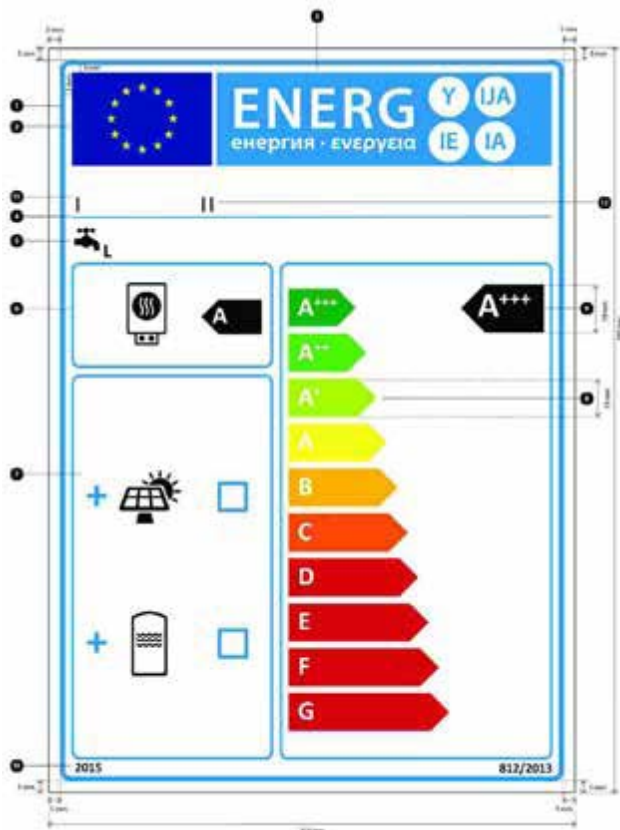
① **EU label border stroke:** 4 pt, colour: cyan 100 %, round corners: 3,5 mm.

② **EU logo: Colours:** X-80-00-00 and 00-00-X-00.

③ **Energy label: Colour:** X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.

- 4 Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.
- 5 Storage function:**
- **Pictogram** as depicted.
- 6 A-G or A⁺-F scale:**
- **Arrow:** height: 7 mm, gap: 1 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00,
 - **Text:** Calibri bold 16 pt, capitals, white, '+' symbol: superscript.
- 7 Energy efficiency class:**
- **Arrow:** width: 22 mm, height: 12 mm, 100 % black,
 - **Text:** Calibri bold 24 pt, capitals, white, '+' symbol: superscript.
- 8 Standing loss:**
- **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
 - **Value 'YZ':** Calibri bold 45 pt, 100 % black,
 - **Text 'W':** Calibri regular 30 pt, 100 % black.
- 9 Storage volume:**
- **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
 - **Value 'XYZ':** Calibri bold 45 pt, 100 % black,
 - **Text 'L':** Calibri regular 30 pt, 100 % black.
- 10 Year of label introduction and number of Regulation:**
- **Text:** Calibri bold 10 pt.
- 11 Supplier's name or trademark.**
- 12 Supplier's model identifier:**
- The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

8. The design of the label for packages of water heater and solar device shall be the following:



Whereby:

(a) The label shall be at least 210 mm wide and 297 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- 1 **EU label border stroke:** 6 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 2 **EU logo: Colours:** X-80-00-00 and 00-00-X-00.
- 3 **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 191 mm, height: 37 mm.
- 4 **Sub-logos border:** 2 pt, colour: cyan 100 %, length: 191 mm.
- 5 **Water heating function:**

– **Pictogram** as depicted, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII: Calibri bold 22 pt, 100 % black.

6 **Water Heater:**

- **Pictogram** as depicted.
- **Water heating energy efficiency class of water heater:**
- **Arrow:** width: 24 mm, height: 14 mm, 100 % black,
- **Text:** Calibri bold 28 pt, capitals, white,
- **Border:** 3 pt, colour: cyan 100 %, round corners: 3,5 mm.

7 **Package with solar collector and/or hot water storage tank:**

- **Pictograms** as depicted,
- **‘+’ symbol:** Calibri bold 50 pt, cyan 100 %,
- **Boxes: width:** 12 mm, height: 12 mm, border: 4 pt, cyan 100 %,
- **Border:** 3 pt – colour: cyan 100 % – round corners: 3,5 mm.

8 **A⁺⁺⁺-G scale with border:**

- **Arrow:** height: 15 mm, gap: 3 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Seventh class: 00-X-X-00,
 - If applicable, last classes: 00-X-X-00,
- **Text:** Calibri bold 30 pt, capitals, white, ‘+’ symbols: superscript, aligned on a single row,
- **Border:** 3 pt, colour: cyan 100 %, round corners: 3,5 mm.

9 **Water heating energy efficiency class for package of water heater and solar device:**

- **Arrow:** width: 33 mm, height: 19 mm, 100 % black,
- **Text:** Calibri bold 40 pt, capitals, white, ‘+’ symbols: superscript, aligned on a single row.

10 **Year of label introduction and number of Regulation:**

- **Text:** Calibri bold 12 pt.

11 **Dealer’s and/or supplier’s name or trademark.**

12 **Dealer’s and/or supplier’s model identifier:**

The dealer’s and/or supplier’s name or trade mark and model identifier shall fit in a space of 91 × 19 mm.

ANNEX IV

Product Fiche

1. WATER HEATERS

1.1. The information in the product fiche of the water heater shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trade mark;
- (b) supplier's model identifier;
- (c) the declared load profile, expressed by the appropriate letter and typical usage in accordance with Table 3 of Annex VII;
- (d) the water heating energy efficiency class of the model, determined in accordance with point 1 of Annex II, whereby: for solar water heaters and heat pump water heaters, under average climate conditions;
- (e) the water heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with point 3 of Annex VIII, whereby: for solar water heaters and heat pump water heaters, under average climate conditions;
- (f) the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of *GCV*, rounded to the nearest integer and calculated in accordance with point 4 of Annex VIII, whereby: for solar water heaters and heat pump water heaters, under average climate conditions;
- (g) if applicable, other load profiles for which the water heater is suitable to use and the corresponding water heating energy efficiency and annual electricity consumption as set out in points (e) and (f);
- (h) the thermostat temperature settings of the water heater, as placed on the market by the supplier;
- (i) the sound power level L_{WA} , indoors, in dB, rounded to the nearest integer (for heat pump water heaters if applicable);
- (j) if applicable, an indication that the water heater is able to work only during off-peak hours;
- (k) any specific precautions that shall be taken when the water heater is assembled, installed or maintained;
- (l) where the value of *smart* is declared as being '1', an indication that the information on water heating energy efficiency, annual electricity and fuel consumption, as applicable, relate to enabled smart control settings only;

in addition, for solar water heaters and heat pump water heaters:

- (m) the water heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 3 of Annex VIII;
- (n) the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of *GCV*, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VIII; in addition, for solar water heaters:
 - (o) the collector aperture area in m^2 , to two decimal places;
 - (p) the zero-loss efficiency, to three decimal places;
 - (q) the first-order coefficient in $W/(m^2 K)$, to two decimal places;
 - (r) the second-order coefficient in $W/(m^2 K^2)$, to three decimal places;

- (s) the incidence angle modifier, to two decimal places;
- (t) the storage volume in litres, rounded to the nearest integer;
- (u) the pump power consumption in W, rounded to the nearest integer;
- (v) the standby power consumption in W, to two decimal places; in addition, for heat pump water heaters:
- (w) the sound power level L_{WA} , outdoors, in dB, rounded to the nearest integer.

1.2. One fiche may cover a number of water heater models supplied by the same supplier.

1.3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1.1 not already displayed on the label shall also be provided.

2. HOT WATER STORAGE TANKS

2.1. The information in the product fiche of the hot water storage tank shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trade mark;
- (b) supplier's model identifier;
- (c) the energy efficiency class of the model, determined in accordance with point 2 of Annex II;
- (d) the standing loss in W, rounded to the nearest integer;
- (e) the storage volume in litres, rounded to the nearest integer.

2.2. One fiche may cover a number of hot water storage tank models supplied by the same supplier.

2.3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 2.1 not already displayed on the label shall also be provided.

3. SOLAR DEVICES

3.1. The information in the product fiche of the solar device shall be provided in the following order and shall be included in the product brochure or other literature provided with the product (for pumps in the collector loop if applicable):

- (a) supplier's name or trade mark;
- (b) supplier's model identifier;
- (c) the collector aperture area in m^2 , to two decimal places;
- (d) the zero-loss efficiency, to three decimal places;
- (e) the first-order coefficient in $W/(m^2 K)$, to two decimal places;
- (f) the second-order coefficient in $W/(m^2 K^2)$, to three decimal places;
- (g) the incidence angle modifier, to two decimal places;
- (h) the storage volume in litres, rounded to the nearest integer;
- (i) the annual non-solar heat contribution Q_{nonsol} in kWh in terms of primary energy for electricity and/or in kWh in terms of GCV for fuels, for the load profiles M, L, XL and XXL under average climate conditions,

rounded to the nearest integer;

(j) the pump power consumption in W, rounded to the nearest integer;

(k) the standby power consumption in W, to two decimal places;

(l) the annual auxiliary electricity consumption Q_{aux} in kWh in terms of final energy, rounded to the nearest integer.

3.2. One fiche may cover a number of solar device models supplied by the same supplier.

4. PACKAGES OF WATER HEATER AND SOLAR DEVICE

The fiche for packages of water heater and solar device shall contain the elements set out in Figure 1 for evaluating the water heating energy efficiency of a package of water heater and solar device, where the following information shall be included:

- I: the value of the water heating energy efficiency of the water heater, expressed in %,
- II: the value of the mathematical expression , where Q_{ref} is taken from Table 3 in Annex VII and Q_{nonsol} from the product fiche of the solar device for the declared load profile M, L, XL or XXL of the water heater,
- III: the value of the mathematical expression , expressed in %, where Q_{aux} is taken from the product fiche of the solar device and Q_{ref} from Table 3 in Annex VII for the declared load profile M, L, XL or XXL.

Figure 1

Fiche for a package of water heater and solar device indicating the water heating energy efficiency of the package offered

Water heating energy efficiency of water heater %

Declared load profile:

Solar contribution
From fiche of solar device

Auxiliary electricity

$(1,1 \times Y - 10\%) \times \text{III} - Y = + \text{[]} \%$

Water heating energy efficiency of package under average climate %

Water heating energy efficiency class of package under average climate

	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	G	F	E	D	C	B	A	A ⁺	A ⁺⁺	A ⁺⁺⁺
<input type="checkbox"/> M	< 27 %	≥ 27 %	≥ 30 %	≥ 33 %	≥ 36 %	≥ 39 %	≥ 65 %	≥ 100 %	≥ 130 %	≥ 163 %
<input type="checkbox"/> L	< 27 %	≥ 27 %	≥ 30 %	≥ 34 %	≥ 37 %	≥ 50 %	≥ 75 %	≥ 115 %	≥ 150 %	≥ 188 %
<input type="checkbox"/> %	< 27 %	≥ 27 %	≥ 30 %	≥ 35 %	≥ 38 %	≥ 55 %	≥ 80 %	≥ 123 %	≥ 160 %	≥ 200 %
<input type="checkbox"/> 100	< 28 %	≥ 28 %	≥ 32 %	≥ 36 %	≥ 40 %	≥ 60 %	≥ 85 %	≥ 131 %	≥ 170 %	≥ 213 %

Water heating energy efficiency under colder and warmer climate conditions

Colder: - 0,2 × = %

Warmer: + 0,4 × = %

The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as this efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

ANNEX V

Technical documentation

1. WATER HEATERS

For water heaters, the technical documentation referred to in Article 3(1)(c) shall include:

- (a) the name and address of the supplier;
- (b) a description of the water heater model sufficient for its unambiguous identification;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) the results of the measurements for the technical parameters specified in point 7 of Annex VII;
- (g) the results of the calculations for the technical parameters specified in point 2 of Annex VIII;
- (h) any specific precautions that shall be taken when the water heater is assembled, installed or maintained.

2. HOT WATER STORAGE TANKS

For hot water storage tanks, the technical documentation referred to in Article 3(2)(c) shall include:

- (a) the name and address of the supplier;
- (b) a description of the hot water storage tank model sufficient for its unambiguous identification;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) the results of the measurements for the technical parameters specified in point 8 of Annex VII;
- (g) any specific precautions that shall be taken when the hot water storage tank is assembled, installed or maintained.

3. SOLAR DEVICES

The technical documentation of solar devices referred to in Article 3(3)(b) shall include:

- (a) the name and address of the supplier;
- (b) a description of the solar device model sufficient for its unambiguous identification;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) the results of the measurements for the technical parameters as specified in point 9 of Annex VII;
- (g) any specific precautions that shall be taken when the solar device is assembled, installed or maintained.

4. PACKAGES OF WATER HEATER AND SOLAR DEVICE

For packages of water heater and solar device, the technical documentation referred to in Article 3(4)

(c) shall include:

(a) the name and address of the supplier;

(b) a description of the package of water heater and solar device model sufficient for its unambiguous identification;

(c) where appropriate, the references of the harmonised standards applied;

(d) where appropriate, the other technical standards and specifications used;

(e) the identification and signature of the person empowered to bind the supplier;

(f) technical parameters:

– the water heating energy efficiency in %, rounded to the nearest integer,

– the technical parameters set out in points 1, 2 and 3 of this Annex;

(g) any specific precautions that shall be taken when the package of water heater and solar device is assembled, installed or maintained.

ANNEX VI

Information to be provided in the cases where end-users cannot be expected to see the product displayed, except on the internet¹⁵

1. WATER HEATERS

1.1. The information referred to in Article 4(1)(b) shall be provided in the following order:

- (a) the declared load profile, expressed by the appropriate letter and typical usage in accordance with Table 3 of Annex VII;
- (b) the water heating energy efficiency class of the model, under average climate conditions, in accordance with point 1 of Annex II;
- (c) the water heating energy efficiency in %, under average climate conditions, rounded to the nearest integer and calculated in accordance with point 3 of Annex VIII;
- (d) the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of GCV, under average climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VIII;
- (e) the sound power level, indoors, in dB, rounded to the nearest integer (for heat pump water heaters, if applicable); in addition, for solar water heaters and heat pump water heaters:
- (f) the water heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 3 of Annex VIII;
- (g) the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of GCV, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VIII; in addition, for solar water heaters:
- (h) the collector aperture area in m², to two decimal places;
- (i) the storage volume in litres, rounded to the nearest integer; in addition, for heat pump water heaters:
- (j) the sound power level, outdoors, in dB, rounded to the nearest integer.

1.2. Where other information contained in the product fiche is also provided, it shall be in the form and order specified in point 1 of Annex IV.

1.3. The size and font in which the information referred in points 1.1 and 1.2 is printed or shown shall be legible.

2. HOT WATER STORAGE TANKS

2.1. The information referred to in Article 4(2)(b) shall be provided in the following order:

- (a) the energy efficiency class of the model, determined in accordance with point 2 of Annex II;
- (b) the standing loss in W, rounded to the nearest integer;
- (c) the storage volume in litres, rounded to the nearest integer.

2.2. The size and font in which the information referred in point 2.1 is printed or shown shall be legible.

¹⁵ In Annex VI, the title is replaced in accordance with Article 10(3) of Delegated Regulation (EU) 518/2014, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

3. PACKAGES OF WATER HEATER AND SOLAR DEVICE

3.1. The information referred to in Article 4(3)(b) shall be provided in the following order:

- (a) the water heating energy efficiency class of the model, determined in accordance with point 1 of Annex II;
- (b) the water heating energy efficiency in %, rounded to the nearest integer;
- (c) the elements set out in Figure 1 of Annex IV.

3.2. The size and font in which the information referred in point 3.1 is printed or shown shall be legible.

ANNEX VII

Measurements

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements shall be made using harmonised standards the reference numbers of which have been published for this purpose in the *Official Journal of the European Union*, or using other reliable, accurate and reproducible measurement methods that take into account the generally recognised state-of-the-art methods. They shall meet the conditions and technical parameters set out in points 2 to 9.

2. General conditions for testing water heaters:

(a) measurements shall be carried out using the load profiles set out in Table 3;

(b) measurements shall be carried out using a 24-hour measurement cycle as follows:

– 00:00 to 06:59: no water draw-off,

– from 07:00: water draw-offs according to the declared load profile,

– from end of last water draw-off until 24:00: no water draw-off;

(c) the declared load profile shall be the maximum load profile or the load profile one below the maximum load profile.

Table 3

Load profiles of water heaters

h	3XS			XXS			XS			S			
	Q_{top} kWh	f l/min	T_m °C	Q_{top} kWh	f l/min	T_m °C	Q_{top} kWh	f l/min	T_m °C	Q_{top} kWh	f l/min	T_m °C	T_p °C
7:00	0,015	2	25	0,105	2	25				0,105	3	25	
7:05	0,015	2	25										
7:15	0,015	2	25										
7:26	0,015	2	25										
7:30	0,015	2	25	0,105	2	25	0,525	3	35	0,105	3	25	
7:45													
8:01													
8:05													
8:15													
8:25													
8:30				0,105	2	25				0,105	3	25	
8:45													
9:00	0,015	2	25										
9:30	0,015	2	25	0,105	2	25				0,105	3	25	
10:00													
10:30													
11:00													
11:30	0,015	2	25	0,105	2	25				0,105	3	25	

11:45	0,015	2	25	0,105	2	25				0,105	3	25	
12:00	0,015	2	25	0,105	2	25							
12:30	0,015	2	25	0,105	2	25							
12:45	0,015	2	25	0,105	2	25	0,525	3	35	0,315	4	10	55
14:30	0,015	2	25										
15:00	0,015	2	25										
15:30	0,015	2	25										
16:00	0,015	2	25										
16:30													
17:00													
18:00				0,105	2	25				0,105	3	25	
18:15				0,105	2	25				0,105	3	40	
18:30	0,015	2	25	0,105	2	25							
19:00	0,015	2	25	0,105	2	25							
19:30	0,015	2	25	0,105	2	25							
20:00				0,105	2	25							
20:30							0,105	3	35	0,42	4	10	55
20:45				0,105	2	25							
20:46													
21:00				0,105	2	25							
21:15	0,015	2	25	0,105	2	25							
21:30	0,015	2	25							0,525	5	45	
21:35	0,015	2	25	0,105	2	25							
21:45	0,015	2	25	0,105	2	25							
Q_{ref}	0,345			2,100			2,100			2,100			

Continued Table 3

Load profiles of water heaters

h	M				L				XL			
	Q_{top} kWh	f l/min	T_m °C	T_p °C	Q_{top} kWh	f l/min	T_m °C	T_p °C	Q_{top} kWh	f l/min	T_m °C	T_p °C
7:00	0,105	3	25		0,105	3	25		0,105	3	25	
7:05	1,4	6	40		1,4	6	40					
7:15									1,82	6	40	
7:26									0,105	3	25	
7:30	0,105	3	25		0,105	3	25					
7:45					0,105	3	25		4,42	10	10	40
8:01	0,105	3	25						0,105	3	25	
8:05					3,605	10	10	40				
8:15	0,105	3	25						0,105	3	25	
8:25					0,105	3	25					
8:30	0,105	3	25		0,105	3	25		0,105	3	25	

8:45	0,105	3	25		0,105	3	25		0,105	3	25	
9:00	0,105	3	25		0,105	3	25		0,105	3	25	
9:30	0,105	3	25		0,105	3	25		0,105	3	25	
10:00									0,105	3	25	
10:30	0,105	3	10	40	0,105	3	10	40	0,105	3	10	40
11:00									0,105	3	25	
11:30	0,105	3	25		0,105	3	25		0,105	3	25	
11:45	0,105	3	25		0,105	3	25		0,105	3	25	
12:00												
12:30												
12:45	0,315	4	10	55	0,315	4	10	55	0,735	4	10	55
14:30	0,105	3	25		0,105	3	25		0,105	3	25	
15:00									0,105	3	25	
15:30	0,105	3	25		0,105	3	25		0,105	3	25	
16:00									0,105	3	25	
16:30	0,105	3	25		0,105	3	25		0,105	3	25	
17:00									0,105	3	25	
18:00	0,105	3	25		0,105	3	25		0,105	3	25	
18:15	0,105	3	40		0,105	3	40		0,105	3	40	
18:30	0,105	3	40		0,105	3	40		0,105	3	40	
19:00	0,105	3	25		0,105	3	25		0,105	3	25	
19:30												
20:00												
20:30	0,735	4	10	55	0,735	4	10	55	0,735	4	10	55
20:45												
20:46									4,42	10	10	40
21:00					3,605	10	10	40				
21:15	0,105	3	25						0,105	3	25	
21:30	1,4	6	40		0,105	3	25		4,42	10	10	40
21:35												
21:45												
Q_{ref}	5,845				11,655				19,07			

Continued Table 3

Load profiles of water heaters

h	XXL			
	Q_{top} kWh	f l/min	T_m °C	T_p °C
7:00	0,105	3	25	
7:05				
7:15	1,82	6	40	
7:26	0,105	3	25	

7:30				
7:45	6,24	16	10	40
8:01	0,105	3	25	
8:05				
8:15	0,105	3	25	
8:25				
8:30	0,105	3	25	
8:45	0,105	3	25	
9:00	0,105	3	25	
9:30	0,105	3	25	
10:00	0,105	3	25	
10:30	0,105	3	10	40
11:00	0,105	3	25	
11:30	0,105	3	25	
11:45	0,105	3	25	
12:00				
12:30				
12:45	0,735	4	10	55
14:30	0,105	3	25	
15:00	0,105	3	25	
15:30	0,105	3	25	
16:00	0,105	3	25	
16:30	0,105	3	25	
17:00	0,105	3	25	
18:00	0,105	3	25	
18:15	0,105	3	40	
18:30	0,105	3	40	
19:00	0,105	3	25	
19:30				
20:00				
20:30	0,735	4	10	55
20:45				
20:46	6,24	16	10	40
21:00				
21:15	0,105	3	25	
21:30	6,24	16	10	40
21:35				
21:45				
Q_{ref}	24,53			

3. Conditions for testing the smart control compliance (*smart*) of water heaters

Where the supplier deems it appropriate to declare the value of *smart* as being '1', measurements of the weekly electricity and/or fuel consumption with smart controls and the weekly electricity and/or fuel consumption without smart controls shall be carried out using a two-week measurement cycle as follows:

- days 1 to 5: random sequence of load profiles chosen from the declared load profile and the load profile one below the declared load profile, and smart control disabled,
- days 6 and 7: no water draw-offs, and smart control disabled,
- days 8 to 12: repetition of the same sequence applied for days 1 to 5, and smart control enabled,
- days 13 and 14: no water draw-offs, and smart control enabled,
- the difference between the useful energy content measured during days 1 to 7 and the useful energy content measured during days 8 to 14 shall not exceed 2 % of Q_{ref} of the declared load profile.

4. Conditions for testing solar water heaters

The solar collector, solar hot water storage tank, pump in the collector loop (if applicable) and heat generator shall be tested separately. Where the solar collector and solar hot water storage tank cannot be tested separately, they shall be tested in combination. The heat generator shall be tested under the conditions set out in point 2 of this Annex.

The results shall be used for the calculations set out in point 3(b) of Annex VIII under the conditions set out in Tables 4 and 5. For the purpose of establishing Q_{total} the efficiency of the heat generator using the Joule effect in electric resistance heating elements is assumed to be 100/CC, expressed in %.

5. Conditions for testing heat pump water heaters

- Heat pump water heaters shall be tested under the conditions set out in Table 6,
- Heat pump water heaters which use ventilation exhaust air as the heat source shall be tested under the conditions set out in Table 7.

6. Conditions for testing solar devices

The solar collector, solar hot water storage tank and pump in the collector loop (if applicable) shall be tested separately. Where the solar collector and solar hot water storage tank cannot be tested separately, they shall be tested in combination.

The results shall be used for the calculations of Q_{nonsol} for the load profiles M, L, XL and XXL under the average climate conditions set out in Tables 4 and 5 and Q_{aux} .

Table 4

Average daytime temperature [°C]

	January	february	March	April	May	June	July	August	September	October	November	December
Average climate conditions	+2,8	+2,6	+7,4	+12,2	+16,3	+19,8	+21,0	+22,0	+17,0	+11,9	+5,6	+3,2
Colder climate conditions	-3,8	-4,1	-0,6	+5,2	+11,0	+16,5	+19,3	+18,4	+12,8	+6,7	+1,2	-3,5
Warmer climate conditions	+9,5	+10,1	+11,6	+15,3	+21,4	+26,5	+28,8	+27,9	+23,6	+19,0	+14,5	+10,4

Table 5

Average global solar irradiance [W/m²]

	January	february	March	April	May	June	July	August	September	October	November	December
Average climate conditions	70	104	149	192	221	222	232	217	176	129	80	56
Colder climate conditions	22	75	124	192	234	237	238	181	120	64	23	13
Warmer climate conditions	128	137	182	227	248	268	268	263	243	175	126	109

Table 6

Standard rating conditions for heat pump water heaters, temperatures in dry bulb air temperature (wet bulb air temperature in brackets)

Heat source	Outdoor air			Indoor air	Exhaust air	Brine	Water
Climate conditions	Average climate conditions	Colder climate conditions	Warmer climate conditions	Not applicable	All climate conditions		
Temperature	+ 7 °C (+ 6 °C)	+ 2 °C (+ 1 °C)	+ 14 °C (+ 13 °C)	+ 20 °C (maximum + 15 °C)	+ 20 °C (+ 12 °C)	0 °C (inlet)/ - 3 °C (outlet)	+ 10 °C (inlet)/ + 7 °C (outlet)

Table 7

**Maximum ventilation exhaust air available [m³/h], at a temperature of 20 °C
and with humidity of 5,5 g/m³**

Declared load profile	XXS	XS	S	M	L	XL	XXL
Maximum ventilation exhaust air available	109	128	128	159	190	870	1 021

7. Technical parameters of water heaters

The following parameters shall be established for water heaters:

- (a) the daily electricity consumption Q_{elec} in kWh, rounded to three decimal places;
 - (b) the declared load profile, expressed by the appropriate letter in accordance with Table 3 of this Annex;
 - (c) the sound power level in dB, indoors, rounded to the nearest integer (for heat pump water heaters, if applicable); in addition, for water heaters using fossil and/or biomass fuels:
 - (d) the daily fuel consumption Q_{fuel} in kWh in terms of GCV, rounded to three decimal places; in addition, for water heaters for which the value of smart is declared as being '1':
 - (e) the weekly fuel consumption with smart controls $Q_{fuel, week, smart}$ in kWh in terms of GCV, rounded to three decimal places;
 - (f) the weekly electricity consumption with smart controls $Q_{elec, week, smart}$ in kWh, rounded to three decimal places;
 - (g) the weekly fuel consumption without smart controls $Q_{fuel, week, no smart}$ in terms of GCV, rounded to three decimal places;
 - (h) the weekly electricity consumption without smart controls $Q_{elec, week, no smart}$ in kWh, rounded to three decimal places;
- in addition, for solar water heaters:
- (i) the collector aperture area A_{sol} in m², rounded to two decimal places;
 - (j) the zero-loss efficiency η_0 , rounded to three decimal places;
 - (k) the first-order coefficient a_1 in W/(m² K), rounded to two decimal places;
 - (l) the second-order coefficient a_2 in W/(m² K²), rounded to three decimal places;
 - (m) the incidence angle modifier IAM, rounded to two decimal places;
 - (n) the pump power consumption sol_{pump} in W, rounded to two decimal places;
 - (o) the standby power consumption $sol_{standby}$ in W, rounded to two decimal places; in addition, for heat pump water heaters:
 - (p) the sound power level L_{WA} in dB, outdoors, rounded to the nearest integer.

8. Technical parameters of hot water storage tanks

The following parameters shall be established for hot water storage tanks:

- (a) the storage volume V in litres, rounded to one decimal place;
- (b) the standing loss S in W, rounded to one decimal place.

9. Technical parameters of solar devices

The following parameters shall be established for solar devices:

- (a) the collector aperture area A_{sol} in m^2 , rounded to two decimal places;
- (b) the zero-loss efficiency η_0 , rounded to three decimal places;
- (c) the first-order coefficient a_1 in $W/(m^2 K)$, rounded to two decimal places;
- (d) the second-order coefficient a_2 in $W/(m^2 K^2)$, rounded to three decimal places;
- (e) the incidence angle modifier IAM , rounded to two decimal place;
- (f) the pump power consumption sol_{pump} in W , rounded to two decimal places;
- (g) the standby power consumption, $sol_{standby}$ in W , rounded to two decimal places.

ANNEX VIII

Method for calculating the water heating energy efficiency of water heaters

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, calculations shall be made using harmonised standards the reference numbers of which have been published for this purpose in the *Official Journal of the European Union*, or using other appropriate calculation methods that take into account the generally recognised state-of-the-art methods. They shall meet the technical parameters and calculations set out in points 2 to 6.

Technical parameters used for the calculations shall be measured in accordance with Annex VII.

2. Technical parameters of water heaters

The following parameters shall be calculated for water heaters under average climate conditions:

- (a) the water heating energy efficiency η_{wh} in %, rounded to one decimal place;
- (b) the annual electricity consumption *AEC* in kWh in terms of final energy, rounded to the nearest integer;

in addition, for water heaters using fuels under average climate conditions:

- (c) the annual fuel consumption *AFC* in kWh in terms of *GCV*, rounded to the nearest integer; in addition, for solar water heaters under average climate conditions:

- (d) the heat generator water heating energy efficiency $\eta_{wh, nonsol}$ in %, rounded to one decimal place;
- (e) the annual auxiliary electricity consumption Q_{aux} in kWh in terms of final energy, rounded to one decimal place;

in addition, for solar water heaters and heat pump water heaters under colder and warmer climate conditions:

- (f) the parameters set out in points (a) to (c);

in addition for solar water heaters under average, colder and warmer climate conditions:

- (g) the annual non-solar heat contribution Q_{nonsol} in kWh in terms of primary energy for electricity and/or in kWh in terms of *GCV* for fuels, rounded to one decimal place.

3. Calculation of the water heating energy efficiency η_{wh}

- (a) Conventional water heaters and heat pump water heaters:

The water heating energy efficiency is calculated as follows:

$$\eta_{wh} = \frac{Q_{ref}}{(Q_{fuel} + CC \cdot Q_{elec}) (1 - SCF \cdot smart) + Q_{cor}}$$

For water-/brine-to-water heat pump water heaters, the electricity consumption of one or more ground water pumps shall be taken into account.

(b) Solar water heaters:

The water heating energy efficiency is calculated as follows:

$$\eta_{wh} = \frac{0,6 \cdot 366 \cdot Q_{ref}}{Q_{tota}}$$

Where:

$$Q_{tota} = \frac{Q_{nonsol}}{1,1 \cdot \eta_{wh,nonsol} - 0,1} + Q_{aux} \cdot CC$$

4. Calculation of the annual electricity consumption AEC and the annual fuel consumption AFC

(a) Conventional water heaters and heat pump water heaters:

The annual electricity consumption AEC in kWh in terms of final energy is calculated as follows:

$$AEC = 0,6 \cdot 366 \cdot \left(Q_{elec} \cdot (1 - SCF \cdot smart) + \frac{Q_{cor}}{CC} \right)$$

The annual fuel consumption AFC in GJ in terms of GCV is calculated as follows:

$$AFC = 0,6 \cdot 366 \cdot (Q_{fuel} \cdot (1 - SCF \cdot smart) + Q_{cor})$$

(b) Solar water heaters:

The annual electricity consumption AEC in kWh in terms of final energy is calculated as follows:

$$AEC = \frac{CC \cdot Q_{elec}}{Q_{fuel} + CC \cdot Q_{elec}} \cdot \frac{Q_{tota}}{CC}$$

The annual fuel consumption AFC in GJ in terms of GCV is calculated as follows:

$$AFC = \frac{Q_{fuel}}{Q_{fuel} + CC \cdot Q_{elec}} \cdot Q_{tota}$$

5. Determination of the smart control factor SCF and of smart control compliance smart

(a) The smart control factor is calculated as follows:

$$SCF = 1 - \frac{Q_{fuel,week,smart} + CC \cdot Q_{elec,week,smart}}{Q_{fuel,week} + CC \cdot Q_{elec,week}}$$

(b) If $SCF \geq 0,07$, the value of smart shall be 1. In all other cases, the value of smart shall be 0.

6. Determination of the ambient correction term Q_{cor}

The ambient correction term is calculated as follows:

(a) for conventional water heaters using electricity:

$$Q_{cor} = -k \cdot (CC \cdot (Q_{elec} \cdot (1 - SCF \cdot smart) - Q_{ref}))$$

(b) for conventional water heaters using fuels:

$$Q_{\text{cor}} = -k \cdot (Q_{\text{fuel}} \cdot (1 - \text{SCF} \cdot \text{smart}) - Q_{\text{ref}})$$

(c) for heat pump water heaters:

$$Q_{\text{cor}} = -k \cdot 24h \cdot P_{\text{stby}}$$

Where:

the k-values are given in Table 8 for each load profile.

Table 8

k-values

	3SX	XXS	XS	S	M	L	XL	XXL
k	0,23	0,23	0,23	0,23	0,23	0,23	0,23	0,0

ANNEX IX¹⁶**Product compliance verification by market surveillance authorities**

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Contracting Parties shall apply the following procedure:

- (1) The Contracting Party authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 9.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all other equivalent water heater models, hot water storage tanks models, solar device models or package of water heater and solar device models shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the Contracting Party authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different equivalent models.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 9.
- (6) If the result referred to in point 5 is not achieved, the model and all other equivalent water heater models, hot water storage tanks models, solar device models or package of water heater and solar device models shall be considered not to comply with this Delegated Regulation.
- (7) The Contracting Party authorities shall provide all relevant information to the authorities

¹⁶ Annex IX is replaced in accordance with Article 10 and Annex X of Delegated Regulation (EU) 2017/254, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

of the other Contracting Parties and to the Secretariat without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The Contracting Party authorities shall use the measurement and calculation methods set out in Annex VII and Annex VIII.

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 9 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 9
Verification tolerances

Parameters	Verification tolerances
Daily electricity consumption, Q_{elec}	The determined value shall not exceed the declared value by more than 5 %.
Sound power level, L_{WA} , indoors and/or outdoors	The determined value shall not exceed the declared value by more than 2 dB.
Daily fuel consumption, Q_{fuel}	The determined value shall not exceed the declared value by more than 5 %.
Weekly fuel consumption with smart controls, $Q_{fuel,week,smart}$	The determined value shall not exceed the declared value by more than 5 %.
Weekly electricity consumption with smart controls, $Q_{elec,week,smart}$	The determined value shall not exceed the declared value by more than 5 %.
Weekly fuel consumption without smart controls, $Q_{fuel,week}$	The determined value shall not exceed the declared value by more than 5 %.
Weekly electricity consumption without smart controls, $Q_{elec,week}$	The determined value shall not exceed the declared value by more than 5 %.
Storage volume, V	The determined value shall not be lower than the declared value by more than 2 %.
Collector aperture area, A_{sol}	The determined value shall not be lower than the declared value by more than 2 %.
Pump power consumption, sol_{pump}	The determined value shall not exceed the declared value by more than 3 %.
Standby power consumption, $sol_{standby}$	The determined value shall not exceed the declared value by more than 5 %.
Standing loss, S	The determined value shall not exceed the declared value by more than 5 %.

ANNEX X¹⁷**Information to be provided in the case of sale, hire or hire-purchase through the internet**

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

- (a) “display mechanism” means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
- (b) “nested display” means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;
- (c) “tactile screen” means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
- (d) “alternative text” means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3 or in the case of a package where appropriate duly filled in based on the label and fiches provided by suppliers in accordance with Article 3, shall be shown on the display mechanism in proximity to the price of the product or package in accordance with the timetable set out in Article 3. If both a product and a package are shown, but with a price indicated only for the package, only the package label shall be displayed. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

- (a) be an arrow in the colour corresponding to the energy efficiency class of the product or package on the label;
- (b) indicate on the arrow the energy efficiency class of the product or package in white in a font size equivalent to that of the price; and
- (c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

- (a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product or package;
- (b) the image shall link to the label;

¹⁷ Annex IX is added in accordance with Article 10(4) of Delegated Regulation (EU) 518/2014, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

- (c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;**
 - (d) the label shall be displayed by pop up, new tab, new page or inset screen display;**
 - (e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;**
 - (f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;**
 - (g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product or package in a font size equivalent to that of the price.**
- (5) The appropriate product fiche made available by suppliers in accordance with Article 3 shall be shown on the display mechanism in proximity to the price of the product or package. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.**

DELEGATED REGULATION (EU) 811/2013 of 18 February 2013 supplementing Directive 2010/30/EU with regard to the energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device

Incorporated and adapted by Ministerial Council Decision 2014/02/MC-EnC of 23 September 2014 adapting certain Delegated Regulations on energy related products, and amended by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products.

*The adaptations made by Ministerial Council Decisions 2014/02/MC-EnC and 2018/03/MC-EnC are highlighted in **bold and blue**.*

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the energy labelling of, and the provision of supplementary product information on, space heaters and combination heaters with a rated heat output ≤ 70 kW, packages of space heater ≤ 70 kW, temperature control and solar device and packages of combination heater ≤ 70 kW, temperature control and solar device.
2. This Regulation shall not apply to:
 - (a) heaters specifically designed for using gaseous or liquid fuels predominantly produced from biomass;
 - (b) heaters using solid fuels;
 - (c) heaters within the scope of Directive 2010/75/EU of the European Parliament and of the Council
 - (d) heaters generating heat only for the purpose of providing hot drinking or sanitary water;
 - (e) heaters for heating and distributing gaseous heat transfer media such as vapour or air;
 - (f) cogeneration space heaters with a maximum electrical capacity of 50 kW or above.

Article 2

Definitions

In addition to the definitions set out in Article 2 of Directive 2010/30/EC, the following definitions shall apply for the purposes of this Regulation:

- (1) 'heater' means a space heater or combination heater;
- (2) 'space heater' means a device that
 - (a) provides heat to a water-based central heating system in order to reach and maintain at a desired level the indoor temperature of an enclosed space such as a building, a dwelling or a room; and
 - (b) is equipped with one or more heat generators;

- (3) 'combination heater' means a space heater that is designed to also provide heat to deliver hot drinking or sanitary water at given temperature levels, quantities and flow rates during given intervals, and is connected to an external supply of drinking or sanitary water;
- (4) 'water-based central heating system' means a system using water as a heat transfer medium to distribute centrally generated heat to heat emitters for the space heating of buildings, or parts thereof;
- (5) 'heat generator' means the part of a heater that generates the heat using one or more of the following processes:
- (a) combustion of fossil fuels and/or biomass fuels;
 - (b) use of the Joule effect in electric resistance heating elements;
 - (c) capture of ambient heat from an air source, water source or ground source, and/or waste heat;
- (6) 'rated heat output' (Prated) means the declared heat output of a heater when providing space heating and, if applicable, water heating at standard rating conditions, expressed in kW; for heat pump space heaters and heat pump combination heaters the standard rating conditions for establishing the rated heat output are the reference design conditions, as set out in Annex VII, Table 10;
- (7) 'standard rating conditions' means the operating conditions of heaters under average climate conditions for establishing the rated heat output, seasonal space heating energy efficiency, water heating energy efficiency and sound power level;
- (8) 'biomass' means the biodegradable fraction of products, waste and residues from biological origin from agriculture (including vegetal and animal substances), forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of industrial and municipal waste;
- (9) 'biomass fuel' means a gaseous or liquid fuel produced from biomass;
- (10) 'fossil fuel' means a gaseous or liquid fuel of fossil origin;
- (11) 'cogeneration space heater' means a space heater simultaneously generating heat and electricity in a single process;
- (12) 'temperature control' means the equipment that interfaces with the end-user regarding the values and timing of the desired indoor temperature, and communicates relevant data to an interface of the heater such as a central processing unit, thus helping to regulate the indoor temperature(s);
- (13) 'solar device' means a solar-only system, a solar collector, a solar hot water storage tank or a pump in the collector loop, which are placed on the market separately;
- (14) 'solar-only system' means a device that is equipped with one or more solar collectors and solar hot water storage tanks and possibly pumps in the collector loop and other parts, which is placed on the market as one unit and is not equipped with any heat generator except possibly one or more back-up immersion heaters;
- (15) 'solar collector' means a device designed to absorb global solar irradiance and to transfer the heat energy so produced to a fluid passing through it;
- (16) 'hot water storage tank' means a vessel for storing hot water for water and/or space heating purposes, including any additives, which is not equipped with any heat generator except possibly one or more back-up immersion heaters;
- (17) 'solar hot water storage tank' means a hot water storage tank storing heat energy produced by one or more solar collectors;

(18) 'back-up immersion heater' means a Joule effect electric resistance heater that is part of a hot water storage tank and generates heat only when the external heat source is disrupted (including during maintenance periods) or out of order, or that is part of a solar hot water storage tank and provides heat when the solar heat source is not sufficient to satisfy required comfort levels;

(19) 'package of space heater, temperature control and solar device' means a package offered to the end-user containing one or more space heaters combined with one or more temperature controls and/or one or more solar devices;

(20) 'package of combination heater, temperature control and solar device' means a package offered to the end-user containing one or more combination heaters combined with one or more temperature controls, and/or one or more solar devices;

(21) 'seasonal space heating energy efficiency' (η_s) means the ratio between the space heating demand for a designated heating season, supplied by a space heater, a combination heater, a package of space heater, temperature control and solar device or a package of combination heater, temperature control and solar device, and the annual energy consumption required to meet this demand, expressed in %;

(22) 'water heating energy efficiency' (η_{wh}) means the ratio between the useful energy in the drinking or sanitary water provided by a combination heater or a package of combination heater, temperature control and solar device, and the energy required for its generation, expressed in %;

(23) 'sound power level' (L_{WA}) means the A-weighted sound power level, indoors and/or outdoors, expressed in dB.

For the purposes of Annexes II to VIII, additional definitions are set out in Annex I.

Article 3

Responsibilities of suppliers and timetable

1. From **1 January 2018** suppliers placing space heaters on the market and/or putting them into service, including those integrated in packages of space heater, temperature control and solar device, shall ensure that:

(a) a printed label complying with the format and content of information set out in point 1.1 of Annex III is provided for each space heater conforming to the seasonal space heating energy efficiency classes set out in point 1 of Annex II, whereby: for heat pump space heaters, the printed label is provided at least in the packaging of the heat generator; for space heaters intended for use in packages of space heater, temperature control and solar device, a second label complying with the format and content of information set out in point 3 of Annex III is provided for each space heater;

(b) a product fiche, as set out in point 1 of Annex IV, is provided for each space heater, whereby: for heat pump space heaters, the product fiche is provided at least for the heat generator; for space heaters intended for use in packages of space heater, temperature control and solar device, a second fiche, as set out in point 5 of Annex IV, is provided;

(c) the technical documentation, as set out in point 1 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;

(d) any advertisement relating to a specific space heater model and containing energy-related or price

information includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model;

(e) any technical promotional material concerning a specific space heater model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model

(f) an electronic label in the format and containing the information set out in point 1.1 of Annex III is made available to dealers for each space heater model conforming to the seasonal space heating energy efficiency classes set out in point 1 of Annex II;

(g) an electronic product fiche as set out in point 1 of Annex IV is made available to dealers for each space heater model, whereby for heat pump space heaters models, the electronic product fiche is made available to dealers at least for the heat generator.¹

From 26 September 2019 a printed label complying with the format and content of information set out in point 1.2 of Annex III shall be provided for each space heater conforming to the seasonal space heating energy efficiency classes set out in point 1 of Annex II, whereby: for heat pump space heaters, the printed label shall be provided at least in the packaging of the heat generator.

From 1 January 2020 an electronic label in the format and containing the information set out in point 1.2 of Annex III shall be made available to dealers for each space heater model conforming to the seasonal space heating energy efficiency classes set out in point 1 of Annex II.²

2. From **1 January 2018** suppliers placing combination heaters on the market and/or putting them into service, including those integrated in packages of combination heater, temperature control and solar device, shall ensure that:

(a) a printed label complying with the format and content of information set out in point 2.1 of Annex III is provided for each combination heater conforming to the seasonal space heating energy efficiency classes and water heating energy efficiency classes set out in points 1 and 2 of Annex II, whereby: for heat pump combination heaters, the printed label is provided at least in the packaging of the heat generator; for combination heaters intended for use in packages of combination heater, temperature control and solar device, a second label complying with the format and content of information set out in point 4 of Annex III is provided for each combination heater;

(b) a product fiche, as set out in point 2 of Annex IV, is provided for each combination heater, whereby: for heat pump combination heaters, the product fiche is provided at least for the heat generator; for combination heaters intended for use in packages of combination heater, temperature control and solar device, a second fiche, as set out in point 6 of Annex IV, is provided;

(c) the technical documentation, as set out in point 2 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;

(d) any advertisement relating to a specific combination heater model and containing energy-related or price information includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model;

(e) any technical promotional material concerning a specific combination heater model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class and

¹ Article 3, paragraph 1, points (f) and (g) are added in accordance with Article 9(1) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC**

² Added in accordance with Article 9(1) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC**

water heating energy efficiency class under average climate conditions for that model

(f) an electronic label in the format and containing the information set out in point 2.1 of Annex III is made available to dealers for each combination heater model conforming to the seasonal space heating energy efficiency classes and water heating energy efficiency classes set out in points 1 and 2 of Annex II;

(g) an electronic product fiche as set out in point 2 of Annex IV is made available to dealers for each combination heater model, whereby for heat pump combination heaters models, the electronic product fiche is made available to dealers at least for the heat generator.³

From 26 September 2019 a printed label complying with the format and content of information set out in point 2.2 of Annex III shall be provided for each combination heater conforming to the seasonal space heating energy efficiency classes and water heating energy efficiency classes set out in points 1 and 2 of Annex II, whereby: for heat pump combination heaters, the printed label shall be provided at least in the packaging of the heat generator.

From 1 January 2020 an electronic label in the format and containing the information set out in point 2.2 of Annex III shall be made available to dealers for each combination heater model conforming to the seasonal space heating energy efficiency classes and water heating energy efficiency classes set out in points 1 and 2 of Annex II.⁴

3. From **1 January 2018** suppliers placing temperature controls on the market and/or putting them into service shall ensure that:

(a) a product fiche, as set out in point 3 of Annex IV, is provided;

(b) the technical documentation, as set out in point 3 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;

(c) an electronic product fiche, as set out in point 3 of Annex IV, is made available to dealers for each temperature control model.⁵

4. From **1 January 2018** suppliers placing solar devices on the market and/or putting them into service shall ensure that:

(a) a product fiche, as set out in point 4 of Annex IV, is provided;

(b) the technical documentation, as set out in point 4 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;

(c) an electronic product fiche, as set out in point 4 of Annex IV, is made available to dealers for each solar device model.⁶

5. From **1 January 2018** suppliers placing packages of space heater, temperature control and solar device on the market and/or putting them into service shall ensure that:

³ Article 3, paragraph 2, points (f) and (g) are added in accordance with Article 9(1) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-Enc**

⁴ Added in accordance with Article 9(1) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-Enc**

⁵ Article 3, paragraph 3, point (c) is added in accordance with Article 9(1) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-Enc**

⁶ Article 3, paragraph 3, point (c) is added in accordance with Article 9(1) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-Enc**

(a) a printed label complying with the format and content of information set out in point 3 of Annex III is provided for each package of space heater, temperature control and solar device conforming to the seasonal space heating energy efficiency classes set out in point 1 of Annex II;

(b) a product fiche, as set out in point 5 of Annex IV, is provided for each package of space heater, temperature control and solar device;

(c) the technical documentation, as set out in point 5 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;

(d) any advertisement relating to a specific package of space heater, temperature control and solar device model and containing energy-related or price information includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model;

(e) any technical promotional material concerning a specific package of space heater, temperature control and solar device model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model;

(f) an electronic label in the format and containing the information set out in point 3 of Annex III is made available to dealers for each model comprising a package of space heater, temperature control and solar device conforming to the seasonal space heating energy efficiency classes set out in point 1 of Annex II;

(g) an electronic product fiche as set out in point 5 of Annex IV is made available to dealers for each model comprising a package of space heater, temperature control and solar device.⁷

6. From **1 January 2018** suppliers placing packages of combination heater, temperature control and solar device on the market and/or putting them into service shall ensure that:

(a) a printed label complying with the format and content of information set out in point 4 of Annex III is provided for each package of combination heater, temperature control and solar device conforming to the seasonal space heating energy efficiency classes and water heating energy efficiency classes set out in points 1 and 2 of Annex II;

(b) a product fiche, as set out in point 6 of Annex IV, is provided for each package of combination heater, temperature control and solar device;

(c) the technical documentation, as set out in point 6 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;

(d) any advertisement relating to a specific package of combination heater, temperature control and solar device model and containing energy-related or price information includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model;

(e) any technical promotional material concerning a specific package of combination heater, temperature control and solar device model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model;

⁷ Article 3, paragraph 5, points (f) and (g) are added in accordance with Article 9(1) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-Enc**

(f) an electronic label in the format and containing the information set out in point 4 of Annex III is made available to dealers for each model comprising a package of combination heater, temperature control and solar device conforming to the seasonal space heating energy efficiency classes and water heating energy efficiency classes set out in points 1 and 2 of Annex II;

(g) an electronic product fiche as set out in point 6 of Annex IV is made available to dealers for each model comprising a package of combination heater, temperature control and solar device.⁸

Article 4

Responsibilities of dealers

1. Dealers of space heaters shall ensure that:

(a) each space heater, at the point of sale, bears the label provided by suppliers in accordance with Article 3(1), as set out in point 1 of Annex III, on the outside of the front of the appliance, in such a way as to be clearly visible;

(b) space heaters offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the space heater displayed, are marketed with the information provided by the suppliers in accordance with point 1 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex IX shall apply;⁹

(c) any advertisement relating to a specific space heater model and containing energy-related or price information includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model;

(d) any technical promotional material concerning a specific space heater model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model.

2. Dealers of combination heaters shall ensure that:

(a) each combination heater, at the point of sale, bears the label provided by suppliers in accordance with Article 3(2), as set out in point 2 of Annex III, on the outside of the front of the appliance, in such a way as to be clearly visible;

(b) combination heaters offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the combination heater displayed, are marketed with the information provided by the suppliers in accordance with point 2 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex IX shall apply;¹⁰

(c) any advertisement relating to a specific combination heater model and containing energy-related or price information includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model;

⁸ Article 3, paragraph 6, points (f) and (g) are added in accordance with Article 9(1) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC**

⁹ Article 4, paragraph 1, point (b) is replaced in accordance with Article 9(2) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC**

¹⁰ Article 4, paragraph 2, point (b) is replaced in accordance with Article 9(2) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC**

(d) any technical promotional material concerning a specific combination heater model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model.

3. Dealers of packages of space heater, temperature control and solar device shall ensure, based on the label and fiches provided by suppliers in accordance with Article 3(1), (3), (4) and (5), that:

(a) any offer for a specific package includes the seasonal space heating energy efficiency and the seasonal space heating energy efficiency class for that package under average, colder or warmer climate conditions, as applicable, by displaying with the package the label set out in point 3 of Annex III and providing the fiche set out in point 5 of Annex IV, duly filled in according to the characteristics of that package;

(b) packages of space heater, temperature control and solar device offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the package of space heater, temperature control and solar device displayed, are marketed with the information provided in accordance with point 3 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex IX shall apply;¹¹

(c) any advertisement relating to a specific package of space heater, temperature control and solar device model and containing energy-related or price information includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model;

(d) any technical promotional material concerning a specific package of space heater, temperature control and solar device model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model.

4. Dealers of packages of combination heater, temperature control and solar device shall ensure, based on the label and fiches provided by suppliers in accordance with Article 3(2), (3), (4) and (6), that:

(a) any offer for a specific package of combination heater, temperature control and solar device includes the seasonal space heating energy efficiency, the water heating energy efficiency, the seasonal space heating energy efficiency class and the water heating energy efficiency class for that package under average, colder or warmer climate conditions, as applicable, by displaying with the package the label set out in point 4 of Annex III and providing the fiche set out in point 6 of Annex IV, duly filled in according to the characteristics of that package;

(b) packages of combination heater, temperature control and solar device offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the package of combination heater, temperature control and solar device displayed, are marketed with the information provided in accordance with point 4 of Annex VI, except where the offer is made through the internet, in which case the provisions in Annex IX shall apply;¹²

(c) any advertisement relating to a specific package of combination heater, temperature control and solar device model and containing energy-related or price information includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model;

(d) any technical promotional material concerning a specific package of combination heater, temperature control and solar device model and describing its specific technical parameters includes a reference to the

¹¹ Article 4, paragraph 3, point (b) is replaced in accordance with Article 9(2) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC**

¹² Article 4, paragraph 4, point (b) is replaced in accordance with Article 9(2) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC**

seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model.

Article 5

Measurement and calculation methods

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation methods which take into account the recognised state-of-the-art measurement and calculation methods, as set out in Annex VII.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure set out in Annex VIII when assessing the conformity of the declared seasonal space heating energy efficiency class, water heating energy efficiency class, seasonal space heating energy efficiency, water heating energy efficiency and sound power level of heaters.

Article 7

Review

<...>¹³

Article 8

Entry into force and application

This Regulation shall apply from 1 January 2016¹⁴.

The Secretariat shall monitor and review the implementation of the Delegated Regulations referred to in Article 1 in the Contracting Parties. Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by these Delegated Regulations, in the next year of the deadline for the overall implementation¹⁵.

This Decision (2014/02/MC-EnC) enters into force upon its adoption (23 September 2014) and it is addressed to the Contracting Parties¹⁶.

¹³ Not applicable

¹⁴ The text displayed here corresponds to Article 2(2) of Decision 2014/02/MC-EnC

¹⁵ The text displayed here corresponds to Article 2(3) of Decision 2014/02/MC-EnC

¹⁶ The text displayed here corresponds to Article 2(1) of Decision 2014/02/MC-EnC

ANNEX I

Definitions applicable for Annexes II to VIII

For the purposes of Annexes II to VIII the following definitions shall apply:

Definitions related to heaters:

- (1) 'boiler space heater', for the purposes of Figures 1 to 4 in Annex IV referred to as 'boiler', means a space heater that generates heat using the combustion of fossil fuels and/or biomass fuels, and/or using the Joule effect in electric resistance heating elements;
- (2) 'boiler combination heater', for the purposes of Figures 1 to 4 in Annex IV referred to as 'boiler', means a boiler space heater that is designed to also provide heat to deliver hot drinking or sanitary water at given temperature levels, quantities and flow rates during given intervals, and is connected to an external supply of drinking or sanitary water;
- (3) 'heat pump space heater', for the purposes of Figures 1 and 3 in Annex IV referred to as 'heat pump', means a space heater using ambient heat from an air source, water source or ground source, and/or waste heat for heat generation; a heat pump space heater may be equipped with one or more supplementary heaters using the Joule effect in electric resistance heating elements or the combustion of fossil and/or biomass fuels;
- (4) 'heat pump combination heater', for the purposes of Figures 1 and 3 in Annex IV referred to as 'heat pump', means a heat pump space heater that is designed to also provide heat to deliver hot drinking or sanitary water at given temperature levels, quantities and flow rates during given intervals, and is connected to an external supply of drinking or sanitary water;
- (5) 'supplementary heater' means a non-preferential heater that generates heat in cases where the heat demand is greater than the rated heat output of the preferential heater;
- (6) 'rated heat output of supplementary heater' (P_{sup}) means the declared heat output of the supplementary heater when providing space heating and, if applicable, water heating at standard rating conditions, expressed in kW; if the supplementary heater is a heat pump space heater or heat pump combination heater, the standard rating condition for establishing the rated heat output of supplementary heater is the outdoor temperature $T_j = + 7 \text{ }^\circ\text{C}$;
- (7) 'outdoor temperature' (T_j) means the dry bulb outdoor air temperature, expressed in degrees Celsius; the relative humidity may be indicated by a corresponding wet bulb temperature;
- (8) 'annual energy consumption' (Q_{HE}) means the annual energy consumption of a heater required for space heating to meet the reference annual heating demand for a designated heating season, expressed in kWh in terms of the final energy and/or in GJ in terms of GCV;
- (9) 'standby mode' means a condition where the heater is connected to the mains power source, depends on energy input from the mains power source to work as intended and provides only the following functions, which may persist for an indefinite time: reactivation function, or reactivation function and only an indication of enabled reactivation function, and/or information or status display;
- (10) 'standby mode power consumption' (P_{SB}) means the power consumption of a heater in standby mode, expressed in kW;

(11) 'conversion coefficient' (CC) means a coefficient reflecting the estimated 40 % average EU generation efficiency referred to in Directive 2012/27/EU of the European Parliament and of the Council ⁽¹⁾; the value of the conversion coefficient is $CC = 2,5$;

(12) 'gross calorific value' (GCV) means the total amount of heat released by a unit quantity of fuel when it is burned completely with oxygen and when the products of combustion are returned to ambient temperature; this quantity includes the condensation heat of any water vapour contained in the fuel and of the water vapour formed by the combustion of any hydrogen contained in the fuel;

Definitions related to boiler space heaters, boiler combination heaters and cogeneration space heaters:

(13) 'seasonal space heating energy efficiency in active mode' (η_{son}) means

- for fuel boiler space heaters and fuel boiler combination heaters, a weighted average of the useful efficiency at rated heat output and the useful efficiency at 30 % of the rated heat output, expressed in %;
- for electric boiler space heaters and electric boiler combination heaters, the useful efficiency at rated heat output, expressed in %;
- for cogeneration space heaters not equipped with supplementary heaters, the useful efficiency at rated heat output, expressed in %;
- for cogeneration space heaters equipped with supplementary heaters, a weighted average of the useful efficiency at rated heat output with supplementary heater disabled, and the useful efficiency at rated heat output with supplementary heater enabled, expressed in %;

(14) 'useful efficiency' (η) means the ratio of the useful heat output and the total energy input of a boiler space heater, boiler combination heater or cogeneration space heater, expressed in %, whereby the total energy input is expressed in terms of GCV and/or in terms of final energy multiplied by CC ;

(15) 'useful heat output' (P) means the heat output of a boiler space heater, boiler combination heater or cogeneration space heater transmitted to the heat carrier, expressed in kW;

(16) 'electrical efficiency' (η_{el}) means the ratio of the electricity output and the total energy input of a cogeneration space heater, expressed in %, whereby the total energy input is expressed in terms of GCV and/or in terms of final energy multiplied by CC ;

(17) 'ignition burner power consumption' (P_{ign}) means the power consumption of a burner intended to ignite the main burner, expressed in W in terms of GCV ;

(18) 'condensing boiler' means a boiler space heater or boiler combination heater in which, under normal operating conditions and at given operating water temperatures, the water vapour in the combustion products is partially condensed, in order to make use of the latent heat of this water vapour for heating purposes;

(19) 'auxiliary electricity consumption' means the annual electricity required for the designated operation of a boiler space heater, boiler combination heater or cogeneration space heater, calculated from the electric power consumption at full load (el_{max}), at part load (el_{min}), in standby mode and default operating hours at each mode, expressed in kWh in terms of final energy;

(20) 'standby heat loss' (P_{stby}) means the heat loss of a boiler space heater, boiler combination heater or cogeneration space heater in operating modes without heat demand, expressed in kW;

Definitions related to heat pump space heaters and heat pump combination heaters:

- (21) 'rated coefficient of performance' (COP_{rated}) or 'rated primary energy ratio' (PER_{rated}) means the declared heat capacity, expressed in kW, divided by the energy input, expressed in kW in terms of GCV and/or in kW in terms of final energy multiplied by CC, for heating provided at standard rating conditions;
- (22) 'reference design conditions' means the combination of the reference design temperature, the maximum bivalent temperature and the maximum operation limit temperature, as set out in Annex VII, Table 10;
- (23) 'reference design temperature' ($T_{designh}$) means the outdoor temperature, expressed in degrees Celsius, as set out in Annex VII, Table 10, at which the part load ratio is equal to 1;
- (24) 'part load ratio' ($pl(T_j)$) means the outdoor temperature minus 16 °C divided by the reference design temperature minus 16 °C;
- (25) 'heating season' means a set of operating conditions for average, colder and warmer climate conditions, describing per bin the combination of outdoor temperatures and the number of hours these temperatures occur per season;
- (26) 'bin' (bin_j) means a combination of an outdoor temperature and bin hours, as set out in Annex VII, Table 12;
- (27) 'bin hours' (H_j) means the hours per heating season, expressed in hours per year, at which an outdoor temperature occurs for each bin, as set out in Annex VII, Table 12;
- (28) 'part load for heating' ($Ph(T_j)$) means the heating load at a specific outdoor temperature, calculated as the design load multiplied by the part load ratio and expressed in kW;
- (29) 'seasonal coefficient of performance' ($SCOP$) or 'seasonal primary energy ratio' ($SPER$) means the overall coefficient of performance of a heat pump space heater or heat pump combination heater using electricity or the overall primary energy ratio of a heat pump space heater or heat pump combination heater using fuels, representative of the designated heating season, calculated as the reference annual heating demand divided by the annual energy consumption;
- (30) 'reference annual heating demand' (Q_{Hr}) means the reference heating demand for a designated heating season, to be used as the basis for calculating $SCOP$ or $SPER$ and calculated as the product of the design load for heating and the annual equivalent active mode hours, expressed in kWh;
- (31) 'annual equivalent active mode hours' (H_{HE}) means the assumed annual number of hours a heat pump space heater or heat pump combination heater has to provide the design load for heating to satisfy the reference annual heating demand, expressed in h;
- (32) 'active mode coefficient of performance' ($SCOP_{on}$) or 'active mode primary energy ratio' ($SPER_{on}$) means the average coefficient of performance of the heat pump space heater or heat pump combination heater using electricity in active mode or the average primary energy ratio of the heat pump space heater or heat pump combination heater using fuels in active mode for the designated heating season;
- (33) 'supplementary capacity for heating' ($sup(T_j)$) means the rated heat output P_{sup} of a supplementary heater that supplements the declared capacity for heating to meet the part load for heating, if the declared capacity for heating is less than the part load for heating, expressed in kW;
- (34) 'bin-specific coefficient of performance' ($COP_{bin}(T_j)$) or 'bin-specific primary energy ratio' ($PER_{bin}(T_j)$) means the coefficient of performance of the heat pump space heater or heat pump combination heater using electricity or primary energy ratio of the heat pump space heater or heat pump combination heater

using fuel specific for every bin in a season, derived from the part load for heating, declared capacity for heating and declared coefficient of performance for specified bins and calculated for other bins by interpolation or extrapolation, corrected where necessary by the degradation coefficient;

(35) 'declared capacity for heating' ($P_{dh}(T_j)$) means the heating capacity a heat pump space heater or heat pump combination heater is able to deliver, for an outdoor temperature, expressed in kW;

(36) 'capacity control' means the ability of a heat pump space heater or heat pump combination heater to change its capacity by changing the volumetric flow rate of at least one of the fluids needed to operate the refrigeration cycle, to be indicated as 'fixed' if the volumetric flow rate cannot be changed or 'variable' if the volumetric flow rate is changed or varied in series of two or more steps;

(37) 'design load for heating' ($P_{designh}$) means the rated heat output (P_{rated}) of a heat pump space heater or heat pump combination heater at the reference design temperature, whereby the design load for heating is equal to the part load for heating with outdoor temperature equal to reference design temperature, expressed in kW;

(38) 'declared coefficient of performance' ($COP_d(T_j)$) or 'declared primary energy ratio' ($PER_d(T_j)$) means the coefficient of performance or primary energy ratio at a limited number of specified bins;

(39) 'bivalent temperature' (T_{biv}) means the outdoor temperature declared by the supplier for heating at which the declared capacity for heating equals the part load for heating and below which the declared capacity for heating requires supplementary capacity for heating to meet the part load for heating, expressed in degrees Celsius;

(40) 'operation limit temperature' (TOL) means the outdoor temperature declared by the supplier for heating, below which the air-to-water heat pump space heater or air-to-water heat pump combination heater will not be able to deliver any heating capacity and the declared capacity for heating is equal to zero, expressed in degrees Celsius;

(41) 'heating water operation limit temperature' ($WTOL$) means the outlet water temperature declared by the supplier for heating, above which the heat pump space heater or heat pump combination heater will not be able to deliver any heating capacity and the declared capacity heating is equal to zero, expressed in degrees Celsius;

(42) 'cycling interval capacity for heating' (P_{cyc}) means the integrated heating capacity over the cycling test interval for heating, expressed in kW;

(43) 'cycling interval efficiency' (COP_{cyc} or PER_{cyc}) means the average coefficient of performance or average primary energy ratio over the cycling test interval, calculated as the integrated heating capacity over the interval, expressed in kWh, divided by the integrated energy input over that same interval, expressed in kWh in terms of GCV and/or in kWh in terms of final energy multiplied by CC;

(44) 'degradation coefficient' (C_{dh}) means the measure of efficiency loss due to cycling of a heat pump space heater or heat pump combination heater; if C_{dh} is not determined by measurement then the default degradation coefficient is $C_{dh} = 0,9$;

(45) 'active mode' means the condition corresponding to the hours with a heating load for the enclosed space and activated heating function; this condition may involve cycling of the heat pump space heater or heat pump combination heater to reach or maintain a required indoor air temperature;

(46) 'off mode' means a condition in which the heat pump space heater or heat pump combination heater is connected to the mains power source and is not providing any function, including conditions

providing only an indication of off mode condition and conditions providing only functionalities intended to ensure electromagnetic compatibility pursuant to Directive 2004/108/EC of the European Parliament and of the Council ⁽²⁾;

(47) 'thermostat-off mode' means the condition corresponding to the hours with no heating load and activated heating function, whereby the heating function is switched on but the heat pump space heater or heat pump combination heater is not operational; cycling in active mode is not considered as thermostat-off mode;

(48) 'crankcase heater mode' means the condition in which a heating device is activated to avoid the refrigerant migrating to the compressor so as to limit the refrigerant concentration in oil when the compressor is started;

(49) 'off mode power consumption' (P_{off}) means the power consumption of a heat pump space heater or heat pump combination heater in off mode, expressed in kW;

(50) 'thermostat-off mode power consumption' (P_{TO}) means the power consumption of the heat pump space heater or heat pump combination heater while in thermostat-off mode, expressed in kW;

(51) 'crankcase heater mode power consumption' (P_{ck}) means the power consumption of the heat pump space heater or heat pump combination heater while in crankcase heater mode, expressed in kW;

(52) 'low-temperature heat pump' means a heat pump space heater that is specifically designed for low-temperature application, and that cannot deliver heating water with an outlet temperature of 52 °C at an inlet dry (wet) bulb temperature of – 7 °C (– 8 °C) in the reference design conditions for average climate;

(53) 'low-temperature application' means an application where the heat pump space heater delivers its declared capacity for heating at an indoor heat exchanger outlet temperature of 35 °C;

(54) 'medium-temperature application' means an application where the heat pump space heater or heat pump combination heater delivers its declared capacity for heating at an indoor heat exchanger outlet temperature of 55 °C;

Definitions related to water heating in combination heaters:

(55) 'load profile' means a given sequence of water draw-offs, as specified in Annex VII, Table 15; each combination heater meets at least one load profile;

(56) 'water draw-off' means a given combination of useful water flow rate, useful water temperature, useful energy content and peak temperature, as specified in Annex VII, Table 15;

(57) 'useful water flow rate' (f) means the minimum flow rate, expressed in litres per minute, for which hot water is contributing to the reference energy, as specified in Annex VII, Table 15;

(58) 'useful water temperature' (T_m) means the water temperature, expressed in degrees Celsius, at which hot water starts contributing to the reference energy, as specified in Annex VII, Table 15;

(59) 'useful energy content' (Q_{tap}) means the energy content of hot water, expressed in kWh, provided at a temperature equal to, or above, the useful water temperature, and at water flow rates equal to, or above, the useful water flow rate, as specified in Annex VII, Table 15;

(60) 'energy content of hot water' means the product of the specific heat capacity of water, the average temperature difference between the hot water output and cold water input, and the total mass of the hot water delivered;

- (61) 'peak temperature' (T_p) means the minimum water temperature, expressed in degrees Celsius, to be achieved during water draw-off, as specified in Annex VII, Table 15;
- (62) 'reference energy' (Q_{ref}) means the sum of the useful energy content of water draw-offs, expressed in kWh, in a particular load profile, as specified in Annex VII, Table 15;
- (63) 'maximum load profile' means the load profile with the greatest reference energy that a combination heater is able to provide while fulfilling the temperature and flow rate conditions of that load profile;
- (64) 'declared load profile' means the load profile applied when determining water heating energy efficiency;
- (65) 'daily electricity consumption' (Q_{elec}) means the consumption of electricity for water heating over 24 consecutive hours under the declared load profile, expressed in kWh in terms of final energy;
- (66) 'daily fuel consumption' (Q_{fuel}) means the consumption of fuels for water heating over 24 consecutive hours under the declared load profile, expressed in kWh in terms of GCV and, for the purposes of point 5(f) in Annex VII, expressed in GJ in terms of GCV;
- (67) 'annual electricity consumption' (AEC) means the annual electricity consumption of a combination heater for water heating under the declared load profile and under given climate conditions, expressed in kWh in terms of final energy;
- (68) 'annual fuel consumption' (AFC) means the annual fossil fuel and/or biomass fuel consumption of a combination heater for water heating under the declared load profile and under given climate conditions, expressed in GJ in terms of GCV;

Definitions related to solar devices:

- (69) 'annual non-solar heat contribution' (Q_{nonsol}), means the annual contribution of electricity (expressed in kWh in terms of primary energy) and/or fuels (expressed in kWh in terms of GCV) to the useful heat output of a package of combination heater, temperature control and solar device, taking into account the annual amount of heat captured by the solar collector and the heat losses of the solar hot water storage tank;
- (70) 'collector aperture area' (A_{sol}), for the purposes of Figures 1 to 4 in Annex IV referred to as 'collector size', means the maximum projected area through which unconcentrated solar radiation enters the collector, expressed in m²;
- (71) 'collector efficiency' (η_{col}) means the efficiency of the solar collector at a temperature difference between the solar collector and the surrounding air of 40 K and a global solar irradiance of 1 000 W/ m², expressed in %;
- (72) 'standing loss' (S) means the heating power dissipated from a solar hot water storage tank at given water and ambient temperatures, expressed in W;
- (73) 'storage volume' (V), for the purposes of Figures 1 to 4 in Annex IV referred to as 'tank volume', means the rated volume of a solar hot water storage tank, expressed in litres or m³;
- (74) 'auxiliary electricity consumption' (Q_{aux}), for the purpose of Figure 5 in Annex IV referred to as 'auxiliary electricity', means the annual electricity consumption of a solar-only system that is due to the pump power consumption and the standby power consumption, expressed in kWh in terms of final energy;
- (75) 'pump power consumption' (*solpump*) means the rated electrical power consumption of the pump in the collector loop of a solar-only system, expressed in W;

(76) 'standby power consumption' (*solstandby*) means the rated electrical power consumption of a solar-only system when the pump and the heat generator are inactive, expressed in W;

Other definitions:

(77) 'average climate conditions', 'colder climate conditions' and 'warmer climate conditions' mean the temperature and global solar irradiance conditions characteristic for the cities of Strasbourg, Helsinki and Athens, respectively;

(78) 'model identifier' means the code, usually alphanumeric, which distinguishes a specific space heater, combination heater, temperature control, solar device, package of space heater, temperature control and solar device, or package of combination heater, temperature control and solar device model from other models with the same trade mark, supplier's name or dealer's name.

ANNEX II

Energy efficiency classes

1. SEASONAL SPACE HEATING ENERGY EFFICIENCY CLASSES

The seasonal space heating energy efficiency class of a heater, with the exception of low-temperature heat pumps and heat pump space heaters for low-temperature application, shall be determined on the basis of its seasonal space heating energy efficiency as set out in Table 1.

The seasonal space heating energy efficiency classes of a low-temperature heat pump and a heat pump space heater for low-temperature application shall be determined on the basis of its seasonal space heating energy efficiency as set out in Table 2.

The seasonal space heating energy efficiency of a heater shall be calculated in accordance with points 3 and 4 of Annex VII, for heat pump space heaters, heat pump combination heaters and low-temperature heat pumps under average climate conditions.

Table 1

Seasonal space heating energy efficiency classes of heaters, with the exception of low-temperature heat pumps and heat pump space heaters for low-temperature application

Seasonal space heating energy efficiency class	Seasonal space heating energy efficiency η_s in %
A ⁺⁺⁺	$\eta_s \geq 150$
A ⁺⁺	$125 \leq \eta_s < 150$
A ⁺	$98 \leq \eta_s < 125$
A	$90 \leq \eta_s < 98$
B	$82 \leq \eta_s < 90$
C	$75 \leq \eta_s < 82$
D	$36 \leq \eta_s < 75$
E	$34 \leq \eta_s < 36$
F	$30 \leq \eta_s < 34$
G	$\eta_s < 30$

Table 2

Seasonal space heating energy efficiency classes of low-temperature heat pumps and heat pump space heaters for low-temperature application

Seasonal space heating energy efficiency class	Seasonal space heating energy efficiency η_s in %
A ⁺⁺⁺	$\eta_s \geq 175$
A ⁺⁺	$150 \leq \eta_s < 175$
A ⁺	$123 \leq \eta_s < 150$
A	$115 \leq \eta_s < 123$
B	$107 \leq \eta_s < 115$
C	$00 \leq \eta_s < 107$
D	$61 \leq \eta_s < 100$
E	$59 \leq \eta_s < 61$
F	$55 \leq \eta_s < 59$
G	$\eta_s < 55$

2. WATER HEATING ENERGY EFFICIENCY CLASSES

The water heating energy efficiency class of a combination heater shall be determined on the basis of its water heating energy efficiency as set out in Table 3.

The water heating energy efficiency of a combination heater shall be calculated in accordance with point 5 of Annex VII.

Table 3

Water heating energy efficiency classes of combination heaters, categorised by declared load profiles, η_{wh} in %

	3XS	XXS	XS	S	M	L	XL	XXL
A⁺⁺⁺	$\eta_{wh} \geq 62$	$\eta_{wh} \geq 62$	$\eta_{wh} \geq 69$	$\eta_{wh} \geq 90$	$\eta_{wh} \geq 163$	$\eta_{wh} \geq 188$	$\eta_{wh} \geq 200$	$\eta_{wh} \geq 213$
A⁺	$53 \leq \eta_{wh} < 62$	$53 \leq \eta_{wh} < 62$	$61 \leq \eta_{wh} < 69$	$72 \leq \eta_{wh} < 90$	$130 \leq \eta_{wh} < 163$	$150 \leq \eta_{wh} < 188$	$160 \leq \eta_{wh} < 200$	$170 \leq \eta_{wh} < 213$
A⁺	$44 \leq \eta_{wh} < 53$	$44 \leq \eta_{wh} < 53$	$53 \leq \eta_{wh} < 61$	$55 \leq \eta_{wh} < 72$	$100 \leq \eta_{wh} < 130$	$115 \leq \eta_{wh} < 150$	$123 \leq \eta_{wh} < 160$	$131 \leq \eta_{wh} < 170$
A	$35 \leq \eta_{wh} < 44$	$35 \leq \eta_{wh} < 44$	$38 \leq \eta_{wh} < 53$	$38 \leq \eta_{wh} < 55$	$65 \leq \eta_{wh} < 100$	$75 \leq \eta_{wh} < 115$	$80 \leq \eta_{wh} < 123$	$85 \leq \eta_{wh} < 131$
B	$32 \leq \eta_{wh} < 35$	$32 \leq \eta_{wh} < 35$	$35 \leq \eta_{wh} < 38$	$35 \leq \eta_{wh} < 38$	$39 \leq \eta_{wh} < 65$	$50 \leq \eta_{wh} < 75$	$55 \leq \eta_{wh} < 80$	$60 \leq \eta_{wh} < 85$
C	$29 \leq \eta_{wh} < 32$	$29 \leq \eta_{wh} < 32$	$32 \leq \eta_{wh} < 35$	$32 \leq \eta_{wh} < 35$	$36 \leq \eta_{wh} < 39$	$37 \leq \eta_{wh} < 50$	$38 \leq \eta_{wh} < 55$	$40 \leq \eta_{wh} < 60$

D	$26 \leq \eta_{wh} < 29$	$26 \leq \eta_{wh} < 29$	$29 \leq \eta_{wh} < 32$	$29 \leq \eta_{wh} < 32$	$33 \leq \eta_{wh} < 36$	$34 \leq \eta_{wh} < 37$	$35 \leq \eta_{wh} < 38$	$36 \leq \eta_{wh} < 40$
E	$22 \leq \eta_{wh} < 26$	$23 \leq \eta_{wh} < 26$	$26 \leq \eta_{wh} < 29$	$26 \leq \eta_{wh} < 29$	$30 \leq \eta_{wh} < 33$	$30 \leq \eta_{wh} < 34$	$30 \leq \eta_{wh} < 35$	$32 \leq \eta_{wh} < 36$
F	$19 \leq \eta_{wh} < 22$	$20 \leq \eta_{wh} < 23$	$23 \leq \eta_{wh} < 26$	$23 \leq \eta_{wh} < 26$	$27 \leq \eta_{wh} < 30$	$27 \leq \eta_{wh} < 30$	$27 \leq \eta_{wh} < 30$	$28 \leq \eta_{wh} < 32$
G	$\eta_{wh} < 19$	$\eta_{wh} < 20$	$\eta_{wh} < 23$	$\eta_{wh} < 23$	$\eta_{wh} < 27$	$\eta_{wh} < 27$	$\eta_{wh} < 27$	$\eta_{wh} < 28$

3. ENERGY EFFICIENCY CLASSES OF SOLAR HOT WATER STORAGE TANKS, IF (PART OF) A SOLAR DEVICE

The energy efficiency class of a solar hot water storage tank, if (part of) a solar device, shall be determined on the basis of its standing loss as set out in Table 4.

Table 4

Energy efficiency classes of solar hot water storage tanks, if (part of) a solar device

Energy efficiency class Standing loss S in Watts, with storage volume V in litres

A⁺	$S < 5,5 + 3,16 \cdot V^{0,4}$
A	$5,5 + 3,16 \cdot V^{0,4} \leq S < 8,5 + 4,25 \cdot V^{0,4}$
B	$8,5 + 4,25 \cdot V^{0,4} \leq S < 12 + 5,93 \cdot V^{0,4}$
C	$12 + 5,93 \cdot V^{0,4} \leq S < 16,66 + 8,33 \cdot V^{0,4}$
D	$16,66 + 8,33 \cdot V^{0,4} \leq S < 21 + 10,33 \cdot V^{0,4}$
E	$21 + 10,33 \cdot V^{0,4} \leq S < 26 + 13,66 \cdot V^{0,4}$
F	$26 + 13,66 \cdot V^{0,4} \leq S < 31 + 16,66 \cdot V^{0,4}$
G	$S > 31 + 16,66 \cdot V^{0,4}$

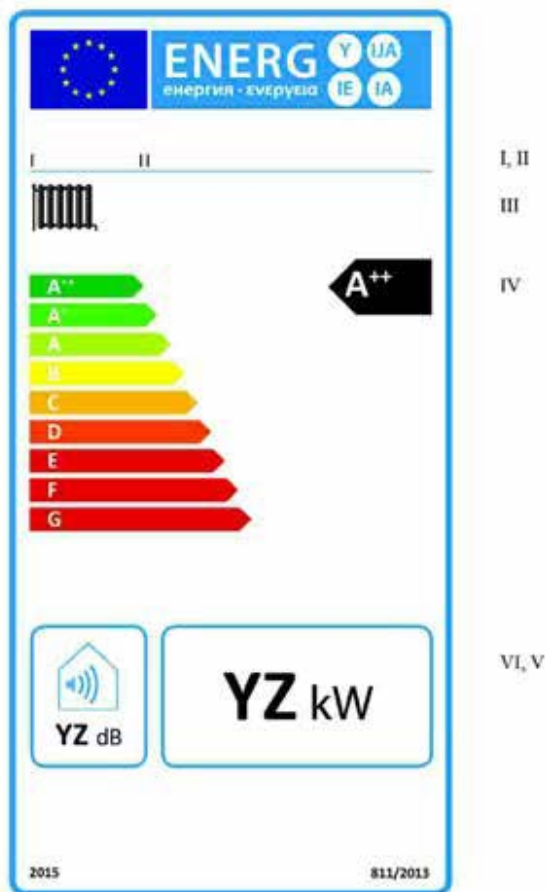
ANNEX III

The labels

1. SPACE HEATERS

1.1. Label 1

1.1.1. Boiler space heaters in seasonal space heating energy efficiency classes A⁺⁺ to G



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the space heating function;

IV. the seasonal space heating energy efficiency class, determined in accordance with point 1 of Annex II; the head of the arrow containing the seasonal space heating energy efficiency class of the boiler space

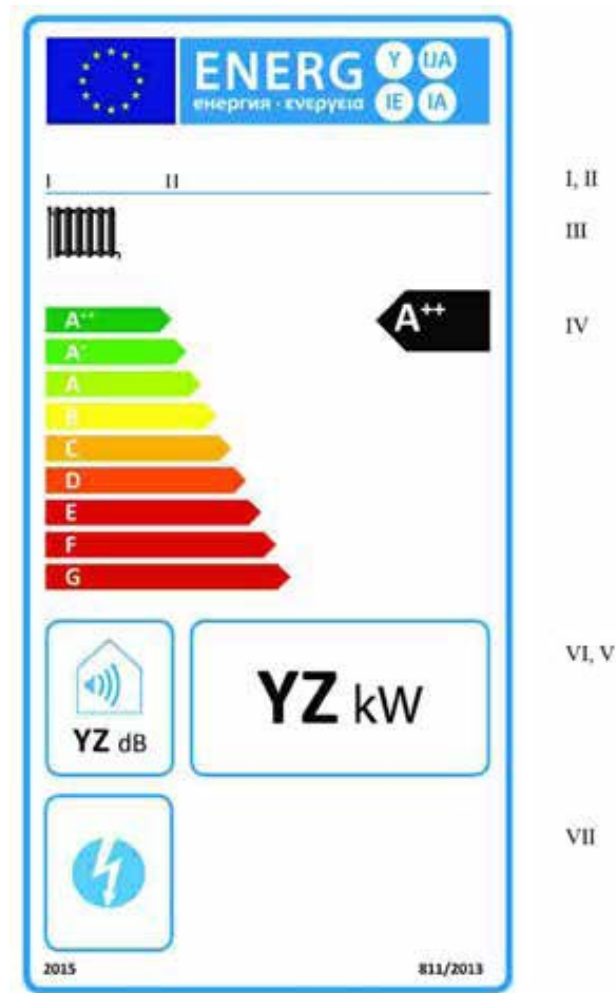
heater shall be placed at the same height as the head of the relevant energy efficiency class;

V. the rated heat output in kW, rounded to the nearest integer;

VI. the sound power level L_{WA} , indoors, in dB, rounded to the nearest integer.

(b) The design aspects of the label for boiler space heaters shall be in accordance with point 5 of this Annex.

1.1.2. Cogeneration space heaters in seasonal space heating energy efficiency classes A⁺⁺ to G



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the space heating function;

IV. the seasonal space heating energy efficiency class, determined in accordance with point 1 of Annex II; the head of the arrow containing the seasonal space heating energy efficiency class of the cogeneration space heater shall be placed at the same height as the head of the relevant energy efficiency class;

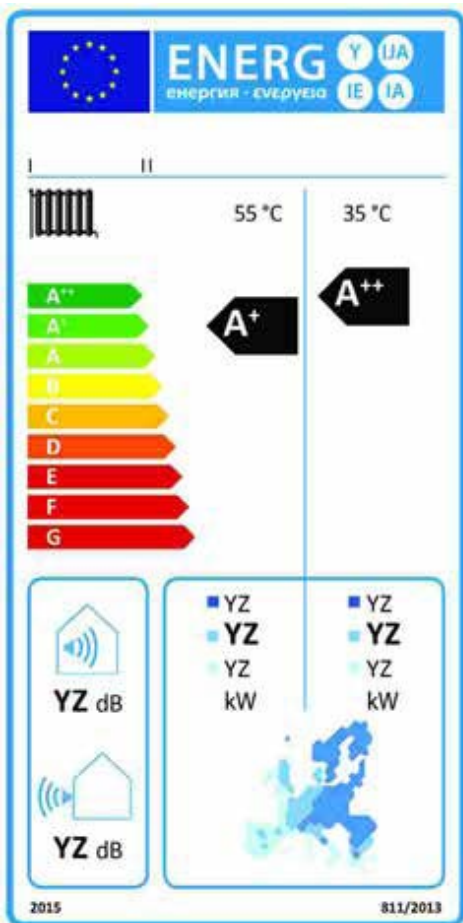
V. the rated heat output, including the rated heat output of any supplementary heater, in kW, rounded to the nearest integer;

VI. the sound power level L_{WA} , indoors, in dB, rounded to the nearest integer;

VII. the additional electricity generation function.

(b) The design aspects of the label for cogeneration space heaters shall be in accordance with point 6 of this Annex.

1.1.3. Heat pump space heaters, except low-temperature heat pumps, in seasonal space heating energy efficiency classes A++ to G



I, II

III

IV

VII, V

VI

(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the space heating function for medium- and low-temperature application, respectively;

IV. the seasonal space heating energy efficiency class under average climate conditions for medium- and low-temperature application, respectively, determined in accordance with point 1 of Annex II; the head of the arrow containing the seasonal space heating energy efficiency class of the heat pump space heater for medium- and low-temperature application, respectively, shall be placed at the same height as the head of the relevant energy efficiency class;

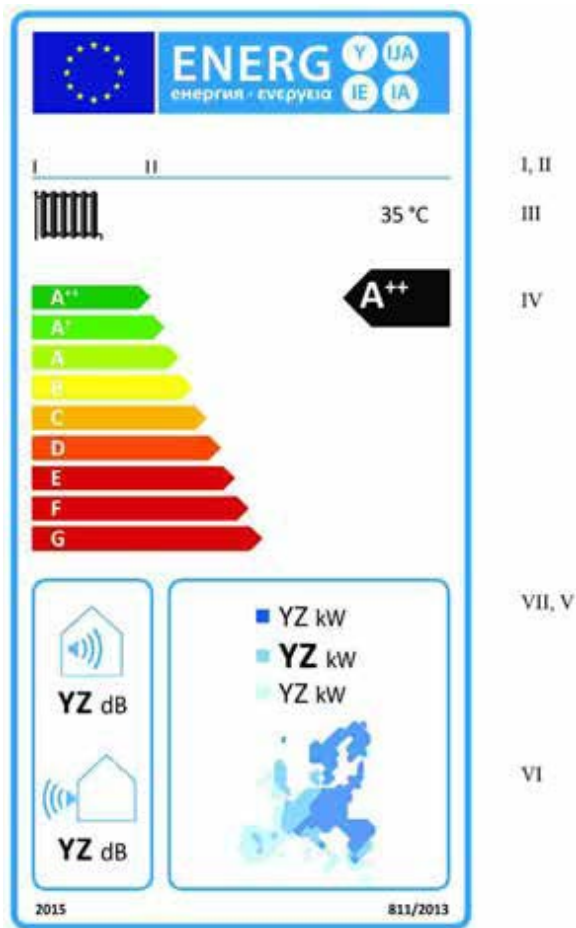
V. the rated heat output, including the rated heat output of any supplementary heater, in kW, under average, colder and warmer climate conditions for medium- and low-temperature application, respectively, rounded to the nearest integer;

VI. European temperature map displaying three indicative temperature zones;

VII. the sound power level L_{WA} , indoors (if applicable) and outdoors, in dB, rounded to the nearest integer.

(b) The design aspects of the label for heat pump space heaters shall be in accordance with point 7 of this Annex. By way of exception, where a model has been granted an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council (1), a copy of the EU Ecolabel may be added.

1.1.4. Low-temperature heat pumps in seasonal space heating energy efficiency classes A⁺⁺ to G



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the space heating function for low-temperature application;

IV. the seasonal space heating energy efficiency class under average climate conditions, determined in accordance with point 1 of Annex II; the head of the arrow containing the seasonal space heating energy efficiency class of the low-temperature heat pump shall be placed at the same height as the head of the relevant energy efficiency class;

V. the rated heat output, including the rated heat output of any supplementary heater, in kW, under average, colder and warmer climate conditions, rounded to the nearest integer;

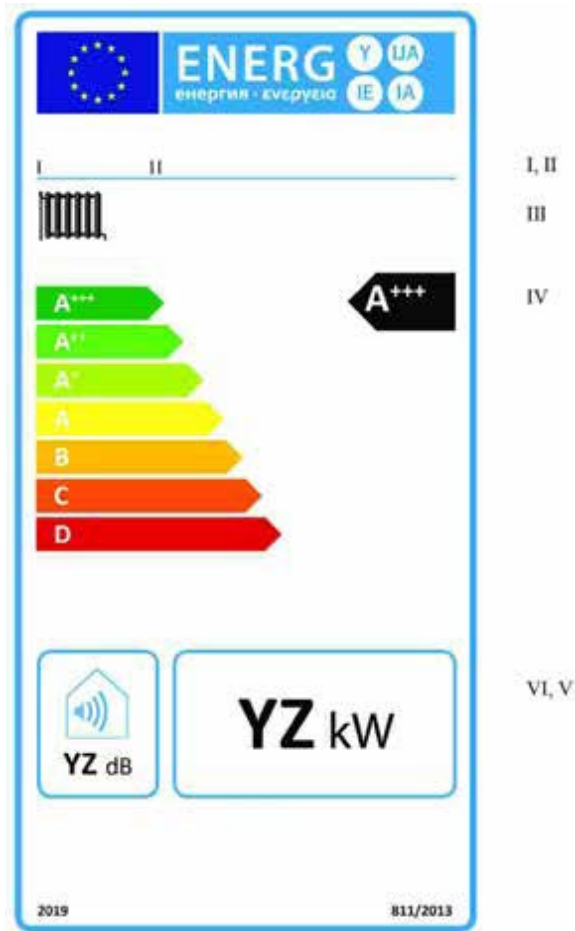
VI. European temperature map displaying three indicative temperature zones;

VII. the sound power level L_{WA} , indoors (if applicable) and outdoors, in dB, rounded to the nearest integer.

(b) The design aspects of the label for low-temperature heat pumps shall be in accordance with point 8 of this Annex. By way of exception, where a model has been granted an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU Ecolabel may be added.

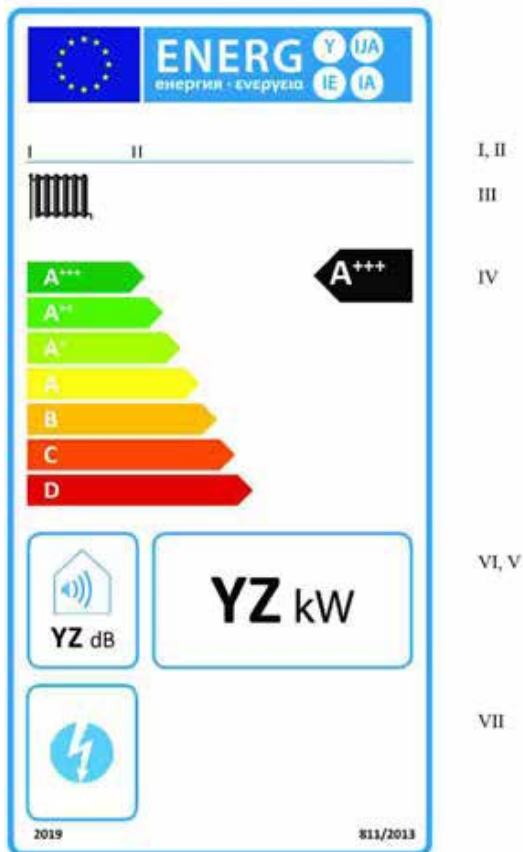
1.2. Label 2

1.2.1. Boiler space heaters in seasonal space heating energy efficiency classes A+++ to D



(a) The information listed in point 1.1.1(a) of this Annex shall be included in the label.

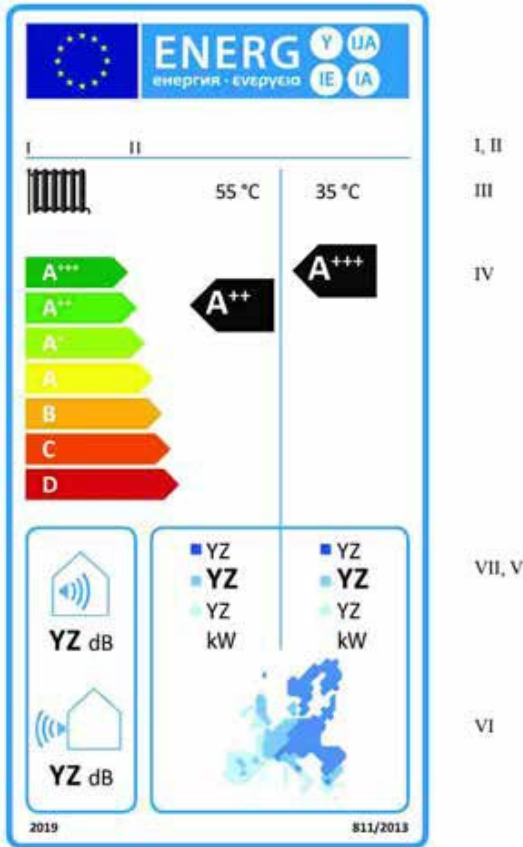
(b) The design aspects of the label for boiler space heaters shall be in accordance with point 5 of this Annex.

1.2.2. Cogeneration space heaters in seasonal space heating energy efficiency classes A⁺⁺⁺ to D

(a) The information listed in point 1.1.2(a) of this Annex shall be included in the label.

(b) The design aspects of the label for cogeneration space heaters shall be in accordance with point 6 of this Annex.

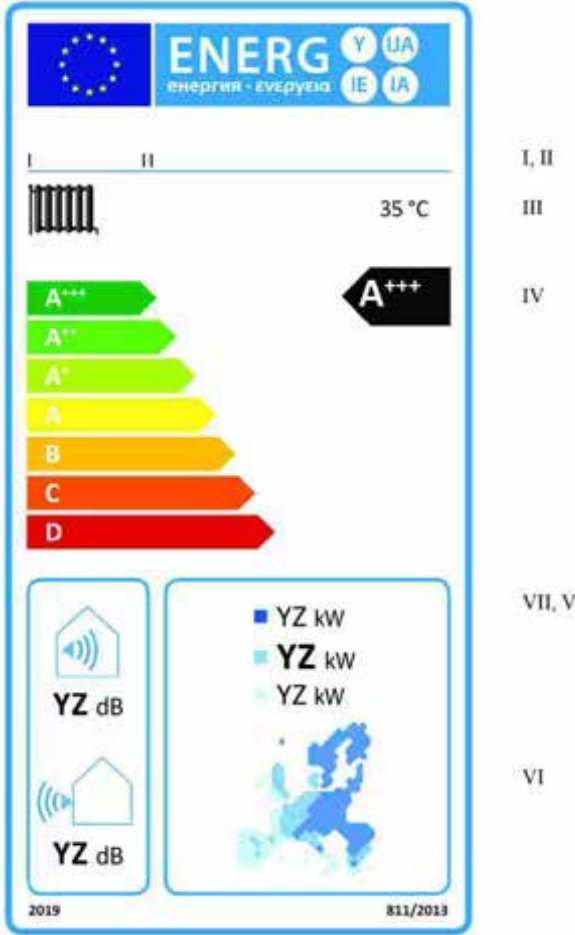
1.2.3. Heat pump space heaters, except low-temperature heat pumps, in seasonal space heating energy efficiency classes A⁺⁺⁺ to D



(a) The information listed in point 1.1.3(a) of this Annex shall be included in the label.

(b) The design aspects of the label for heat pump space heaters shall be in accordance with point 7 of this Annex.

1.2.4. Low-temperature heat pumps in seasonal space heating energy efficiency classes A+++ to D

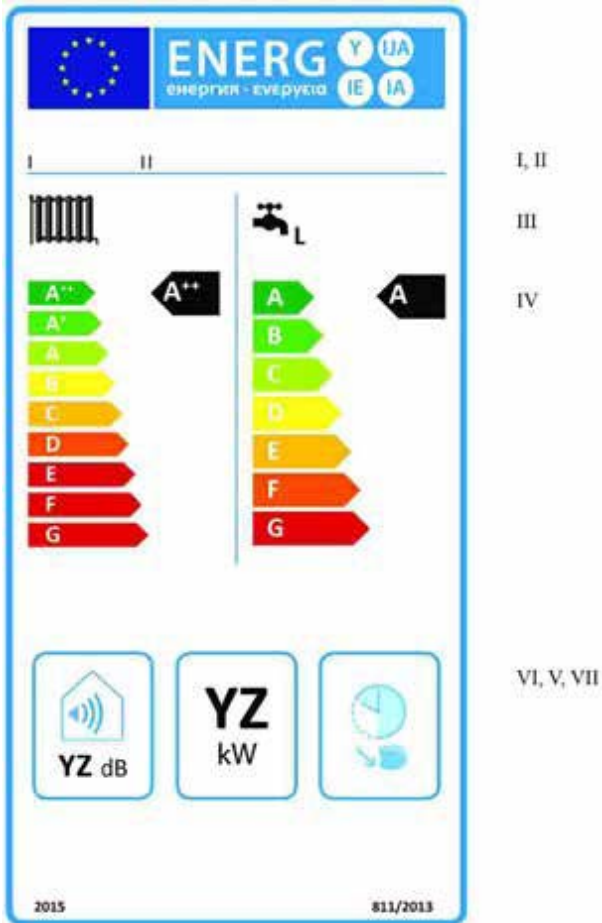


- (a) The information listed in point 1.1.4(a) of this Annex shall be included in the label.
- (b) The design aspects of the label for low-temperature heat pumps shall be in accordance with point 8 of this Annex.

2. COMBINATION HEATERS

2.1. Label 1

2.1.1 Boiler combination heaters in seasonal space heating energy efficiency classes A⁺⁺ to G and in water heating energy efficiency classes A to G



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the space heating function and the water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 15 of Annex II;

IV. the seasonal space heating energy efficiency class and the water heating energy efficiency class, determined in accordance with points 1 and 2 of Annex II; the head of the arrows containing the seasonal space heating energy efficiency class and water heating energy efficiency class of the boiler combination

heater shall be placed at the same height as the head of the relevant energy efficiency class;

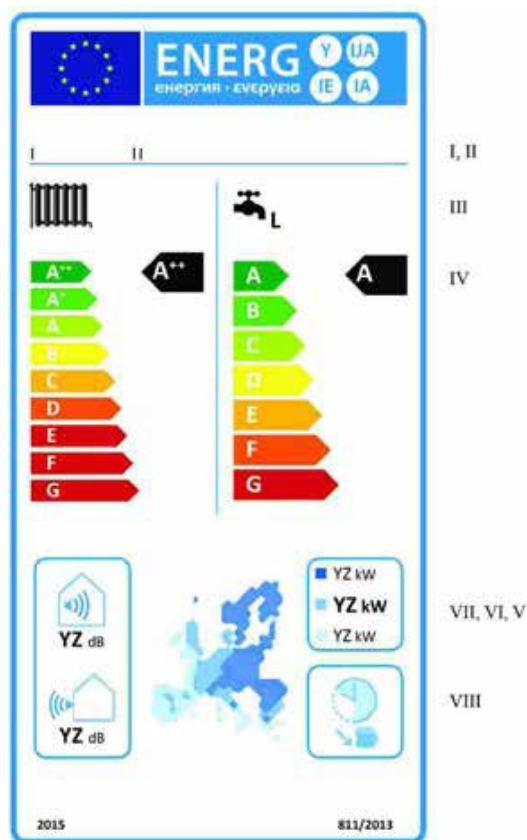
V. the rated heat output in kW, rounded to the nearest integer;

VI. the sound power level L_{WA} , indoors, in dB, rounded to the nearest integer.

VII. for boiler combination heaters able to work only during off-peak hours, the pictogram referred to in point 9(d)(11) of this Annex may be added.

(b) The design aspects of the label for boiler combination heaters shall be in accordance with point 9 of this Annex.

2.1.2. Heat pump combination heaters in seasonal space heating energy efficiency classes A++ to G and in water heating energy efficiency classes A to G



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

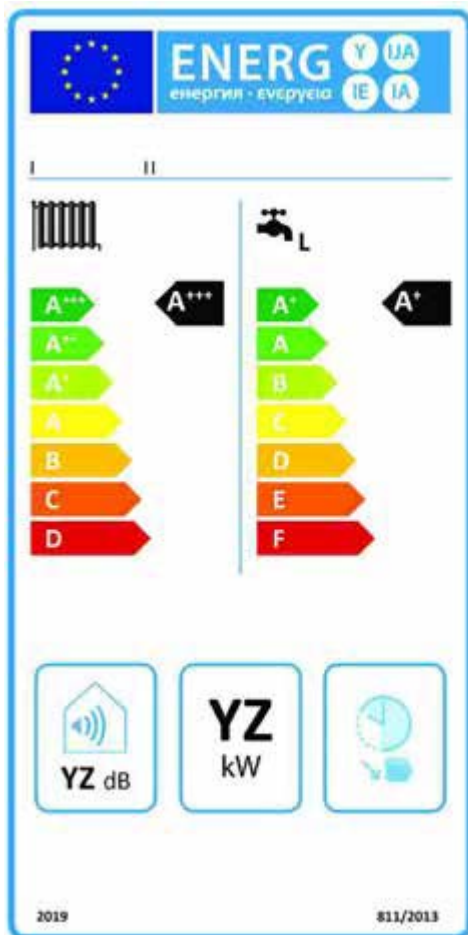
II. supplier's model identifier;

III. the space heating function for medium-temperature application and the water heating function, includ-

- ing the declared load profile expressed as the appropriate letter in accordance with Table 15 of Annex VII;
- IV. the seasonal space heating energy efficiency class under average climate conditions for medium-temperature application and the water heating energy efficiency class under average climate conditions, determined in accordance with points 1 and 2 of Annex II; the head of the arrows containing the seasonal space heating energy efficiency class and water heating energy efficiency class of the heat pump combination heater shall be placed at the same height as the head of the relevant energy efficiency class;
- V. the rated heat output, including the rated heat output of any supplementary heater, in kW, under average, colder and warmer climate conditions, rounded to the nearest integer;
- VI. European temperature map displaying three indicative temperature zones;
- VII. the sound power level L_{WA} , indoors (if applicable) and outdoors, in dB, rounded to the nearest integer;
- VIII. for heat pump combination heaters able to work only during off-peak hours, the pictogram referred to in point 10(d)(12) of this Annex may be added.
- (b) The design aspects of the label for heat pump combination heaters shall be in accordance with point 10 of this Annex.

2.2. Label 2

2.2.1. Boiler combination heaters in seasonal space heating energy efficiency classes A⁺⁺⁺ to D and in water heating energy efficiency classes A⁺ to F



I, II

III

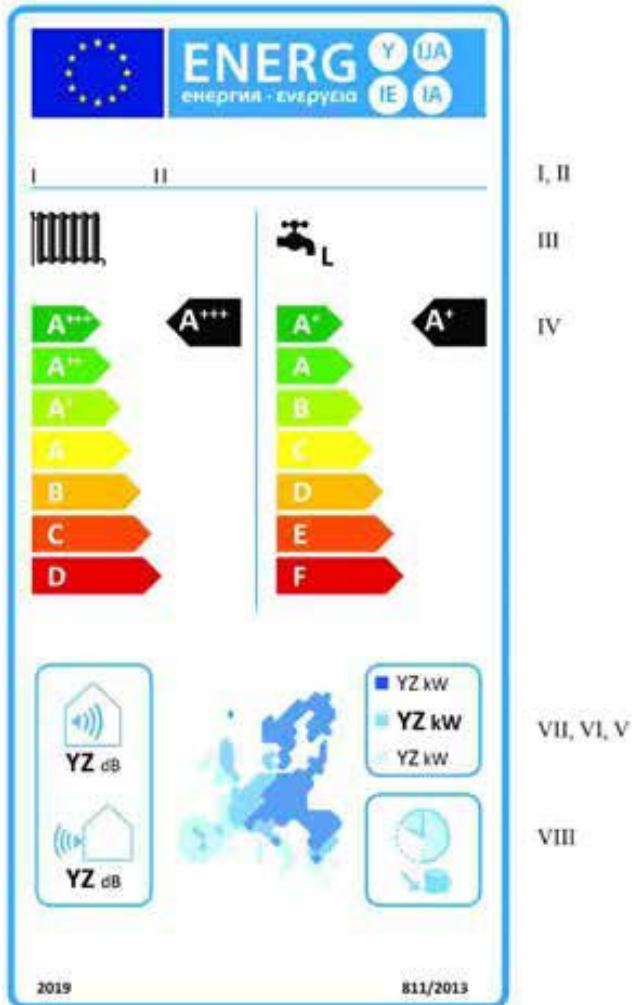
IV

VI, V, VII

(a) The information listed in point 2.1.1(a) of this Annex shall be included in the label.

(b) The design aspects of the label for boiler combination heaters shall be in accordance with point 9 of this Annex.

2.2.2. Heat pump combination heaters in seasonal space heating energy efficiency classes A+++ to D and in water heating energy efficiency classes A+ to F

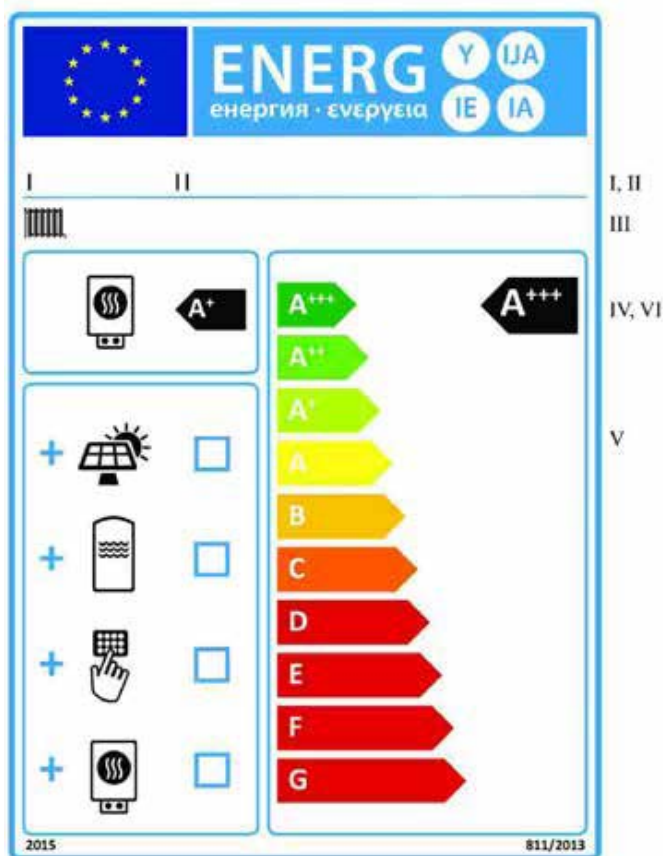


(a) The information listed in point 2.1.2(a) of this Annex shall be included in the label.

(b) The design aspects of the label for heat pump combination heaters shall be in accordance with point 10 of this Annex.

3. PACKAGES OF SPACE HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

Label for packages of space heater, temperature control and solar device in seasonal space heating energy efficiency classes A+++ to G



(a) The following information shall be included in the label:

I. dealer's and/or supplier's name or trade mark;

II. dealer's and/or supplier's model(s) identifier;

III. the space heating function;

IV. the seasonal space heating energy efficiency class of the space heater, determined in accordance with point 1 of Annex II;

V. indication of whether a solar collector, hot water storage tank, temperature control and/or supplementary space heater may be included in the package of space heater, temperature control and solar device;

VI. the seasonal space heating energy efficiency class of the package of space heater, temperature control and solar device, determined in accordance with point 5 of Annex IV; the head of the arrow containing

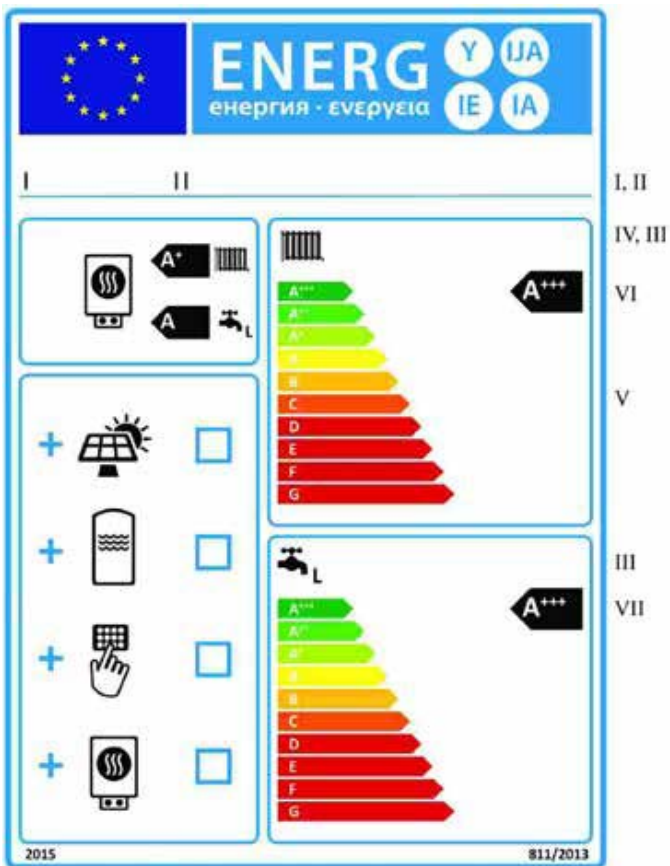
the seasonal space heating energy efficiency class

of the package of space heater, temperature control and solar device shall be placed at the same height as the head of the relevant energy efficiency class.

(b) The design aspects of the label for packages of space heater, temperature control and solar device shall be in accordance with point 11 of this Annex. For packages of space heater, temperature control and solar device in seasonal space heating energy efficiency classes A⁺⁺⁺ to D, the last classes E to G in the A⁺⁺⁺ to G scale may be omitted.

4. PACKAGES OF COMBINATION HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

Label for packages of combination heater, temperature control and solar device in seasonal space heating and water heating energy efficiency classes A⁺⁺⁺ to G



(a) The following information shall be included in the label:

I. dealer's and/or supplier's name or trade mark;

II. dealer's and/or supplier's model(s) identifier;

III. the space heating function and the water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 15 of Annex VII;

IV. the seasonal space heating and water heating energy efficiency classes of the combination heater, determined in accordance with points 1 and 2 of Annex II;

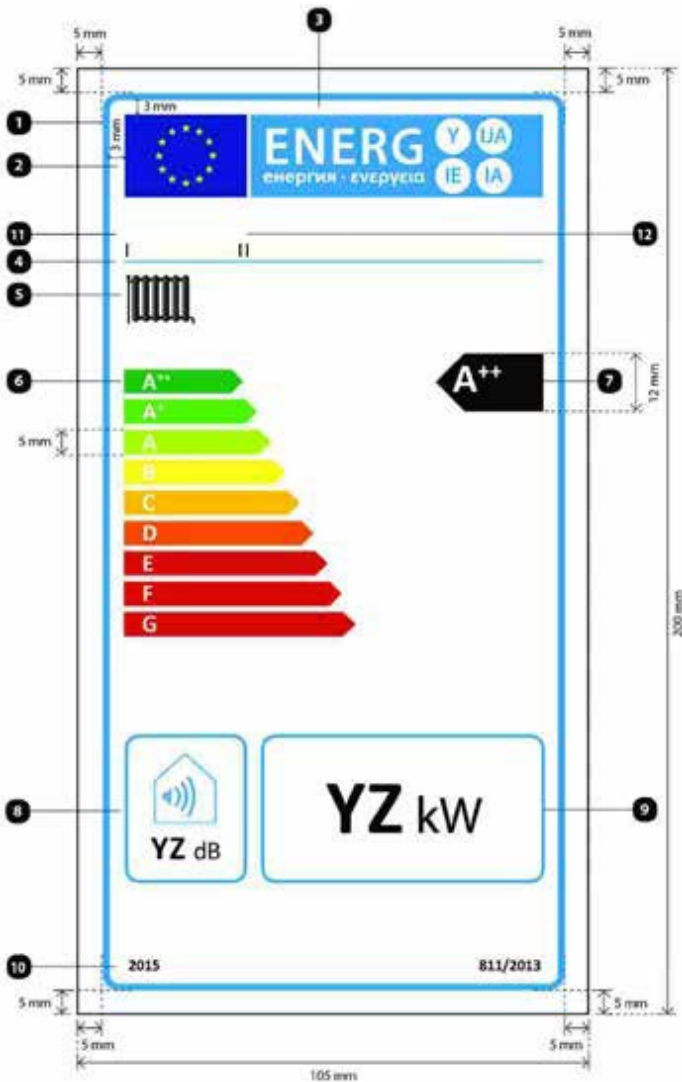
V. indication of whether a solar collector, hot water storage tank, temperature control and/or supplementary heater, may be included in the package of combination heater, temperature control and solar device;

VI. the seasonal space heating energy efficiency class of the package of combination heater, temperature control and solar device, determined in accordance with point 6 of Annex IV; the head of the arrow containing the seasonal space heating energy efficiency class of the package of combination heater, temperature control and solar device shall be placed at the same height as the head of the relevant energy efficiency class;

VII. the water heating energy efficiency class of the package of combination heater, temperature control and solar device, determined in accordance with point 6 of Annex IV; the head of the arrow containing the water heating energy efficiency class of the package of combination heater, temperature control and solar device shall be placed at the same height as the head of the relevant energy efficiency class.

(b) The design aspects of the label for packages of combination heater, temperature control and solar device shall be in accordance with point 12 of this Annex. For packages of combination heater, temperature control and solar device in seasonal space heating and/or water heating energy efficiency classes A⁺⁺⁺ to D, the last classes E to G in the A⁺⁺⁺ to G scale may be omitted.

5. The design of the label for boiler space heaters shall be the following:



Whereby:

- (a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (b) The background shall be white.
- (c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- (d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- 1 **EU label border stroke:** 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 2 **EU logo: Colours:** X-80-00-00 and 00-00-X-00.
- 3 **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
- 4 **Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.
- 5 **Space heating function:**
 - Pictogram as depicted.
- 6 **A⁺⁺-G and A⁺⁺⁺-D scales, respectively:**
 - **Arrow:** height: 5 mm, gap: 1,3 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Seventh class: 00-X-X-00,
 - Eighth class: 00-X-X-00,
 - Last class: 00-X-X-00,
 - **Text:** Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;
 - **Arrow:** height: 7 mm, gap: 1 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00,
 - **Text:** Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- 7 **Seasonal space heating energy efficiency class:**
 - **Arrow:** width: 22 mm, height: 12 mm, 100 % black,
 - **Text:** Calibri bold 24 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- 8 **Sound power level, indoors:**
 - Pictogram as depicted,
 - **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
 - **Value 'YZ':** Calibri bold 20 pt, 100 % black,
 - **Text 'dB':** Calibri regular 15 pt, 100 % black.

9 Rated heat output:

- **Border:** 2 pt – colour: cyan 100 % – round corners: 3,5 mm,
- **Value ‘YZ’:** Calibri bold 45 pt, 100 % black,
- **Text ‘kW’:** Calibri regular 30 pt, 100 % black.

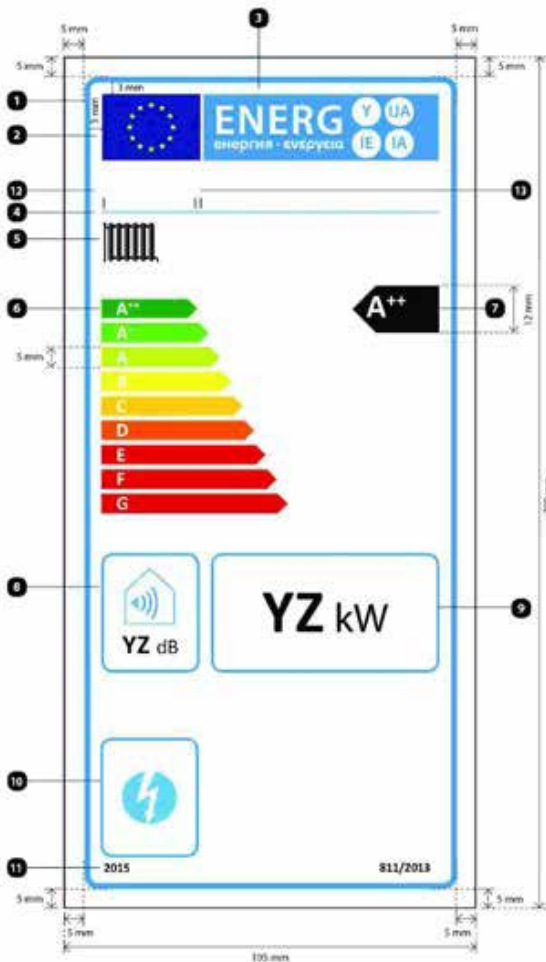
10 Year of label introduction and number of Regulation:

- **Text:** Calibri bold 10 pt.

11 Supplier’s name or trademark.**12 Supplier’s model identifier:**

The supplier’s name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

6. The design of the label for cogeneration space heaters shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 EU label border stroke: 4 pt, colour: cyan 100 %, round corners: 3,5 mm.

2 EU logo: Colours: X-80-00-00 and 00-00-X-00.

3 Energy label: Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.

4 Sub-logos border: 1 pt, colour: cyan 100 %, length: 86 mm.

5 Space heating function:

– Pictogram as depicted.

6 A⁺⁺-G and A⁺⁺⁺-D scales, respectively:

– **Arrow:** height: 5 mm, gap: 1,3 mm, colours:

– Highest class: X-00-X-00,

– Second class: 70-00-X-00,

– Third class: 30-00-X-00,

– Fourth class: 00-00-X-00,

– Fifth class: 00-30-X-00,

– Sixth class: 00-70-X-00,

– Seventh class: 00-X-X-00,

– Eighth class: 00-X-X-00,

– Last class: 00-X-X-00,

– **Text:** Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;

– **Arrow:** height: 7 mm, gap: 1 mm, colours:

– Highest class: X-00-X-00,

– Second class: 70-00-X-00,

– Third class: 30-00-X-00,

– Fourth class: 00-00-X-00,

– Fifth class: 00-30-X-00,

– Sixth class: 00-70-X-00,

– Last class: 00-X-X-00,

– **Text:** Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row.

7 Seasonal space heating energy efficiency class:

- **Arrow:** width: 22 mm, height: 12 mm, 100 % black,
- **Text:** Calibri bold 24 pt, capitals, white, '+' symbols: superscript, aligned on a single row.

8 Sound power level, indoors:

- **Pictogram** as depicted,
- **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
- **Value 'YZ':** Calibri bold 20 pt, 100 % black,
- **Text 'dB':** Calibri regular 15 pt, 100 % black.

9 Rated heat output:

- **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
- **Value 'YZ':** Calibri bold 45 pt, 100 % black,
- **Text 'kW':** Calibri regular 30 pt, 100 % black.

10 Electricity function:

- **Pictogram** as depicted,
- **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm.

11 Year of label introduction and number of Regulation:

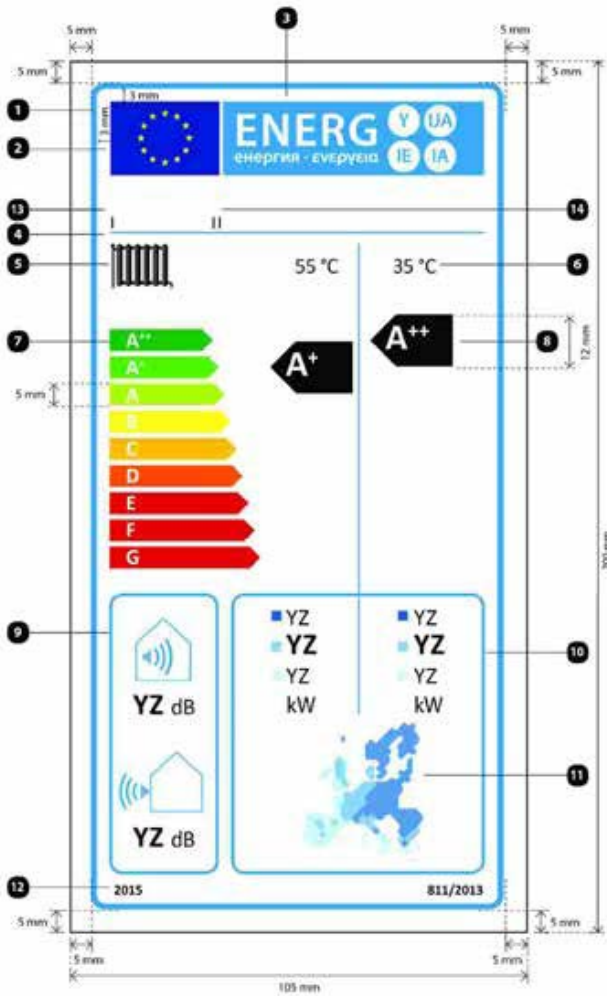
- **Text:** Calibri bold 10 pt.

12 Supplier's name or trademark.

13 Supplier's model identifier:

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

7. The design of the label for heat pump space heaters shall be the following:



Whereby:

- (a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (b) The background shall be white.
- (c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- (d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- 1 **EU label border stroke:** 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 2 **EU logo: Colours:** X-80-00-00 and 00-00-X-00.
- 3 **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
- 4 **Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.
- 5 **Space heating function:**
 - **Pictogram** as depicted.
- 6 **Medium- and low-temperature application:**
 - **Text** '55 °C' and '35 °C': Calibri regular 14 pt, 100 % black.
- 7 **A⁺⁺-G and A⁺⁺⁺-D scales, respectively:**
 - **Arrow:** height: 5 mm, gap: 1,3 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Seventh class: 00-X-X-00,
 - Eighth class: 00-X-X-00,
 - Last class: 00-X-X-00,
 - **Text:** Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;
 - **Arrow:** height: 7 mm, gap: 1 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00,
 - **Text:** Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- 8 **Seasonal space heating energy efficiency class:**
 - **Arrow:** width: 19 mm, height: 12 mm, 100 % black,
 - **Text:** Calibri bold 24 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- 9 **Sound power level, indoors (if applicable) and outdoors:**
 - **Pictogram** as depicted,
 - **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm,

- **Value 'YZ'**: Calibri bold 20 pt, 100 % black,
- **Text 'dB'**: Calibri regular 15 pt, 100 % black.

10 Rated heat output:

- **Border**: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
- **Values 'YZ'**: Calibri at least 15 pt, 100 % black,
- **Text 'kW'**: Calibri regular 15 pt, 100 % black.

11 European temperature map and colour squares:

- **Pictogram** as depicted,
- **Colours**:
 - Dark blue: 86-51-00-00,
 - Middle blue: 53-08-00-00,
 - Light blue: 25-00-02-00.

12 Year of label introduction and number of Regulation:

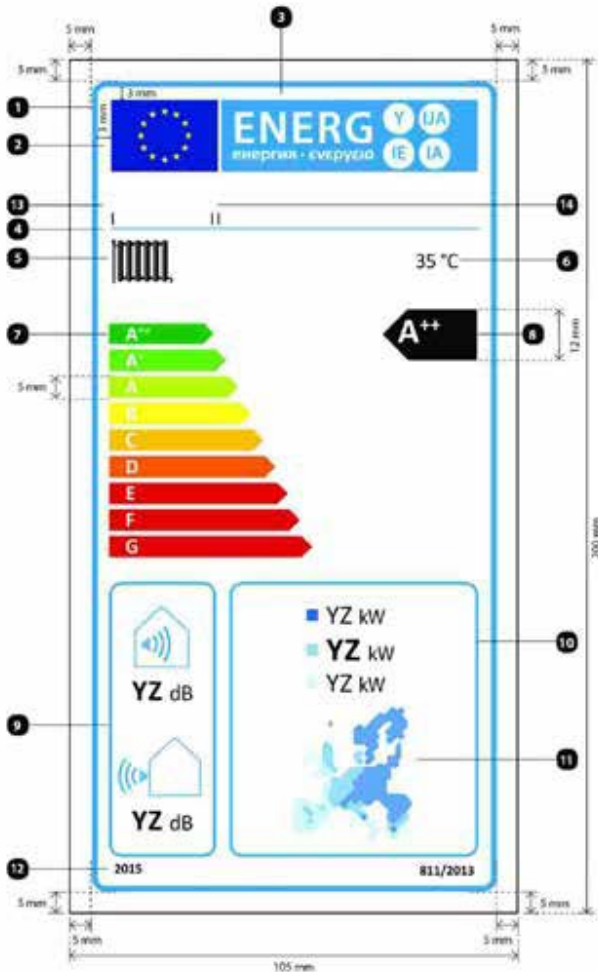
- **Text**: Calibri bold 10 pt.

13 Supplier's name or trademark.

14 Supplier's model identifier:

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

8. The design of the label for low-temperature heat pumps shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 EU label border stroke: 4 pt, colour: cyan 100 %, round corners: 3,5 mm.

2 EU logo: Colours: X-80-00-00 and 00-00-X-00.

- 3 Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
- 4 Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.
- 5 Space heating function:**
- **Pictogram** as depicted.
- 6 Low-temperature application:**
- Text** '35 °C': Calibri regular 14 pt, 100 % black.
- 7 A⁺⁺-G and A⁺⁺⁺-D scales, respectively:**
- **Arrow:** height: 5 mm, gap: 1,3 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Seventh class: 00-X-X-00,
 - Eighth class: 00-X-X-00,
 - Last class: 00-X-X-00,
 - **Text:** Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;
 - **Arrow:** height: 7 mm, gap: 1 mm – colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00,
 - **Text:** Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- 8 Seasonal space heating energy efficiency class:**
- **Arrow:** width: 22 mm, height: 12 mm, 100 % black,
 - **Text:** Calibri bold 24 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- 9 Sound power level, indoors (if applicable) and outdoors:**
- **Pictogram** as depicted,
 - **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
 - **Value 'YZ':** Calibri bold 20 pt, 100 % black,
 - **Text 'dB':** Calibri regular 15 pt, 100 % black.

10 Rated heat output:

- **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
- **Values 'YZ':** Calibri at least 18 pt, 100 % black,
- **Text 'kW':** Calibri regular 13,5 pt, 100 % black.

11 European temperature map and colour squares:

- **Pictogram** as depicted,
- **Colours:**
 - Dark blue: 86-51-00-00,
 - Middle blue: 53-08-00-00,
 - Light blue: 25-00-02-00.

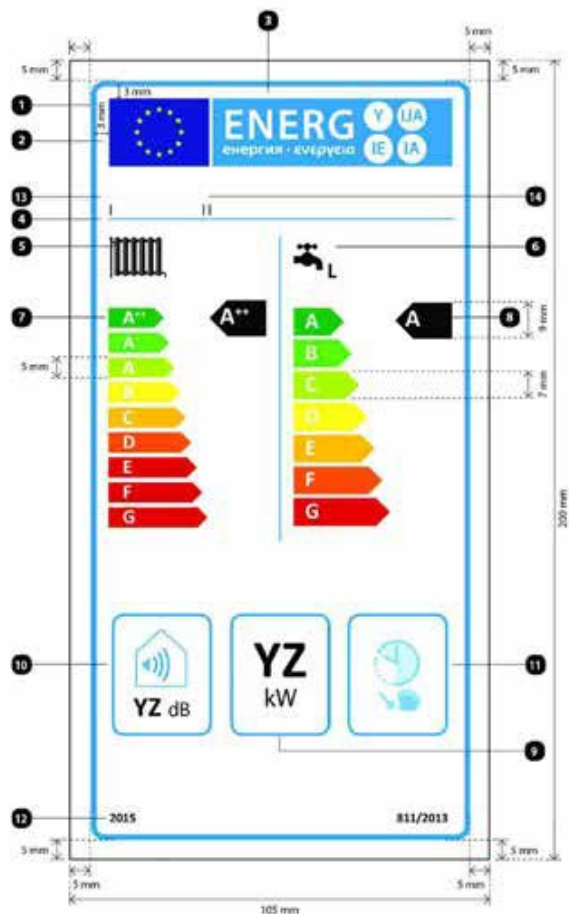
12 Year of label introduction and number of Regulation:

- **Text:** Calibri bold 10 pt.

13 Supplier's name or trademark.**14 Supplier's model identifier:**

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

9. The design of the label for boiler combination heaters shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- 1 **EU label border stroke:** 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 2 **EU logo:** Colours: X-80-00-00 and 00-00-X-00.
- 3 **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.

- 4 Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.
- 5 Space heating function:**
- **Pictogram** as depicted.
- 6 Water heating function:**
- **Pictogram** as depicted, including the declared load profile expressed as the appropriate letter in accordance with Table 15 of Annex VII: Calibri bold 16 pt, 100 % black.
- 7 A⁺⁺-G and A-G, A⁺⁺⁺-D or A⁺-F scales, respectively:**
- **Arrow:** height: 5 mm, gap: 1,3 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Seventh class: 00-X-X-00,
 - Eighth class: 00-X-X-00,
 - Last class: 00-X-X-00,
 - **Text:** Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;
 - **Arrow:** height: 7 mm, gap: 1 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00,
 - **Text:** Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- 8 Seasonal space heating and water heating energy efficiency classes:**
- **Arrow:** width: 14 mm, height: 9 mm, 100 % black,
 - **Text:** Calibri bold 18 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- 9 Rated heat output:**
- **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
 - **Value 'YZ':** Calibri bold 37,5 pt, 100 % black,
 - **Text 'kW':** Calibri regular 18 pt, 100 % black.
- 10 Sound power level, indoors:**
- **Pictogram** as depicted,

- **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
- **Value 'YZ':** Calibri bold 20 pt, 100 % black,
- **Text 'dB':** Calibri regular 15 pt, 100 % black.

11 If applicable, off-peak fitness:

- **Pictogram** as depicted,
- **Border:** 2 pt – colour: cyan 100 % – round corners: 3,5 mm.

12 Year of label introduction and number of Regulation:

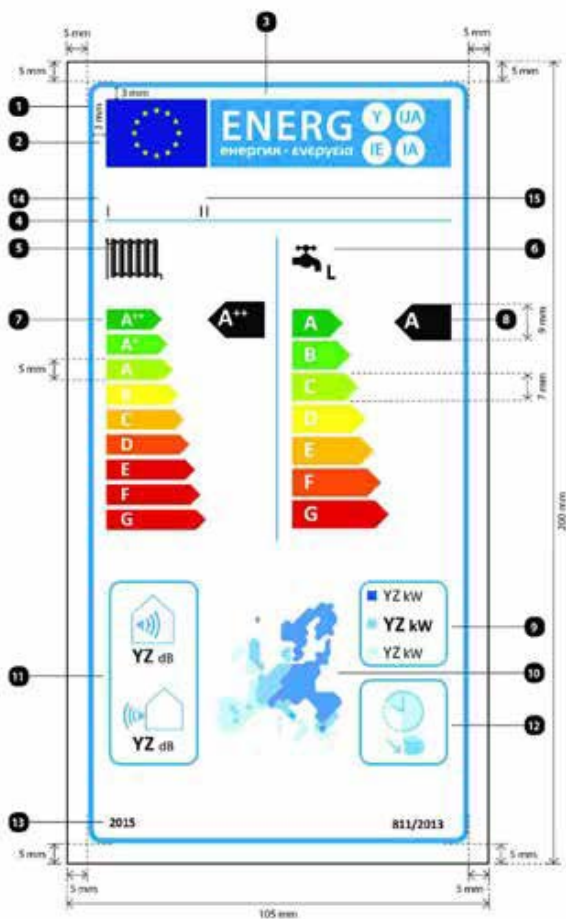
- **Text:** Calibri bold 10 pt.

13 Supplier's name or trademark.

14 Supplier's model identifier:

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

10. The design of the label for heat pump combination heaters shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 EU label border stroke: 4 pt, colour: cyan 100 %, round corners: 3,5 mm.

2 EU logo: Colours: X-80-00-00 and 00-00-X-00.

3 Energy label: Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.

- 4 Sub-logos border:** 1 pt, colour: cyan 100 %, length: 86 mm.
- 5 Space heating function:**
- **Pictogram** as depicted.
- 6 Water heating function:**
- **Pictogram** as depicted, including the declared load profile expressed as the appropriate letter in accordance with Table 15 of Annex VII: Calibri bold 16 pt, 100 % black.
- 7 A⁺⁺-G and A-G, A⁺⁺⁺-D or A⁺-F scales, respectively:**
- **Arrow:** height: 5 mm, gap: 1,3 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Seventh class: 00-X-X-00,
 - Eighth class: 00-X-X-00,
 - Last class: 00-X-X-00,
 - **Text:** Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;
 - **Arrow:** height: 7 mm, gap: 1 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00,
 - **Text:** Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- 8 Seasonal space heating and water heating energy efficiency classes:**
- **Arrow:** width: 14 mm, height: 9 mm, 100 % black,
 - **Text:** Calibri bold 18 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- 9 Rated heat output:**
- **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
 - **Values 'YZ':** Calibri at least 12 pt, 100 % black,
 - **Text 'kW':** Calibri regular 10 pt, 100 % black.
- 10 European temperature map and colour squares:**
- **Pictogram** as depicted,

– **Colours:**

- Dark blue: 86-51-00-00,
- Middle blue: 53-08-00-00,
- Light blue: 25-00-02-00.

11 Sound power level, indoors (if applicable) and outdoors:

- **Pictogram** as depicted,
- **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
- **Value 'YZ':** Calibri bold 15 pt, 100 % black,
- **Text 'dB':** Calibri regular 10 pt, 100 % black.

12 If applicable, off-peak fitness:

- **Pictogram** as depicted,
- **Border:** 2 pt, colour: cyan 100 %, round corners: 3,5 mm.

13 Year of label introduction and number of Regulation:

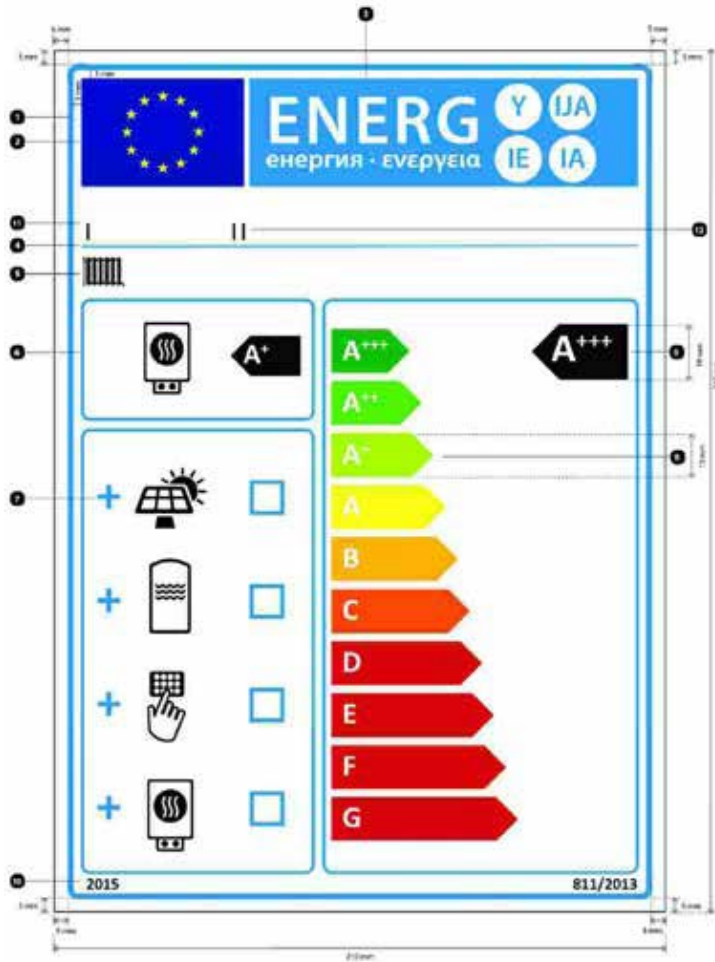
- **Text:** Calibri bold 10 pt.

14 Supplier's name or trademark.

15 Supplier's model identifier:

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

11. The design of the label for packages of space heater, temperature control and solar device shall be the following:



Whereby:

- (a) The label shall be at least 210 mm wide and 297 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (b) The background shall be white.
- (c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- (d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

① **EU label border stroke:** 6 pt, colour: cyan 100 %, round corners: 3,5 mm.

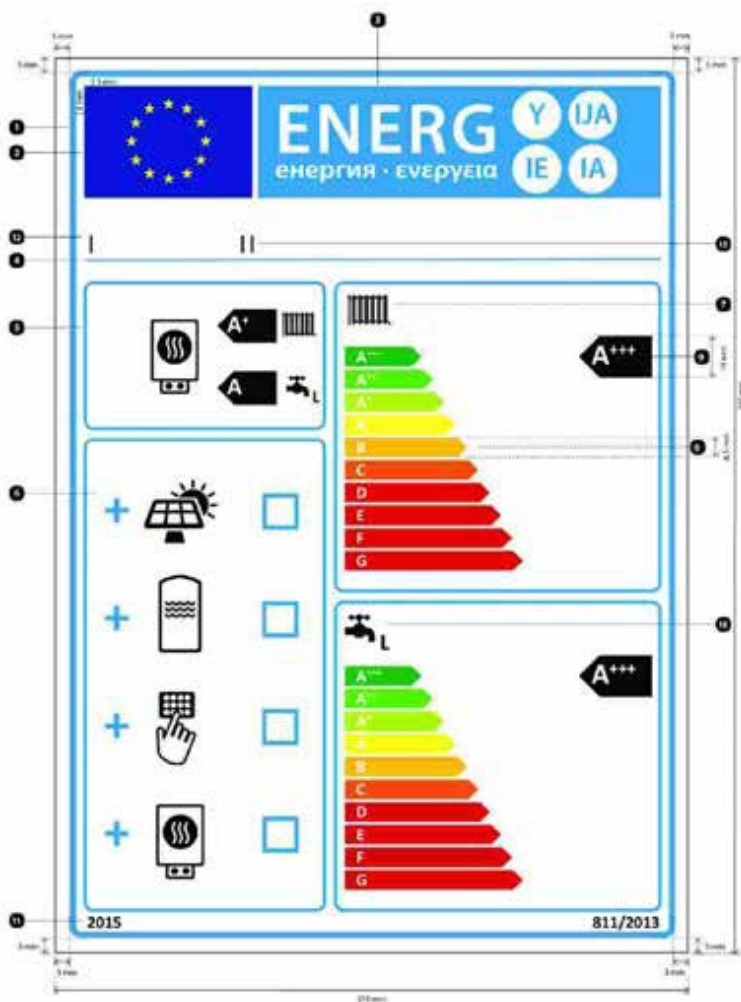
- 2 EU logo: Colours:** X-80-00-00 and 00-00-X-00.
- 3 Energy label: Colour:** X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 191 mm, height: 37 mm.
- 4 Sub-logos border:** 2 pt, colour: cyan 100 %, length: 191 mm.
- 5 Space heating function:**
- Pictogram as depicted.
- 6 Space heater:**
- Pictogram as depicted,
 - Seasonal space heating energy efficiency class of space heater:
 - **Arrow:** width: 24 mm, height: 14 mm, 100 % black;
 - **Text:** Calibri bold 28 pt, capitals, white, '+' symbols: superscript, aligned on a single row,
 - **Border:** 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 7 Package with solar collector, hot water storage tank, temperature control and/or supplementary heater:**
- Pictograms as depicted,
 - '+' symbol: Calibri bold 50 pt, cyan 100 %,
 - **Boxes: width:** 12 mm, height: 12 mm, border: 4 pt, cyan 100 %,
 - **Border:** 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 8 A+++–G scale with border:**
- **Arrow:** height: 15 mm, gap: 3 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Seventh class: 00-X-X-00,
 - If applicable, last classes: 00-X-X-00,
 - **Text:** Calibri bold 30 pt, capitals, white, '+' symbols: superscript, aligned on a single row,
 - **Border:** 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 9 Seasonal space heating energy efficiency class for package of space heater, temperature control and solar device:**
- **Arrow:** width: 33 mm, height: 19 mm, 100 % black,
 - **Text:** Calibri bold 40 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- 10 Year of label introduction and number of Regulation:**
- **Text:** Calibri bold 12 pt.

11 Dealer's and/or supplier's name or trademark.

12 Dealer's and/or supplier's model identifier:

The dealer's and/or supplier's name or trade mark and model identifier shall fit in a space of 191 × 19 mm.

12. The design of the label for packages of combination heater, temperature control and solar device shall be the following:



Whereby:

- (a) The label shall be at least 210 mm wide and 297 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (b) The background shall be white.
- (c) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- (d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- 1 **EU label border stroke:** 6 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 2 **EU logo:** Colours: X-80-00-00 and 00-00-X-00.
- 3 **Energy label:** Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 191 mm, height: 37 mm.
- 4 **Sub-logos border:** 2 pt, colour: cyan 100 %, length: 191 mm.
- 5 **Combination heater:**
 - **Pictograms** as depicted; for water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 15 of Annex VII: Calibri bold 16 pt, 100 % black.
 - **Seasonal space heating and water heating energy efficiency class of combination heater:**
 - **Arrow:** width: 19 mm, height: 11 mm, 100 % black,
 - **Text:** Calibri bold 23 pt, capitals, white, '+' symbols: superscript, aligned on a single row,
 - **Border:** 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 6 **Package with solar collector, hot water storage tank, temperature control and/or supplementary heater:**
 - **Pictograms** as depicted,
 - **'+' symbol:** Calibri bold 50 pt, cyan 100 %,
 - **Boxes:** width: 12 mm, height: 12 mm, border: 4 pt, cyan 100 %,
 - **Border:** 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 7 **Space heating function:**
 - **Pictogram** as depicted.
- 8 **A+++–G scale with border:**
 - **Arrow:** height: 6,5 mm, gap: 1 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Seventh class: 00-X-X-00,
 - If applicable, last classes: 00-X-X-00,
 - **Text:** Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row,
 - **Border:** 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 9 **Seasonal space heating and water heating energy efficiency class, respectively, for package of combination heater, temperature control and solar device:**
 - **Arrow:** width: 24 mm, height: 14 mm, 100 % black,
 - **Text:** Calibri bold 28 pt, capitals, white, '+' symbols: superscript, aligned on a single row.

10 Water heating function:

– **Pictogram** as depicted, including the declared load profile expressed as the appropriate letter in accordance with Table 15 of Annex VII: Calibri bold 22 pt, 100 % black.

11 Year of label introduction and number of Regulation:

– **Text:** Calibri bold 12 pt.

12 Dealer's and/or supplier's name or trademark.

13 Dealer's and/or supplier's model identifier:

The dealer's and/or supplier's name or trade mark and model identifier shall fit in a space of 191 × 19 mm.

ANNEX IV

Product fiche

1. SPACE HEATERS

1.1. The information in the product fiche of the space heater shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trademark;
- (b) supplier's model identifier;
- (c) the seasonal space heating energy efficiency class of the model, determined in accordance with point 1 of Annex II;
- (d) the rated heat output, including the rated heat output of any supplementary heater, in kW, rounded to the nearest integer (for heat pump space heaters under average climate conditions);
- (e) the seasonal space heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump space heaters under average climate conditions);
- (f) the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of GCV, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump space heaters under average climate conditions);
- (g) the sound power level L_{WA} , indoors, in dB, rounded to the nearest integer (for heat pump space heaters if applicable);
- (h) any specific precautions that shall be taken when the space heater is assembled, installed or maintained; in addition, for cogeneration space heaters:
- (i) the electrical efficiency in %, rounded to the nearest integer; in addition, for heat pump space heaters:
- (j) the rated heat output, including the rated heat output of any supplementary heater, in kW, under colder and warmer climate conditions, rounded to the nearest integer;
- (k) the seasonal space heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII;
- (l) the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of GCV, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII;
- (m) the sound power level L_{WA} , outdoors, in dB, rounded to the nearest integer.

1.2. One fiche may cover a number of space heater models supplied by the same supplier.

1.3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1.1 not already displayed on the label shall also be provided.

2. COMBINATION HEATERS

2.1. The information in the product fiche of the combination heater shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trademark;
- (b) supplier's model identifier;
- (c) for space heating, the medium-temperature application (and for heat pump combination heaters the low-temperature application, if applicable); for water heating, the declared load profile, expressed as the appropriate letter and typical usage in accordance with Table 15 of Annex VII;
- (d) the seasonal space heating energy efficiency class and the water heating energy efficiency class of the model, determined in accordance with points 1 and 2 of Annex II;
- (e) the rated heat output, including the rated heat output of any supplementary heater, in kW, rounded to the nearest integer (for heat pump combination heaters under average climate conditions);
- (f) for space heating, the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of *GCV*, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump combination heaters under average climate conditions); for water heating, the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of *GCV*, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII (for heat pump combination heaters under average climate conditions);
- (g) the seasonal space heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump combination heaters under average climate conditions); the water heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII (for heat pump combination heaters under average climate conditions);
- (h) the sound power level L_{WA} , indoors, in dB, rounded to the nearest integer (for heat pump combination heaters if applicable);
- (i) if applicable, an indication that the combination heater is able to work only during off-peak hours;
- (j) any specific precautions that shall be taken when the combination heater is assembled, installed or maintained;

in addition, for heat pump combination heaters:

- (k) the rated heat output, including the rated heat output of any supplementary heater, in kW, under colder and warmer climate conditions, rounded to the nearest integer;
- (l) for space heating, the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of *GCV*, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII; for water heating, the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of *GCV*, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII;
- (m) the seasonal space heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII; the water heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII;
- (n) the sound power level L_{WA} , outdoors, in dB, rounded to the nearest integer.

2.2. One fiche may cover a number of combination heater models supplied by the same supplier.

2.3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 2.1 not already displayed on the label shall also be provided.

3. TEMPERATURE CONTROLS

3.1. The information in the product fiche of the temperature control shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trade mark;
- (b) supplier's model identifier;
- (c) the class of the temperature control;
- (d) the contribution of the temperature control to seasonal space heating energy efficiency in %, rounded to one decimal place.

3.2. One fiche may cover a number of temperature control models supplied by the same supplier.

4. SOLAR DEVICES

4.1. The information in the product fiche of the solar device shall be provided in the following order and shall be included in the product brochure or other literature provided with the product (for pumps in the collector loop if applicable):

- (a) supplier's name or trade mark;
- (b) supplier's model identifier;
- (c) the collector aperture area in m², to two decimal places;
- (d) the collector efficiency in %, rounded to the nearest integer;
- (e) the energy efficiency class of the solar hot water storage tank, determined in accordance with point 3 of Annex II;
- (f) the standing loss of the solar hot water storage tank in W, rounded to the nearest integer;
- (g) the storage volume of the solar hot water storage tank in litres and m³;
- (h) the annual non-solar heat contribution Q_{nonsol} in kWh in terms of primary energy for electricity and/or in kWh in terms of GCV for fuels, for the load profiles M, L, XL and XXL under average climate conditions, rounded to the nearest integer;
- (i) the pump power consumption in W, rounded to the nearest integer;
- (j) the standby power consumption in W, to two decimal places;
- (k) the annual auxiliary electricity consumption Q_{aux} in kWh in terms of final energy, rounded to the nearest integer.

4.2. One fiche may cover a number of solar device models supplied by the same supplier.

5. PACKAGES OF SPACE HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

The fiche for packages of space heater, temperature control and solar device shall contain the elements set out in Figure 1, Figure 2, Figure 3 and Figure 4, respectively, for evaluating the seasonal space heat-

ing energy efficiency of a package of space heater, temperature control and solar device, including the following information:

- I: the value of the seasonal space heating energy efficiency of the preferential space heater, expressed in %;
- II: the factor for weighting the heat output of preferential and supplementary heaters of a package as set out in Tables 5 and 6 of this Annex, respectively;
- III: the value of the mathematical expression: $294 / (11 \cdot Prated)$, whereby *Prated* is related to the preferential space heater;
- IV: the value of the mathematical expression $115 / (11 \cdot Prated)$, whereby *Prated* is related to the preferential space heater; in addition, for preferential heat pump space heaters:
- V: the value of the difference between the seasonal space heating energy efficiencies under average and colder climate conditions, expressed in %;
- VI: the value of the difference between the seasonal space heating energy efficiencies under warmer and average climate conditions, expressed in %.

6. PACKAGES OF COMBINATION HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

The fiche for packages of combination heater, temperature control and solar device shall contain the elements set out in points (a) and (b):

(a) the elements set out in Figure 1 and Figure 3, respectively, for evaluating the seasonal space heating energy efficiency of a package of combination heater, temperature control and solar device, including the following information:

- I: the value of the seasonal space heating energy efficiency of the preferential combination heater, expressed in %;
- II: the factor for weighting the heat output of the preferential and supplementary heaters of a package as set out in Tables 5 and 6 of this Annex, respectively;
- III: the value of the mathematical expression: $294 / (11 \cdot Prated)$, whereby *Prated* is related to the preferential combination heater;
- IV: the value of the mathematical expression $294 / (11 \cdot Prated)$, whereby *Prated* is related to the preferential combination heater;

in addition, for preferential heat pump combination heaters:

- V: the value of the difference between the seasonal space heating energy efficiencies under average and colder climate conditions, expressed in %;
- VI: the value of the difference between the seasonal space heating energy efficiencies under warmer and average climate conditions, expressed in %;

(b) the elements set out in Figure 5 for evaluating the water heating energy efficiency of a package of combination heater, temperature control and solar device, where the following information shall be included:

- I: the value of the water heating energy efficiency of the combination heater, expressed in %;
- II: the value of the mathematical expression $(220 \cdot Q_{ref}) / Q_{nonsol}$, where Q_{ref} is taken from Table 15 in Annex VII and Q_{nonsol} from the product fiche of the solar device for the declared load profile M, L, XL or XXL of the combination heater;

– III: the value of the mathematical expression $(Q_{aux} \cdot 2,5) / (220 \cdot Q_{ref})$, expressed in %, where Q_{aux} is taken from the product fiche of the solar device and Q_{ref} from Table 15 in Annex VII for the declared load profile M, L, XL or XXL.

Table 5

For the purposes of Figure 1 of this Annex, weighting of preferential boiler space heater or boiler combination heater and supplementary heater ⁽¹⁾

$P_{sup} / (P_{rated} + P_{sup})$ ⁽²⁾	II, package without hot water storage tank	II, package with hot water storage tank
0	0	0
0,1	0,30	0,37
0,2	0,55	0,70
0,3	0,75	0,85
0,4	0,85	0,94
0,5	0,95	0,98
0,6	0,98	1,00
$\geq 0,7$	1,00	1,00

Table 6

For the purposes of Figures 2 to 4 of this Annex, weighting of preferential cogeneration space heater, heat pump space heater, heat pump combination heater or low-temperature heat pump and supplementary heater ⁽³⁾

$P_{rated} / (P_{rated} + P_{sup})$ ⁽⁴⁾	II, package without hot water storage tank	II, package with hot water storage tank
0	1,00	1,00
0,1	0,70	0,63
0,2	0,45	0,30
0,3	0,25	0,15
0,4	0,15	0,06
0,5	0,05	0,02
0,6	0,02	0
$\geq 0,7$	0	0

⁽¹⁾ The intermediate values are calculated by linear interpolation between the two adjacent values.

⁽²⁾ P_{rated} is related to the preferential space heater or combination heater.

⁽³⁾ The intermediate values are calculated by linear interpolation between the two adjacent values.

⁽⁴⁾ P_{rated} is related to the preferential space heater or combination heater.

Figure 1

For preferential boiler space heaters and preferential boiler combination heaters, element of the fiche for a package of space heater, temperature control and solar device and a package of combination heater, temperature control and solar device, respectively, indicating the seasonal space heating energy efficiency of the package offered

Seasonal space heating energy efficiency of boiler ① %

Temperature control
From fiche of temperature control

Class I = 1 %, Class II = 2 %, Class III = 1,5 %,
Class IV = 2 %, Class V = 3 %, Class VI = 4 %, Class VII = 3,5 %, Class VIII = 5 %

② %

Supplementary boiler
From fiche of boiler

Seasonal space heating energy efficiency (in %)

$(\text{ } - \text{ }) \times 0,1 = \pm \text{ } %$

Solar contribution
From fiche of solar device

Collector size: (in m²)
Tank volume (in m³)
Collector efficiency (in %)

Tank rating
A⁺ = 0,95, A = 0,91,
B = 0,86, C = 0,83,
D-G = 0,81

$(\text{ III' } \times \text{ } + \text{ IV' } \times \text{ }) \times 0,9 \times (\text{ } / 100) \times \text{ } = + \text{ } %$

Supplementary heat pump
From fiche of heat pump

Seasonal space heating energy efficiency (in %)

$(\text{ } - \text{ }) \times \text{ } = + \text{ } %$

Solar contribution AND Supplementary heat pump

Select smaller value $0,5 \times \text{ } \text{ OR } 0,5 \times \text{ } = - \text{ } %$

Seasonal space heating energy efficiency of package ⑦ %

Seasonal space heating energy efficiency class of package

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

G F E D C B A A⁺ A⁺⁺ A⁺⁺⁺

< 30 % ≥ 30 % ≥ 34 % ≥ 36 % ≥ 75 % ≥ 82 % ≥ 90 % ≥ 98 % ≥ 125 % ≥ 150 %

Boiler and supplementary heat pump installed with low temperature heat emitters at 35 °C?

From fiche of heat pump ⑧ + (50 ×) = %

The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

Figure 2

For preferential cogeneration space heaters, element of the fiche for a package of space heater, temperature control and solar device indicating the seasonal space heating energy efficiency of the package offered

Seasonal space heating energy efficiency of cogeneration space heater		①	<input type="text" value="7"/> %																														
Temperature control		②	<input type="text" value=""/>																														
From fiche of temperature control	Class I = 1 %, Class II = 2 %, Class III = 1,5 %, Class IV = 2 %, Class V = 3 %, Class VI = 4 %, Class VII = 3,5 %, Class VIII = 5 %	+	<input type="text" value=""/>																														
Supplementary boiler	Seasonal space heating energy efficiency (in %)	③	<input type="text" value=""/>																														
From fiche of boiler			$(\text{III} - \text{I}) \times \text{II} =$ <input type="text" value=""/> %																														
Solar contribution		④	<input type="text" value=""/>																														
From fiche of solar device	Collector size (in m ²)	Tank volume (in m ³)	Collector efficiency (in %)																														
			Tank rating A* = 0,95, A = 0,91, B = 0,86, C = 0,83, D-G = 0,81																														
			$(\text{III}' \times \text{IV} + \text{IV}' \times \text{III}) \times 0,7 \times (\text{V}/100) \times \text{VI} =$ <input type="text" value=""/> %																														
Seasonal space heating energy efficiency of package		⑤	<input type="text" value=""/> %																														
Seasonal space heating energy efficiency class of package	<table border="1"> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>G</td> <td>F</td> <td>E</td> <td>D</td> <td>C</td> <td>B</td> <td>A</td> <td>A*</td> <td>A**</td> <td>A***</td> </tr> <tr> <td>< 30 %</td> <td>≥ 30 %</td> <td>≥ 34 %</td> <td>≥ 36 %</td> <td>≥ 75 %</td> <td>≥ 82 %</td> <td>≥ 90 %</td> <td>≥ 98 %</td> <td>≥ 125 %</td> <td>≥ 150 %</td> </tr> </table>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G	F	E	D	C	B	A	A*	A**	A***	< 30 %	≥ 30 %	≥ 34 %	≥ 36 %	≥ 75 %	≥ 82 %	≥ 90 %	≥ 98 %	≥ 125 %	≥ 150 %
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																								
G	F	E	D	C	B	A	A*	A**	A***																								
< 30 %	≥ 30 %	≥ 34 %	≥ 36 %	≥ 75 %	≥ 82 %	≥ 90 %	≥ 98 %	≥ 125 %	≥ 150 %																								

The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

Figure 3

For preferential heat pump space heaters and preferential heat pump combination heaters, element of the fiche for a package of space heater, temperature control and solar device and a package of combination heater, temperature control and solar device, respectively, indicating the seasonal space heating energy efficiency of the package offered

Seasonal space heating energy efficiency of heat pump ① %

Temperature control
From fiche of temperature control

Class I = 1 %, Class II = 2 %, Class III = 1,5 %,
 Class IV = 2 %, Class V = 3 %, Class VI = 4 %, Class VII = 3,5 %, Class VIII = 5 %

② %

Supplementary boiler
From fiche of boiler

Seasonal space heating energy efficiency (in %)

③ %

(- 1) × 10 = - %

Solar contribution
From fiche of solar device

Collector size
(in m²)

Tank volume
(in m³)

Collector efficiency
(in %)

Tank rating
A* = 0,05, A = 0,01,
B = 0,86, C = 0,83,
D-G = 0,81

④ %

(10 × + 10 ×) × 0,45 × (/ 100) × = + %

Seasonal space heating energy efficiency of package under average climate ⑤ %

Seasonal space heating energy efficiency class of package under average climate

G → **F** → **E** → **D** → **C** → **B** → **A** → **A*** → **A**** → **A*****

< 30 % ≥ 30 % ≥ 34 % ≥ 38 % ≥ 75 % ≥ 82 % ≥ 90 % ≥ 98 % ≥ 125 % ≥ 150 %

Seasonal space heating energy efficiency under colder and warmer climate conditions

Colder: ⑥ - 10 = %

Warmer: ⑦ + 10 = %

The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

Figure 4

For preferential low-temperature heat pumps, element of the fiche for a package of space heater, temperature control and solar device indicating the seasonal space heating energy efficiency of the package offered

Seasonal space heating energy efficiency of low temperature heat pump ① %

Temperature control
From fiche of temperature control

Class I = 1 %, Class II = 2 %, Class III = 1,5 %,
 Class IV = 2 %, Class V = 3 %, Class VI = 4 %, Class VII = 3,5 %, Class VIII = 5 %

② %

Supplementary boiler
From fiche of boiler

Seasonal space heating energy efficiency (in %)

$$\left(\text{[]} - T \right) \times 'V' = \text{[]} \%$$
③ %

Solar contribution
From fiche of solar device

Collector size (in m²)

Tank volume (in m³)

Collector efficiency (in %)

Tank rating
 A* = 0,95, A = 0,91,
 B = 0,86, C = 0,83,
 D-G = 0,81

$$\left('IIF' \times \text{[]} + 'IV' \times \text{[]} \right) \times 0,45 \times \left(\text{[]} / 100 \right) \times \text{[]} = \text{[]} \%$$
④ %

Seasonal space heating energy efficiency of package under average climate ⑤ %

Seasonal space heating energy efficiency class of package under average climate

G	F	E	D	C	B	A	A*	A**	A***					
< 55 %		≥ 55 %		≥ 59 %		≥ 61 %		≥ 100 %						
≥ 107 %			≥ 115 %			≥ 123 %			≥ 150 %			≥ 175 %		

Seasonal space heating energy efficiency under colder and warmer climate conditions

Colder: ⑥ - 'V' = %

Warmer: ⑦ - 'VI' = %

The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

Figure 5

For preferential boiler combination heaters and preferential heat pump combination heaters, element of the fiche for a package of combination heater, temperature control and solar device indicating the water heating energy efficiency of the package offered

Water heating energy efficiency of combination heater ① %

Declared load profile:

Solar contribution
From fiche of solar device

Auxiliary electricity

$(1,1 \times T + 10\%) \times E - E' = T =$ ② %

Water heating energy efficiency of package under average climate ③ %

Water heating energy efficiency class of package under average climate

	G	F	E	D	C	B	A	A ⁺	A ⁺⁺	A ⁺⁺⁺
<input type="checkbox"/> G	< 27%	≥ 27%	≥ 30%	≥ 33%	≥ 36%	≥ 39%	≥ 45%	≥ 100%	≥ 150%	≥ 165%
<input type="checkbox"/> F	< 27%	≥ 27%	≥ 30%	≥ 34%	≥ 37%	≥ 50%	≥ 75%	≥ 115%	≥ 150%	≥ 168%
<input type="checkbox"/> E	< 27%	≥ 27%	≥ 30%	≥ 35%	≥ 38%	≥ 55%	≥ 90%	≥ 123%	≥ 160%	≥ 200%
<input type="checkbox"/> D	< 28%	≥ 28%	≥ 32%	≥ 36%	≥ 40%	≥ 60%	≥ 85%	≥ 131%	≥ 170%	≥ 213%

Water heating energy efficiency under colder and warmer climate conditions

Colder: ① - 0,2 × ② = %

Warmer: ① + 0,4 × ② = %

The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

ANNEX V

Technical documentation

1. SPACE HEATERS

For space heaters, the technical documentation referred to in Article 3(1)(c) shall include:

- (a) the name and address of the supplier;
- (b) a description of the space heater model sufficient for its unambiguous identification;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) technical parameters:
 - for boiler space heaters and cogeneration space heaters, the technical parameters set out in Table 7, measured and calculated in accordance with Annex VII;
 - for heat pump space heaters, the technical parameters set out in Table 8, measured and calculated in accordance with Annex VII;
 - for heat pump space heaters where the information relating to a specific model comprising a combination of indoor and outdoor units has been obtained by calculation on the basis of design and/or extrapolation from other combinations, the details of such calculations and/or extrapolations, and of any tests undertaken to verify the accuracy of the calculations, including details of the mathematical model for calculating the performance of such combinations and details of the measurements taken to verify this model;
- (g) any specific precautions that shall be taken when the space heater is assembled, installed or maintained.

2. COMBINATION HEATERS

For combination heaters, the technical documentation referred to in Article 3(2)(c) shall include:

- (a) the name and address of the supplier;
- (b) a description of the combination heater model sufficient for its unambiguous identification;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) technical parameters:
 - for boiler combination heaters, the technical parameters set out in Table 7, measured and calculated in accordance with Annex VII;
 - for heat pump combination heaters, the technical parameters set out in Table 8, measured and calculated in accordance with Annex VII;
 - for heat pump combination heaters where the information relating to a specific model comprising a combination of indoor and outdoor units has been obtained by calculation on the basis of design and/

or extrapolation from other combinations, the details of such calculations and/or extrapolations, and of any tests undertaken to verify the accuracy of the calculations, including details of the mathematical model for calculating the performance of such combinations and details of the measurements taken to verify this model;

(g) any specific precautions that shall be taken when the combination heater is assembled, installed or maintained.

Table 7

Technical parameters for boiler space heaters, boiler combination heaters and cogeneration space heaters

Model(s): [information identifying the model(s) to which the information relates]							
Condensing boiler: [yes/no]							
Low-temperature ⁽²⁾ boiler: [yes/no]							
B11 boiler: [yes/no]							
Cogeneration space heater: [yes/no]				If yes, equipped with a supplementary heater: [yes/no]			
Combination heater: [yes/no]							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated deat output	P_{rated}	x	kW	Seasonal space heating energy efficiency	η_s	x	%
For boiler space heaters and boiler combination heaters: Useful heat output				For boiler space heaters and boiler combination heaters: Useful efficiency			
At rated heat output and high-temperature regime ⁽¹⁾	P_4	x,x	kW	At rated heat output and high-temperature regime ⁽¹⁾	η_4	x,x	%
At 30 % of rated heat output and low-temperature regime ⁽²⁾	P_1	x,x	kW	At 30 % of rated heat output and low-temperature regime ⁽²⁾	η_1	x,x	%
For cogeneration space heaters: Useful heat output				For cogeneration space heaters: Useful efficiency			
At rated heat output of cogeneration space heater with supplementary heater disabled	$P_{CHP100+Sup0}$	x,x	kW	At rated heat output of cogeneration space heater with supplementary heater disabled	$\eta_{CHP100+Sup0}$	x,x	%

At rated heat output of cogeneration space heater with supplementary heater enabled	$P_{CHP100+Sup100}$	x,x	kW	At rated heat output of cogeneration space heater with supplementary heater enabled	$\eta_{CHP100+Sup100}$	x,x	%
For cogeneration space heaters: Electrical efficiency				Supplementary heater			
At rated heat output of cogeneration space heater with supplementary heater disabled	$\eta_{el,CHP100+Sup0}$	x,x	%	Rated heat output	P_{sup}	x,x	kW
At rated heat output of cogeneration space heater with supplementary heater enabled	$\eta_{el,CHP100+Sup100}$	x,x	%	Type of energy input			
Auxiliary electricity consumption				Other items			
At full load	el_{max}	x,x	kW	Standby heat loss	P_{stby}	x,x	kW
At part load	el_{min}	x,x	kW	Ignition burner power consumption	P_{ign}	x,x	kW
In standby mode	P_{SB}	x,xxx	kW	Annual energy consumption	Q_{HE}	x	k W h or GJ
				Sound power level, indoors	L_{WA}	x	dB
For combination heaters:							
Declared load profile				Water heating energy efficiency	η_{wh}	x	%
Daily electricity consumption	Q_{elec}	x,xxx	kWh	Daily fuel consumption	Q_{fuel}	x,xxx	kWh
Annual electricity consumption	AEC	x	kWh	Annual fuel consumption	AFC	x	GJ
Contact details	Name and address of the supplier.						

Table 8

Technical parameters for heat pump space heaters and heat pump combination heaters

Model(s): [information identifying the model(s) to which the information relates]							
Air-to-water heat pump: [yes/no]							
Water-to-water heat pump: [yes/no]							
Brine-to-water heat pump: [yes/no]							
Low-temperature heat pump: [yes/no]							
Equipped with a supplementary heater: [yes/no]							
Heat pump combination heater: [yes/no]							
Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps.							
For low-temperature heat pumps, parameters shall be declared for low-temperature application.							
Parameters shall be declared for average, colder and warmer climate conditions.							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated deat output ⁽³⁾	<i>P_{rated}</i>	x	kW	Seasonal space heating energy efficiency	η_s	x	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T_j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T_j			
$T_j = -7$ °C	<i>P_{d,h}</i>	x,x	kW	$T_j = -7$ °C	<i>COP_d</i> or <i>PER_d</i>	x, x x or x,x	– or %
$T_j = +2$ °C	<i>P_{d,h}</i>	x,x	kW	$T_j = +2$ °C	<i>COP_d</i> or <i>PER_d</i>	x, x x or x,x	– or %
$T_j = +7$ °C	<i>P_{d,h}</i>	x,x	kW	$T_j = +7$ °C	<i>COP_d</i> or <i>PER_d</i>	x, x x or x,x	– or %
$T_j = +12$ °C	<i>P_{d,h}</i>	x,x	kW	$T_j = +12$ °C	<i>COP_d</i> or <i>PER_d</i>	x, x x or x,x	– or %
$T_j =$ bivalent temperature	<i>P_{d,h}</i>	x,x	kW	$T_j =$ bivalent temperature	<i>COP_d</i> or <i>PER_d</i>	x, x x or x,x	– or %
$T_j =$ operation limit temperature	<i>P_{d,h}</i>	x,x	kW	$T_j =$ operation limit temperature	<i>COP_d</i> or <i>PER_d</i>	x, x x or x,x	– or %
For air-to-water heat pumps: $T_j = -15$ °C (if $TOL < -20$ °C)	<i>P_{d,h}</i>	x,x	kW	For air-to-water heat pumps: $T_j = -15$ °C (if $TOL < -20$ °C)	<i>COP_d</i> or <i>PER_d</i>	x, x x or x,x	– or %
Bivalent temperature	T_{biv}	x	°C	For air-to-water heat pumps: Operation limit Temperature	<i>TOL</i>	x	°C

Cycling interval capacity for heating	P_{cych}	x,x	kW	Cycling interval efficiency	COP_d or PER_d	x, x x or x,x	– or %
Degradation co-efficient (4)	C_{dh}	x,x	–	Heating water operating limit temperature	$WTOL$	x	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	x,xxx	kW	Rated heat output ⁽⁴⁾	P_{sup}	x,x	kW
Thermostat-off mode	P_{TO}	x,xxx	kW	Type of energy input			
Standby mode	P_{SB}	x,xxx	kW				
Crankcase heater mode	P_{CK}	x,xxx	kW				
Other items							
Capacity control	fixed/variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	x	m ³ /h
Sound power level, in-doors/ outdoors	L_{WA}	x / x	dB	or water- or brine-to- water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	x	m ³ /h
Annual energy consumption	Q_{HE}	x	k Wh or GJ				
For heat pump combination heater:							
Declared load profile	x			Water heating energy efficiency	η_{wh}	x	%
Daily electricity consumption	Q_{elec}	x,xxx	kWh	Daily fuel consumption	Q_{fuel}	x,xxx	kWh
Annual electricity consumption	AEC	x	kWh	Annual fuel consumption	AFC	x	GJ
Contact details	Name and address of the supplier.						

⁽¹⁾ High-temperature regime means 60 °C return temperature at heater inlet and 80 °C feed temperature at heater outlet.

⁽²⁾ Low temperature means for condensing boilers 30 °C, for low-temperature boilers 37 °C and for other heaters 50 °C return temperature (at heater inlet).

⁽³⁾ For heat pump space heaters and heat pump combination heaters, the rated heat output P_{rated} is equal to the design load for heating $P_{designh}$, and the rated heat output of a supplementary heater P_{sup} is equal to the supplementary capacity for heating $sup(T_j)$.

⁽⁴⁾ If C_{dh} is not determined by measurement then the default degradation coefficient is $C_{dh} = 0,9$.

3. TEMPERATURE CONTROLS

For temperature controls, the technical documentation referred to in Article 3(3)(b) shall include:

- (a) the name and address of the supplier;
- (b) a description of the temperature control model sufficient for its unambiguous identification;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) technical parameters:
 - the class of the temperature control;
 - the contribution of the temperature control to seasonal space heating energy efficiency in %, rounded to one decimal place;
- (g) any specific precautions that shall be taken when the temperature control is assembled, installed or maintained.

4. SOLAR DEVICES

For solar devices, the technical documentation referred to in Article 3(4)(b) shall include:

- (a) the name and address of the supplier;
- (b) a description of the solar device model sufficient for its unambiguous identification;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) technical parameters (for pumps in the collector loop if applicable):
 - the collector aperture area A_{sol} in m^2 , to two decimal places;
 - the collector efficiency η_{col} in %, rounded to the nearest integer;
 - the energy efficiency class of the solar hot water storage tank, determined in accordance with point 3 of Annex II;
 - the standing loss S of the solar hot water storage tank in W , rounded to the nearest integer;
 - the storage volume V of the solar hot water storage tank in litres and m^3 ;
 - the annual non-solar heat contribution Q_{nonsol} in kWh in terms of primary energy for electricity and/or in kWh in terms of GCV for fuels, for the load profiles M, L, XL and XXL under average climate conditions, rounded to the nearest integer;
 - the pump power consumption sol_{pump} in W , rounded to the nearest integer;
 - the standby power consumption $sol_{standby}$ in W , to two decimal places;
 - the annual auxiliary electricity consumption Q_{aux} in kWh in terms of final energy, rounded to the nearest integer;
- (g) any specific precautions that shall be taken when the solar device is assembled, installed or maintained.

5. PACKAGES OF SPACE HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

For packages of space heater, temperature control and solar device, the technical documentation referred to in Article 3(5)(c) shall include:

- (a) the name and address of the supplier;
- (b) a description of the package of space heater, temperature control and solar device model sufficient for its unambiguous identification;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) technical parameters:
 - the seasonal space heating energy efficiency in %, rounded to the nearest integer;
 - the technical parameters set out in points 1, 3 and 4 of this Annex;
- (g) any specific precautions that shall be taken when the package of space heater, temperature control and solar device is assembled, installed or maintained.

6. PACKAGES OF COMBINATION HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

For packages of combination heater, temperature control and solar device, the technical documentation referred to in Article 3(6)(c) shall include:

- (a) the name and address of the supplier;
- (b) a description of the package of combination heater, temperature control and solar device model sufficient for its unambiguous identification;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) technical parameters:
 - the seasonal space heating energy efficiency and water heating energy efficiency in %, rounded to the nearest integer;
 - the technical parameters set out in points 2, 3 and 4 of this Annex;
- (g) any specific precautions that shall be taken when the package of combination heater, temperature control and solar device is assembled, installed or maintained.

ANNEX VI

Information to be provided in the cases where end-users cannot be expected to see the product displayed, except on the internet¹⁷

1. SPACE HEATERS

1.1. The information referred to in Article 4(1)(b) shall be provided in the following order:

- (a) the seasonal space heating energy efficiency class of the model, determined in accordance with point 1 of Annex II;
- (b) the rated heat output, including the rated heat output of any supplementary heater, in kW, rounded to the nearest integer (for heat pump space heaters, under average climate conditions);
- (c) the seasonal space heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump space heaters, under average climate conditions);
- (d) the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of GCV, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump space heaters, under average climate conditions);
- (e) the sound power level L_{WA} , indoors, in dB, rounded to the nearest integer (for heat pump space heaters if applicable);

in addition, for cogeneration space heaters:

- (f) the electrical efficiency in %, rounded to the nearest integer; in addition, for heat pump space heaters:
- (g) the rated heat output, including the rated heat output of any supplementary heater, in kW, under colder and warmer climate conditions, rounded to the nearest integer;
- (h) the seasonal space heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII;
- (i) the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of GCV, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII;
- (j) the sound power level L_{WA} , outdoors, in dB, rounded to the nearest integer; in addition, for low-temperature heat pumps:
- (k) an indication that the low-temperature heat pump is only suitable for low-temperature application;

1.2. The size and font in which the information referred in point 1.1 is printed or shown shall be legible.

2. COMBINATION HEATERS

2.1. The information referred to in Article 4(2)(b) shall be provided in the following order:

- (a) for space heating, the medium-temperature application; for water heating, the declared load profile, expressed as the appropriate letter and typical usage in accordance with Table 15 of Annex VII;
- (b) the seasonal space heating energy efficiency class and the water heating energy efficiency class of the model, determined in accordance with points 1 and 2 of Annex II;

¹⁷ Title is replaced in accordance with Article 9(3) and Annex IX of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-Enc**

(c) the rated heat output, including the rated heat output of any supplementary heater, in kW, rounded to the nearest integer (for heat pump combination heaters, under average climate conditions);

(d) for space heating, the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of GCV, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump combination heaters, under average climate conditions); for water heating, the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of GCV, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII (for heat pump combination heaters, under average climate conditions);

(e) the seasonal space heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump combination heaters, under average climate conditions); the water heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII (for heat pump combination heaters, under average climate conditions);

(f) the sound power level L_{WA} , indoors, in dB, rounded to the nearest integer (for heat pump combination heaters if applicable);

(g) if applicable, an indication that the combination heater is able to work only during off-peak hours; in addition, for heat pump combination heaters:

(h) the rated heat output, including the rated heat output of any supplementary heater, in kW, under colder and warmer climate conditions, rounded to the nearest integer;

(i) for space heating, the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of GCV, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII; for water heating, the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of GCV, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII;

(j) the seasonal space heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII; the water heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII;

(k) the sound power level L_{WA} , outdoors, in dB, rounded to the nearest integer.

2.2. The size and font in which the information referred in point 2.1 is printed or shown shall be legible.

3. PACKAGES OF SPACE HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

3.1. The information referred to in Article 4(3)(b) shall be provided in the following order:

(a) the seasonal space heating energy efficiency class of the model, determined in accordance with point 1 of Annex II;

(b) the seasonal space heating energy efficiency in %, rounded to the nearest integer;

(c) the elements set out in Figure 1, Figure 2, Figure 3 and Figure 4, respectively, of Annex IV.

3.2. The size and font in which the information referred in point 3.1 is printed or shown shall be legible.

4. PACKAGES OF COMBINATION HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

4.1. The information referred to in Article 4(4)(b) shall be provided in the following order:

- (a) the seasonal space heating energy efficiency class and the water heating energy efficiency class of the model, determined in accordance with points 1 and 2 of Annex II;
- (b) the seasonal space heating energy efficiency and the water heating energy efficiency in %, rounded to the nearest integer;
- (c) the elements set out in Figure 1 and Figure 3, respectively, of Annex IV;
- (d) the elements set out in Figure 5 of Annex IV.

4.2. The size and font in which the information referred in point 4.1 is printed or shown shall be legible.

ANNEX VII

Measurements and calculations

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using harmonised standards the reference numbers of which have been published for this purpose in the *Official Journal of the European Union*, or using other reliable, accurate and reproducible methods that take into account the generally recognised state-of-the-art methods. They shall meet the conditions and technical parameters set out in points 2 to 6.

2. General conditions for measurements and calculations

(a) For the purposes of the measurements set out in points 3 to 7, the indoor ambient temperature shall be set at 20 °C.

(b) For the purposes of the calculations set out in points 3 to 7, electricity consumption shall be multiplied by a conversion coefficient CC of 2,5, unless the annual electricity consumption is expressed in final energy for the end-user, as set out in points 3(b), 4(g), 5(e) and 6.

(c) For heaters equipped with supplementary heaters, the measurement and calculation of rated heat output, seasonal space heating energy efficiency, water heating energy efficiency, sound power level and emissions of nitrogen oxides shall take account of the supplementary heater.

(d) Declared values for rated heat output, seasonal space heating energy efficiency, water heating energy efficiency, annual energy consumption and sound power level shall be rounded to the nearest integer.

3. Seasonal space heating energy efficiency and consumption of boiler space heaters, boiler combination heaters and cogeneration space heaters

(a) The seasonal space heating energy efficiency η_s shall be calculated as the seasonal space heating energy efficiency in active mode η_{son} , corrected by contributions accounting for temperature controls, auxiliary electricity consumption, standby heat loss, ignition burner power consumption (if applicable) and, for cogeneration space heaters, corrected by adding the electrical efficiency multiplied by a conversion coefficient CC of 2,5.

(b) The annual energy consumption Q_{HE} in kWh in terms of final energy and/or in GJ in terms of GCV shall be calculated as the ratio of the reference annual heating demand and the seasonal space heating energy efficiency.

4. Seasonal space heating energy efficiency and consumption of heat pump space heaters and heat pump combination heaters

(a) For establishing the rated coefficient of performance COP_{rated} or rated primary energy ratio PER_{rated} , or the sound power level, the operating conditions shall be the standard rating conditions set out in Table 9 and the same declared capacity for heating shall be used.

(b) The active mode coefficient of performance $SCOP_{on}$ for average, colder and warmer climate conditions shall be calculated on the basis of the part load for heating $Ph(T_j)$, the supplementary capacity for heating $sup(T_j)$ (if applicable), and the bin-specific coefficient of performance $COPbin(T_j)$ or bin-specific primary energy ratio $PERbin(T_j)$, weighted by the bin-hours for which the bin conditions apply, using the following conditions:

- the reference design conditions set out in Table 10;

- the European reference heating season under average, colder and warmer climate conditions set out in Table 12;
 - if applicable, the effects of any degradation of energy efficiency caused by cycling, depending on the type of control of the heating capacity.
- (c) The reference annual heating demand Q_H shall be the design load for heating $P_{designh}$ for average, colder and warmer climate conditions, multiplied by the annual equivalent active mode hours H_{HE} of 2 066, 2 465 and 1 336 for average, colder and warmer climate conditions, respectively.
- (d) The annual energy consumption Q_{HE} shall be calculated as the sum of:
- the ratio of the reference annual heating demand Q_H and the active mode coefficient of performance $SCOP_{on}$ or active mode primary energy ratio $SPER_{on}$; and
 - the energy consumption for off, thermostat-off, standby, and crankcase heater mode during the heating season.
- (e) The seasonal coefficient of performance $SCOP$ or seasonal primary energy ratio $SPER$ shall be calculated as the ratio of the reference annual heating demand Q_H and the annual energy consumption Q_{HE} .
- (f) The seasonal space heating energy efficiency η_s shall be calculated as the seasonal coefficient of performance $SCOP$ divided by the conversion coefficient CC or the seasonal primary energy ratio $SPER$, corrected by contributions accounting for temperature controls and, for water-/brine-to-water heat pump space heaters and heat pump combination heaters, the electricity consumption of one or more ground water pumps.
- (g) The annual energy consumption Q_{HE} in kWh in terms of final energy and/or GJ in terms of GCV shall be calculated as the ratio of the reference annual heating demand Q_H and the seasonal space heating energy efficiency η_s .
- ### 5. Water heating energy efficiency of combination heaters
- The water heating energy efficiency η_{wh} of a combination heater shall be calculated as the ratio between the reference energy Q_{ref} and the energy required for its generation under the following conditions:
- (a) measurements shall be carried out using the load profiles set out in Table 15;
- (b) measurements shall be carried out using a 24-hour measurement cycle as follows:
- 00:00 to 06:59: no water draw-off;
 - from 07:00: water draw-offs according to the declared load profile;
 - from end of last water draw-off until 24:00: no water draw-off;
- (c) the declared load profile shall be the maximum load profile or the load profile one below the maximum load profile;
- (d) for heat pump combination heaters, the following additional conditions apply:
- heat pump combination heaters shall be tested under the conditions set out in Table 9;
 - heat pump combination heaters which use ventilation exhaust air as the heat source shall be tested under the conditions set out in Table 11;
- (e) the annual electricity consumption AEC in kWh in terms of final energy shall be calculated as daily electricity consumption Q_{elec} in kWh in terms of final energy multiplied by 220;

(f) the annual fuel consumption AFC in GJ in terms of GCV shall be calculated as daily fuel consumption Q_{fuel} multiplied by 220.

6. Conditions for measurements and calculations of solar devices

The solar collector, solar hot water storage tank and pump in the collector loop (if applicable) shall be tested separately. Where the solar collector and solar hot water storage tank cannot be tested separately, they shall be tested in combination.

The results shall be used for the determination of the standing loss S and the calculations of the collector efficiency η_{col} , the annual non-solar heat contribution Q_{nonsol} for the load profiles M, L, XL and XXL under the average climate conditions set out in Tables 13 and 14, and the annual auxiliary electricity consumption Q_{aux} in kWh in terms of final energy.

Table 9

Standard rating conditions for heat pump space heaters and heat pump combination heaters

Heat source	Outdoor heat exchanger		Indoor heat exchanger			
	Climate condition	Inlet dry bulb (wet bulb) temperature	Heat pump space heaters and heat pump combination heaters, except low-temperature heat pumps		Low-temperature heat pumps	
			Inlet temperature	Outlet temperature	Inlet temperature	Outlet temperature
Outdoor air	Average	+ 7 °C (+ 6 °C)	+ 47 °C	+ 55 °C	+ 30 °C	+ 35 °C
	Colder	+ 2 °C (+ 1 °C)				
	Warmer	+ 14 °C (+13 °C)				
Exhaust air	All	+ 20 °C (+ 12 °C)				
		Inlet / outlet temperature				
Water	All	+ 10 °C / + 7 °C				
Brine	All	0 °C / - 3 °C				

Table 10

Reference design conditions for heat pump space heaters and heat pump combination heaters, temperatures in dry bulb air temperature (wet bulb air temperature indicated in brackets)

Climate condition	Reference design temperature	Bivalent temperature	Operation limit temperature
	$T_{designh}$	T_{biv}	TOL
Average	- 10 (- 11) °C	maximum + 2 °C	maximum - 7 °C
Colder	- 22 (- 23) °C	maximum - 7 °C	maximum - 15 °C
Warmer	+ 2 (+ 1) °C	maximum + 7 °C	maximum + 2 °C

Table 11

Maximum ventilation exhaust air available [m³/h], with humidity of 5,5 g/m³

Declared load profile	XXS	XS	S	M	L	XL	XXL
Maximum ventilation exhaust air available	109	128	128	159	190	870	1021

Table 12

European reference heating season under average, colder and warmer climate conditions for heat pump space heaters and heat pump combination heaters

bin_j	T_j [°C]	Average climate conditions	Colder climate conditions	Warmer climate conditions
		H_j [h/annum]	H_j [h/annum]	H_j [h/annum]
1 to 8	-30 to -23	0	0	0
9	-22	0	1	0
10	-21	0	6	0
11	-20	0	13	0
12	-19	0	17	0
13	-18	0	19	0
14	-17	0	26	0
15	-16	0	39	0
16	-15	0	41	0
17	-14	0	35	0
18	-13	0	52	0
19	-12	0	37	0
20	-11	0	41	0
21	-10	1	43	0
22	-9	25	54	0

23	-8	23	90	0
24	-7	24	125	0
25	-6	27	169	0
26	-5	68	195	0
27	-4	91	278	0
28	-3	89	306	0
29	-2	165	454	0
30	-1	173	385	0
31	0	240	490	0
32	1	280	533	0
33	2	320	380	3
34	3	357	228	22
35	4	356	261	63
36	5	303	279	63
37	6	330	229	175
38	7	326	269	162
39	8	348	233	259
40	9	335	230	360
41	10	315	243	428
42	11	215	191	430
43	12	169	146	503
44	13	151	150	444
45	14	105	97	384
46	15	74	61	294
Total hours:		4 910	6 446	3 590

Table 13

Average daytime temperature [°C]

	January	february	March	April	May	June	July	August	September	October	November	December
Average climate conditions	+2,8	+2,6	+7,4	+12,2	+16,3	+19,8	+21,0	+22,0	+17,0	+11,9	+5,6	+3,2

Table 14

Average global solar irradiance [W/m²]

	January	february	March	April	May	June	July	August	September	October	November	December
Average climate conditions	70	104	149	192	221	222	232	217	176	129	80	56

Table 15

Water heating load profiles of combination heaters

h	3XS			XXS			XS			S			
	Q_{top} kWh	f l/min	T_m °C	Q_{top} kWh	f l/min	T_m °C	Q_{top} kWh	f l/min	T_m °C	Q_{top} kWh	f l/min	T_m °C	T_p °C
7:00	0,015	2	25	0,105	2	25				0,105	3	25	
7:05	0,015	2	25										
7:15	0,015	2	25										
7:26	0,015	2	25										
7:30	0,015	2	25	0,105	2	25	0,525	3	35	0,105	3	25	
7:45													
8:01													
8:05													
8:15													
8:25													
8:30				0,105	2	25				0,105	3	25	
8:45													
9:00	0,015	2	25										
9:30	0,015	2	25	0,105	2	25				0,105	3	25	
10:00													
10:30													
11:00													
11:30	0,015	2	25	0,105	2	25				0,105	3	25	
11:45	0,015	2	25	0,105	2	25				0,105	3	25	
12:00	0,015	2	25	0,105	2	25							
12:30	0,015	2	25	0,105	2	25							
12:45	0,015	2	25	0,105	2	25	0,525	3	35	0,315	4	10	55
14:30	0,015	2	25										
15:00	0,015	2	25										
15:30	0,015	2	25										
16:00	0,015	2	25										

16:30														
17:00														
18:00				0,105	2	25				0,105	3	25		
18:15				0,105	2	25				0,105	3	40		
18:30	0,015	2	25	0,105	2	25								
19:00	0,015	2	25	0,105	2	25								
19:30	0,015	2	25	0,105	2	25								
20:00				0,105	2	25								
20:30								0,105	3	35	0,42	4	10	55
20:45				0,105	2	25								
20:46														
21:00				0,105	2	25								
21:15	0,015	2	25	0,105	2	25								
21:30	0,015	2	25							0,525	5	45		
21:35	0,015	2	25	0,105	2	25								
21:45	0,015	2	25	0,105	2	25								
Q_{ref}	0,345			2,100				2,100			2,100			

Continued Table 15

Water heating load profiles of combination heaters

h	M				L				XL			
	Q_{top}	f	T_m	T_p	Q_{top}	f	T_m	T_p	Q_{top}	f	T_m	T_p
	kWh	l/min	°C	°C	kWh	l/min	°C	°C	kWh	l/min	°C	°C
7:00	0,105	3	25		0,105	3	25		0,105	3	25	
7:05	1,4	6	40		1,4	6	40					
7:15									1,82	6	40	
7:26									0,105	3	25	
7:30	0,105	3	25		0,105	3	25					
7:45					0,105	3	25		4,42	10	10	40
8:01	0,105	3	25						0,105	3	25	
8:05					3,605	10	10	40				
8:15	0,105	3	25						0,105	3	25	
8:25					0,105	3	25					
8:30	0,105	3	25		0,105	3	25		0,105	3	25	
8:45	0,105	3	25		0,105	3	25		0,105	3	25	
9:00	0,105	3	25		0,105	3	25		0,105	3	25	
9:30	0,105	3	25		0,105	3	25		0,105	3	25	
10:00									0,105	3	25	
10:30	0,105	3	25	40	0,105	3	25	40	0,105	3	10	40
11:00									0,105	3	25	
11:30	0,105	3	25		0,105	3	25		0,105	3	25	
11:45	0,105	3	25		0,105	3	25		0,105	3	25	

12:00												
12:30												
12:45	0,315	4	10	55	0,315	4	10	55	0,735	4	10	55
14:30	0,105	3	25		0,105	3	25		0,105	3	25	
15:00									0,105	3	25	
15:30	0,105	3	25		0,105	3	25		0,105	3	25	
16:00									0,105	3	25	
16:30	0,105	3	25		0,105	3	25		0,105	3	25	
17:00									0,105	3	25	
18:00	0,105	3	25		0,105	3	25		0,105	3	25	
18:15	0,105	3	40		0,105	3	40		0,105	3	40	
18:30	0,105	3	40		0,105	3	40		0,105	3	40	
19:00	0,105	3	25		0,105	3	25		0,105	3	25	
19:30												
20:00												
20:30	0,735	4	10	55	0,735	4	10	55	0,735	4	10	55
20:45												
20:46									4,42	10	10	40
21:00					3,605	10	10	40				
21:15	0,105	3	25						0,105	3	25	
21:30	1,4	6	40		0,105	3	25		4,42	10	10	40
21:35												
21:45												
Q_{ref}	5,845				11,655				19,07			

Continued Table 15

Water heating load profiles of combination heaters

h	XXL			
	Q_{top} kWh	f l/min	T_m °C	T_p °C
7:00	0,105	3	25	
7:05				
7:15	1,82	6	40	
7:26	0,105	3	25	
7:30				
7:45	6,24	16	10	40
8:01	0,105	3	25	
8:05				
8:15	0,105	3	25	
8:25				
8:30	0,105	3	25	
8:45	0,105	3	25	

9:00	0,105	3	25	
9:30	0,105	3	25	
10:00	0,105	3	25	
10:30	0,105	3	10	40
11:00	0,105	3	25	
11:30	0,105	3	25	
11:45	0,105	3	25	
12:00				
12:30				
12:45	0,735	4	10	55
14:30	0,105	3	25	
15:00	0,105	3	25	
15:30	0,105	3	25	
16:00	0,105	3	25	
16:30	0,105	3	25	
17:00	0,105	3	25	
18:00	0,105	3	25	
18:15	0,105	3	40	
18:30	0,105	3	40	
19:00	0,105	3	25	
19:30				
20:00				
20:30	0,735	4	10	55
20:45				
20:46	6,24	16	10	40
21:00				
21:15	0,105	3	25	
21:30	6,24	16	10	40
21:35				
21:45				
Q_{ref}	24,53			

ANNEX VIII¹⁸

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Contracting Parties shall apply the following procedure:

- (1) The Contracting Party authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 16.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the Contracting Party authorities shall select three additional units of the same model for testing.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 16.
- (6) If the result referred to in point 5 is not achieved, the model shall be considered not to comply with this Delegated Regulation.
- (7) The Contracting Party authorities shall provide all relevant information to the authorities of the other Contracting Parties and to the Secretariat without delay after a decision being taken on the non-compliance of the model according to points 3 and 6. The Contracting Party authorities shall use the measurement and calculation methods set out in Annex VII.

¹⁸ Annex VIII is replaced in accordance with Article 9 and Annex IX of Delegated Regulation (EU) 2017/254, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 16 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 16
Verification tolerances

Parameters	Verification tolerances
Space-heating energy efficiency, η_s	The determined value shall not be lower than the declared value by more than 8 %.
Water-heating energy efficiency, η_{wh}	The determined value shall not be lower than the declared value by more than 8 %.
Sound power level	The determined value shall not exceed the declared value by more than 2 dB(A).
Class of the temperature control	The class of the temperature controls corresponds to the declared class of the unit.
Collector efficiency, η_{col}	The determined value shall not be lower than the declared value by more than 5 %.
Standing loss, S	The determined value shall not exceed the declared value by more than 5 %.
Auxiliary electricity consumption, Q_{aux}	The determined value shall not exceed the declared value by more than 5 %.

ANNEX IX¹⁹**Information to be provided in the case of sale, hire or hire-purchase through the internet**

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

- (a) “display mechanism” means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
- (b) “nested display” means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;
- (c) “tactile screen” means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
- (d) “alternative text” means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3 or in the case of a package where appropriate duly filled in based on the label and fiches provided by suppliers in accordance with Article 3, shall be shown on the display mechanism in proximity to the price of the product or package in accordance with the timetable set out in Article 3. If both a product and a package are shown, but with a price indicated only for the package, only the package label shall be displayed. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

- (a) be an arrow in the colour corresponding to the energy efficiency class of the product or package on the label;
- (b) indicate on the arrow the energy efficiency class of the product or package in white in a font size equivalent to that of the price; and
- (c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

- (a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product or package;
- (b) the image shall link to the label;
- (c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

¹⁹ Annex IX is added in accordance with Article 9(4) of Delegated Regulation (EU) 518/2014, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

- (d) the label shall be displayed by pop up, new tab, new page or inset screen display;**
 - (e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;**
 - (f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;**
 - (g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product or package in a font size equivalent to that of the price.**
- (5) The appropriate product fiche made available by suppliers in accordance with Article 3 shall be shown on the display mechanism in proximity to the price of the product or package. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.**

DELEGATED REGULATION (EU) 874/2012 of 12 July 2012 supplementing Directive 2010/30/EU with regard to energy labelling of electrical lamps and luminaires

Incorporated and adapted by Ministerial Council Decision 2014/02/MC-EnC of 23 September 2014 adapting certain Delegated Regulations on energy related products, and amended by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products.

*The adaptations made by Ministerial Council Decisions 2014/02/MC-EnC and 2018/03/MC-EnC are highlighted in **bold and blue**.*

Article 1

Subject matter and scope

1. This Regulation establishes requirements for labelling of and providing supplementary product information on electrical lamps such as:

- (a) filament lamps;
- (b) fluorescent lamps;
- (c) high-intensity discharge lamps;
- (d) LED lamps and LED modules.

This Regulation also establishes requirements for labelling luminaires designed to operate such lamps and marketed to end users, including when they are integrated into other products that are not dependent on energy input in fulfilling their primary purpose during use (such as furniture).

2. The following products shall be excluded from the scope of this Regulation:

- (a) lamps and LED modules with a luminous flux of less than 30 lumens;
- (b) lamps and LED modules marketed for operation with batteries;
- (c) lamps and LED modules marketed for applications where their primary purpose is not lighting, such as:
 - (i) emission of light as an agent in chemical or biological processes (such as polymerisation, photodynamic therapy, horticulture, petcare, anti-insect products);
 - (ii) image capture and image projection (such as camera flashlights, photocopiers, video projectors);
 - (iii) heating (such as infrared lamps);
 - (iv) signalling (such as airfield lamps). These lamps and LED modules are not excluded when they are marketed for lighting;
- (d) lamps and LED modules marketed as part of a luminaire and not intended to be removed by the end-user, except when they are offered for sale, hire or hire purchase or displayed separately to the end user, for example as spare parts;
- (e) lamps and LED modules marketed as part of a product whose primary purpose is not lighting. However, if they are offered for sale, hire or hire purchase or displayed separately, for example as spare parts, they

shall be included within the scope of this Regulation;

(f) lamps and LED modules that do not comply with requirements becoming applicable in 2013 and 2014 according to Regulations implementing Directive 2009/125/EC of the European Parliament and of the Council;

(g) luminaires that are designed to operate exclusively with the lamps and LED modules listed in points (a) to (c).

Article 2

Definitions

In addition to the definitions laid down in Article 2 of Directive 2010/30/EU, the following definitions shall apply for the purposes of this Regulation:

(1) 'Light source' means a surface or object designed to emit mainly visible optical radiation produced by a transformation of energy. The term 'visible' refers to a wavelength of 380-780 nm;

(2) 'Lighting' means the application of light to a scene, objects or their surroundings so that they may be seen by humans;

(3) 'Accent lighting' means a form of lighting where light is directed so as to highlight an object or a part of an area;

(4) 'Lamp' means a unit whose performance can be assessed independently and which consists of one or more light sources. It may include additional components necessary for starting, power supply or stable operation of the unit or for distributing, filtering or transforming the optical radiation, in cases where those components cannot be removed without permanently damaging the unit;

(5) 'Lamp cap' means that part of a lamp which provides connection to the electrical supply by means of a lamp holder or lamp connector and may also serve to retain the lamp in the lamp holder;

(6) 'Lamp holder' or 'socket' means a device which holds the lamp in position, usually by having the cap inserted in it, in which case it also provides the means of connecting the lamp to the electric supply;

(7) 'Directional lamp' means a lamp having at least 80 % light output within a solid angle of π sr (corresponding to a cone with angle of 120°);

(8) 'Non-directional lamp' means a lamp that is not a directional lamp;

(9) 'Filament lamp' means a lamp in which light is produced by means of a threadlike conductor which is heated to incandescence by the passage of an electric current. The lamp may contain gases influencing the process of incandescence;

(10) 'Incandescent lamp' means a filament lamp in which the filament operates in an evacuated bulb or is surrounded by inert gas;

(11) '(Tungsten) halogen lamp' means a filament lamp in which the filament is made of tungsten and is surrounded by gas containing halogens or halogen compounds. They may be supplied with an integrated power supply;

(12) 'Discharge lamp' means a lamp in which the light is produced, directly or indirectly, by an electric discharge through a gas, a metal vapour or a mixture of several gases and vapours;

(13) 'Fluorescent lamp' means a discharge lamp of the low pressure mercury type in which most of the

light is emitted by one or more layers of phosphors excited by the ultraviolet radiation from the discharge. Fluorescent lamps may be supplied with an integrated ballast;

(14) 'Fluorescent lamp without integrated ballast' means a single- or double-capped fluorescent lamp without integrated ballast;

(15) 'High-intensity discharge lamp' means an electric discharge lamp in which the light producing arc is stabilised by wall temperature and the arc has a bulb wall loading in excess of 3 watts per square centimetre;

(16) 'Light-emitting diode (LED)' means a light source which consists of a solid state device embodying a p-n junction. The junction emits optical radiation when excited by an electric current;

(17) 'LED package' means an assembly having one or more LED(s). The assembly may include an optical element and thermal, mechanical and electrical interfaces;

(18) 'LED module' means an assembly having no cap and incorporating one or more LED packages on a printed circuit board. The assembly may have electrical, optical, mechanical and thermal components, interfaces and control gear;

(19) 'LED lamp' means a lamp incorporating one or more LED modules. The lamp may be equipped with a cap;

(20) 'Lamp control gear' means a device located between the electrical supply and one or more lamps, which provides a functionality related to the operation of the lamp(s), such as transforming the supply voltage, limiting the current of the lamp(s) to the required value, providing a starting voltage and preheating current, preventing cold starting, correcting the power factor or reducing radio interference. The device may be designed to connect to other lamp control gear to perform these functions. The term does not include:

- control devices,
- power supplies converting the mains voltage to another supply voltage that are designed to supply in the same installation both lighting products and products whose primary purpose is not lighting;

(21) 'Control device' means an electronic or mechanical device controlling or monitoring the luminous flux of the lamp by other means than power conversion for the lamp, such as timer switches, occupancy sensors, light sensors and daylight regulation devices. In addition, phase cut dimmers shall also be considered as control devices;

(22) 'External lamp control gear' means non-integrated lamp control gear designed to be installed outside the enclosure of a lamp or luminaire, or to be removed from the enclosure without permanently damaging the lamp or the luminaire;

(23) 'Ballast' means lamp control gear inserted between the supply and one or more discharge lamps which by means of inductance, capacitance or a combination of inductance and capacitance, serves mainly to limit the current of the lamp(s) to the required value;

(24) 'Halogen lamp control gear' means lamp control gear that transforms mains voltage to extra low voltage for halogen lamps;

(25) 'Compact fluorescent lamp' means a fluorescent lamp that includes all the components necessary for starting and stable operation of the lamp;

(26) 'Luminaire' means an apparatus which distributes, filters or transforms the light transmitted from one or more lamps and which includes all the parts necessary for supporting, fixing and protecting the lamps and, where necessary, circuit auxiliaries together with the means for connecting them to the electric supply;

(27) 'Point of sale' means a physical location where the product is displayed or offered for sale, hire or hire-purchase to the end-user;

(28) 'End-user' means a natural person buying or expected to buy an electrical lamp or luminaire for purposes which are outside his trade, business, craft or profession;

(29) 'Final owner' means the person or entity owning a product during the use phase of its life cycle, or any person or entity acting on behalf of such a person or entity.

Article 3

Responsibilities of suppliers

1. Suppliers of electrical lamps placed on the market as individual products shall ensure that:

(a) a product fiche, as set out in Annex II, is made available;

(b) the technical documentation as set out in Annex III is made available on request to the authorities of the **Contracting Parties** and to the Commission;

(c) any advertisement, formal price quote or tender offer disclosing energy-related or price information for a specific lamp states the energy efficiency class;

(d) any technical promotional material concerning a specific lamp which describes its specific technical parameters states the energy efficiency class of that lamp;

(e) if the lamp is intended to be marketed through a point of sale, a label produced in the format and containing information as set out in Annex I.1 is placed or printed on, or attached to, the outside of the individual packaging, and the packaging displays the nominal power of the lamp outside the label;

(f) an electronic label in the format and containing the information set out in point 1 of Annex I is made available to dealers for each lamp model placed on the market from 1 January 2020 with a new model identifier. It may also be made available to dealers for other lamp models.¹

2. Suppliers of luminaires intended to be marketed to end-users shall ensure that:

(a) the technical documentation as set out in Annex III is made available on request to the authorities of the **Contracting Parties** and to the Commission;

(b) the information contained in the label according to Annex I.2 is provided in the following situations:

(i) in any advertisement, formal price quote or tender offer disclosing energy-related or price information for a specific luminaire;

(ii) in any technical promotional material concerning a specific lamp which describes its specific technical parameters. In these cases the information may be provided in formats other than the one set out in Annex I.2, such as fully textual;

(c) if the luminaire is intended to be marketed through a point of sale, a label produced in the format and containing information as set out in Annex I is made available free of charge to dealers in electronic or paper format. If the supplier chooses a delivery system in which labels are provided only on request from dealers, the supplier shall promptly deliver the labels on request;

¹ Article 3, paragraph 1, points (f) is added in accordance with Article 7(1) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-Enc**

(d) if the luminaire is placed on the market in a packaging for end-users that includes electrical lamps which the end-user can replace in the luminaire, the original packaging of those lamps is included in the luminaire's packaging. If not, then the outside or inside of the luminaire packaging must present, in some other form, the information given on the lamps' original packaging and required by this Regulation and by Commission regulations setting ecodesign requirements for lamps pursuant to Directive 2009/125/EC;

(e) an electronic label in the format and containing information set out in point 2 of Annex I is made available to dealers for each luminaire model placed on the market from 1 January 2020 with a new model identifier. It may also be made available to dealers for other luminaire models.²

Suppliers of luminaires intended to be marketed through a point of sale who provide information under this Regulation shall be considered to have fulfilled their responsibilities as distributors with respect to the product information requirements for lamps laid down in Commission regulations setting ecodesign requirements for lamps pursuant to Directive 2009/125/EC.

Article 4

Responsibilities of dealers

1. Dealers of electrical lamps shall ensure that:

(a) each model offered for sale, hire or hire-purchase where the final owner cannot be expected to see the product displayed is marketed with the information to be provided by suppliers in accordance with Annex IV. Where the offer is made through the internet and an electronic label has been made available in accordance with Article 3(1)(f) the provisions in Annex VIII shall apply instead;³

(b) any advertisement, formal price quote or tender offer disclosing energy-related or price information for a specific model states the energy efficiency class;

(c) any technical promotional material concerning a specific model which describes its specific technical parameters states the energy efficiency class of that model.

2. Dealers of luminaires marketed to end-users shall ensure that:

(a) the information contained in the label in accordance with Annex I.2 is provided in the following situations:

(i) in any advertisement, formal price quote or tender offer disclosing energy-related or price information for a specific luminaire;

(ii) in any technical promotional material concerning a specific luminaire which describes its specific technical parameters. In these cases the information may be provided in formats other than the one set out in Annex I.2, such as fully textual;

(b) each model presented at a point of sale is accompanied by the label as set out in Annex I.2. The label shall be displayed in one or both of the following ways:

² Article 3, paragraph 2, points (e) is added in accordance with Article 7(1) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-Enc**

³ Article 4, paragraph 1, point (a) is replaced in accordance with Article 7(2) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-Enc**

(i) in proximity to the displayed luminaire, so as to be clearly visible and identifiable as the label belonging to the model, without having to read the brand name and model number on the label;

(ii) clearly accompanying the most directly-visible information about the displayed luminaire (such as price or technical information) in the point of sale;

(c) if the luminaire is sold in a packaging for end-users that includes electrical lamps which the end-user can replace in the luminaire, the original packaging of those lamps is included in the luminaire's packaging. If not, then the outside or inside of the luminaire packaging must present, in some other form, the information given on the lamps' original packaging and required by this Regulation and by Commission regulations setting ecodesign requirements for lamps pursuant to Directive 2009/125/EC.

(d) each model offered for sale, hire or hire-purchase through the internet and for which an electronic label has been made available in accordance with Article 3(2)(e) is accompanied by the label in accordance with Annex VIII.⁴

Article 5

Measurement methods

The information to be provided under Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement procedures, which take into account the recognised state-of-the-art measurement methods, as set out in Annex V.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure laid down in Annex V when assessing the conformity of the declared energy efficiency class and energy consumption.

Article 7

Revision

<...>⁵

Article 8

Repeal

<...>⁶

⁴ Article 4, paragraph 2, points (d) is added in accordance with Article 7(2) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC**

⁵ Not applicable

⁶ Not applicable

Article 9

Transitional provisions

1. Articles 3(2) and 4(2) shall not apply to luminaires before **1 July 2016**.
2. Article 3(1)(c-d) and Article 4(1)(a-c) shall not apply to printed advertisements and printed technical promotional material published before **1 July 2016**.
3. Lamps referred to in Article 1(1) and (2) of Directive 98/11/EC placed on the market before **1 January 2016** shall comply with the provisions set out in Directive 98/11/EC.
4. Lamps referred to in Article 1(1) and (2) of Directive 98/11/EC which comply with the provisions of this Regulation and which are placed on the market or offered for sale, hire or hire-purchase before **1 January 2016** shall be regarded as complying with the requirements of Directive 98/11/EC.

Article 10

Entry into force and application

1. **This Decision (2014/02/MC-EnC) enters into force upon its adoption (23 September 2014) and it is addressed to the Contracting Parties.**⁷
2. It shall apply from **1 January 2016**, except in the cases listed in Article 9.

This Regulation shall be binding in its entirety and directly applicable in all **Contracting Parties**.

The Secretariat shall monitor and review the implementation of the Delegated Regulations referred to in Article 1 in the Contracting Parties. Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by these Delegated Regulations, in the next year of the deadline for the overall implementation.⁸

⁷ The text displayed here corresponds to Article 3(1) of Decision 2014/02/MC-EnC

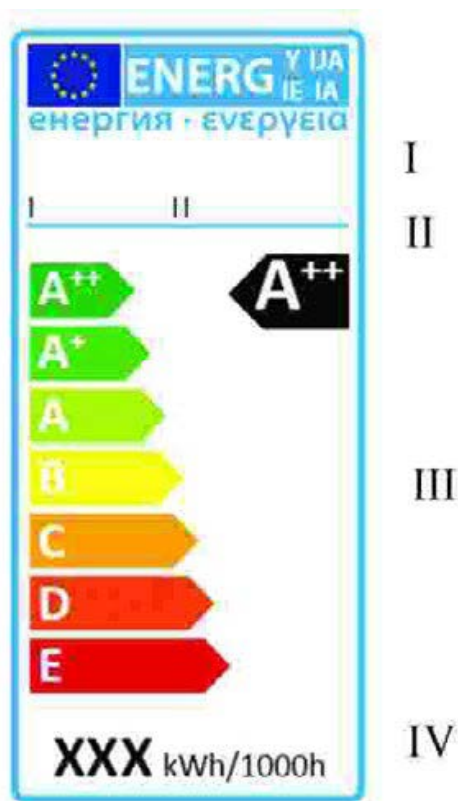
⁸ The text displayed here corresponds to Article 2(3) of Decision 2014/02/MC-EnC

ANNEX I

Label

1. LABEL FOR ELECTRICAL LAMPS PRESENTED AT A POINT OF SALE

(1) The label shall be as in the following illustration if it is not printed on the packaging:



(2) The following information shall be included on the label:

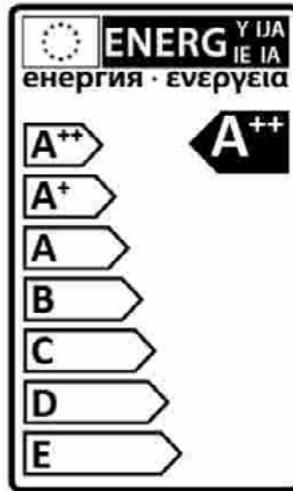
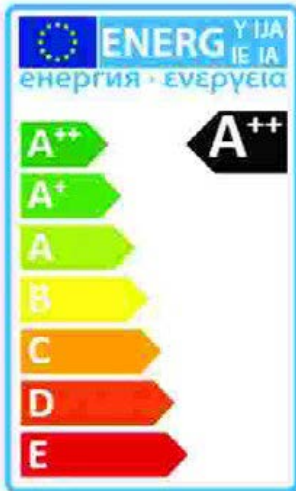
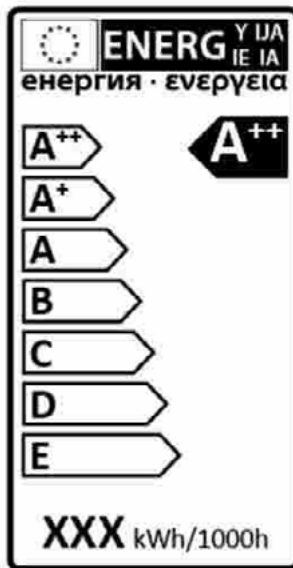
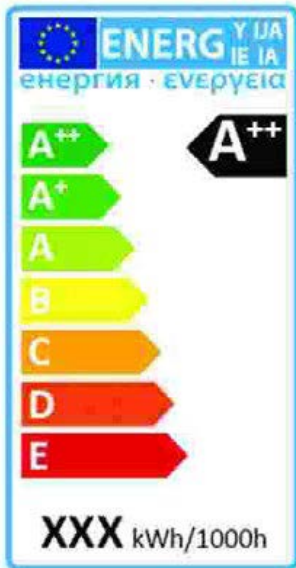
I. supplier's name or trade mark;

II. supplier's model identifier, meaning the code, usually alphanumeric, which distinguishes a specific lamp model from other models with the same trade mark or supplier's name;

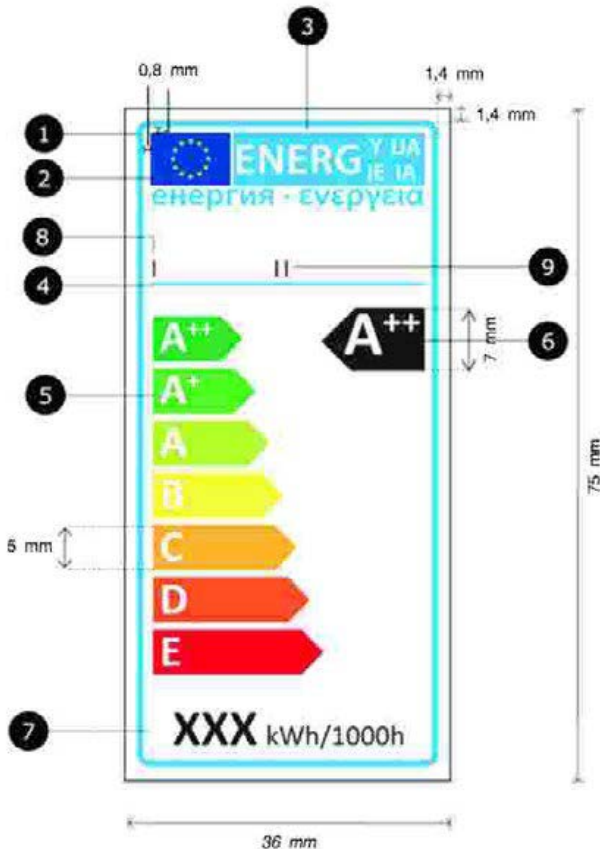
III. the energy efficiency class determined in accordance with Annex VI; the head of the arrow containing the energy efficiency class of the lamp shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

IV. weighted energy consumption (E_w) in kWh per 1 000 hours, calculated and rounded up to the nearest integer in accordance with Annex VII.

(3) If the label is printed on the packaging and the information specified in point (2)(I), (II) and (IV) is included elsewhere on the packaging, that information may be omitted from the label. The label shall then be chosen from the following illustrations:



(4) The design of the label shall be as follows:



where:

(a) the size specifications in the figure above and in point (d) apply to a lamp label 36 mm wide and 75 mm high. If the label is printed in a different format, its content must nevertheless remain proportionate to the specifications above.

The label version specified in points (1) and (2) must be at least 36 mm wide and 75 mm high, and the versions specified in point (3) must be, respectively, at least 36 mm wide and 68 mm high and at least 36 mm wide and 62 mm high. If no side of the packaging is large enough to contain the label and its blank border or if this would cover more than 50 % of the surface area of the largest side, the label and border may be reduced, but by no more than is required to meet both these conditions. However, in no case may the label be reduced to less than 40 % (by height) of its standard size. If the packaging is too small to take such a reduced label, a 36 mm wide and 75 mm high label must be attached to the lamp or the packaging;

(b) the background shall be white for both the multicoloured and the monochrome versions of the label;

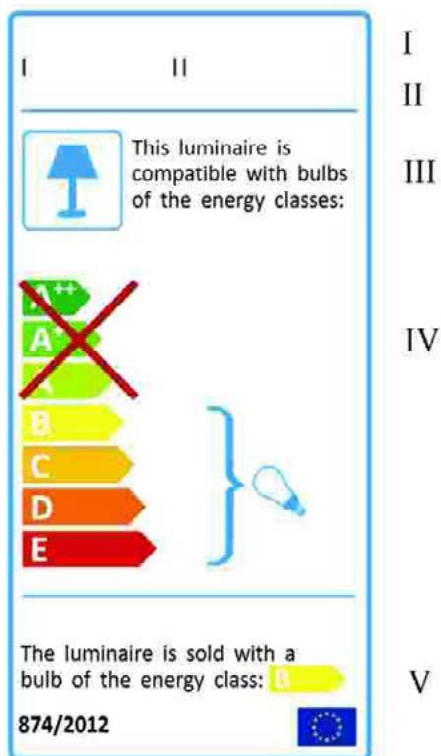
(c) for the multicoloured version of the label, the colours shall be CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black;

(d) the label shall meet all the following requirements (numbers refer to the figure above; colour specifications apply only to the multicoloured version of the label):

- 1 **Border stroke:** 2 pt – colour: Cyan 100 % – round corners: 1 mm.
 - 2 **EU logo** – colours: X-80-00-00 and 00-00-X-00.
 - 3 **Energy logo:** colour: X-00-00-00. Pictogram as depicted: EU logo and energy logo (combined): width: 30 mm, height: 9 mm.
 - 4 **Sub-logos border:** 1 pt – colour: Cyan 100 % – length: 30 mm.
 - 5 **A⁺⁺-E scale**
 - **Arrow:** height: 5 mm, gap: 0,8 mm – colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00.
 - **Text:** Calibri bold 15 pt, capitals and white; ‘+’ symbols: Calibri bold 15 pt, Superscript, white, aligned on a single row.
 - 6 **Energy efficiency class**
 - **Arrow:** width: 11,2 mm, height: 7 mm, 100 % black.
 - **Text:** Calibri bold 20 pt, capitals and white; ‘+’ symbols: Calibri bold 20 pt, Superscript, white, aligned on a single row.
 - 7 **Weighted energy consumption**
 - Value:** Calibri bold 16 pt, 100 % black; and Calibri regular 9 pt, 100 % black.
 - 8 **Supplier’s name or trade mark**
 - 9 **Supplier’s model identifier**
 - The suppliers’ name or trade mark and the model identifier shall fit in a space of 30 × 7 mm.
- Nothing else placed or printed on, or attached to, the individual packaging shall obscure the label or reduce its visibility.
- By way of derogation, if a model has been awarded an ‘EU ecolabel’ under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU ecolabel may be added.

2. LABEL FOR LUMINAIRES PRESENTED AT A POINT OF SALE

(1) The label shall be the relevant language version, and shall be as shown in the following illustration, or as in variants defined under points (2) and (3):



(2) The following information shall be included in the label:

- I. the supplier's name or trade mark;
- II. the supplier's model identifier, meaning the code, usually alphanumeric, which distinguishes a specific luminaire model from other models with the same trade mark or supplier's name;
- III. the sentence as shown in the example in point (1), or one of its alternatives from the examples in point (3) below, as applicable. Instead of the word 'luminaire', a more precise term may be used describing the particular luminaire type or the product into which the luminaire is integrated (such as furniture), as long as it remains clear that the term refers to the product on sale that operates the light sources;
- IV. the range of energy-efficiency classes according to part 1 of this Annex, accompanied by the following elements, as applicable:
 - (a) a 'bulb' pictogram indicating the classes of user-replaceable lamps with which the luminaire is compatible according to state-of-the-art requirements for compatibility;
 - (b) a cross over the classes of lamps with which the luminaire is not compatible according to state-of-the-art requirements for compatibility;

(c) the letters 'LED' arranged vertically along the classes A to A⁺⁺ if the luminaire contains LED modules not intended to be removed by the end-user. If such a luminaire does not contain sockets for user-replaceable lamps, the classes from B to E shall be covered by a cross;

V. one of the following options, as applicable:

(a) if the luminaire operates with lamps that are replaceable by the end-user, and such lamps are included in the packaging of the luminaire, the sentence as shown in the example in point (1), containing the appropriate energy classes. Where necessary, the sentence can be adjusted to refer to one lamp or several lamps, and several energy classes can be listed;

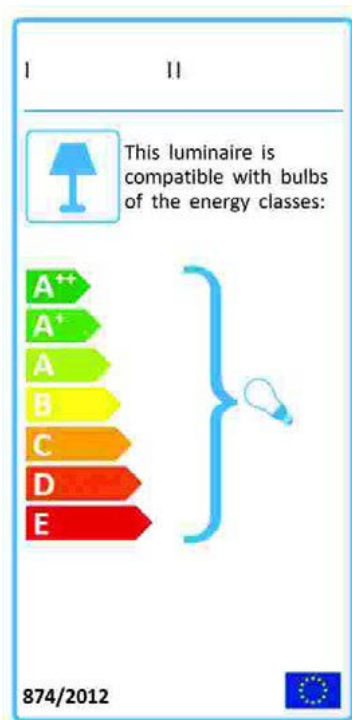
(b) if the luminaire contains only LED modules not intended to be removed by the end-user, the sentence as shown in the example in point (3)(b);

(c) if the luminaire contains both LED modules not intended to be removed by the end-user and sockets for replaceable lamps, and such lamps are not included with the luminaire, the sentence as shown in the example in point (3)(d);

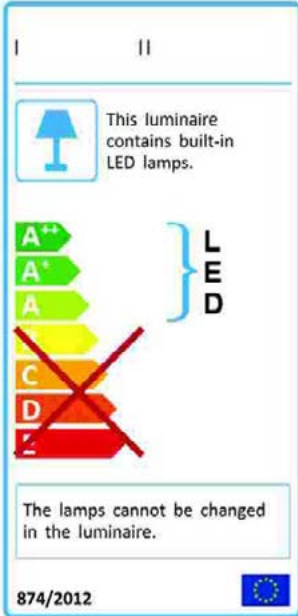
(d) if the luminaire operates only with lamps that are replaceable by the end-user and there are no such lamps included with the luminaire, the space shall be left empty, as shown in the example in point (3)(a).

(3) The following illustrations provide examples of typical luminaire labels in addition to the illustration in point (1), without showing all possible combinations:

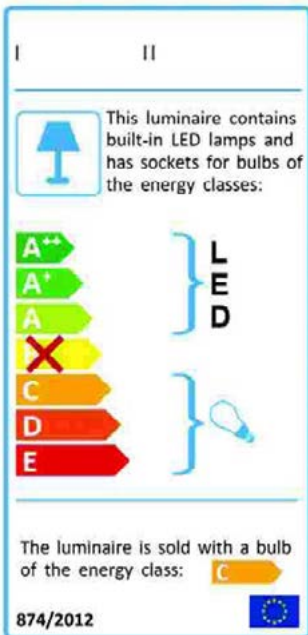
(a) luminaire operating with user-replaceable lamps compatible with lamps of all energy classes with no lamps included:



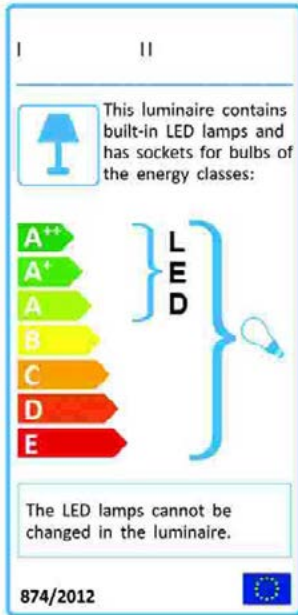
(b) luminaire containing only non-replaceable LED modules:



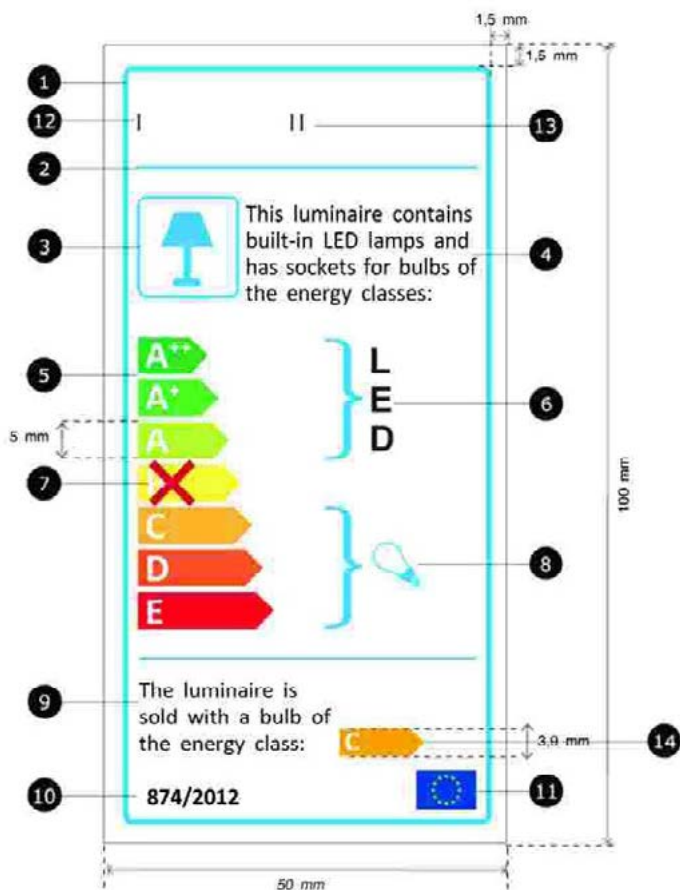
(c) luminaire containing both non-replaceable LED modules and sockets for user-replaceable lamps, with lamps included:



(d) luminaire containing both non-replaceable LED modules and sockets for user-replaceable lamps, with lamps not included:



(4) The design of the label shall be as in the figures below:



(a) the label version shall be at least 50 mm wide and 100 mm high;

(b) the background shall be white or transparent, but the letters of the energy classes shall always be white. When the background is transparent, the dealer shall ensure that the label is applied to a surface which is white or a light shade of grey that preserves the legibility of all the elements of the label;

(c) the colours shall be CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black;

(d) the label shall fulfil all of the following requirements (the numbers refer to the figure above):

1 Border stroke: 2 pt – colour: Cyan 100 % – round corners: 1 mm.

2 Sub-logos border: 1 pt – colour: Cyan 100 % – length: 43 mm.

3 Luminaire logo: stroke: 1 pt – colour: Cyan 100 % – Size: 13 mm × 13 mm – round corners: 1 mm. Pictogram as depicted, or the supplier's own pictogram or photo, if it describes better the luminaire

belonging to the label.

4 Text: Calibri Regular 9 pt or larger, 100 % black.

5 A⁺-E scale

– **Arrow:** height: 5 mm, gap: 0,8 mm – colours:

- Highest class: X-00-X-00,
- Second class: 70-00-X-00,
- Third class: 30-00-X-00,
- Fourth class: 00-00-X-00,
- Fifth class: 00-30-X-00,
- Sixth class: 00-70-X-00,
- Last class: 00-X-X-00.

– **Text:** Calibri bold 14 pt, capitals and white; ‘+’ symbols: Calibri bold 14 pt, Superscript, white, aligned on a single row.

6 LED text: Verdana Regular 15 pt, 100 % black.

7 Cross: colour: 13-X-X-04, stroke: 3 pt.

8 Bulb logo: Pictogram as depicted.

9 Text: Calibri Regular 10 pt or larger, 100 % black.

10 Numbering of the Regulation: Calibri bold 10 pt, 100 % black.

11 EU logo: Colours: X-80-00-00 and 00-00-X-00.

12 Supplier’s name or trademark.

13 Supplier’s model identifier:

The supplier’s name or trade mark and the model identifier shall fit into a space measuring 43 × 10 mm.

14 Energy class arrow

– **Arrow:** height: 3,9 mm, width: as shown in the illustration in point (4) but reduced in the same proportion as the height, colour: the colour defined in point, as applicable.

– **Text:** Calibri bold 10,5 pt, capitals and white; ‘+’ symbols: Calibri bold 10,5 pt, Superscript, white, aligned on a single row.

If there is not enough space for displaying the energy class arrows within the area of the sentence referred to in point (2)(V)(a), the area between the number of the Regulation and the EU logo may be used for that purpose;

(e) the label may also be displayed in horizontal orientation, in which case it shall be at least 100 mm wide and 50 mm high. The components of the label shall be as described in points (b) to (d) and shall be arranged according to the following examples, as applicable. If there is not enough space for displaying the energy class arrows in the text box to the left from the A⁺ to E scale, the text box may be enlarged vertically as necessary.

This luminaire is compatible with bulbs of the energy classes:

The luminaire is sold with a bulb of the energy class: II

A++
A+
A
B
C
D
E

I II

874/2012

This luminaire contains built-in LED lamps.

The lamps cannot be changed in the luminaire.

A++
A+
A
B
C
D
E

LED

I II

874/2012

This luminaire is compatible with bulbs of the energy classes:

A++
A+
A
B
C
D
E

I II

874/2012

ANNEX II

Product fiche for electrical lamps

The fiche shall contain the information specified for the label. Where product brochures are not supplied, the label provided with the product can also be considered to be the fiche.

ANNEX III

Technical documentation

The technical documentation referred to in Article 3(1)(b) and (2)(a) shall include:

- (a) the name and address of the supplier;
- (b) a general description of the model, sufficient for it to be unequivocally and easily identified;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) the technical parameters for determining energy consumption and energy efficiency in the case of electrical lamps, and compatibility with lamps in the case of luminaires, specifying at least one realistic combination of product settings and conditions in which to test the product;
- (g) for electrical lamps, the results of calculations performed in accordance with Annex VII.

The information contained in this technical documentation may be merged with the technical documentation provided in accordance with measures under Directive 2009/125/EC.

ANNEX IV

Information to be provided in cases where final owners cannot be expected to see the product displayed

1. The information referred to in Article 4(1)(a) shall be provided in the following order:
 - (a) the energy efficiency class as defined in Annex VI;
 - (b) where required by Annex I, the weighted energy consumption in kWh per 1 000 hours, rounded up to the nearest integer and calculated in accordance with part 2 of Annex VII.
2. When other information contained in the product fiche is also provided, it shall be in the form and order specified in Annex II.
3. The size and font in which all the information referred to in this Annex is printed or shown shall be legible.

ANNEX V⁹

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Contracting Parties shall apply the following procedure:

1. VERIFICATION PROCEDURE FOR ELECTRICAL LAMPS AND LED MODULES MARKETED AS INDIVIDUAL PRODUCTS

(1) The Contracting Party authorities shall verify a sample batch of a minimum of 20 lamps of the same model from the same supplier, where possible obtained in equal proportions from four randomly selected sources.

(2) The model shall be considered to comply with the applicable requirements if:

(a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and

(b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(c) when testing the units of model, the arithmetical mean of the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) is within the respective tolerance of 10 %.

(3) If the results referred to in points 2(a), (b) or (c) are not achieved, the model shall be considered not to comply with this Delegated Regulation.

(4) The Contracting Party authorities shall provide all relevant information to the authorities of the other Contracting Parties and to the Secretariat without delay after a decision being taken on the non-compliance of the model according to point 3.

The Contracting Party authorities shall use measurement procedures that reflect generally recognised, current best practice and are reliable, accurate and reproducible, including methods set out in documents whose reference numbers have been published for that purpose in a dedicated section of the website of the Energy Community. The Contracting Party authorities shall use the measurement and calculation methods set out in Annex VII.

⁹ Annex V is replaced in accordance with Article 7 and Annex VII of Delegated Regulation (EU) 2017/254, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

The Contracting Party authorities shall only apply the verification tolerance of 10 % and shall only use the procedure described in points 1 to 4 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

2. VERIFICATION PROCEDURE FOR LUMINAIRES INTENDED TO BE MARKETED OR MARKETED TO THE END-USER

The luminaire shall be considered to comply with the requirements laid down in this Regulation if it is accompanied by the required product information, if it is claimed to be compatible with all the lamp energy efficiency classes it is compatible with, and if, when applying state-of-the-art methods and criteria for assessing compatibility, it is found to be compatible with the lamp energy efficiency classes with which it is claimed to be compatible pursuant to points (2)(IV)(a) and (b) of part 2 of Annex I.

ANNEX VI

Energy efficiency classes

The energy efficiency class of lamps shall be determined on the basis of their energy efficiency index (*EEI*) as set out in Table 1.

The *EEI* of lamps shall be determined in accordance with Annex VII.

Table 1

Energy efficiency classes for lamps

Energy efficiency class	Energy efficiency index (<i>EEI</i>) for non-directional lamps	Energy efficiency index (<i>EEI</i>) for directional lamps
A ⁺ (most efficient)	$EEI \leq 0,11$	$EEI \leq 0,13$
A ⁺	$0,11 < EEI \leq 0,17$	$0,13 < EEI \leq 0,18$
A	$0,17 < EEI \leq 0,24$	$0,18 < EEI \leq 0,40$
B	$0,24 < EEI \leq 0,60$	$0,40 < EEI \leq 0,95$
C	$0,60 < EEI \leq 0,80$	$0,95 < EEI \leq 1,20$
D	$0,80 < EEI \leq 0,95$	$1,20 < EEI \leq 1,75$
E (least efficient)	$EEI > 0,95$	$EEI > 1,75$

ANNEX VII

Method for calculating the energy efficiency index and energy consumption

1. CALCULATION OF THE ENERGY EFFICIENCY INDEX

For the calculation of the energy efficiency index (EEI) of a model, its power corrected for any control gear losses is compared with its reference power. The reference power is obtained from the useful luminous flux, which is the total flux for non-directional lamps, and the flux in a 90° or 120° cone for directional lamps. The EEI is calculated as follows and rounded to two decimal places:

$$EEI = P_{cor} / P_{ref}$$

where:

P_{cor} is the rated power (P_{rated}) for models without external control gear and the rated power (P_{rated}) corrected in accordance with Table 2 for models with external control gear. The rated power of the lamps is measured at their nominal input voltage.

Table 2

Power correction if the model requires external control gear

Scope of the correction	Power corrected for control gear losses (P_{cor})
Lamps operating on external halogen lamp control gear	$P_{rated} \times 1,06$
Lamps operating on external LED lamp control gear	$P_{rated} \times 1,10$
Fluorescent lamps of 16 mm diameter (T5 lamps) and 4-pin single capped fluorescent lamps operating on external fluorescent lamp control gear	$P_{rated} \times 1,10$
Other lamps operating on external fluorescent lamp control gear	$P_{rated} \times \frac{0,24\sqrt{\Phi_{use}} + 0,0103\Phi_{use}}{0,15\sqrt{\Phi_{use}} + 0,0097\Phi_{use}}$
Lamps operating on external high-intensity discharge lamp control gear	$P_{rated} \times 1,10$
Lamps operating on external low pressure sodium lamp control gear	$P_{rated} \times 1,15$

P_{ref} is the reference power obtained from the useful luminous flux of the model (Φ_{use}) by the following formulae:

- For models with $\Phi_{use} < 1\,300$ lumen: $P_{ref} = 0,88\sqrt{\Phi_{use}} + 0,049\Phi_{use}$

- For models with $\Phi_{use} \geq 1\,300$ lumen: $P_{ref} = 0,07341\Phi_{use}$. The useful luminous flux (Φ_{use}) is defined in accordance with Table 3.

Table 3

Definition of the useful luminous flux

Model	Useful luminous flux (Φ_{use})
Non-directional lamps	Total rated luminous flux (Φ)
Directional lamps with a beam angle $\geq 90^\circ$ other than filament lamps and carrying a textual or graphical warning on their packaging that they are not suitable for accent lighting	Rated luminous flux in a 120° cone (Φ_{120°)
Other directional lamps	Rated luminous flux in a 90° cone (Φ_{90°)

2. CALCULATION OF THE ENERGY CONSUMPTION

The weighted energy consumption (E_c) is calculated in kWh/1 000 h as follows and is rounded to two decimal places:

$$E_c = \frac{P_{cor} \times 1000h}{1000}$$

Where P_{cor} is the power corrected for any control gear losses in accordance with part 1 above.

ANNEX VIII¹⁰**Information to be provided in the case of sale, hire or hire-purchase through the internet**

(1) For the purpose of points 2 to 4 of this Annex the following definitions shall apply:

- (a) “display mechanism” means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
- (b) “nested display” means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;
- (c) “tactile screen” means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
- (d) “alternative text” means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(1)(f) or Article 3(2)(e) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex I. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

- (a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;
- (b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and
- (c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

- (a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;
- (b) the image shall link to the label;
- (c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;
- (d) the label shall be displayed by pop up, new tab, new page or inset screen display;

¹⁰ Annex VIII is added in accordance with Article 7(3) of Delegated Regulation (EU) 518/2014, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

- (e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;**
- (f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;**
- (g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.**

DELEGATED REGULATION (EU) 392/2012 of 1 March 2012 supplementing Directive 2010/30/EU with regard to energy labelling of household tumble driers

Incorporated and adapted by Ministerial Council Decision 2014/02/MC-EnC of 23 September 2014 adapting certain Delegated Regulations on energy related products, and amended by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products.

*The adaptations made by Ministerial Council Decisions 2014/02/MC-EnC and 2018/03/MC-EnC are highlighted in **bold and blue**.*

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the labelling of and the provision of supplementary product information on electric mains-operated and gas-fired household tumble driers and built-in household tumble driers, including those sold for non-household use.
2. This Regulation shall not apply to household combined washer-driers and household spin-extractors.

Article 2

Definitions

In addition to the definitions laid down in Article 2 of Directive 2010/30/EU, the following definitions shall apply for the purposes of this Regulation:

- (1) 'household tumble drier' means an appliance in which textiles are dried by tumbling in a rotating drum, through which heated air is passed and which is designed to be used principally for non-professional purposes;
- (2) 'built-in household tumble drier' means a household tumble drier intended to be installed in a cabinet, a prepared recess in a wall or a similar location, requiring furniture finishing;
- (3) 'household combined washer-drier' means a household washing machine which includes both a spin extraction function and also a means for drying the textiles, usually by heating and tumbling;
- (4) 'household spin-extractor', also known commercially as 'spin-drier', means an appliance in which water is removed from the textiles by centrifugal action in a rotating drum and drained through an automatic pump and which is designed to be used principally for non-professional purposes;
- (5) 'air-vented tumble drier' means a tumble drier that draws in fresh air, passes it over the textiles and vents the resulting moist air into the room or outside;
- (6) 'condenser tumble drier' means a tumble drier which includes a device (either using condensation or any other means) for removing moisture from the air used for the drying process;
- (7) 'automatic tumble drier' means a tumble drier which switches off the drying process when a certain

moisture content of the load is detected, for example through conductivity or temperature sensing;

(8) 'non-automatic tumble drier' means a tumble drier which switches off the drying process after a pre-defined period, usually controlled by a timer, but which may also be manually switched off;

(9) 'programme' means a series of operations that are predefined and which are declared by the supplier as suitable for drying certain types of textile;

(10) 'cycle' means a complete drying process, as defined for the selected programme;

(11) 'programme time' means the time that elapses from the initiation of the programme until the completion of the programme, excluding any end-user programmed delay;

(12) 'rated capacity' means the maximum mass in kilograms, indicated by the supplier in 0,5 kilogram increments of dry textiles of a particular type, which can be treated in a household tumble drier with the selected programme, when loaded in accordance with the supplier's instructions;

(13) 'partial load' means half of the rated capacity of a household tumble drier for a given programme;

(14) 'condensation efficiency' means the ratio between the mass of moisture condensed by a condenser tumble drier and the mass of moisture removed from the load at the end of a cycle;

(15) 'off-mode' means a condition where the household tumble drier is switched off using appliance controls or switches accessible to and intended for operation by the end-user during normal use to attain the lowest power consumption that may persist for an indefinite time while the household tumble drier is connected to a power source and used in accordance with the supplier's instructions; where there is no control or switch accessible to the end-user, 'off-mode' means the condition reached after the household tumble drier reverts to a steady-state power consumption on its own;

(16) 'left-on mode' means the lowest power consumption mode that may persist for an indefinite time after completion of the programme without any further intervention by the end-user besides unloading of the household tumble drier;

(17) 'equivalent household tumble drier' means a model of household tumble drier placed on the market with the same rated capacity, technical and performance characteristics, energy consumption, condensation efficiency where relevant, standard cotton programme time and airborne acoustical noise emissions during drying as another model of household tumble drier placed on the market under a different commercial code number by the same supplier;

(18) 'end-user' means a consumer buying or expected to buy a household tumble drier;

(19) 'point of sale' means a location where household tumble driers are displayed or offered for sale, hire or hire-purchase.

(20) 'standard cotton programme' means the cycle which dries cotton laundry with an initial moisture content of the load of 60% up to a remaining moisture content of the load of 0%.

Article 3

Responsibilities of suppliers

Suppliers shall ensure that:

(a) each household tumble drier is supplied with a printed label in the format and containing the infor-

mation set out in Annex I;

(b) a product fiche, as set out in Annex II, is made available;

(c) technical documentation as set out in Annex III is made available on request to the authorities of the **Contracting Parties** and to the Commission;

(d) any advertisement for a specific model of household tumble drier contains the energy efficiency class, if the advertisement discloses energy-related or price information;

(e) any technical promotional material concerning a specific model of household tumble drier which describes its specific technical parameters includes the energy efficiency class of that model;

(f) an electronic label in the format and containing the information set out in Annex I is made available to dealers for each household tumble drier model placed on the market from 1 January 2020 with a new model identifier. It may also be made available to dealers for other household tumble drier models;

(g) an electronic product fiche as set out in Annex II is made available to dealers for each household tumble drier model placed on the market from 1 January 2020 with a new model identifier. It may also be made available to dealers for other household tumble drier models.¹

Article 4

Responsibilities of dealers

Dealers shall ensure that:

(a) each household tumble drier, at the point of sale, bears the label provided by suppliers in accordance with Article 3(a) on the outside of the front or top of the household tumble drier, in such a way as to be clearly visible;

(b) household tumble driers offered for sale, hire or hire-purchase where the end-user cannot be expected to see the product displayed, as specified in Article 7 of Directive 2010/30/ EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC, are marketed with the information provided by suppliers in accordance with Annex IV to this Regulation. Where the offer is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with Article 3(f) and 3(g) the provisions of Annex VIII shall apply instead;²

(c) any advertisement for a specific model of household tumble drier contains a reference to the energy efficiency class, if the advertisement discloses energy-related or price information;

(d) any technical promotional material concerning a specific model of household tumble drier which describes its specific technical parameters includes a reference to the energy efficiency class of that model.

¹ Article 3, points (f) and (g) are added in accordance with Article 6(1) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC**

² Article 4, point (b) is replaced in accordance with Article 6(2) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC**

Article 5

Measurement methods

The information to be provided under Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement procedures, which take into account the recognised state-of-the-art measurement methods.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure set out in Annex V for assessing the conformity of the declared energy efficiency class, the energy consumption per cycle, the condensation efficiency class where applicable, the rated capacity, the power consumption in off-mode and left-on mode, the duration of the left-on mode, the programme time and airborne acoustical noise emissions.

Article 7

Revision

<...>³

Article 8

Repeal

<...>⁴

Article 9

Transitional provisions

1. Article 3(d) and (e) and Article 4(b), (c) and (d) shall not apply to printed advertisements and printed technical promotional material published before **30 April 2016**.
2. Household tumble driers placed on the market before **1 January 2016** shall comply with the provisions of Directive 95/13/EC.
3. Household tumble driers which comply with the provisions of this Regulation and which are placed on the market or offered for sale, hire or hire-purchase before **1 January 2016** shall be regarded as complying with the requirements of Directive 95/13/EC.

³ Not applicable

⁴ Not applicable

Article 10

Entry into force and application

1. **This Decision (2014/02/MC-EnC) enters into force upon its adoption (23 September 2014) and it is addressed to the Contracting Parties.**⁵
2. It shall apply from **1 January 2016**. However, Article 3(d) and (e) and Article 4(b), (c) and (d) shall apply from **30 April 2016**.

The Secretariat shall monitor and review the implementation of the Delegated Regulations referred to in Article 1 in the Contracting Parties. Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by these Delegated Regulations, in the next year of the deadline for the overall implementation.⁶

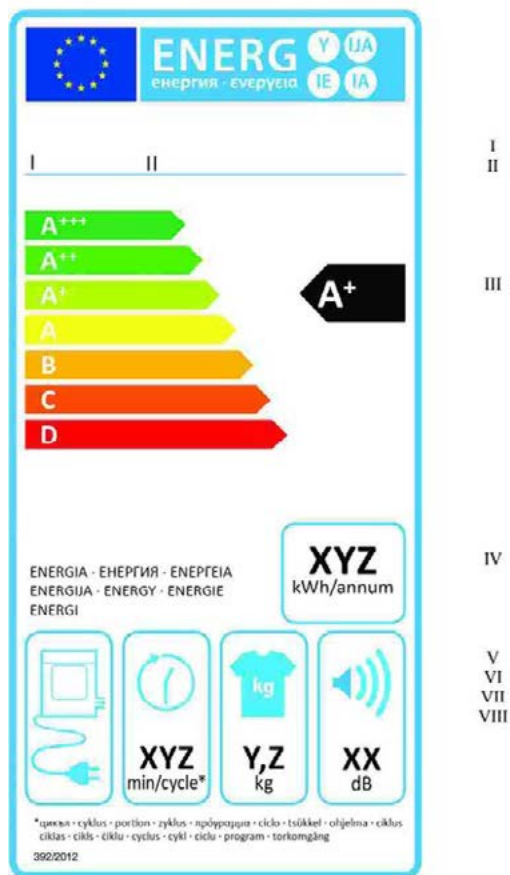
⁵ The text displayed here corresponds to Article 3(1) of Decision 2014/02/MC-EnC

⁶ The text displayed here corresponds to Article 2(3) of Decision 2014/02/MC-EnC

ANNEX I

Label

1. LABEL FOR AIR-VENTED HOUSEHOLD TUMBLE DRIER



1.1. The following information shall be included in the label for air vented household tumble driers:

I. supplier's name or trade mark;

II. supplier's model identifier, meaning the code, usually alphanumeric, which distinguishes a specific household tumble drier model from other models with the same trade mark or supplier's name;

III. the energy efficiency class as defined in point 1 of Annex VI; the head of the arrow containing the energy efficiency class of the household tumble drier shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

IV. weighted annual energy consumption (AE_c) in kWh/year, rounded up to the nearest integer and calculated in accordance with Annex VII;

V. information on the type of household tumble drier;

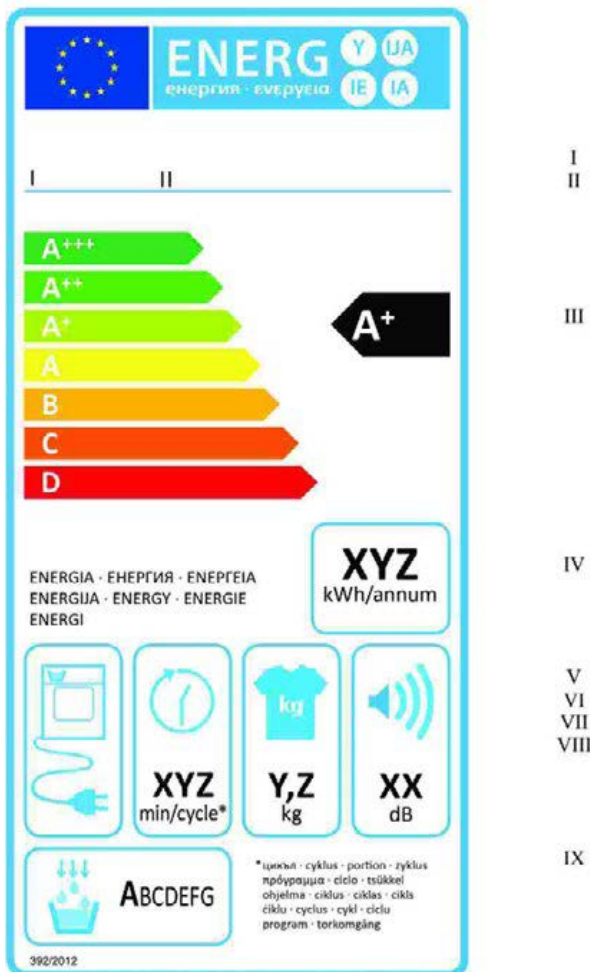
VI. cycle time corresponding to the standard cotton programme at full load in minutes and rounded to the nearest minute;

VII. rated capacity, in kg, for the standard cotton programme at full load;

VIII. the sound power level (weighted average value – L_{WA}), during the drying phase, for the standard cotton programme at full load, expressed in dB, rounded to the nearest integer.

1.2. The design of the label for air vented household tumble driers shall be in accordance with point 4 of this Annex. Where a model has been granted an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU Ecolabel may be added.

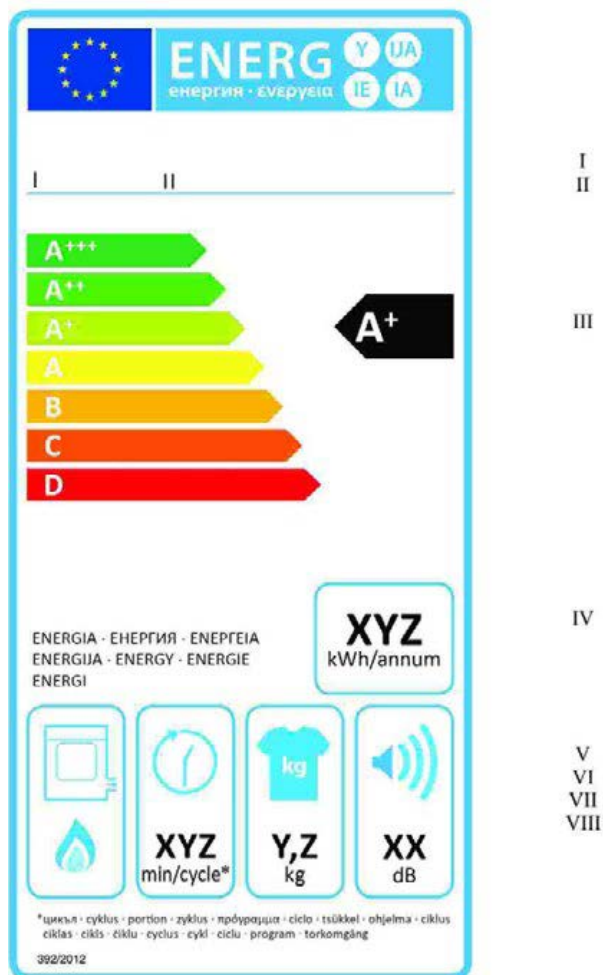
2. LABEL FOR CONDENSER HOUSEHOLD TUMBLE DRIER



2.1. In addition to the information listed in point 1.1, the label for condenser household tumble driers shall include:

IX. the condensation efficiency class in accordance with point 2 of Annex VI.

2.2. The design of the label for condenser household tumble driers shall be in accordance with point 4 of this Annex. Where a model has been awarded an 'EU Ecolabel' under Regulation (EC) No 66/2010, a copy of the EU Ecolabel may be added.

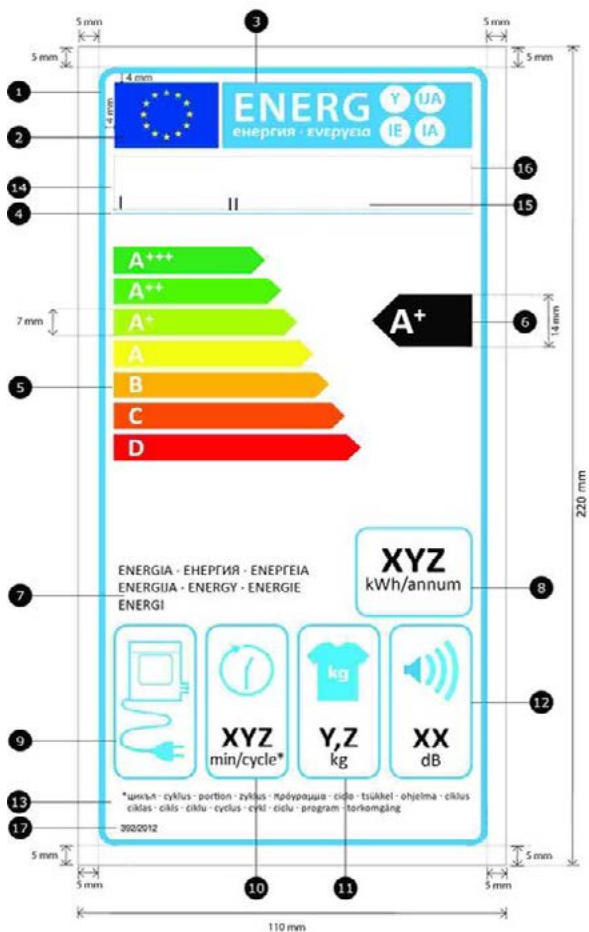


3.1. The information listed in point 1.1 shall be included in the label for gas fired household tumble driers.

3.2. The design of the label for gas fired household tumble driers shall be in accordance with point 4 of this Annex. Where a model has been awarded an 'EU Ecolabel' under Regulation (EC) No 66/2010, a copy of the EU Ecolabel may be added.

4. LABEL DESIGN

4.1. For air vented household tumble driers, the design of the label shall be as in the figure below.



Whereby

- The label must be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content must nevertheless remain proportionate to the specifications above.
- The background shall be white.
- Colours shall be CMYK – cyan, magenta, yellow and black following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- The label shall fulfil all of the following requirements (numbers refer to the figure above).

- 1** **Eu label border stroke:** 5 pt – colour: Cyan 100 % – round corners: 3,5 mm.
- 2** **EU logo – colours:** X-80-00-00 and 00-00-X-00.
- 3** **Energy label:** colour: X-00-00-00. Pictogram as depicted; EU logo and energy logo (combined):

width: 92 mm, height: 17 mm.

4 Sub-logos border: 1 pt – colour: Cyan 100 % – length: 92,5 mm.

5 A-G scale

– **Arrow:** height: 7 mm, gap: 0,75 mm – colours:

- Highest class: X-00-X-00,
- Second class: 70-00-X-00,
- Third class: 30-00-X-00,
- Fourth class: 00-00-X-00,
- Fifth class: 00-30-X-00,
- Sixth class: 00-70-X-00,
- Last class: 00-X-X-00.

– **Text:** Calibri bold 18 pt, capitals and white; ‘+’ symbols: Calibri bold 12 pt, white aligned on a single row.

6 Energy efficiency class

– **Arrow:** width: 26 mm, height: 14 mm, 100 % black;

– **Text:** Calibri bold 29 pt, capitals and white; ‘+’ symbols: Calibri bold 18 pt, white aligned on a single row.

7 Energy

– **Text:** Calibri regular 11 pt, capitals, 100 % black.

8 Weighted annual energy consumption:

– **Border:** 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

– **Value:** Calibri bold 30 pt, 100 % black.

– **Second line:** Calibri regular 14 pt, 100 % black.

9 Type of household tumble drier:

– **Pictogram** as depicted

– **Border:** 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

10 Cycle time:

– **Pictogram** as depicted

– **Border:** 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

– **Value:** Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.

11 Rated capacity:

– **Pictogram** as depicted

– **Border:** 2 pt – colour: Cyan 100% – round corners: 3,5 mm.

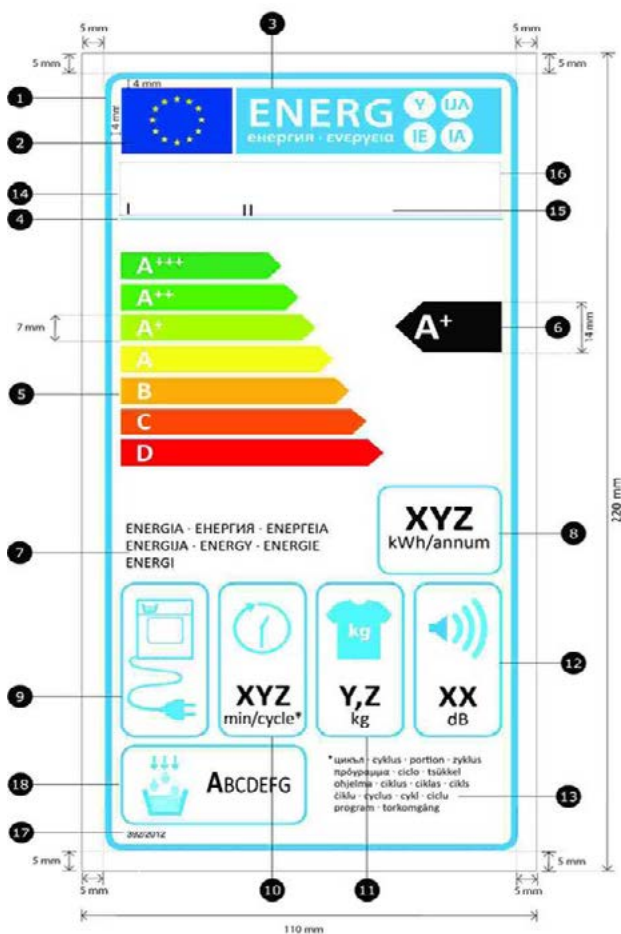
– **Value:** Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.

12 Sound power level:

– **Pictogram** as depicted

- **Border:** 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.
- **Value:** Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.
- 13 Asterisk:** Calibri regular 6 pt, 100 % black.
- 14 Supplier's name or trade mark**
- 15 Supplier's model identifier**
- 16** The supplier's name or trademark and model identifier should fit in a space of 92 × 15 mm.
- 17 Numbering of the Regulation:** Calibri bold 9 pt, 100 % black.

4.2. For condenser household tumble driers, the design of the label shall be as in the figure below.



Whereby

- (a) The label must be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content must nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours shall be CMYK – cyan, magenta, yellow and black following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above).

1 EU label border stroke: 5 pt – colour: Cyan 100 % – round corners: 3,5 mm.

2 EU logo – colours: X-80-00-00 and 00-00-X-00.

3 Energy label: colour: X-00-00-00. Pictogram as depicted; EU logo and energy logo (combined): width: 92 mm, height: 17 mm.

4 Sub-logos border: 1 pt – colour: Cyan 100 % – length: 92,5 mm.

5 A-G scale

– **Arrow:** height: 7 mm, gap: 0,75 mm – colours:

– Highest class: X-00-X-00,

– Second class: 70-00-X-00,

– Third class: 30-00-X-00,

– Fourth class: 00-00-X-00,

– Fifth class: 00-30-X-00,

– Sixth class: 00-70-X-00,

– Last class: 00-X-X-00.

– **Text:** Calibri bold 18 pt, capitals and white; ‘+’ symbols: Calibri bold 12 pt, white aligned on a single row.

6 Energy efficiency class

– **Arrow:** width: 26 mm, height: 14 mm, 100 % black;

– **Text:** Calibri bold 29 pt, capitals and white; ‘+’ symbols: Calibri bold 18 pt, white aligned on a single row.

7 Energy

– **Text:** Calibri regular 11 pt, capitals, 100 % black.

8 Weighted annual energy consumption:

– **Border:** 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

– **Value:** Calibri bold 30 pt, 100 % black.

– **Second line:** Calibri regular 14 pt, 100 % black.

9 Type of household tumble drier:

– **Pictogram** as depicted

– **Border:** 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

10 Cycle time:

– **Pictogram** as depicted

– **Border:** 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

– **Value:** Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.

11 Rated capacity:

– **Pictogram** as depicted

– **Border:** 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

– **Value:** Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.

12 Sound power level:

– **Pictogram** as depicted

– **Border:** 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

– **Value:** Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.

13 Asterisk: Calibri regular 6 pt, 100 % black.

14 Supplier's name or trade mark

15 Supplier's model identifier

16 The supplier's name or trademark and model identifier should fit in a space of 92 × 15 mm.

17 Numbering of the Regulation: Calibri bold 9 pt, 100 % black.

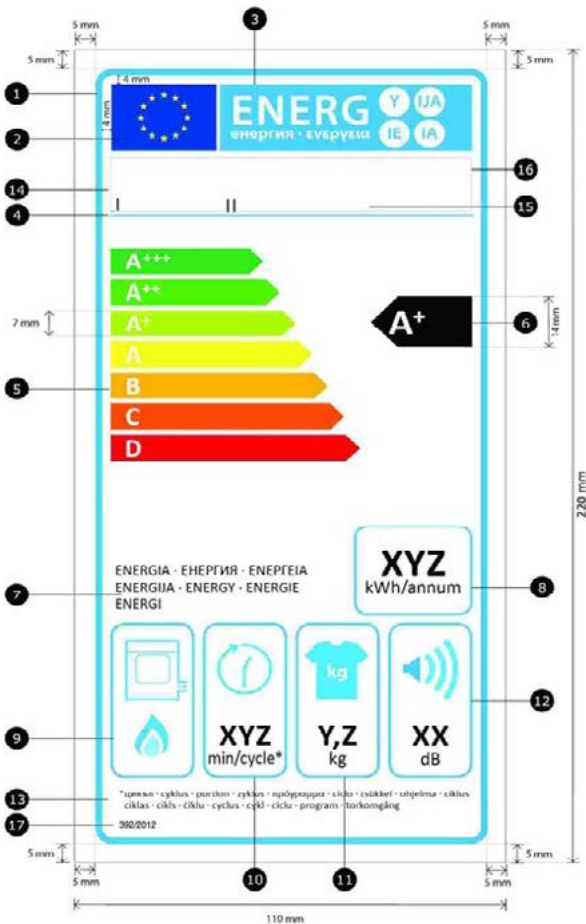
18 Condensation efficiency class:

– **Pictogram** as depicted

– **Border:** 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

– **Value:** Calibri regular 16 pt, horizontal scale 75 %, 100 % black and Calibri bold 22 pt, horizontal scale 75 %, 100 % black.

4.3. For gas fired household tumble driers, the design of the label shall be as in the figure below.



Whereby

(a) The label must be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content must nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours shall be CMYK – cyan, magenta, yellow and black following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above).

- 1 **Eu label border stroke:** 5 pt – colour: Cyan 100 % – round corners: 3,5 mm.
- 2 **EU logo** – colours: X-80-00-00 and 00-00-X-00.
- 3 **Energy label:** colour: X-00-00-00. Pictogram as depicted; EU logo and energy logo (combined): width: 92 mm, height: 17 mm.

4 Sub-logos border: 1 pt – colour: Cyan 100 % – length: 92,5 mm.

5 A-G scale

– **Arrow:** height: 7 mm, gap: 0,75 mm – colours:

- Highest class: X-00-X-00,
- Second class: 70-00-X-00,
- Third class: 30-00-X-00,
- Fourth class: 00-00-X-00,
- Fifth class: 00-30-X-00,
- Sixth class: 00-70-X-00,
- Last class: 00-X-X-00.

– **Text:** Calibri bold 18 pt, capitals and white; +- symbols: Calibri bold 12 pt, white aligned on a single row.

6 Energy efficiency class

– **Arrow:** width: 26 mm, height: 14 mm, 100 % black;

– **Text:** Calibri bold 29 pt, capitals and white; +- symbols: Calibri bold 18 pt, white aligned on a single row.

7 Energy

– **Text:** Calibri regular 11 pt, capitals, 100 % black.

8 Weighted annual energy consumption:

– **Border:** 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

– **Value:** Calibri bold 30 pt, 100 % black.

– **Second line:** Calibri regular 14 pt, 100 % black.

9 Type of household tumble drier:

– **Pictogram** as depicted

– **Border:** 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

10 Cycle time:

– **Pictogram** as depicted

– **Border:** 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

– **Value:** Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.

11 Rated capacity:

– **Pictogram** as depicted

– **Border:** 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

– **Value:** Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.

12 Sound power level:

– **Pictogram** as depicted

– **Border:** 2 pt – colour: Cyan 100 % – round corners: 3,5 mm.

– **Value:** Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.

13 Asterisk: Calibri regular 6 pt, 100 % black

14 Supplier's name or trade mark

15 Supplier's model identifier

16 The supplier's name or trademark and model identifier should fit in a space of 92 × 15 mm.

17 Numbering of the Regulation: Calibri bold 9 pt, 100 % black.

ANNEX II

Product Fiche

1. The information in the product fiche of household tumble driers shall be given in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trade mark;
- (b) supplier's model identifier, which means the code, usually alphanumeric, which distinguishes a specific household tumble drier model from other models with the same trade mark or supplier's name;
- (c) rated capacity in kg of cotton laundry for the standard cotton programme at full load;
- (d) whether the household tumble drier is an air-vented, condenser or gas-fired household tumble drier;
- (e) energy efficiency class in accordance with point 1 of Annex VI;
- (f) for electric mains-operated household tumble drier:

the weighted Annual Energy Consumption (AE_e) rounded up to one decimal place; it shall be described as: 'Energy consumption "X" kWh per year, based on 160 drying cycles of the standard cotton programme at full and partial load, and the consumption of the low-power modes. Actual energy consumption per cycle will depend on how the appliance is used.';

for household gas-fired tumble drier:

the weighted Annual Energy Consumption ($AE_{C(Gas)}$) rounded up to one decimal place; it shall be described as: 'Energy consumption "X" kWh-Gas per year, based on 160 drying cycles of the standard cotton programme at full and partial load. Actual energy consumption per cycle will depend on how the appliance is used.';

and

the weighted Annual Energy Consumption ($AE_{C(Gas)el}$) rounded up to one decimal place; it shall be described as: 'Energy consumption "X" kWh per year, based on 160 drying cycles of the standard cotton programme at full and partial load, and the consumption of the low-power modes. Actual energy consumption per cycle will depend on how the appliance is used.';

- (g) whether the household tumble drier is an 'automatic tumble drier' or 'non-automatic tumble drier';
- (h) where the household tumble drier has been awarded an 'EU Ecolabel award' under Regulation (EC) No 66/2010, this information may be included;
 - (i) the energy consumption ($E_{dry}, E_{dry/2}, E_{gdry}, E_{gdry/2}, E_{gdry,a}, E_{gdry/2,a}$) of the standard cotton programme at full and partial load;
- (j) the power consumption of the off-mode (P_o) and of the left-on mode (P_l) for the standard cotton programme at full load;
- (k) if the household tumble drier is equipped with a power management system, the duration of the 'left-on mode';
- (l) indication that the 'standard cotton programme' used at full and partial load is the standard drying programme to which the information in the label and the fiche relates, that this programme is suitable for drying normal wet cotton laundry and that it is the most efficient programme in terms of energy consumption for cotton;

(m) the weighted programme time (T_i) of the 'standard cotton programme at full and partial load' in minutes and rounded to the nearest minute as well as the programme time of the 'standard cotton programme at full load' (T_{dry}) and the programme time of the 'standard cotton programme at partial load' ($T_{dry/2}$) in minutes and rounded to the nearest minute;

(n) if the household tumble drier is a condenser tumble drier, the condensation efficiency class in accordance with point 2 of Annex VI, expressed as 'condensation efficiency class 'X' on a scale from G (least efficient) to A (most efficient)'; this may be expressed by other means provided it is clear that the scale is from G (least efficient) to A (most efficient);

(o) if the household tumble drier is a condenser tumble drier, the average condensation efficiency C_{dry} and $C_{dry/2}$ of the standard cotton programme at full load and partial load and the weighted condensation efficiency (C_i) for the 'standard cotton programme at full and partial load', as a percentage and rounded to the nearest whole percent;

(p) the sound power level (weighted average value – L_{WA}) expressed in dB and rounded to the nearest integer for the standard cotton programme at full load;

(q) if the household tumble drier is intended to be built-in, an indication to this effect.

2. One product fiche may cover a number of household tumble drier models supplied by the same supplier.

3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1 not already displayed on the label shall also be provided.

ANNEX III

Technical documentation

1. The technical documentation referred to in Article 3(c) shall include:

- (a) the name and address of the supplier;
- (b) a general description of the household tumble drier model, sufficient for it to be unequivocally and easily identified;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) technical parameters for measurements as follows:

(i) for electric mains-operated household tumble drier:

the energy consumption (E_{dry} , $E_{dry/2}$, E_{gdry} , $E_{gdry/2}$, $E_{gdry,a}$, $E_{gdry/2,a}$) of the standard cotton programme at full and partial load,

for household gas-fired tumble drier:

the weighted Annual Energy Consumption ($AEC(Gas)$) rounded up to one decimal place; it shall be described as: 'Energy consumption "X" kWh-Gas per year, based on 160 drying cycles of the standard cotton programme at full and partial load. Actual energy consumption per cycle will depend on how the appliance is used';

and

the weighted Annual Energy Consumption ($AE_{C(Gas)el}$) rounded up to one decimal place; it shall be described as: 'Energy consumption "X" kWh per year, based on 160 drying cycles of the standard cotton programme at full and partial load, and the consumption of the low-power modes. Actual energy consumption per cycle will depend on how the appliance is used.';

(ii) power consumption in 'off-mode' and the power consumption in 'left-on mode';

(iii) the programme time of the 'standard cotton programme at full load' (T_{dry}) and the programme time of the 'standard cotton programme at partial load' ($T_{dry/2}$), in minutes and rounded to the nearest minute;

(iv) if the household tumble drier is equipped with a power management system, the duration of the 'left-on mode';

(v) if the household tumble drier is a condenser tumble drier, the average condensation efficiency C_{dry} of the standard cotton programme at full load and the average condensation efficiency of the standard cotton programme at partial load $C_{dry/2}$;

(vi) the sound power level;

(g) the results of calculations performed in accordance with Annex VII.

2. Where the information included in the technical documentation for a particular household tumble drier model has been obtained by calculation on the basis of design or by extrapolation from other equivalent household tumble driers, or both, the documentation shall include details of such calculations or extrapolations, or both, and of tests undertaken by suppliers to verify the accuracy of the calculations undertaken.

The information shall also include a list of all other equivalent household tumble drier models where the information was obtained in the same way.

ANNEX IV

Information to be provided in cases where end-users cannot be expected to see the product displayed

1. The information referred to in Article 4(b) shall be provided in the following order:

- (a) the rated capacity in kg of cotton, for the standard cotton programme at full load;
 - (b) whether the household tumble drier is an air-vented, condenser or gas-fired household tumble drier;
 - (c) the energy efficiency class as defined in point 1 of Annex VI;
 - (d) for electric mains-operated household tumble drier:
 - the weighted Annual Energy Consumption (A_{EC}) rounded up to the nearest integer, to be described as: 'Energy consumption "X" kWh per year, based on 160 drying cycles of the standard cotton programmes at full and partial load, and the consumption of the low-power modes. Actual energy consumption per cycle will depend on how the appliance is used.';
 - for household gas-fired tumble drier:
 - the weighted Annual Energy Consumption ($AE_{C(Gas)}$) rounded up to one decimal place; it shall be described as: 'Energy consumption "X" kWh-Gas per year, based on 160 drying cycles of the standard cotton programme at full and partial load. Actual energy consumption per cycle will depend on how the appliance is used';
 - and
 - the weighted Annual Energy Consumption ($AE_{C(Gas)el}$) rounded up to one decimal place; it shall be described as: 'Energy consumption "X" kWh per year, based on 160 drying cycles of the standard cotton programme at full and partial load, and the consumption of the low-power modes. Actual energy consumption per cycle will depend on how the appliance is used.';
 - (e) whether the household tumble drier is an 'automatic tumble drier' or 'non-automatic tumble drier';
 - (f) the energy consumption (E_{dry} , $E_{dry/2}$, E_{gdry} , $E_{gdry/2}$, $E_{gdry,a}$, $E_{gdry/2,a}$) of the standard cotton programme at full and partial load, rounded up to two decimal places and calculated in accordance with Annex VII;
 - (g) the power consumption of the off-mode (P_o) and the left-on mode (P_l) for the standard cotton programme at full load;
 - (h) the programme time of the 'standard cotton programme at full load' (T_{dry}) and the programme time of the 'standard cotton programme at partial load' ($T_{dry/2}$), in minutes and rounded to the nearest minute, calculated in accordance with Annex VII;
 - (i) if the household tumble drier is a condenser tumble drier, the condensation efficiency class in accordance with point 2 of Annex VI;
 - (j) the sound power level (weighted average value – L_{WA}) for the standard cotton programme at full load, expressed in dB and rounded to the nearest integer;
 - (k) if the household tumble drier is intended to be built-in, an indication to this effect.
2. Where other information contained in the product fiche is also provided, it shall be in the form and order specified in Annex II.
3. The size and font in which all the information referred in this Annex is printed or shown shall be legible.

ANNEX V⁷

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Contracting Parties shall apply the following procedure:

- (1) The Contracting Party authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent household tumble drier models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the Contracting Party authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 1.
- (6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent household tumble drier models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (7) The Contracting Party authorities shall provide all relevant information to the authorities of the other Contracting Parties and to the Secretariat without delay after a decision being

⁷ Annex V is replaced in accordance with Article 6 and Annex VI of Delegated Regulation (EU) 2017/254, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

taken on the non-compliance of the model according to points 3 and 6.

Contracting Parties' authorities shall use measurement procedures which take into account the generally recognised, state-of-the-art, reliable, accurate and reproducible measurement methods, including methods set out in documents whose reference numbers have been published for that purpose in a dedicated section of the website of the Energy Community. The Contracting Party authorities shall use the measurement and calculation methods set out in Annex VII.

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 1 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 1

Verification tolerances

Parameters	Verification tolerances
Weighted annual energy consumption (AE_c)	The determined value shall not exceed the declared value of AE_c by more than 6 %.
Weighted energy consumption (E_t)	The determined value shall not exceed the declared value of E_t by more than 6 %.
Weighted condensation efficiency (C_t)	The determined value shall not be less than the declared value of C_t by more than 6 %.
Weighted programme time (T_t)	The determined value shall not exceed the declared value of T_t by more than 6 %.
Power consumption in off mode and left-on mode (P_o and P_l)	The determined values of power consumption P_o and P_l of more than 1,00 W shall not exceed the declared values of P_o and P_l by more than 6 %. The determined value of power consumption P_o and P_l of less than or equal to 1,00 W shall not exceed the declared values of P_o and P_l by more than 0,10 W.
Duration of the left- on mode (T_l)	The determined value shall not exceed the declared value of T_l by more than 6 %.
Sound power level, L_{WA}	The determined value shall not exceed the declared value of L_{WA} .

ANNEX VI

Energy efficiency classes and condensation efficiency classes

1. ENERGY EFFICIENCY CLASSES

The energy efficiency class of a household tumble drier shall be determined on the basis of its Energy Efficiency Index (EEI) as set out in Table 1.

The Energy Efficiency Index (EEI) of a household tumble drier shall be determined in accordance with point 1 of Annex VII.

Table 1

Energy efficiency classes

Energy efficiency class	Energy Efficiency Index
A+++ (most efficient)	$EEI < 24$
A++	$24 \leq EEI < 32$
A+	$32 \leq EEI < 42$
A	$42 \leq EEI < 65$
B	$65 \leq EEI < 76$
C	$76 \leq EEI < 85$
D (least efficient)	$85 \leq EEI$

2. CONDENSATION EFFICIENCY CLASSES

The condensation efficiency class of a condenser household tumble drier shall be determined on the basis of the weighted condensation efficiency (C_t) as set out in Table 2.

The weighted condensation efficiency (C_t) of a condenser household tumble drier shall be determined in accordance with point 2 of Annex VII.

Table 2

Condensation efficiency classes

Energy efficiency class	Energy Efficiency Index
A (most efficient)	$C_t > 90$
B	$80 < C_t \leq 90$
C	$70 < C_t \leq 80$
D	$60 < C_t \leq 70$
E	$50 < C_t \leq 60$
F	$40 < C_t \leq 50$
G (least efficient)	$C_t \leq 40$

ANNEX VII

Method for calculating the Energy Efficiency Index and the weighted condensation efficiency

1. CALCULATION OF THE ENERGY EFFICIENCY INDEX

For the calculation of the Energy Efficiency Index (*EEl*) of a household tumble drier model, the weighted Annual Energy Consumption of a household tumble drier for the standard cotton programme at full and partial load is compared to its Standard Annual Energy Consumption.

(a) The Energy Efficiency Index (*EEl*) is calculated as follows and rounded to one decimal place:

$$EEI = \frac{AE_C}{SAE_C} \times 100$$

where:

AE_C = weighted Annual Energy Consumption of the household tumble drier.

SAE_C = standard Annual Energy Consumption of the household tumble drier.

(b) The Standard Annual Energy Consumption (SAE_C) is calculated in kWh/year as follows and rounded to two decimal places:

– for all household tumble driers that are not air-vented:

$$SAE_C = 140 \times c \times 0,8$$

– for air-vented household tumble driers:

$$SAE_C = 140 \times c^{0,8} - \left(30 \times \frac{T_t}{60} \right)$$

where:

c is the rated capacity of the household tumble drier for the standard cotton programme.

T_t is the weighted programme time for the standard cotton programme.

(c) The weighted Annual Energy Consumption (AE_C) is calculated in kWh/year as follows and is rounded to two decimal places:

$$(i) \quad AE_C = E_t \times 160 + \frac{\left[P_o \times \frac{525\,600 - (T_t \times 160)}{2} + P_l \times \frac{525\,600 - (T_t \times 160)}{2} \right]}{60 \times 1\,000}$$

where:

E_t = weighted energy consumption, in kWh and rounded to two decimal places.

P_o = power in 'off-mode' for the standard cotton programme at full load, in W and rounded to two decimal places.

P_l = power in 'left-on mode' for the standard cotton programme at full load, in W and rounded to two decimal places.

T_t = weighted programme time, in minutes and rounded to the nearest minute.

160 = total number of drying cycles per year.

(ii) When the household tumble drier is equipped with a power management system, with the household tumble drier reverting automatically to 'off-mode' after the end of the programme, the weighted Annual Energy Consumption (AE_C) is calculated taking into consideration the effective duration of the 'left-on mode', according to the following formula:

$$AE_C = E_t \times 160 + \frac{\{(P_1 \times T_1 \times 160) + P_o \times [525\,600 - (T_t \times 160) - (T_1 \times 160)]\}}{60 \times 1000}$$

where:

T_1 = duration of the 'left-on mode' for the standard cotton programme at full load, in minutes and rounded to the nearest minute.

(d) The weighted programme time (T_t) for the standard cotton programme is calculated in minutes as follows and rounded to the nearest minute:

$T_t = (3 \times T_{dry} + 4 \times T_{dry/2})/7$ where:

T_{dry} = programme time for the standard cotton programme at full load, in minutes and rounded to the nearest minute.

$T_{dry/2}$ = programme time for the standard cotton programme at partial load, in minutes and rounded to the nearest minute.

(e) The weighted energy consumption (E_t) is calculated in kWh as follows and rounded to two decimal places:

$E_t = (3 \times E_{dry} + 4 \times E_{dry/2})/7$ where:

E_{dry} = energy consumption of the standard cotton programme at full load, in kWh and rounded to two decimal places.

$E_{dry/2}$ = energy consumption of the standard cotton programme at partial load, in kWh and rounded to two decimal places.

(f) For gas-fired household tumble driers, the energy consumption for the standard cotton programme at full and partial load is calculated in kWh and rounded to two decimal places, as:

$$E_{dry} = \frac{E_{g,dry}}{f_g} + E_{g,dry,a} \quad E_{dry/2} = \frac{E_{g,dry/2}}{f_g} + E_{g,dry/2,a}$$

where:

$E_{g,dry}$ = gas consumption of the standard cotton programme at full load, in kWh and rounded to two decimal places.

$E_{g,dry/2}$ = gas consumption of the standard cotton programme at partial load, in kWh and rounded to two decimal places.

$E_{g,dry,a}$ = auxiliary electricity consumption of the standard cotton programme at full load, in kWh and rounded to two decimal places.

$E_{g,dry/2,a}$ = auxiliary electricity consumption of the standard cotton programme at partial load, in kWh and rounded to two decimal places.

$f_g = 2,5$.

2. CALCULATION FOR THE PRODUCT INFORMATION DESCRIBED IN 'ANNEX II PRODUCT FICHE', 'ANNEX III TECHNICAL DOCUMENTATION' AND 'ANNEX IV INFORMATION TO BE PROVIDED IN CASES WHERE END-USERS CANNOT BE EXPECTED TO SEE THE PRODUCT DISPLAYED'

For gas-fired household tumble driers, the energy consumption on gas for the standard cotton programme at full and partial load for the information in Annex II, III and IV is calculated in kWh_{Gas} and rounded to two decimal places, as:

$$AE_{C(Gas)} = 160 \times (3 \times Eg_{dry} + 4 \times Eg_{dry1/2})/7$$

For gas-fired household tumble driers, the energy consumption on electricity for the standard cotton programme at full and partial load for the information in Annex II, III and IV is calculated in kWh and rounded to two decimal places, as:

$$AE_{C(Gas)el} = 160 \times (3 \times Eg_{dry,a} + 4 \times Eg_{dry1/2,a})/7 + ((P_i \times T_i \times 160) + P_o \times [525\,600 - (T_t \times 160) - (T_j \times 160)]/60 \times 1\,000$$

3. CALCULATION OF THE WEIGHTED CONDENSATION EFFICIENCY

The condensation efficiency of a programme is the ratio between the mass of moisture condensed and collected in the container of a condenser household tumble drier and the mass of moisture removed from the load by the programme, the latter being the difference between the mass of the wet test load before drying and the mass of the test load after drying. For calculating the weighted condensation efficiency, the average condensation efficiency for the standard cotton programme at both full and partial load is considered.

The weighted condensation efficiency (C_t) of a programme is calculated as a percentage and rounded to the nearest whole percent as:

$$C_t = (3 \times C_{dry} + 4 \times C_{dry1/2})/7 \text{ where:}$$

C_{dry} = average condensation efficiency of the standard cotton programme at full load.

$C_{dry1/2}$ = average condensation efficiency of the standard cotton programme at partial load. The average condensation efficiency C is calculated from the condensation efficiencies of test runs and expressed

$$C = \frac{1}{(n-1)} \sum_{j=2}^n \left(\frac{W_{wj}}{W_i - W_f} \times 100 \right)$$

as a percentage:

where:

n is the number of test runs, comprising at least four valid test runs for the selected programme. j is the test run number.

W_{wj} is the mass of water collected in the condenser reservoir during test run j .

W_i is the mass of the wet test load before drying.

W_f is the mass of the test load after drying.

ANNEX VIII⁸

Information to be provided in the case of sale, hire or hire-purchase through the internet

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

(a) “display mechanism” means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) “nested display” means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) “tactile screen” means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) “alternative text” means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(f) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 4 of Annex I. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

(b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

⁸ Annex VIII is added in accordance with Article 6(3) of Delegated Regulation (EU) 518/2014, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3(g) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

DELEGATED REGULATION (EU) 626/2011 of 4 May 2011 supplementing Directive 2010/30/EU with regard to energy labelling of air conditioners

Incorporated and adapted by Ministerial Council Decision 2011/03/MC-EnC of 6 October 2011 on adopting certain Delegated Regulations on energy related products, and amended by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products

*The adaptations made by Ministerial Council Decisions 2011/03/MC-EnC and 2018/03/MC-EnC are highlighted in **bold and blue**.*

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the labelling and the provision of supplementary product information for electric mains-operated air conditioners with a rated capacity of ≤ 12 kW for cooling, or heating, if the product has no cooling function.
2. This Regulation shall not apply to:
 - a) appliances that use non-electric energy sources;
 - b) air conditioners of which the condensor or evaporator-side, or both, do not use air for heat transfer medium.

Article 2

Definitions

In addition to the definitions set out in Article 2 of Directive 2010/30/EU of the European Parliament and of the Council, the following definitions shall apply:

- (1) "air conditioner" means a device capable of cooling or heating, or both, indoor air, using a vapour compression cycle driven by an electric compressor, including air conditioners that provide additional functionalities such as dehumidification, air-purification, ventilation or supplemental air-heating by means of electric resistance heating and appliances that may use water (either condensate water that is formed on the evaporator side or externally added water) for evaporation on the condensor, provided that the device is also able to function without the use of additional water, using air only;
- (2) "double duct air conditioner" means an air conditioner in which, during cooling or heating, the condensor or evaporator intake air is introduced from the outdoor environment to the unit by a duct and rejected to the outdoor environment by a second duct, and which is placed wholly inside the space to be conditioned, near a wall;
- (3) "single duct air conditioner" means an air conditioner in which, during cooling or heating, the condensor or evaporator intake air is introduced from the space containing the unit and discharged outside this space;
- (4) "rated capacity" (Prated) means the cooling or heating capacity of the vapour compression cycle of the

unit at standard rating conditions;

(5) “end-user” means a consumer buying or expected to buy an air conditioner;

(6) “point of sale” means a location where air conditioners are displayed or offered for sale, hire or hire-purchase.

Additional definitions for the purpose of Annexes II to VIII are set out in Annex I.

Article 3

Responsibilities of suppliers

1. Suppliers shall take action as described in points (a) to (g):

(a) a printed label is provided for each air conditioner respecting energy efficiency classes as set out in Annex II. The label shall comply with the format and content of information as set out in Annex III. For air conditioners, except single and double duct air conditioners, a printed label must be provided, at least in the packaging of the outdoor unit, for at least one combination of indoor and outdoor units at capacity ratio 1. For other combinations, the information can be alternatively provided on a free access web site;

(b) a product fiche, as set out in Annex IV, is made available. For air conditioners, except single and double duct air conditioners, a product fiche must be provided at least in the packaging of the outdoor unit, for at least one combination of indoor and outdoor units at capacity ratio 1. For other combinations, the information can be alternatively provided on a free access web site;

(c) technical documentation as set out in Annex V is made available electronically on request to the authorities of the **Contracting Parties** and to the **Secretariat**;

(d) any advertisement for a specific model of an air conditioner shall contain the energy efficiency class, if the advertisement discloses energy-related or price information. Where more than one efficiency class is possible, the supplier or the manufacturer, as appropriate, shall declare the energy efficiency class for heating at least in “Average” heating season. Information in the cases where end-users cannot be expected to see the product displayed is to be provided as set out in Annex VI;

(e) any technical promotional material concerning a specific model of an air conditioner which describes its specific technical parameters shall include the energy efficiency class of that model as set out Annex II;

(f) instructions for use are made available;

(g) single ducts shall be named “local air conditioners” in packaging, product documentation and in any advertisement material, whether electronic or in paper;

(h) an electronic label in the format and containing the information set out in Annex III is made available to dealers for each air conditioner model placed on the market from 1 January 2020 with a new model identifier, respecting energy efficiency classes set out in Annex II. It may also be made available to dealers for other air conditioner models;

(i) an electronic product fiche as set out in Annex IV is made available to dealers for each air conditioner model placed on the market from 1 January 2020 with a new model identifier. It may also be made available to dealers for other air conditioner models.¹

¹ Article 3, points (h) and (i) are added in accordance with Article 5(1) of Delegated Regulation (EU) 518/2014, **as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC**

2. The energy efficiency class shall be determined as set out in Annex VII.
3. The format of the label for air conditioners except for single and double duct air conditioners shall be as set out in Annex III.
4. For the air conditioners, except for single and double duct air conditioners, the format of the label set out in Annex III shall be applied according to the following timetable:
 - (a) as regards air conditioners, except single duct and double duct air conditioners, placed on the market from 1 January 2013, labels with energy efficiency classes A, B, C, D, E, F, G shall be in accordance with point 1.1 of Annex III for reversible air conditioners, with point 2.1 of Annex III for cooling-only air conditioners and with point 3.1 of Annex III for heating-only air conditioners;
 - (b) as regards air conditioners, except single duct and double duct air conditioners, placed on the market from 1 January 2015, labels with energy efficiency classes A⁺, A, B, C, D, E, F, shall be in accordance with point 1.2 of Annex III for reversible air conditioners, with point 2.2 of Annex III for cooling-only air conditioners and with point 3.2 of Annex III for heating-only air conditioners;
 - (c) as regards air conditioners, except single duct and double duct air conditioners, placed on the market from 1 January 2017, labels with energy efficiency classes A⁺⁺, A⁺, A, B, C, D, E, shall be in accordance with point 1.3 of Annex III for reversible air conditioners, with point 2.3 of Annex III for cooling-only air conditioners and with point 3.3 of Annex III for heating-only air conditioners;
 - (d) as regards air conditioners, except single duct and double duct air conditioners, placed on the market from 1 January 2019, labels with energy efficiency classes A⁺⁺⁺, A⁺⁺, A⁺, A, B, C, D shall be in accordance with point 1.4 of Annex III for reversible air conditioners, with point 2.4 of Annex III for cooling-only air conditioners and with point 3.4 of Annex III for heating-only air conditioners.
5. The format of the label for double duct air conditioners placed on the market from 1 January 2013 with energy efficiency classes A⁺⁺⁺, A⁺⁺, A⁺, A, B, C, D shall be in accordance with point 4.1 of Annex III for reversible double duct air conditioners, with point 4.3 of Annex III for cooling-only double duct air conditioners and with point 4.5 of Annex III for heating-only double duct air conditioners.
6. The format of the label for single duct air conditioners placed on the market from 1 January 2013 with energy efficiency classes A⁺⁺⁺, A⁺⁺, A⁺, A, B, C, D shall be in accordance with point 5.1 of Annex III for reversible single duct air conditioners, with point 5.3 of Annex III for cooling-only single ducts air conditioners and with point 5.5 of Annex III heating-only single duct air conditioners.

Article 4

Responsibilities of dealers

Dealers shall ensure that:

(a) air conditioners, at the point of sale, bear the label provided by suppliers in accordance with Article 3(1) on the outside of the front or top of the appliance, in such a way as to be clearly visible;

(b) air conditioners offered for sale, hire or hire purchase where the end-user cannot be expected to see the product displayed, are marketed with the information provided by suppliers in accordance with Annexes IV and VI. Where the offer is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with

Article 3(1)(h) and 3(1)(i) the provisions of Annex IX shall apply instead;²

(c) any advertisement for a specific model of air conditioner contains a reference to the energy efficiency class, if the advertisement discloses energy-related or price information. Where more than one efficiency class is possible, the supplier/manufacturer will declare the energy efficiency class at least in "Average" season zone;

(d) any technical promotional material concerning a specific model which describes the technical parameters of an air conditioner includes a reference to the energy efficiency class(es) of the model and the instructions for use provided by the supplier. Where more than one efficiency class is possible, the supplier/manufacturer will declare the energy efficiency class at least in "Average" season zone;

(e) single ducts shall be named "local air conditioners" in packaging, product documentation and in any promotional or advertisement material, whether electronic or in paper.

Article 5**Measurement methods**

The information to be provided under Article 3 shall be obtained by reliable, accurate and reproducible measurement procedures, which take into account the recognised state of the art calculation and measurement methods, as set out in Annex VII.

Article 6**Verification procedure for market surveillance purposes**

When **Contracting Parties** assess the conformity of the declared energy efficiency class, the annual or hourly energy consumption, as appropriate, and the noise emissions, they shall apply the procedure laid down in Annex VIII.

Article 7**Revision**

<...>

Article 8**Repeal**

<...>

² Article 4, point (b) is replaced in accordance with Article 5(2) of Delegated Regulation (EU) 518/2014, as incorporated and adapted by **Ministerial Council Decision 2018/03/MC-EnC**

Article 9

Transitional provision

1. Air conditioners placed on the market before 1 January 2013 shall comply with the provisions set out in Directive 2002/31/EC.

Article 10

Entry into force and application

1. This Decision [2011/03/MC-EnC] enters into force upon its adoption <...>³

2. It shall apply from 1 January 2013.

This Regulation shall be binding in its entirety and directly applicable in all **Contracting Parties**.

Article 2(5) of Decision 2011/03/MC-EnC

The Secretariat shall monitor and review the implementation of [this] Delegated Regulation <...> and shall submit a progress report to the Permanent High Level Group by 1 October 2013.

³ The text displayed here corresponds to Article 3(1) of Decision 2011/03/MC-EnC.

ANNEX I

Definitions applicable for the purposes of annexes II to VII

For the purposes of Annexes II to VII, the following definitions shall apply:

- (1) 'Reversible air conditioner' means an air conditioner capable of both cooling and heating;
- (2) 'Standard rating conditions' means the combination of indoor (T_{in}) and outdoor temperatures (T_j) that describe the operating conditions while establishing the sound power level, rated capacity, rated air flow rate, rated energy efficiency ratio (EER_{rated}) and/or rated coefficient of performance (COP_{rated}), as set out in Annex VII, table 2;
- (3) 'Indoor temperature' (T_{in}) means the dry bulb indoor air temperature [°C] (with the relative humidity indicated by the corresponding wet bulb temperature);
- (4) 'Outdoor temperature' (T_j) means the dry bulb outdoor air temperature [°C] (with the relative humidity indicated by the corresponding wet bulb temperature);
- (5) 'Rated energy efficiency ratio' (EER_{rated}) means the declared capacity for cooling [kW] divided by the rated power input for cooling [kW] of a unit when providing cooling at standard rating conditions;
- (6) 'Rated coefficient of performance' (COP_{rated}) means the declared capacity for heating [kW] divided by the rated power input for heating [kW] of a unit when providing heating at standard rating conditions;
- (7) 'Global warming potential' (GWP) means the measure of how much 1 kg of the refrigerant applied in the vapour compression cycle is estimated to contribute to global warming, expressed in kg CO₂ equivalents over a 100 year time horizon;

GWP values considered will be those set out in Annex I of Regulation (EC) No 842/2006 of the European Parliament and of the Council;

for fluorinated refrigerants, the GWP values shall be those published in the Third Assessment Report (TAR), adopted by the Intergovernmental Panel on Climate Change⁴ (2001 IPCC GWP values for a 100 year period);

for non-fluorinated gases, the GWP values are those published in the first IPCC assessment⁵ over a 100 year period;

total GWP values for mixtures of refrigerants shall be based on the formula stated in Annex I of the Regulation (EC) No 842/2006;

for refrigerants not included in the above references, the IPCC UNEP 2010 report on Refrigeration, Air Conditioning and Heat Pumps, dated February 2011, or newer, shall be used as a reference;

(8) 'Off mode' is a condition in which the air conditioner or comfort fan is connected to the mains power source and is not providing any function. As off mode also are considered conditions providing only an indication of off mode condition, as well as conditions providing only functionalities intended to ensure electromagnetic compatibility pursuant to Directive 2004/108/EC of the European Parliament and of the Council;

(9) 'Standby mode' means a condition where the equipment is connected to the mains power source, depends on energy input from the mains power source to work as intended and provides only the following

⁴ IPCC Third Assessment Climate Change 2001. A Report of the Intergovernmental Panel on Climate Change: http://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml

⁵ Climate Change, The IPCC Scientific Assessment, J.T Houghton, G.J.Jenkins, J.J. Ephraums (ed.) Cambridge University Press, Cambridge (UK) 1990.

functions, which may persist for an indefinite time: reactivation function, or reactivation function and only an indication of enabled reactivation function, and/or information or status display;

(10) 'Reactivation function' means a function facilitating the activation of other modes, including active mode, by remote switch including remote control, internal sensor, timer to a condition providing additional functions, including the main function;

(11) 'Information or status display' is a continuous function providing information or indicating the status of the equipment on a display, including clocks;

(12) 'Sound power level' means the A-weighted sound power level [dB(A)] indoors and/or outdoors measured at standard rating conditions for cooling (or heating, if the product has no cooling function);

(13) 'Reference design conditions' means the combination of requirements for the reference design temperature, the maximum bivalent temperature and the maximum operation limit temperature, as set out in Annex VII, Table 3;

(14) 'Reference design temperature' means the outdoor temperature [°C] for either cooling ($T_{designc}$) or heating ($T_{designh}$) as described in Annex VII, Table 3, at which the part load ratio shall be equal to 1, and which varies according to the designated cooling or heating season;

(15) 'Part load ratio' ($\rho(T_j)$) means the outdoor temperature minus 16°C, divided by the reference design temperature minus 16°C, for either cooling or heating;

(16) 'Season' means one of the four sets of operating conditions (available for four seasons: one cooling season, three heating seasons: average / colder / warmer) describing per bin the combination of outdoor temperatures and the number of hours these temperatures occur per season for which the unit is declared fit for purpose;

(17) 'Bin' (with index 'j') means a combination of an outdoor temperature (T_j) and bin hours (h_j), as set out in Annex VII, Table 1;

(18) 'Bin hours' means the hours per season (h_j) the outdoor temperature occurs for each bin, as set out in Annex VII, Table 1;

(19) 'Seasonal energy efficiency ratio' ($SEER$) is the overall energy efficiency ratio of the unit, representative for the whole cooling season, calculated as the reference annual cooling demand divided by the annual electricity consumption for cooling;

(20) 'Reference annual cooling demand' (QC) means the reference cooling demand [kWh/a] to be used as basis for calculation of $SEER$ and calculated as the product of the design load for cooling ($P_{designc}$) and the equivalent active mode hours for cooling (HCE);

(21) 'Equivalent active mode hours for cooling' (HCE) means the assumed annual number of hours [h/a] the unit must provide the design load for cooling ($P_{designc}$) in order to satisfy the reference annual cooling demand, as set out in Annex VII, Table 4;

(22) 'Annual electricity consumption for cooling' (QCE) means the electricity consumption [kWh/a] required to meet the reference annual cooling demand and is calculated as the reference annual cooling demand divided by the active mode seasonal energy efficiency ratio ($SEER_{on}$), and the electricity consumption of the unit for thermostat off-, standby-, off- and crankcase heater-mode during the cooling season;

(23) 'Active seasonal mode energy efficiency ratio' ($SEER_{on}$) means the average energy efficiency ratio of the unit in active mode for the cooling function, constructed from part load and bin-specific energy efficiency

ratio's ($EER_{bin}(T_j)$) and weighted by the bin hours the bin condition occurs;

(24) 'Part load' means the cooling load ($Pc(T_j)$) or the heating load ($Ph(T_j)$) [kW] at a specific outdoor temperature T_j , calculated as the design load multiplied by the part load ratio;

(25) 'Bin-specific energy efficiency ratio' ($EER_{bin}(T_j)$) means the energy efficiency ratio specific for every bin j with outdoor temperature T_j in a season, derived from the part load, declared capacity and declared energy efficiency ratio ($EER_d(T_j)$) for specified bins (j) and calculated for other bins through inter/extrapolation, when necessary corrected by the degradation coefficient;

(26) 'Seasonal coefficient of performance' ($SCOP$) is the overall coefficient of performance of the unit, representative for the whole designated heating season (the value of $SCOP$ pertains to a designated heating season), calculated as the reference annual heating demand divided by the annual electricity consumption for heating;

(27) 'Reference annual heating demand' (Q_H) means the reference heating demand [kWh/a], pertaining to a designated heating season, to be used as basis for calculation of $SCOP$ and calculated as the product of the design load for heating ($P_{designh}$) and the seasonal equivalent active mode hours for heating (H_{HE});

(28) 'Equivalent active mode hours for heating' (H_{HE}) means the assumed annual number of hours [h/a] the unit must provide the design load for heating ($P_{designh}$) in order to satisfy the reference annual heating demand, as set out in Annex VII, Table 4;

(29) 'Annual electricity consumption for heating' (Q_{HE}) means the electricity consumption [kWh/a] required to meet the indicated reference annual heating demand and which pertains to a designated heating season; and is calculated as the reference annual heating demand divided by the active mode seasonal coefficient of performance ($SCOP_{on}$), and the electricity consumption of the unit for thermostat off-, standby-, off- and crankcase heater-mode during the heating season;

(30) 'Active mode seasonal coefficient of performance' ($SCOP_{on}$) means the average coefficient of performance of the unit in active mode for the designated heating season, constructed from the part load, electric back up heating capacity (where required) and bin-specific coefficients of performance ($COP_{bin}(T_j)$) and weighted by the bin hours the bin condition occurs;

(31) 'Electric back-up heater capacity' ($elbu(T_j)$) is the heating capacity [kW] of a real or assumed electric back-up heater with COP of 1 that supplements the declared capacity for heating ($Pdh(T_j)$) in order to meet the part load for heating ($Ph(T_j)$) in case $Pdh(T_j)$ is less than $Ph(T_j)$, for the outdoor temperature (T_j);

(32) 'Bin-specific coefficient of performance' ($COP_{bin}(T_j)$) means the coefficient of performance specific for every bin j with outdoor temperature T_j in a season, derived from the part load, declared capacity and declared coefficient of performance ($COPd(T_j)$) for specified bins (j) and calculated for other bins through inter/extrapolation, when necessary corrected by the degradation coefficient;

(33) 'Declared capacity' [kW] is the capacity of the vapour compression cycle of the unit for cooling ($Pdc(T_j)$) or heating ($Pdh(T_j)$), pertaining to an outdoor temperature T_j and indoor temperature (T_{in}), as declared by the manufacturer;

(34) 'Function' means the indication of whether the unit is capable of indoor air cooling, indoor air heating or both;

(35) 'Design load' means the declared cooling load ($P_{designc}$) and/or declared heating load ($P_{designh}$) [kW] at the reference design temperature, whereby

(a) for cooling mode, $P_{designc}$ is equal to the declared capacity for cooling at T_j equal to $T_{designc}$;

- (b) for heating mode, $P_{designh}$ is equal to the part load at T_j equal to $T_{designh}$;
- (36) 'Declared energy efficiency ratio' ($EER_d(T_j)$) means the energy efficiency ratio at a limited number of specified bins (j) with outdoor temperature (T_j), as declared by the manufacturer;
- (37) 'Declared coefficient of performance' ($COP_d(T_j)$) means the coefficient of performance at a limited number of specified bins (j) with outdoor temperature (T_j), as declared by the manufacturer;
- (38) 'Bivalent temperature' (T_{biv}) means the outdoor temperature (T_j) [°C] declared by the manufacturer for heating at which the declared capacity equals the part load and below which the declared capacity must be supplemented with electric back up heater capacity in order to meet the part load for heating;
- (39) 'Operation limit temperature' (T_{op}) means the outdoor temperature [°C] declared by the manufacturer for heating, below which air conditioner will not be able to deliver any heating capacity. Below this temperature, the declared capacity is equal to zero;
- (40) 'Active mode' means the mode corresponding to the hours with a cooling or heating load of the building and whereby the cooling or heating function of the unit is activated. This condition may involve on/off-cycling of the unit in order to reach or maintain a required indoor air temperature;
- (41) 'Thermostat-off mode' means a mode corresponding to the hours with no cooling or heating load whereby the cooling or heating function of the unit is switched on but the unit is not operational as there is no cooling or heating load. This condition is therefore related to outdoor temperatures and not to indoor loads. Cycling on / off in active mode is not considered as thermostat off;
- (42) 'Crankcase heater operation mode' means a condition where the unit has activated a heating device to avoid the refrigerant migrating to the compressor in order to limit the refrigerant concentration in oil at compressor start;
- (43) 'Thermostat-off mode operating hours' (HTO) means the annual number of hours [h/a] the unit is considered to be in thermostat-off mode, the value of which depends on the designated season and function;
- (44) 'Standby mode operating hours' (HSB) means the annual number of hours [h/a] the unit is considered to be in standby mode, the value of which depends on the designated season and function;
- (45) 'Off-mode hours' ($HOFF$) means the annual number of hours [h/a] the unit is considered to be in off-mode, the value of which depends on the designated season and function;
- (46) 'Crankcase heater mode operating hours' (HCK) means the annual number of hours [h/a] the unit is considered to be in crankcase heater operation mode, the value of which depends on the designated season and function;
- (47) 'Electricity consumption of single and double ducts' (QSD respectively QDD) means the electricity consumption of single or double duct air conditioners for the cooling and/or heating mode (whichever applies) [single duct in kWh/h, double duct in kWh/a];
- (48) 'Capacity ratio' means the ratio of the total declared cooling or heating capacity of all operating indoor units to the declared cooling or heating capacity of the outdoor unit at standard rating conditions.

ANNEX II

Energy efficiency classes

1. The energy efficiency of air conditioners shall be determined on the basis of measurements and calculations set out Annex VII.

Both the *SEER* and *SCOP* shall take into account the reference design conditions and the operational hours per relevant mode of operation, and the *SCOP* shall relate to the heating season 'average', as laid down in Annex VII. The rated energy efficiency ratio (EER_{rated}) and the rated coefficient of performance (COP_{rated}) shall relate to standard rating conditions, as laid down in Annex VII.

Table 1

Energy efficiency classes for air conditioners except double ducts and single ducts

Energy Efficiency Class	<i>SEER</i>	<i>SCOP</i>
A⁺⁺⁺	$SEER \geq 8.50$	$SCOP \geq 5.10$
A⁺⁺	$6.10 \leq SEER < 8.50$	$4.60 \leq SCOP < 5.10$
A⁺	$5.60 \leq SEER < 6.10$	$4.00 \leq SCOP < 4.60$
A	$5.10 \leq SEER < 5.60$	$3.40 \leq SCOP < 4.00$
B	$4.60 \leq SEER < 5.10$	$3.10 \leq SCOP < 3.40$
C	$4.10 \leq SEER < 4.60$	$2.80 \leq SCOP < 3.10$
D	$3.60 \leq SEER < 4.10$	$2.50 \leq SCOP < 2.80$
E	$3.10 \leq SEER < 3.60$	$2.20 \leq SCOP < 2.50$
F	$2.60 \leq SEER < 3.10$	$1.90 \leq SCOP < 2.20$
G	$SEER < 2.60$	$SCOP < 1.90$

Table 2

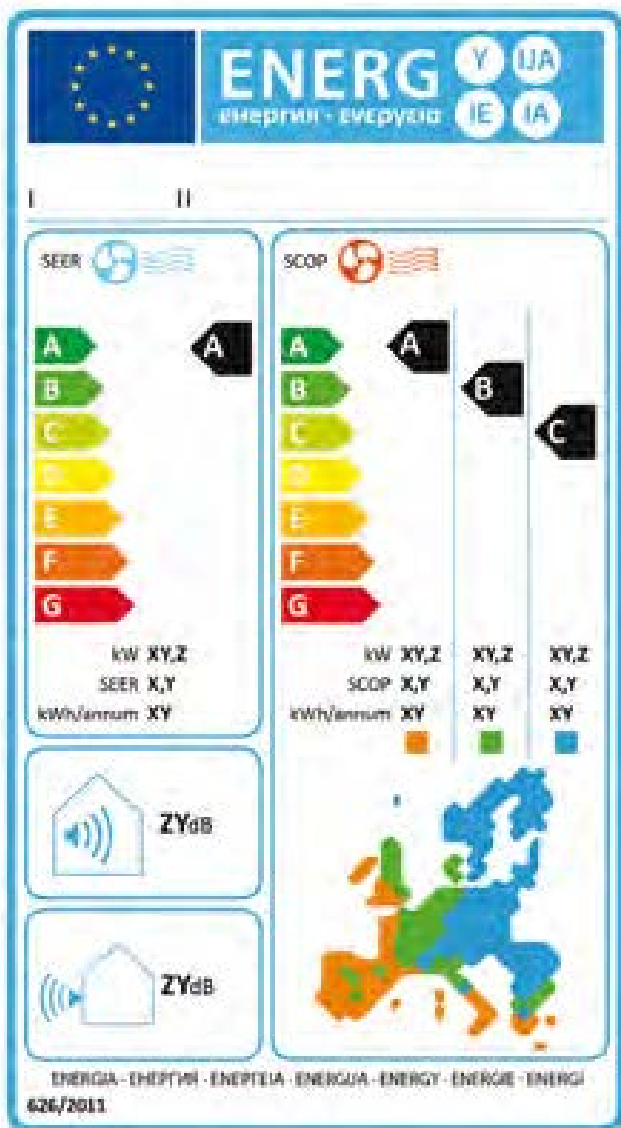
Energy efficiency classes for double ducts and single ducts

Energy Efficiency Class	Double ducts		Single ducts	
	EER_{rated}	COP_{rated}	EER_{rated}	COP_{rated}
A⁺⁺⁺	≥ 4.10	≥ 4.60	≥ 4.10	≥ 3.60
A⁺⁺	$3.60 \leq EER < 4.10$	$4.10 \leq COP < 4.60$	$3.60 \leq EER < 4.10$	$3.10 \leq COP < 3.60$
A⁺	$3.10 \leq EER < 3.60$	$3.60 \leq COP < 4.10$	$3.10 \leq EER < 3.60$	$2.60 \leq COP < 3.10$
A	$2.60 \leq EER < 3.10$	$3.10 \leq COP < 3.60$	$2.60 \leq EER < 3.10$	$2.30 \leq COP < 2.60$
B	$2.40 \leq EER < 2.60$	$2.60 \leq COP < 3.10$	$2.40 \leq EER < 2.60$	$2.00 \leq COP < 2.30$
C	$2.10 \leq EER < 2.40$	$2.40 \leq COP < 2.60$	$2.10 \leq EER < 2.40$	$1.80 \leq COP < 2.00$
D	$1.80 \leq EER < 2.10$	$2.00 \leq COP < 2.40$	$1.80 \leq EER < 2.10$	$1.60 \leq COP < 1.80$
E	$1.60 \leq EER < 1.80$	$1.80 \leq COP < 2.00$	$1.60 \leq EER < 1.80$	$1.40 \leq COP < 1.60$

F	$1.40 \leq EER < 1.60$	$1.60 \leq COP < 1.80$	$1.40 \leq EER < 1.60$	$1.20 \leq COP < 1.40$
G	$G < 1.40$	< 1.60	< 1.40	< 1.20

ANNEX III The label

- 1. LABEL OF AIR CONDITIONERS, EXCEPT SINGLE DUCT AND DOUBLE DUCT AIR CONDITIONERS
- 1.1. Reversible air conditioners classified in energy efficiency classes A to G



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'SEER' and 'SCOP' for cooling and heating, with a blue fan and air wave indication for SEER and red fan and air wave indication for SCOP;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class. Energy efficiency must be indicated for cooling and heating. For heating, energy efficiency for Average heating season is mandatory. Indication of efficiency for Warmer and Colder seasons is optional;

V. for cooling mode: design load in kW, rounded up to one decimal;

VI. for heating mode: design load in kW, for up to 3 heating seasons rounded up to one decimal.

Values for heating seasons for which the design load is not provided shall be indicated as 'X';

VII. for cooling mode: seasonal energy efficiency ratio (SEER value), rounded up to one decimal;

VIII. for heating mode: seasonal coefficient of performance (SCOP value), for up to 3 heating seasons rounded up to one decimal. Values for heating seasons for which SCOP is not provided shall be indicated as 'X';

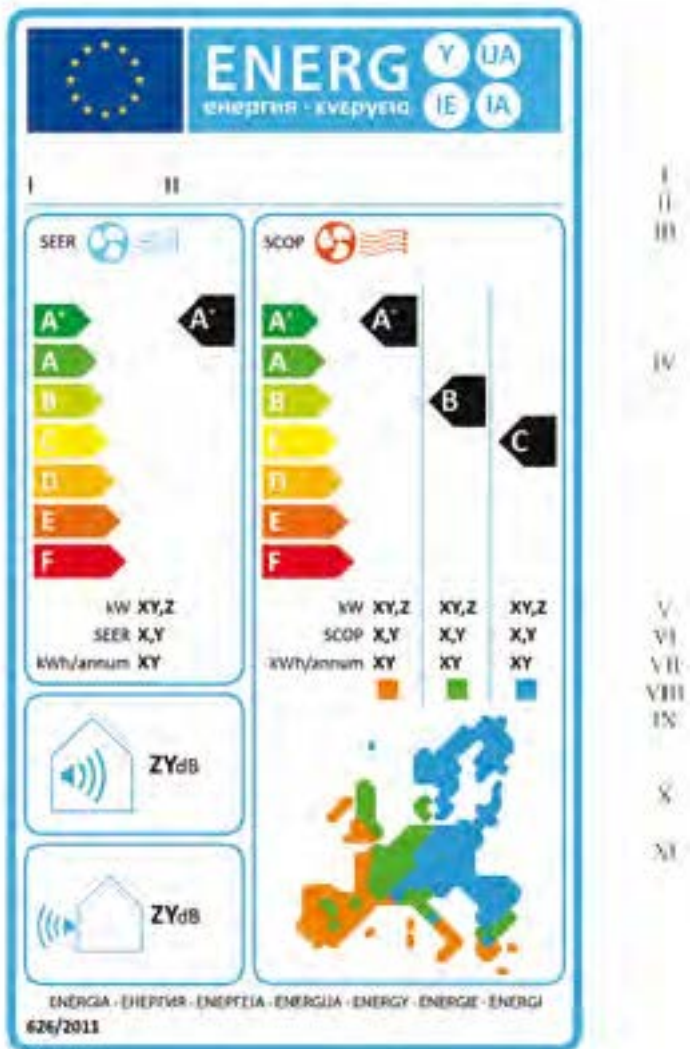
IX. annual energy consumption in kWh per year, for cooling and heating, rounded up to the nearest integer. Values for climate profiles for which annual energy consumption is not provided shall be indicated as 'X';

X. sound power levels for indoor and outdoor units expressed in dB(A) re1 pW, rounded to the nearest integer;

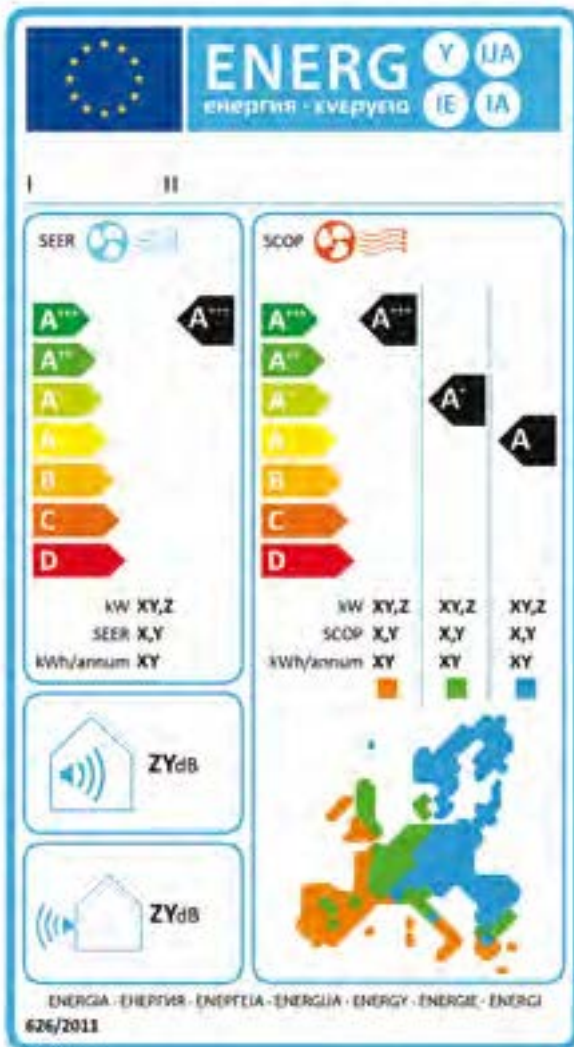
XI European map with a display of three indicative heating seasons and corresponding colour squares. All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 1.5. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU eco-label may be added.

1.2. Reversible air conditioners classified in energy efficiency classes A+ to F



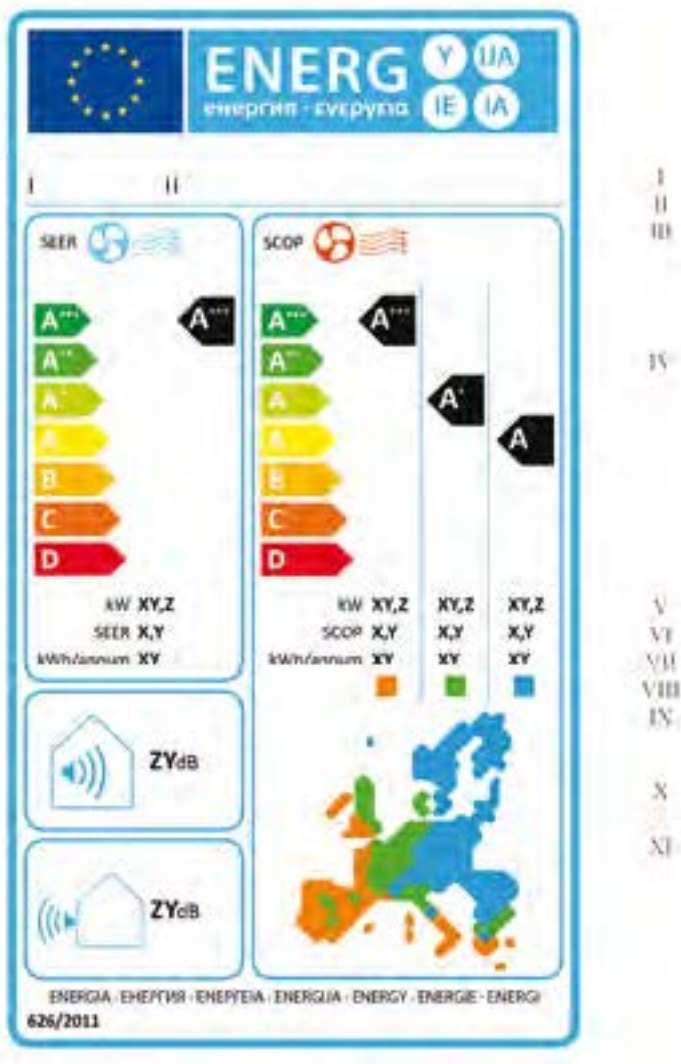
- (a) The information listed in point 1.1 shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 1.5.

1.3. Reversible air conditioners classified in energy efficiency classes A⁺⁺ to E

(a) The information listed in point 1.1 shall be included in the label.

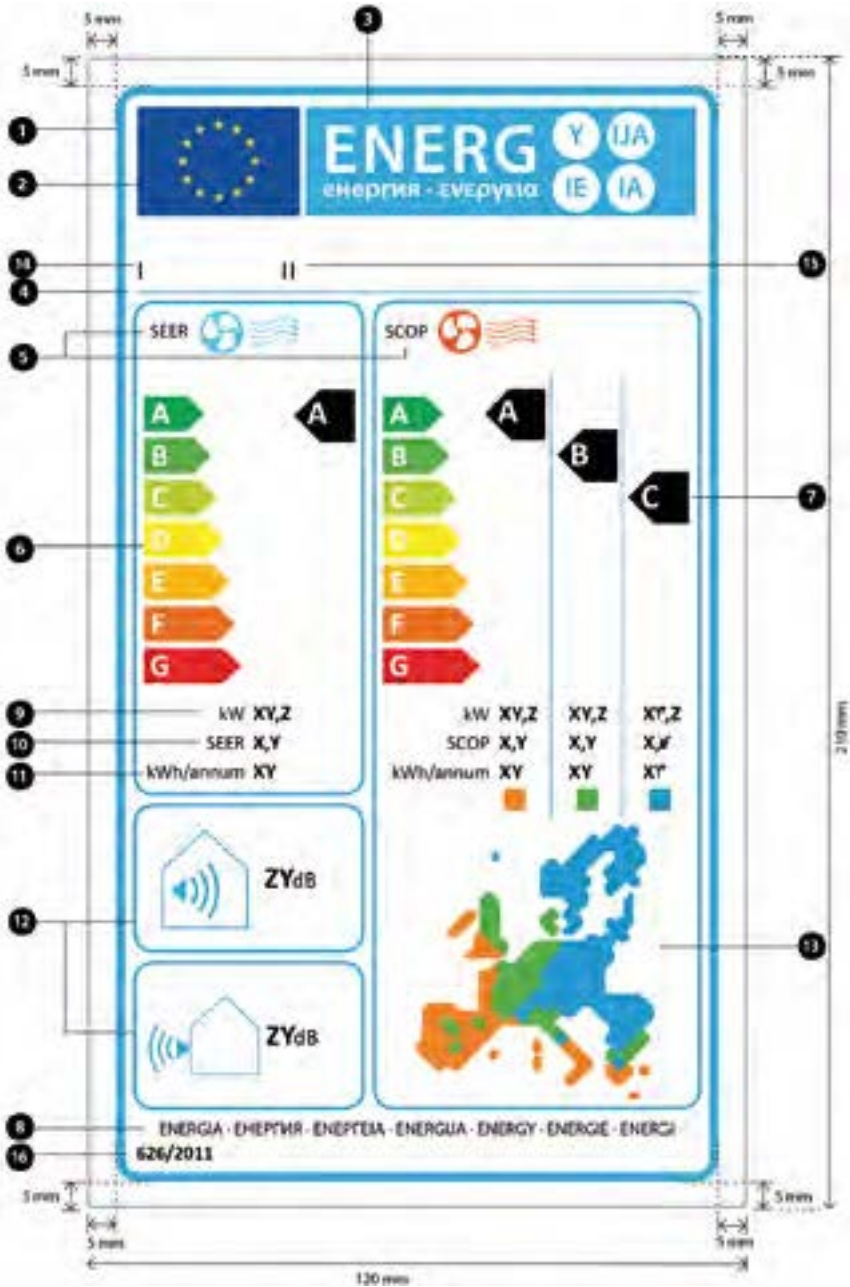
(b) The design aspects of the label shall be in accordance with point 1.5.

1.4. Reversible air conditioners classified in energy efficiency classes A+++ to D



- (a) The information listed in point 1.1 shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 1.5.

1.5. Label design



Whereby:

(i) The label shall be at least 120 mm wide and 210 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70- X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 EU label border: stroke 5 pt – colour: cyan 100% – round corners: 3,5 mm.

2 EU logo: Colours: X-80-00-00 and 00-00-X-00.

3 Energy label:

– **Colour:** X-00-00-00.

– **Pictogram** as depicted: EU logo + energy label: width: 102 mm, height: 20 mm.

4 Sub-logos border: 1 pt – colour: cyan 100% – length: 103,6 mm.

5 SEER and SCOP indication:

– **Border:** 2 pt – colour: cyan 100% – round corners: 3,5 mm.

– **Text:** Calibri regular 10 pt, capitals, 100% black.

6 A-G scale:

– **Arrow:** height: 7 mm, gap: 1 mm – colours:

– Highest class: X-00-X-00

– Second class: 70-00-X-00,

– Third class: 30-00-X-00,

– Fourth class: 00-00-X-00,

– Fifth class: 00-30-X-00,

– Sixth class: 00-70-X-00,

– Last class(es): 00-X-X-00.

– **Text:** Calibri bold 16 pt, capitals, white.

7 Energy efficiency class(es):

– **Arrow:** width: 11 mm, height: 10 mm, 100% black;

– **Text:** Calibri bold 18 pt, capitals, white.

8 Energy

– **Text:** Calibri regular 9 pt, capitals, 100% black.

9 Rated capacity for cooling and heating in kW:

– **Text 'kW':** Calibri regular 10 pt, 100% black.

– **Value 'XY,Z':** Calibri bold 11 pt, 100% black.

10 SCOP and SEER values, rounded up to one decimal:

– **Text 'SEER'/'SCOP':** Calibri regular 10 pt, capitals, 100% black.

– **Value 'X,Y'**: Calibri bold 11 pt, 100% black.

11 Annual energy consumption in kWh/annum:

– **Text 'kWh/annum'**: Calibri regular 10 pt, 100 % black.

– **Value 'XY'**: Calibri bold 11 pt, 100 % black.

12 Noise emissions:

– **Border**: 2 pt – colour: cyan 100 % – round corners: 3,5 mm.

– **Value**: Calibri bold 15 pt, 100 % black; Calibri regular 12 pt, 100 % black.

13 European map and colour squares:

– **Colours:**

Orange: 00-46-46-00.

Green: 59-00-47-00.

Blue: 54-08-00-00.

14 Supplier's name or trademark.

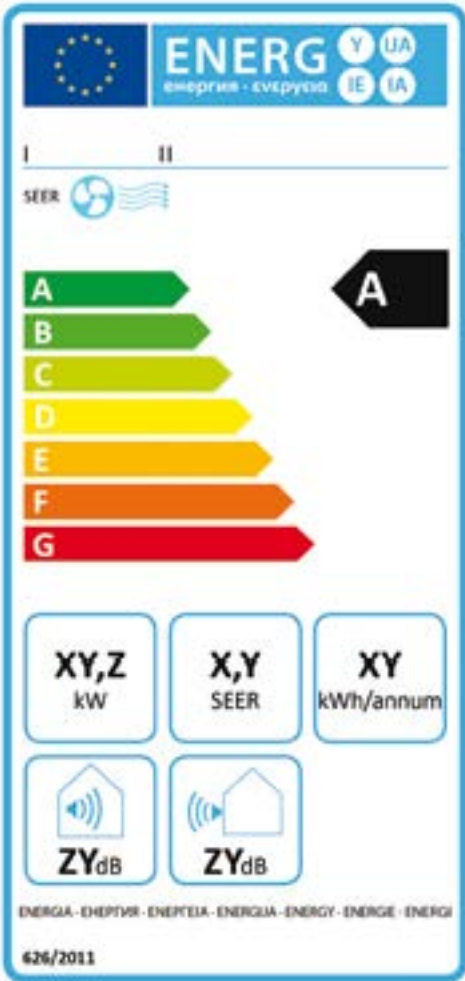
15 Supplier's model identifier:

The suppliers' name or trade mark and model identifier should fit in a space of 102 × 13 mm.

16 Reference period: Text: Calibri bold 10 pt.

2. LABEL OF AIR CONDITIONERS, EXCEPT SINGLE DUCT AND DOUBLE DUCT AIR CONDITIONERS

2.1. Cooling-only air conditioners classified in energy efficiency classes A to G



I
II
III

IV

V
VI
VII

VIII

(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'SEER', with a blue fan and air wave indication;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

V. design load for cooling in kW, rounded up to one decimal;

VI. seasonal energy efficiency ratio (SEER value), rounded up to one decimal;

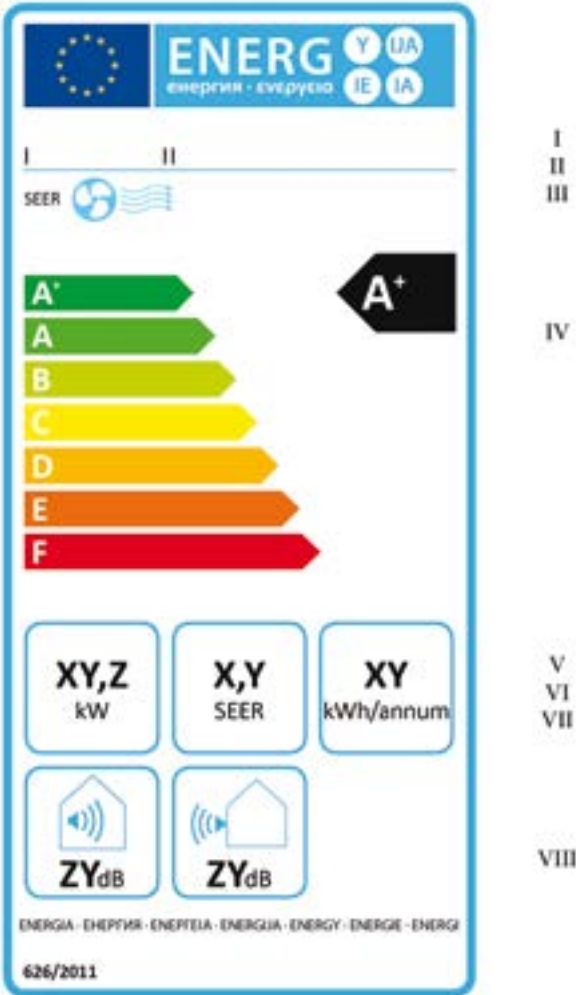
VII. annual energy consumption in kWh per year, rounded up to the nearest integer;

VIII. sound power levels for indoor and outdoor units expressed in dB(A) re 1 pW, rounded to the nearest integer.

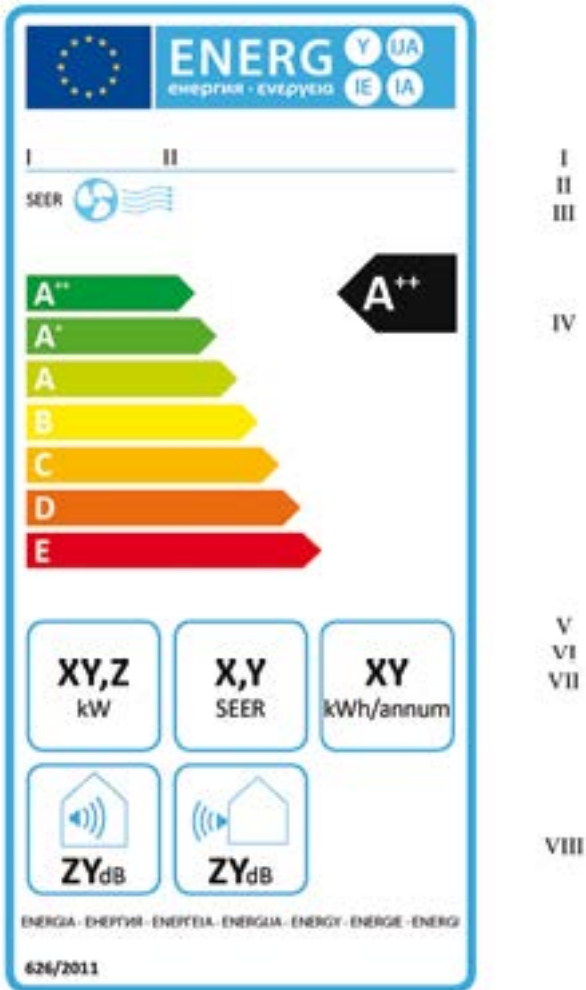
All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 2.5. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

2.2. Cooling-only air conditioners classified in energy efficiency classes A+ to F

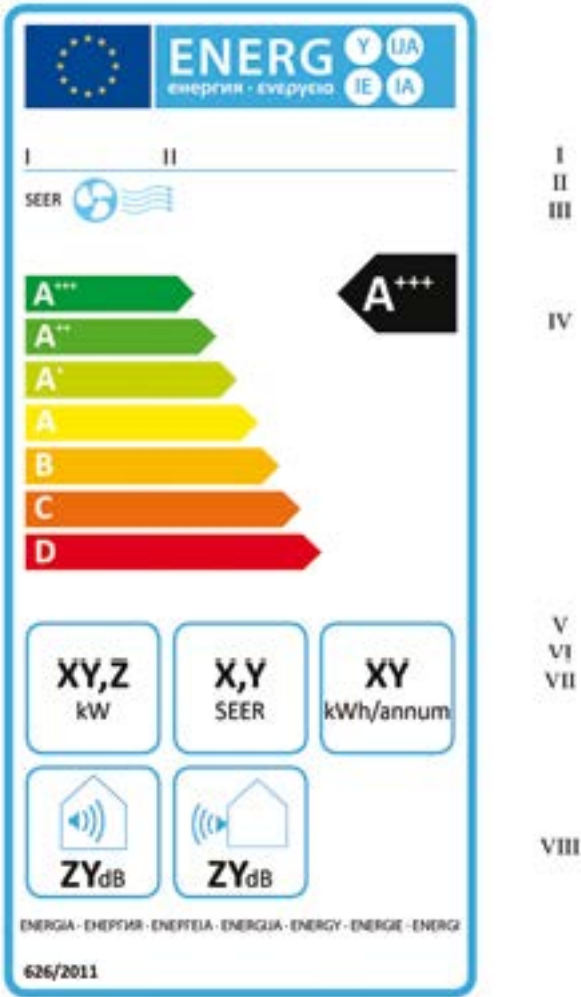


- (a) The information listed in point 2.1 shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 2.5.

2.3. Cooling-only air conditioners classified in energy efficiency classes A⁺⁺ to E

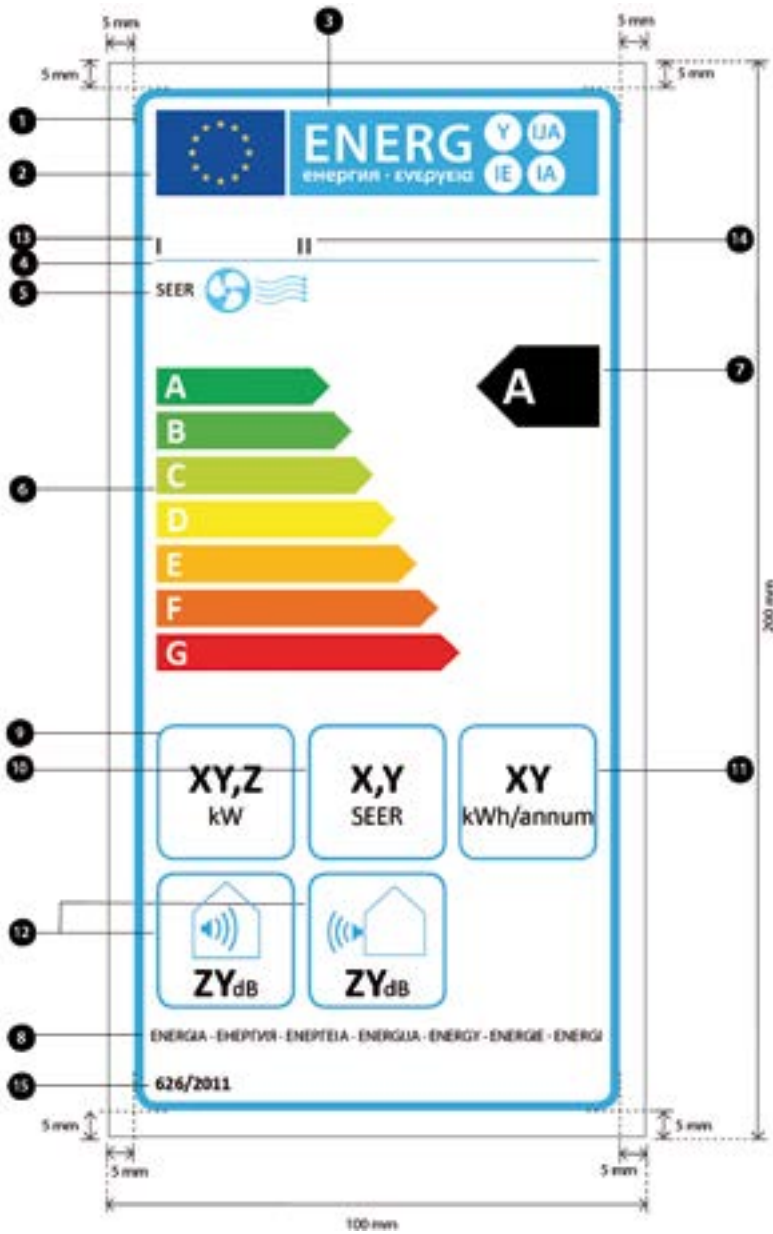
- (a) The information listed in point 2.1 shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 2.5.

2.4. Cooling-only air conditioners classified in energy efficiency classes A+++ to D



- (a) The information listed in point 2.1 shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 2.5.

2.5. Label design



Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70- X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 EU label border: stroke: 5 pt – colour: cyan 100% – round corners: 3,5 mm.

2 EU logo: Colours: X-80-00-00 and 00-00-X-00.

3 Energy label:

– **Colour:** X-00-00-00.

– **Pictogram** as depicted: EU logo + energy label: width: 93 mm, height: 18 mm.

4 Sub-logos border: 1 pt – colour: cyan 100% – length: 93,7 mm.

5 SEER indication:

– **Text:** Calibri regular 10 pt, capitals, 100% black.

6 A-G scale:

– **Arrow:** height: 7 mm, gap: 1,3 mm – colours:

– Highest class: X-00-X-00,

– Second class: 70-00-X-00,

– Third class: 30-00-X-00,

– Fourth class: 00-00-X-00,

– Fifth class: 00-30-X-00,

– Sixth class: 00-70-X-00,

– Last class(es): 00-X-X-00.

– **Text:** Calibri bold 18 pt, capitals, white.

7 Energy efficiency class:

– **Arrow:** Width: 23 mm, height: 15 mm, 100% black;

– **Text:** Calibri bold 29 pt, capitals, white.

8 Energy:

– **Text:** Calibri regular 8 pt, capitals, 100% black.

9 Rated capacity in kW:

– **Text 'kW':** Calibri regular 14 pt, 100% black.

– **Value 'XY,Z':** Calibri bold 22 pt, 100% black.

10 SEER value rounded up to one decimal:

– **Border:** 3 pt – colour: cyan 100% – round corners: 3,5 mm.

– **Text 'SEER':** Calibri regular 14 pt, capitals, 100% black.

– **Value 'X,Y'**: Calibri bold 22 pt, 100% black.

11 Annual energy consumption in kWh/annum:

– **Text 'kWh/annum'**: Calibri regular 14 pt, 100% black.

– **Value 'XY'**: Calibri bold 22 pt, 100% black.

12 Noise emissions:

– **Border**: 2 pt – colour: cyan 100% – round corners: 3,5 mm.

– **Value**: Calibri bold 22 pt, 100% black.

– **Text**: Calibri regular 14 pt, 100% black.

13 Supplier's name or trademark.

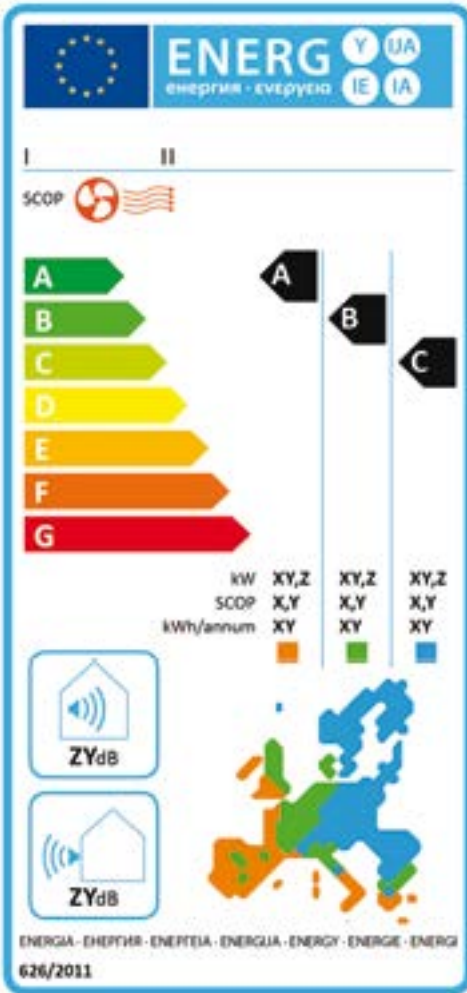
14 Supplier's model identifier:

The suppliers' name or trade mark and model identifier should fit in a space of 90 × 15 mm.

15 Reference period: Text: Calibri bold 10 pt.

3. LABEL OF AIR CONDITIONERS, EXCEPT SINGLE DUCT AND DOUBLE DUCT AIR CONDITIONERS

3.1. Heating-only air conditioners classified in energy efficiency classes A to G



I
II
III

IV

V
VI
VII

VIII

IX

(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'SCOP', with red fan and air wave indication;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class. Energy efficiency for Average heating season is mandatory. Indication of efficiency for Warmer and Colder climates is optional;

V. design load for heating in kW, for up to 3 heating seasons rounded up to one decimal. Values for heating seasons for which design load is not provided shall be indicated as 'X';

VI. seasonal coefficient of performance (SCOP) for up to 3 heating seasons rounded up to one decimal. Values for heating seasons for which SCOP is not provided shall be indicated as 'X';

VII. annual energy consumption in kWh per year, rounded up to the nearest integer. Values for heating seasons for which annual energy consumption is not provided shall be indicated as 'X';

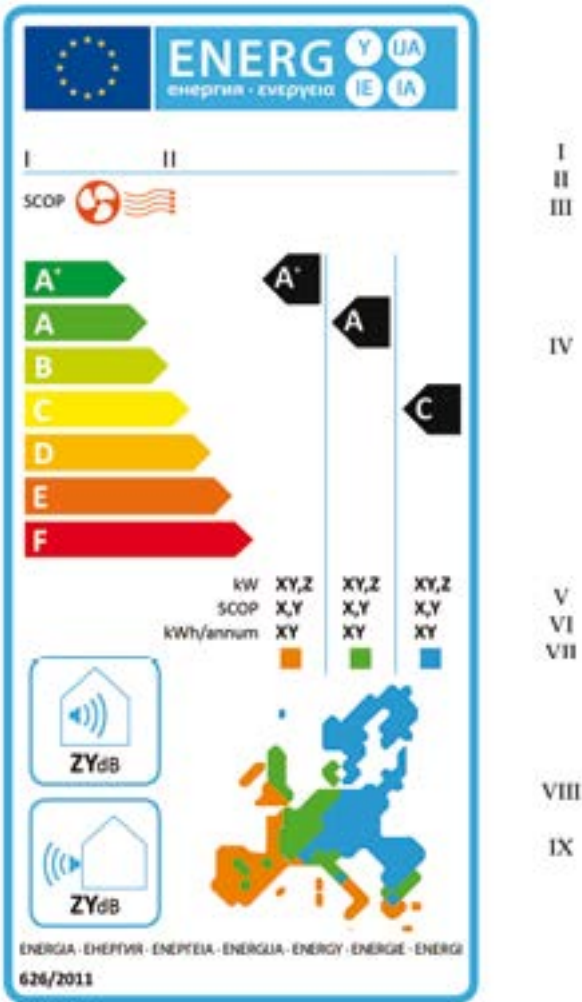
VIII. sound power levels for indoor and outdoor units expressed in dB(A) re1 pW, rounded to the nearest integer;

IX. European map with a display of three indicative heating seasons and corresponding colour squares.

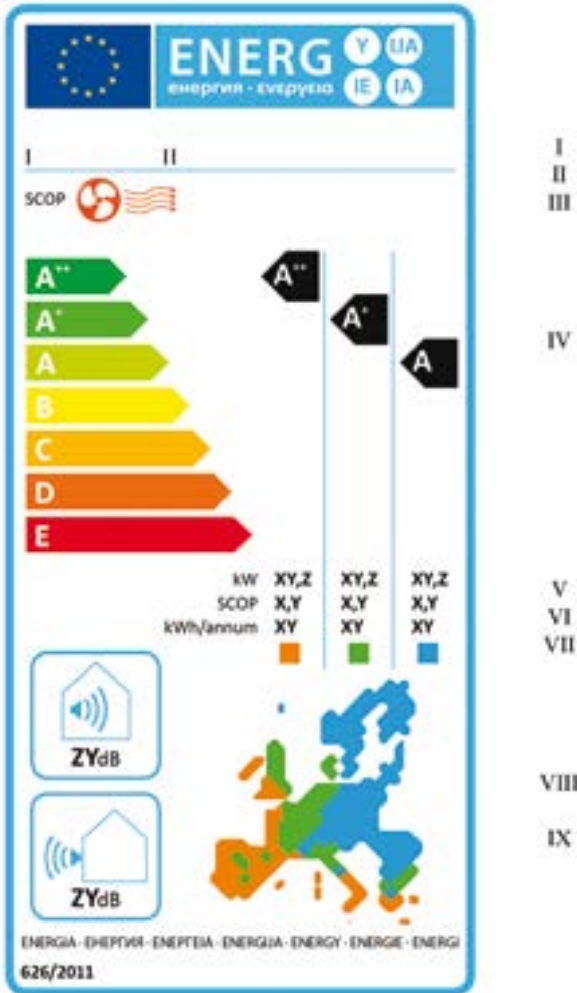
All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 3.5. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

3.2. Heating-only air conditioners classified in energy efficiency classes A+ to F

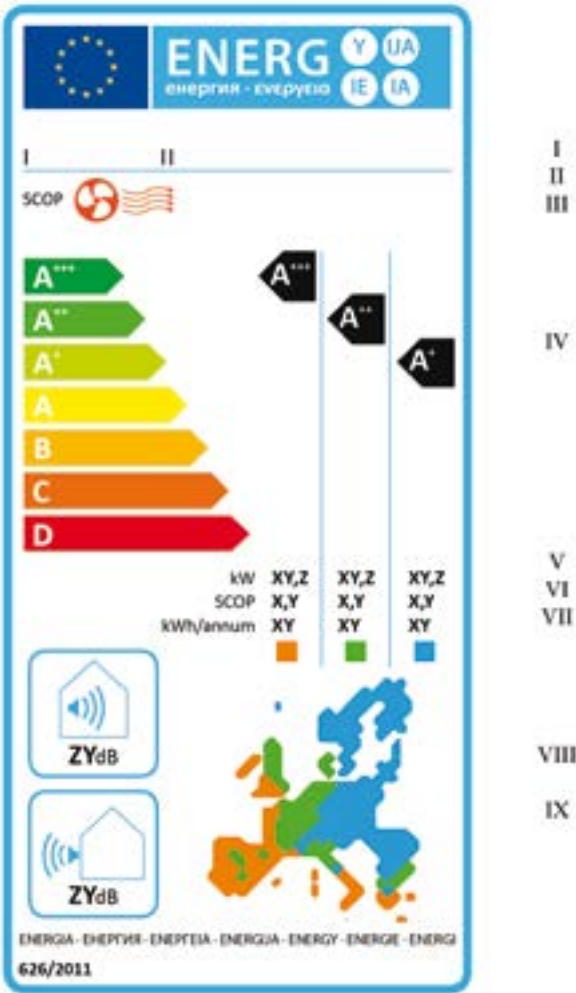


- (a) The information listed in point 3.1 shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 3.5.

3.3. Heating-only air conditioners classified in energy efficiency classes A⁺⁺ to E

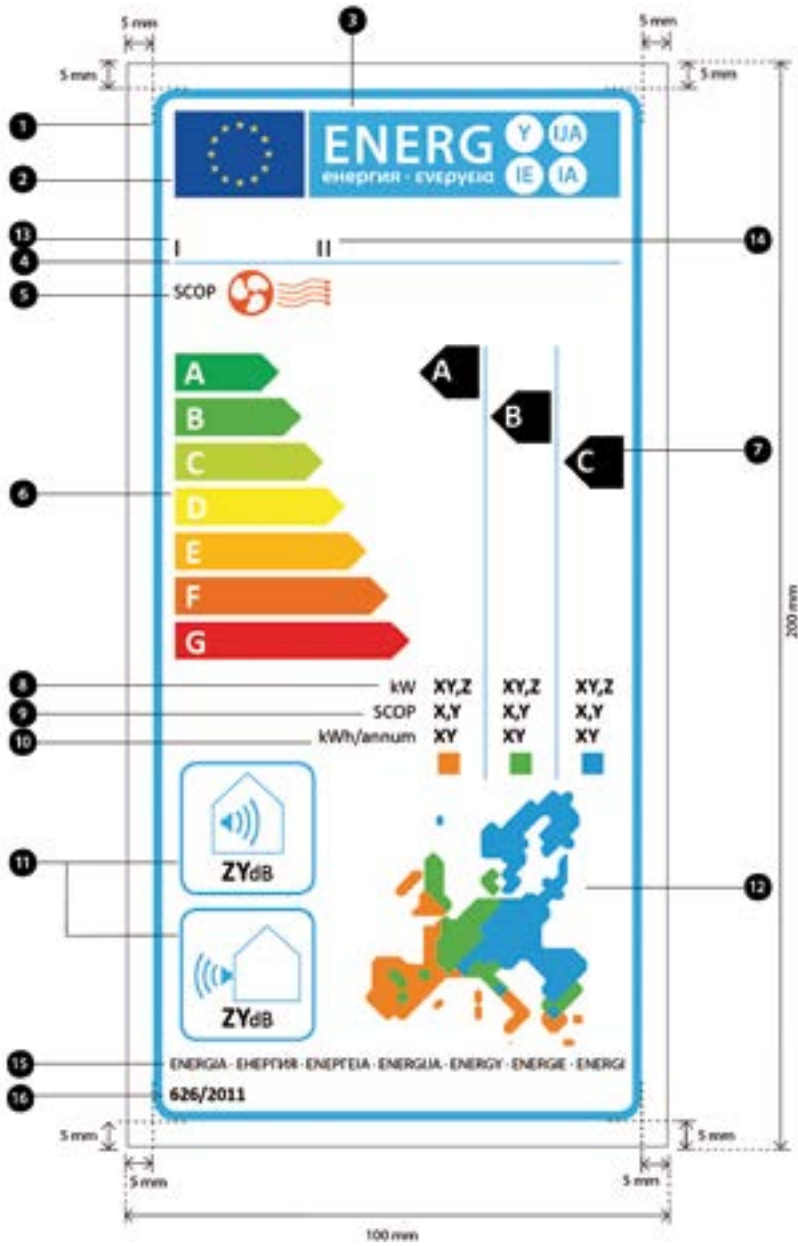
- (a) The information listed in point 3.1 shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 3.5.

3.4. Heating-only air conditioners classified in energy efficiency classes A+++ to D



- (a) The information listed in point 3.1 shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 3.5.

3.5. Label design



Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours shall be CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 EU label border: stroke: 5 pt – colour: cyan 100% – round corners: 3,5 mm.

2 EU logo: Colours: X-80-00-00 and 00-00-X-00.

3 Energy label:

– **Colour:** X-00-00-00.

– **Pictogram** as depicted: EU logo + energy label: width: 93 mm, height: 18 mm.

4 Sub-logos border: 1 pt – colour: cyan 100% – length: 93,7 mm.

5 SCOP indication:

– **Text:** Calibri regular 10 pt, capitals, 100% black.

6 A-G scale:

– **Arrow:** height: 7 mm, gap: 1,3 mm – colours:

– Highest class: X-00-X-00,

– Second class: 70-00-X-00,

– Third class: 30-00-X-00, Fourth class: 00-00-X-00,

– Fifth class: 00-30-X-00, Sixth class: 00-70-X-00,

– Last class(es): 00-X-X-00.

– **Text:** Calibri bold 18 pt, capitals, white.

7 Energy efficiency class(es):

– **Arrow:** width: 11 mm, height: 10 mm, 100% black;

– **Text:** Calibri bold 18 pt, capitals, white.

8 Rated capacity in kW:

– **Text 'kW':** Calibri regular 10 pt, 100% black.

– **Value 'XY,Z':** Calibri bold 11 pt, 100% black.

9 SCOP values, rounded up to one decimal:

– **Text 'SCOP':** Calibri regular 10 pt, capitals, 100% black.

– **Value 'X,Y':** Calibri bold 11 pt, 100% black.

10 Annual energy consumption in kWh/annum:

– **Text 'kWh/annum':** Calibri regular 10 pt, 100% black.

– **Value 'XY':** Calibri bold 11 pt, 100% black.

11 Noise emissions:

- **Border:** 2 pt – colour: cyan 100% – round corners: 3,5 mm.
- **Value:** Calibri bold 15 pt, 100% black.
- **Text:** Calibri regular 12 pt, 100% black.

12 European map and colour squares:

- **Colours:**
 - Orange: 00-46-46-00.
 - Green: 59-00-47-00.
 - Blue: 54-08-00-00.

13 Supplier's name or trademark.**14 Supplier's model identifier:**

The suppliers' name or trade mark and model identifier should fit in a space of 90 × 15 mm.

15 Energy: Text: Calibri regular 8 pt, capitals, 100% black.**16 Reference period:** Text: Calibri bold 10, pt.

4. LABEL OF DOUBLE DUCT AIR CONDITIONERS

4.1. Reversible double duct air conditioners classified in energy efficiency classes A+++ to D



I
II
III

IV

V
VI
VII

VIII

(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'EER' and 'COP' for cooling and heating, with a blue fan and air wave indication for EER and red fan and air wave indication for COP;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class. Energy efficiency must be indicated for cooling and heating;

V. Rated capacity for cooling and heating mode in kW, rounded up to one decimal;

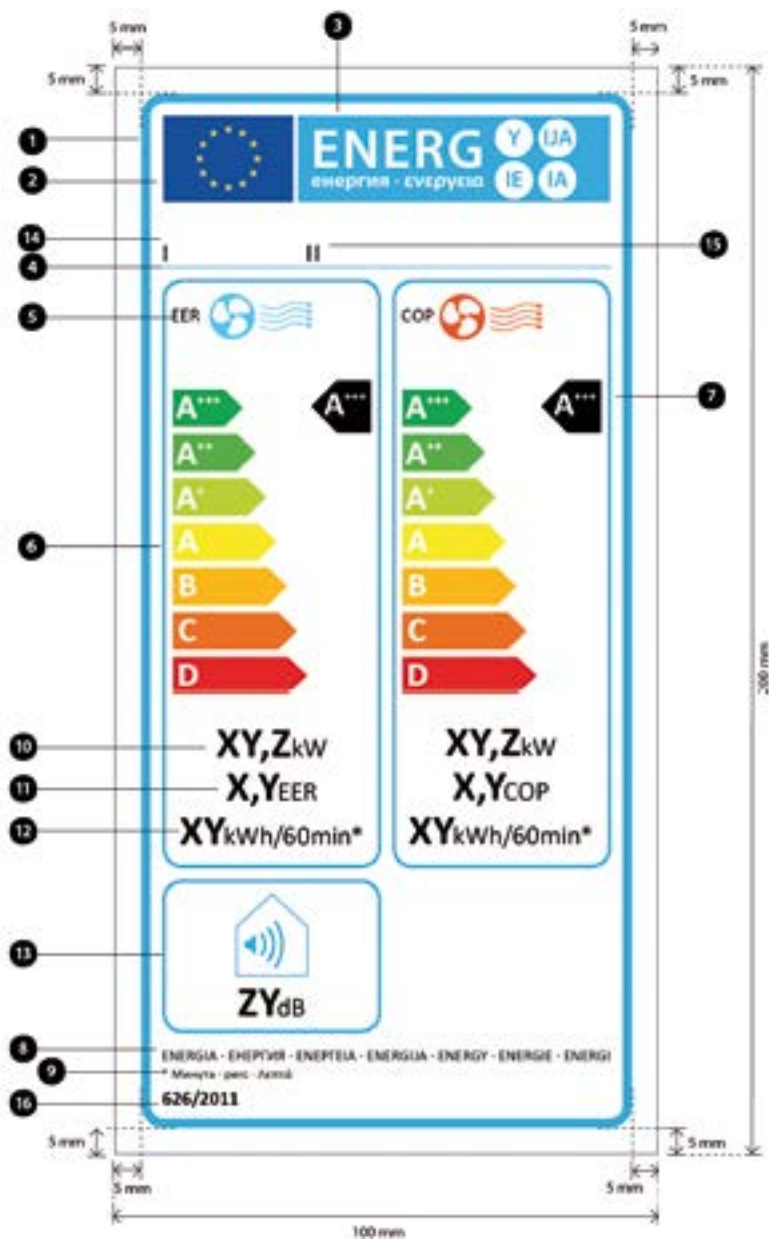
VI. EER rated and COP rated , rounded up to one decimal;

VII. hourly energy consumption in kWh per 60 minutes, for cooling and heating mode, rounded up to the nearest integer;

VIII. sound power level for indoor unit expressed in dB(A) re1 pW, rounded to the nearest integer. All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 4.2. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

4.2. Label Design



Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours shall be CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 EU label border: stroke: 5 pt – colour: cyan 100% – round corners: 3,5 mm.

2 EU logo: Colours: X-80-00-00 and 00-00-X-00.

3 Energy label:

– **Colour:** X-00-00-00.

– **Pictogram** as depicted: EU logo + energy label: width: 82 mm, height: 16 mm.

4 Sub-logos border: 1 pt – colour: cyan 100% – length: 92,5 mm.

5 EER and COP indication:

– **Text:** Calibri regular 10 pt, 100% black

6 A-G scale:

– **Arrow:** height: 7 mm, gap: 1,3 mm – colours:

– Highest class: X-00-X-00,

– Second class: 70-00-X-00,

– Third class: 30-00-X-00,

– Fourth class: 00-00-X-00,

– Fifth class: 00-30-X-00,

– Sixth class: 00-70-X-00,

– Last class(es): 00-X-X-00.

– **Text:** Calibri bold 18 pt, capitals, white; Calibri bold 7 pt, white.

7 Energy efficiency classes:

– **Arrow:** width: 11 mm, height: 10 mm, 100% black;

– **Text:** Calibri bold 18 pt, capitals, white.

Calibri bold 7 pt, white.

8 Energy:

– **Text:** Calibri regular 8 pt, capitals, 100% black.

9 'Minutes'-translation:

– **Text:** Calibri regular 7 pt, 100% black.

10 Rated capacity for cooling and heating mode in kW:

– **Text 'kW':** Calibri regular 14 pt, 100% black.

– **Value 'XY,Z':** Calibri bold 22 pt, 100% black.

11 COP and EER values, rounded up to one decimal:

- **Text 'EER'/'COP'**: Calibri regular 14 pt, capitals, 100% black.
- **Value 'X,Y'**: Calibri bold 22 pt, 100% black.

12 Hourly energy consumption in kWh/60min:

- **Text 'kWh/60min*'**: Calibri regular 14 pt, 100% black.
- **Value 'XY'**: Calibri bold 22 pt, 100% black.

13 Noise emissions:

- **Border**: 2 pt – colour: cyan 100% – round corners: 3,5 mm.
- **Value**: Calibri bold 22 pt, 100% black.
- **Text**: Calibri regular 14 pt, 100% black.

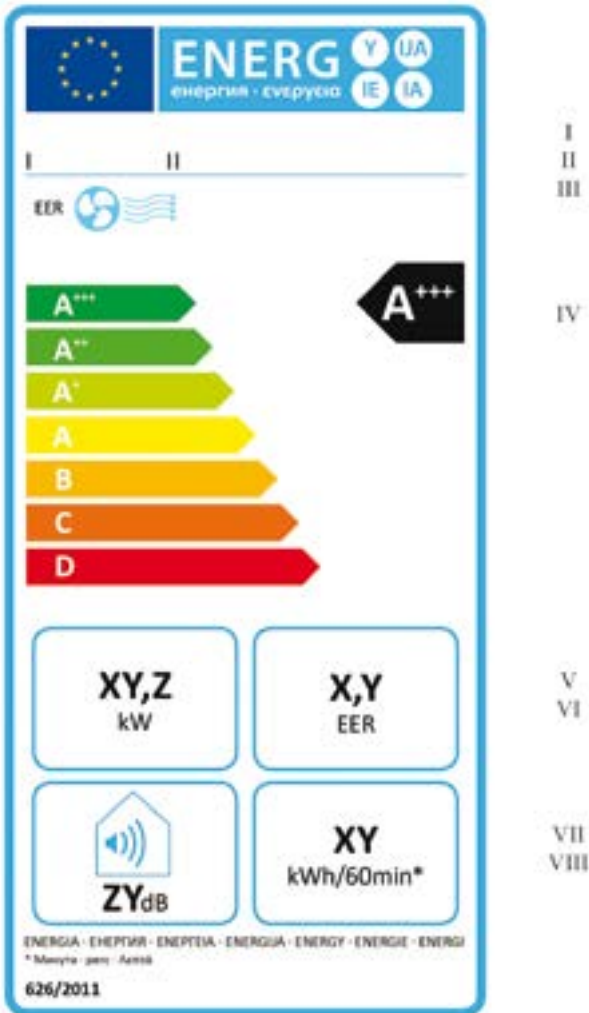
14 Supplier's name or trademark.

15 Supplier's model identifier:

The suppliers' name or trade mark and model identifier should fit in a space of 82 × 10,5 mm.

16 Reference period: Text: Calibri bold 10 pt.

4.3. Cooling-only double duct air conditioners classified in energy efficiency classes A+++ to D



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'EER', with a blue fan and air wave indication;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

V. Rated capacity for cooling in kW, rounded up to one decimal;

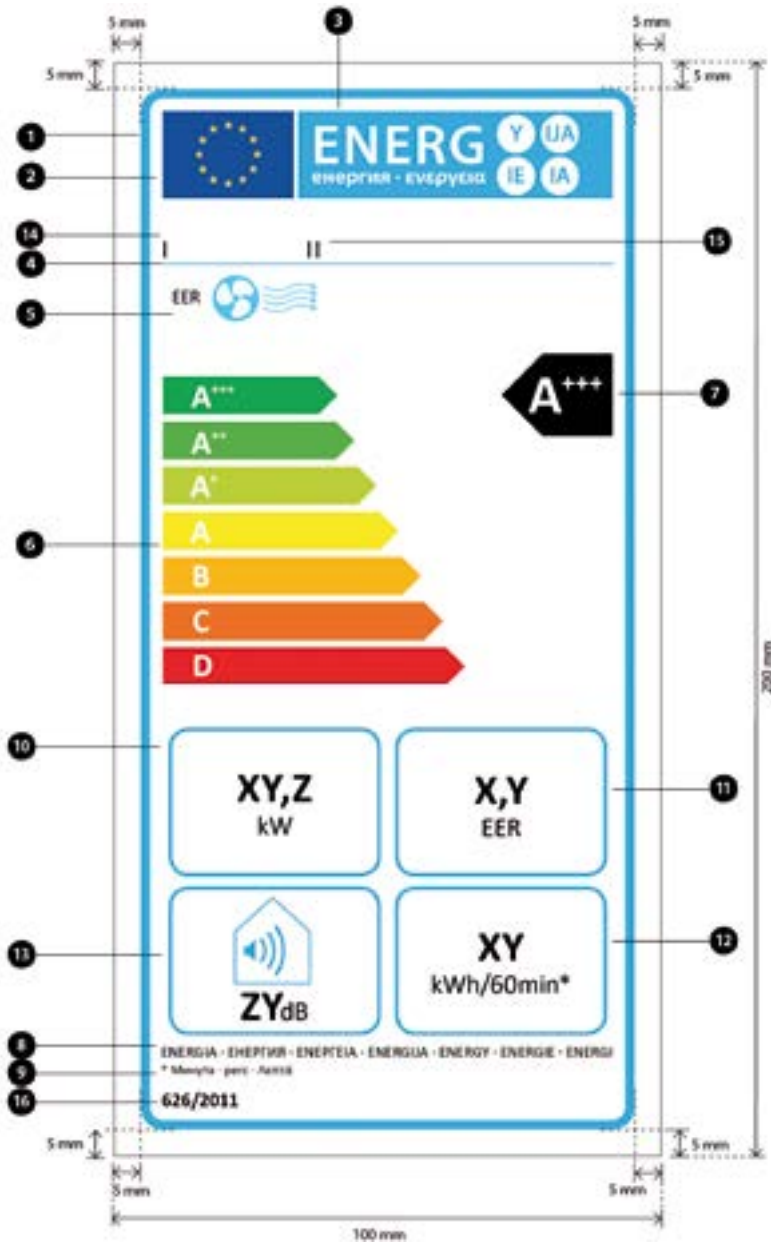
VI. EER rated , rounded up to one decimal;

VII. hourly energy consumption in kWh per 60 minutes, rounded up to the nearest integer;

VIII. sound power level for indoor unit expressed in dB(A) re1 pW, rounded to the nearest integer; All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 4.4. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

4.4. Label Design



Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70- X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 EU label border: stroke: 5 pt – colour: Cyan 100% – round corners: 3,5 mm.

2 EU logo: Colours: X-80-00-00 and 00-00-X-00.

3 Energy label:

– **Colour:** X-00-00-00.

– **Pictogram** as depicted: EU logo + energy label: width: 82 mm, height: 16 mm.

4 Sub-logos border: 1 pt – colour: cyan 100% – length: 92,5 mm.

5 EER indication:

– **Text:** Calibri regular 10 pt, capitals, 100% black

6 A-G scale:

– **Arrow:** height: 7 mm, gap: 1,3 mm – colours:

– Highest class: X-00-X-00,

– Second class: 70-00-X-00,

– Third class: 30-00-X-00,

– Fourth class: 00-00-X-00,

– Fifth class: 00-30-X-00,

– Sixth class: 00-70-X-00,

– Last class(es): 00-X-X-00.

– **Text:** Calibri bold 18 pt, capitals, white;
Calibri bold 7 pt, white.

7 Energy efficiency class:

– **Arrow:** width: 20 mm, height: 15 mm, 100% black;

– **Text:** Calibri bold 30 pt, capitals, white;
Calibri bold 14 pt, white.

8 Energy

– **Text:** Calibri regular 8 pt, capitals, 100% black.

9 'Minutes'-translation:

– **Text:** Calibri regular 7 pt, 100% black.

10 Rated capacity in kW:

– **Text 'kW':** Calibri regular 14 pt, 100% black.

– **Value 'XY,Z'**: Calibri bold 22 pt, 100% black.

11 EER value, rounded up to one decimal:

– **Text 'EER'**: Calibri regular 14 pt, capitals, 100% black.

– **Value 'X,Y'**: Calibri bold 22 pt, 100% black.

12 Hourly energy consumption in kWh/60min:

– **Text 'kWh/60min*'**: Calibri regular 14 pt, 100% black.

– **Value 'XY'**: Calibri bold 22 pt, 100% black.

13 Noise emissions:

– **Border**: 2 pt – colour: 100% cyan – round corners: 3,5 mm.

– **Value**: Calibri bold 22 pt, 100% black.

– **Text**: Calibri regular 14 pt, 100% black.

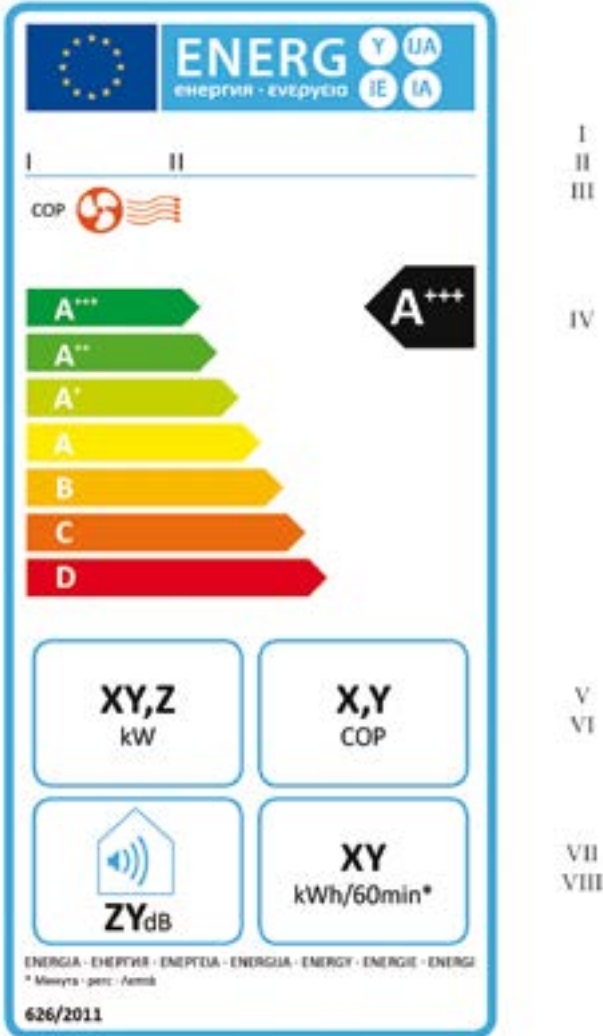
14 Supplier's name or trademark.

15 Supplier's model identifier:

The suppliers' name or trade mark and model identifier should fit in a space of 82 × 10,5 mm.

16 Reference period: Text: Calibri bold 10 pt.

4.5. Heating-only double duct air conditioners classified in energy efficiency classes A+++ to D



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'COP' with red fan and air wave indication;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

V. rated capacity for heating in kW, rounded up to one decimal;

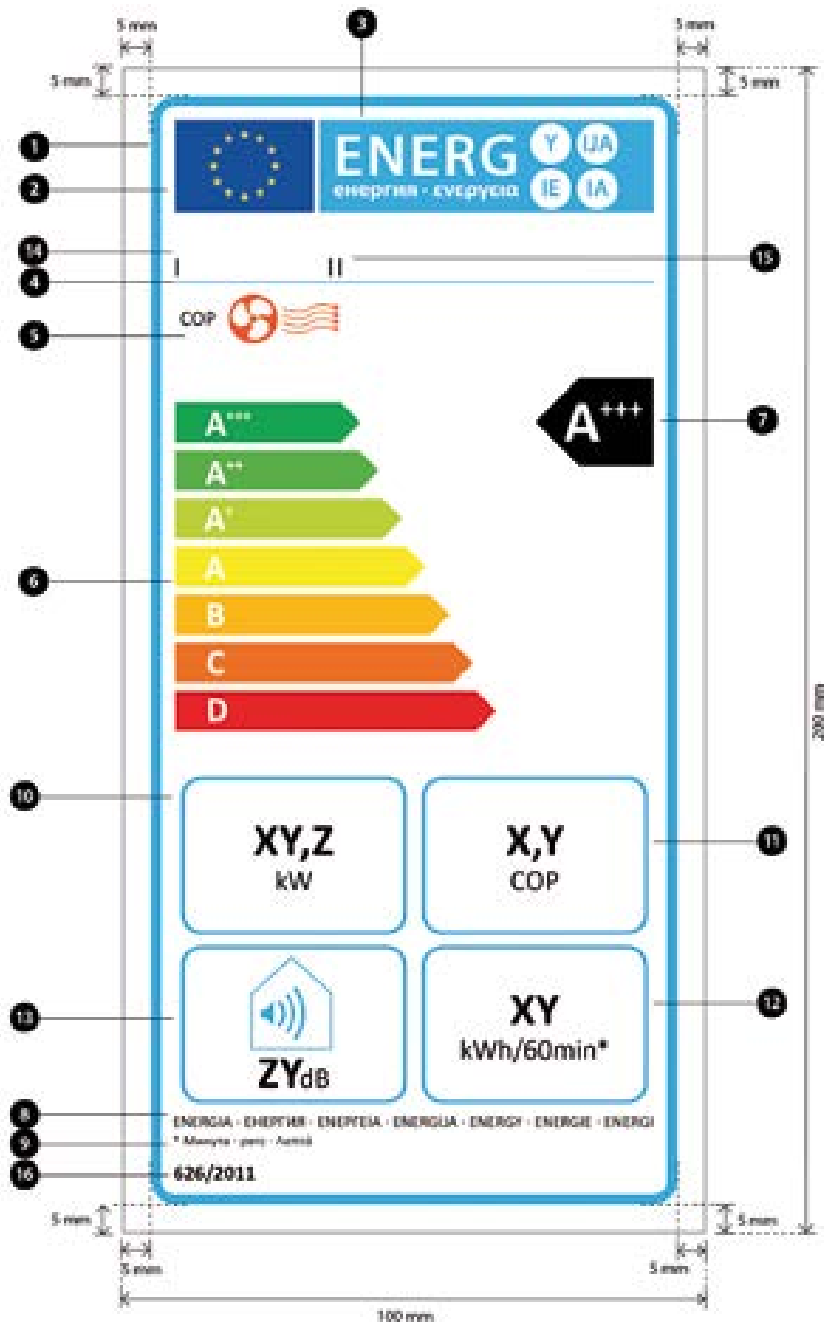
VI. COP rated , rounded up to one decimal;

VII. hourly energy consumption in kWh per 60 minutes, rounded up to the nearest integer;

VIII. sound power level for indoor unit expressed in dB(A) re1 pW, rounded to the nearest integer. All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 4.6. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

4.6. Label Design



Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70- X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 EU label border: stroke: 5 pt – colour: cyan 100% – round corners: 3,5 mm.

2 EU logo: Colours: X-80-00-00 and 00-00-X-00.

3 Energy label:

– **Colour:** X-00-00-00.

– **Pictogram** as depicted: EU logo + energy label: width: 82 mm, height: 16 mm.

4 Sub-logos border: 1 pt – colour: 100% cyan – length: 92,5 mm.

5 COP indication:

– **Text:** Calibri regular 10 pt, capitals, 100% black

6 A-G scale:

– **Arrow:** height: 7 mm, gap: 1,3 mm – colours:

– Highest class: X-00-X-00,

– Second class: 70-00-X-00,

– Third class: 30-00-X-00,

– Fourth class: 00-00-X-00,

– Fifth class: 00-30-X-00,

– Sixth class: 00-70-X-00,

– Last class(es): 00-X-X-00.

– **Text:** Calibri bold 18 pt, capitals, white; Calibri bold 7 pt, white.

7 Energy efficiency class:

– **Arrow:** width: 20 mm, height: 15 mm, 100% black;

– **Text:** Calibri bold 30 pt, capitals, white; Calibri bold 14 pt, white.

8 Energy:

– **Text:** Calibri regular 8 pt, capitals, 100% black.

9 ‘Minutes’-translation:

– **Text:** Calibri regular 7 pt, 100% black.

10 Rated capacity in kW:

– **Text ‘kW’:** Calibri regular 14 pt, 100% black.

– **Value ‘XY,Z’:** Calibri bold 22 pt, 100% black.

11 COP value, rounded up to one decimal:

– **Text 'COP'**: Calibri regular 14 pt, capitals, 100% black.

– **Value 'X,Y'**: Calibri bold 22 pt, 100% black.

12 Hourly energy consumption in kWh/60min:

– **Text 'kWh/60min*'**: Calibri regular 14 pt, 100% black.

– **Value 'XY'**: Calibri bold 22 pt, 100% black.

13 Noise emissions:

– **Border**: 2 pt – colour: cyan 100% – round corners: 3,5 mm.

– **Value**: Calibri bold 22 pt, 100% black.

– **Text**: Calibri regular 14 pt, 100% black.

14 Supplier's name or trademark.

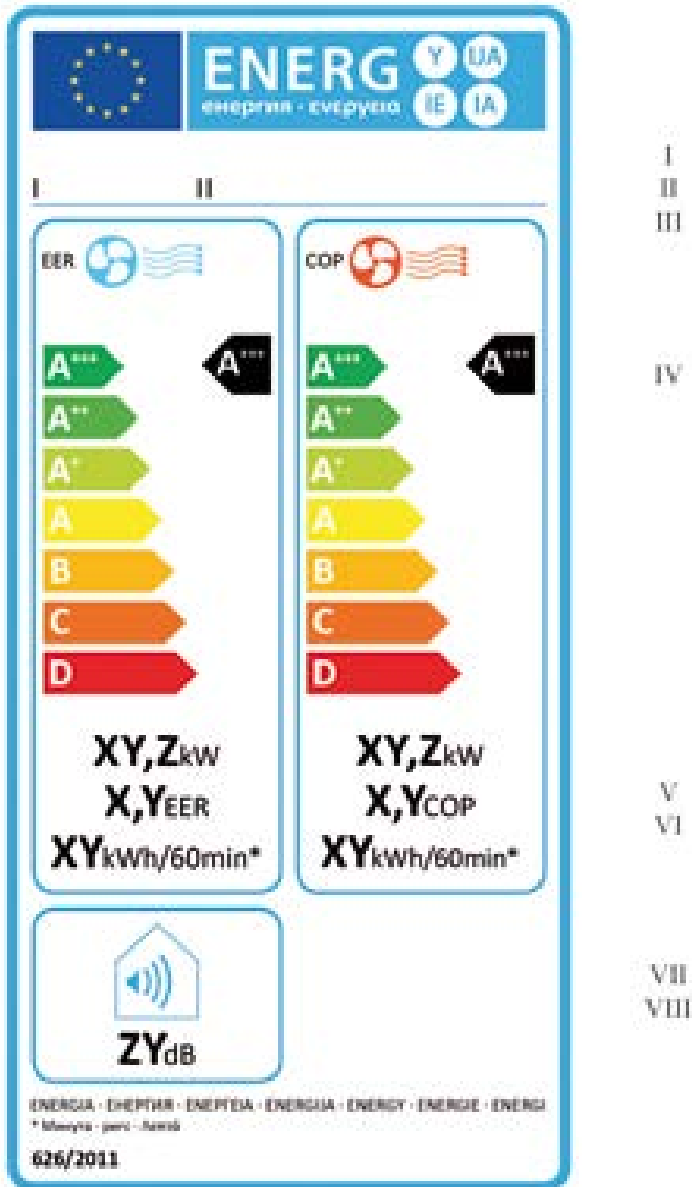
15 Supplier's model identifier:

The suppliers' name or trade mark and model identifier should fit in a space of 82 × 10,5 mm.

16 Reference period: Text: Calibri bold 10 pt.

5. LABEL OF SINGLE DUCT AIR CONDITIONERS

5.1. Reversible single duct air conditioners classified in energy efficiency classes A+++ to D



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'EER' and 'COP' for cooling and heating, with a blue fan and air wave indication for EER and red fan and air wave indication for COP;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class. Energy efficiency must be indicated for cooling and heating;

V. rated capacity for cooling and heating mode in kW, rounded up to one decimal;

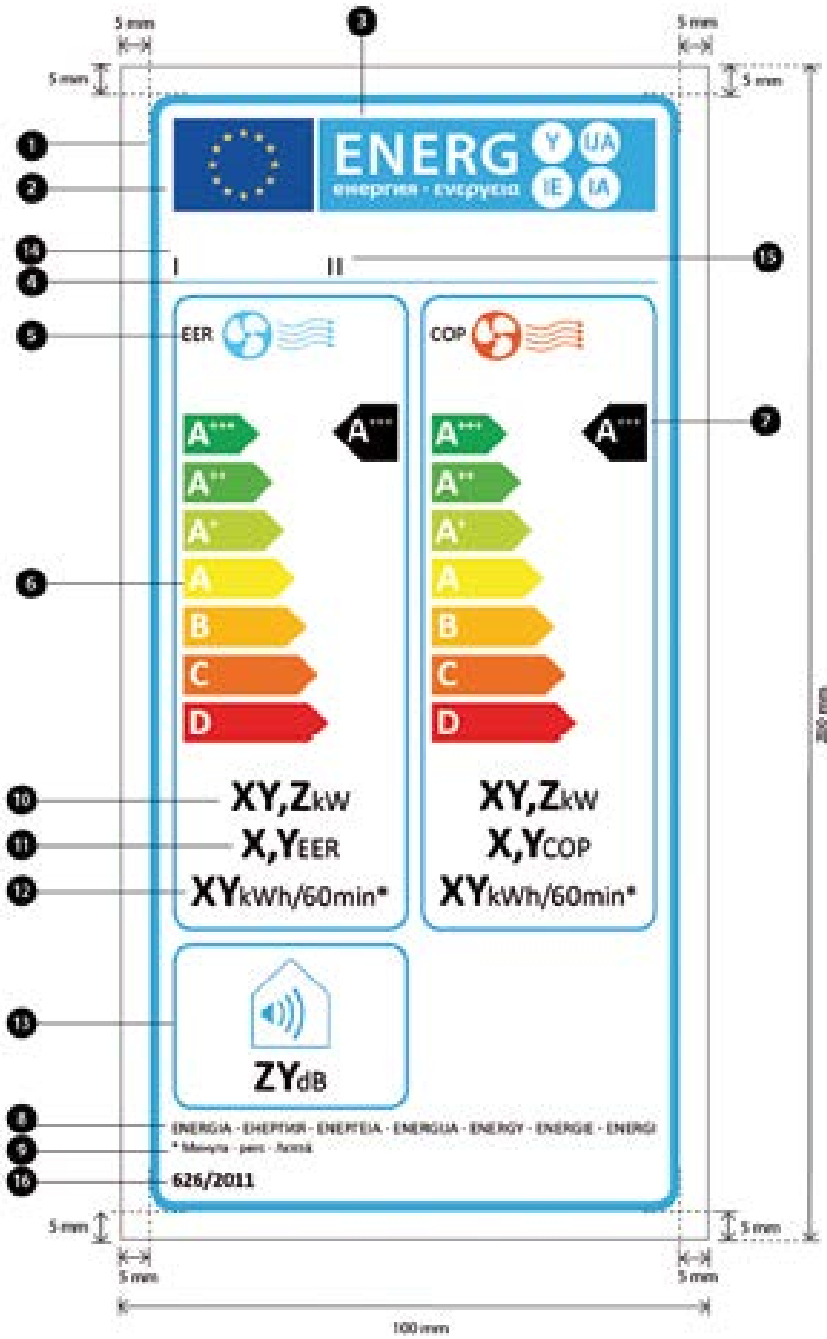
VI. EER_{rated} and COP_{rated} , rounded up to one decimal;

VII. hourly energy consumption in kWh per 60 minutes, for cooling and heating, rounded up to one decimal;

VIII. sound power level for indoor unit expressed in dB(A) re1 pW, rounded to the nearest integer. All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 5.2. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

5.2. Label Design



Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours are coded as CMYK – cyan, magenta, yellow and black, following this example: 00-70- X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 EU label border: stroke: 5 pt – colour: cyan 100% – round corners: 3,5 mm.

2 EU logo: Colours: X-80-00-00 and 00-00-X-00.

3 Energy label:

– **Colour:** X-00-00-00.

– **Pictogram** as depicted: EU logo + energy label: width: 82 mm, height: 16 mm.

4 Sub-logos border: 1 pt – colour: cyan 100% – length: 92,5 mm.

5 EER and COP indication:

– **Border:** 2 pt – colour: cyan 100% – round corners: 3,5 mm.

– **Text:** Calibri regular 10 pt, capitals, 100% black.

6 A-G scale:

– **Arrow:** height: 7 mm, gap: 1,3 mm – colours:

– Highest class: X-00-X-00,

– Second class: 70-00-X-00,

– Third class: 30-00-X-00,

– Fourth class: 00-00-X-00,

– Fifth class: 00-30-X-00,

– Sixth class: 00-70-X-00,

– Last class(es): 00-X-X-00.

– **Text:** Calibri bold 18 pt, capitals, white;
Calibri bold 7 pt, white.

7 Energy efficiency classes:

– **Arrow:** Width: 11 mm, height: 10 mm, 100% black;

– **Text:** Calibri bold 18 pt, capitals, white.

8 Energy:

– **Text:** Calibri regular 8 pt, capitals, 100% black.

9 'Minutes'-translation:

– **Text:** Calibri regular 7 pt, 100% black.

10 Rated capacity for cooling and heating in kW:

– **Text 'kW':** Calibri regular 14 pt, 100% black.

– **Value 'XY,Z'**: Calibri bold 22 pt, 100% black.

11 EER and COP values, rounded up to one decimal:

– **Text**: Calibri regular 14 pt, capitals, 100% black.

– **Value 'X,Y'**: Calibri bold 22 pt, 100% black.

12 Hourly energy consumption in kWh/60min:

– **Text 'kWh/60min*'**: Calibri regular 14 pt, 100% black.

– **Value 'XY'**: Calibri bold 22 pt, 100% black.

13 Noise emissions:

– **Border**: 2 pt – colour: cyan 100% – round corners: 3,5 mm.

– **Value**: Calibri bold 22 pt, 100% black.

– **Text**: Calibri regular 14 pt, 100% black.

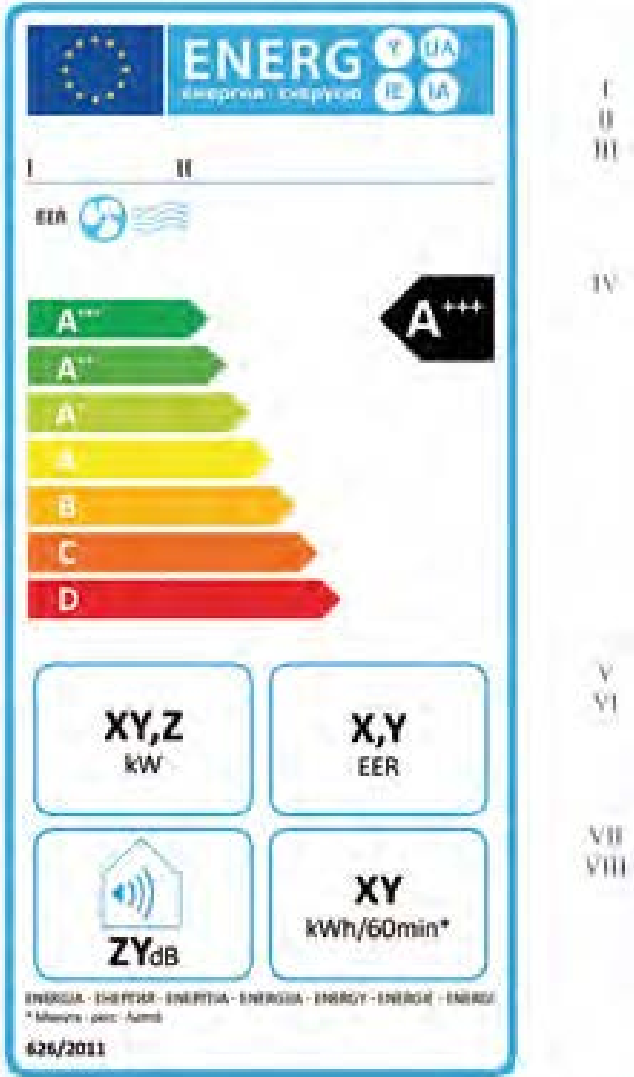
14 Supplier's name or trademark.

15 Supplier's model identifier:

The suppliers' name or trade mark and model identifier should fit in a space of 82 × 10,5 mm.

16 Reference period: Text: Calibri bold 10 pt.

5.3. Cooling-only single duct air conditioners classified in energy efficiency classes A+++ to D



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'EER', with a blue fan and air wave indication;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

V. rated capacity for cooling in kW, rounded up to one decimal;

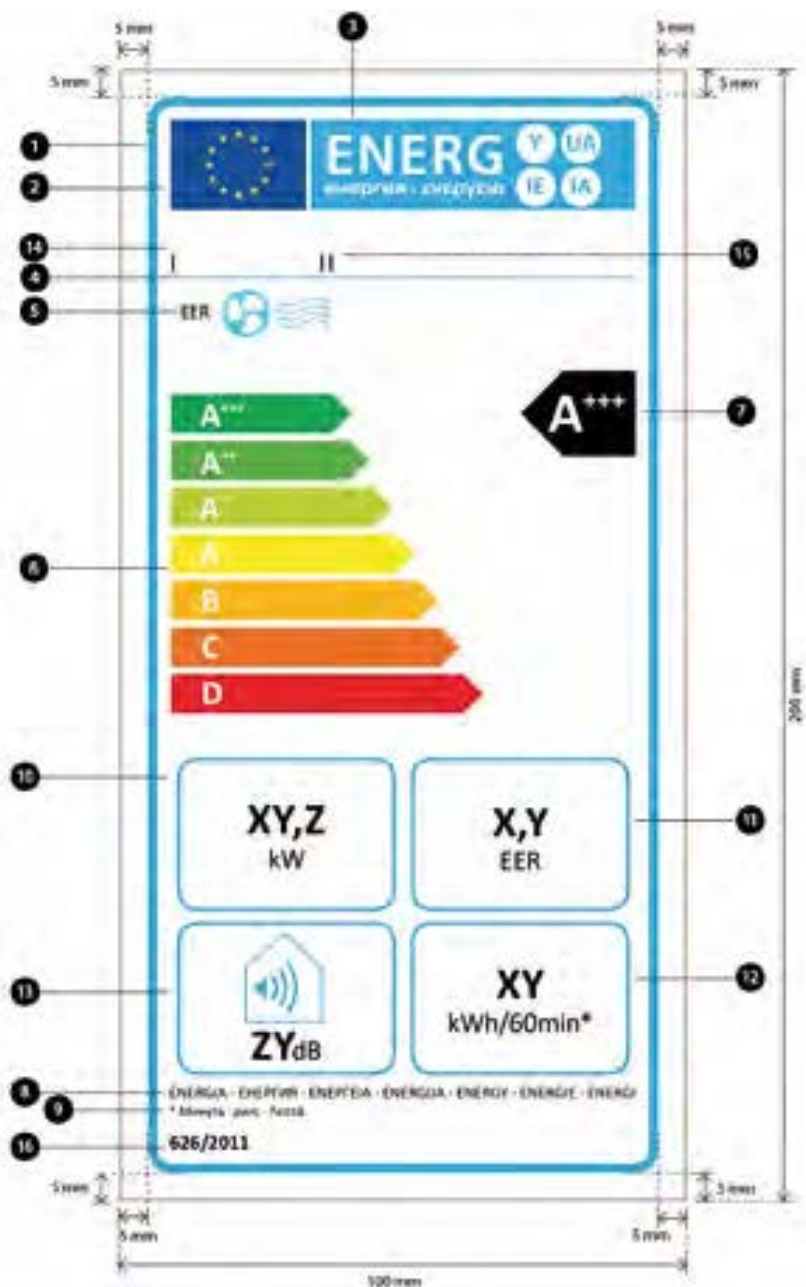
VI. EER rated , rounded up to one decimal;

VII. hourly energy consumption in kWh per 60 minutes, rounded up to one decimal;

VIII. sound power level for indoor unit expressed in dB(A) re1 pW, rounded to the nearest integer. All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 5.4. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

5.4. Label Design



Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours shall be CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 EU label border: stroke: 5 pt – colour: cyan 100% – round corners: 3,5 mm.

2 EU logo: Colours: X-80-00-00 and 00-00-X-00.

3 Energy label:

– **Colour:** X-00-00-00.

– **Pictogram** as depicted: EU logo + energy label: width: 82 mm, height: 16 mm.

4 Sub-logos border: 1 pt – colour: cyan 100% – length: 92,5 mm.

5 EER indication:

– **Text:** Calibri regular 10 pt, capitals, 100% black.

6 A-G scale:

– **Arrow:** height: 7 mm, gap: 1,3 mm – colours:

– Highest class: X-00-X-00,

– Second class: 70-00-X-00,

– Third class: 30-00-X-00,

– Fourth class: 00-00-X-00,

– Fifth class: 00-30-X-00,

– Sixth class: 00-70-X-00,

– Last class(es): 00-X-X-00.

– **Text:** Calibri bold 18 pt, capitals, white; Calibri bold 7 pt, white.

7 Energy efficiency class:

– **Arrow:** Width: 20 mm, height: 15 mm, 100% black;

– **Text:** Calibri bold 30 pt, capitals, white; Calibri bold 14 pt, capitals, white.

8 Energy:

– **Text:** Calibri regular 8 pt, capitals, 100% black.

9 ‘Minutes’-translation:

– **Text:** Calibri regular 7 pt, 100% black.

10 Rated capacity in kW:

– **Text ‘kW’:** Calibri regular 14 pt, 100% black.

– **Value ‘XY,Z’:** Calibri bold 22 pt, 100% black.

11 EER value, rounded up to one decimal:

– **Text ‘EER’:** Calibri regular 14 pt, capitals, 100% black.

– **Value ‘X,Y’:** Calibri bold 22 pt, 100% black.

12 Hourly energy consumption in kWh/60min:

– **Text ‘kWh/60min*’:** Calibri regular 14 pt, 100% black.

– **Value ‘XY’:** Calibri bold 22 pt, 100% black.

13 Noise emissions:

– **Border:** 2 pt – colour: 100% cyan – round corners: 3,5 mm.

– **Value:** Calibri bold 22 pt, 100% black.

– **Text:** Calibri regular 14 pt, 100% black.

14 Supplier’s name or trademark.

15 Supplier’s model identifier:

The suppliers’ name or trade mark and model identifier should fit in a space of 82 × 10,5 mm.

16 Reference period:

– **Text:** Calibri bold 10 pt.

5.5. Heating-only single duct air conditioners classified in energy efficiency classes A+++ to D



- I
- II
- III
- IV
- V
- VI
- VII
- VIII

(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'COP' with red fan and air wave indication;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

V. rated capacity for heating in kW, rounded up to one decimal;

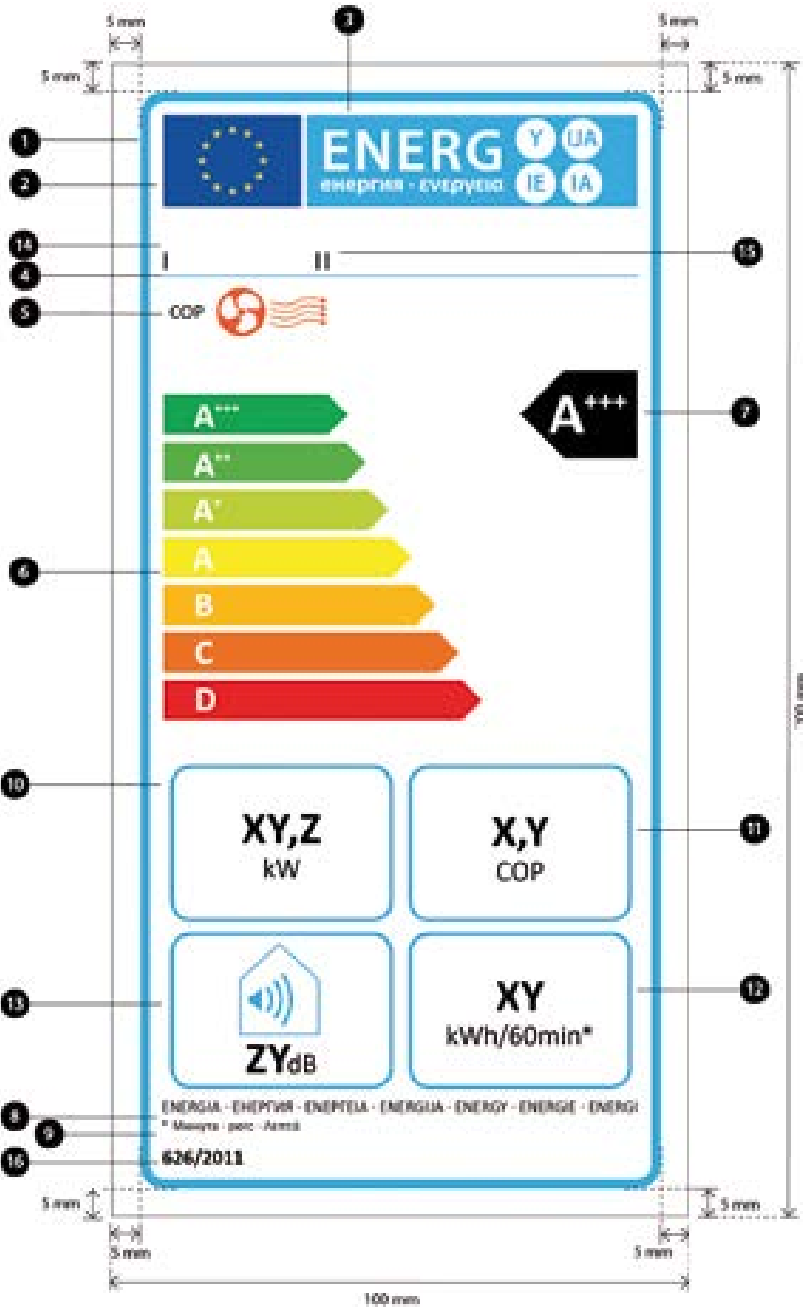
VI. COP_{rated}, rounded up to one decimal;

VII. hourly energy consumption in kWh per 60 minutes, rounded to the nearest integer;

VIII. sound power level for indoor unit expressed in dB(A) re1 pW, rounded to the nearest integer. All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 5.6. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

5.6. Label Design



Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours shall be CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 EU label border: stroke: 5 pt – colour: cyan 100% – round corners: 3,5 mm.

2 EU logo: Colours: X-80-00-00 and 00-00-X-00.

3 Energy label:

– **Colour:** X-00-00-00.

– **Pictogram** as depicted: EU logo + energy label: width: 82 mm, height: 16 mm.

4 Sub-logos border: 1 pt – colour: cyan 100% – length: 92,5 mm.

5 COP indication:

– **Text:** Calibri regular 10 pt, capitals, 100% black

6 A-G scale:

– **Arrow:** height: 7 mm, gap: 1,3 mm – colours:

– Highest class: X-00-X-00,

– Second class: 70-00-X-00,

– Third class: 30-00-X-00,

– Fourth class: 00-00-X-00,

– Fifth class: 00-30-X-00,

– Sixth class: 00-70-X-00,

– Last class(es): 00-X-X-00.

– **Text:** Calibri bold 18 pt, capitals, white; Calibri bold 7 pt, white.

7 Energy efficiency class:

– **Arrow:** Width: 20 mm, height: 15 mm, 100% black;

– **Text:** Calibri bold 30 pt, capitals, white;

Calibri bold 14 pt, capitals, white.

8 Energy:

– **Text:** Calibri regular 8 pt, capitals, 100% black.

9 'Minutes'-translation:

– **Text:** Calibri regular 7 pt, 100% black.

10 Rated capacity in kW:

– **Text 'kW':** Calibri regular 14 pt, 100% black.

– **Value 'XY,Z':** Calibri bold 22 pt, 100% black.

11 COP value, rounded up to one decimal:

- **Text 'COP'**: Calibri regular 14 pt, capitals, 100% black.
- **Value 'X,Y'**: Calibri bold 22 pt, 100% black.

12 Hourly energy consumption in kWh/60 minutes:

- **Text 'kWh/60min*'**: Calibri regular 14 pt, 100% black.
- **Value 'XY'**: Calibri bold 22 pt, 100% black.

13 Noise emissions:

- **Border**: 2 pt – colour: cyan 100% – round corners: 3,5 mm.
- **Value**: Calibri bold 22 pt, 100% black.
- **Text**: Calibri regular 14 pt, 100% black.

14 Supplier's name or trademark.**15 Supplier's model identifier:**

The suppliers' name or trade mark and model identifier should fit in a space of 82 × 10,5 mm.

16 Reference period: Text: Calibri bold 10 pt.

ANNEX IV

Product fiche

1. The information in the product fiche shall be given in the order specified below:

(a) supplier's name or trade mark;

(b) model identifier of the indoor air conditioner or of the indoor and outdoor elements of the air conditioner;

(c) without prejudice to any requirements under the Union eco-label scheme, where a model has been granted a 'European Union eco-label' under Regulation (EC) No 66/2010, a copy of the eco-label may be added;

(d) inside and outside sound power levels at standard rating conditions, on cooling and/or heating modes;

(e) the name and GWP of the refrigerant used and a standard text as follows:

'Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atmosphere. This appliance contains a refrigerant fluid with a GWP equal to [xxx]. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be [xxx] times higher than 1 kg of CO₂, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional.'

2. Additionally, the following information shall be included in the product fiche on air conditioners on the cooling mode, when efficiency is declared on the basis of the seasonal energy efficiency ratio (SEER):

(a) the SEER and the energy efficiency class of the model (model of a unit or of a combination of units) determined in accordance with definitions and test procedures in Annex I and VII for the cooling mode as well as with the class limits defined in Annex II;

(b) the indicative annual electricity consumption Q_{CE} in kWh/a during the cooling season, determined in accordance with definitions and test procedures in Annex I and VII, respectively. It shall be described as: 'Energy consumption "XYZ" kWh per year, based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.';

(c) the design load $P_{designc}$ in kW of the appliance in cooling mode determined in accordance with definitions and test procedures in Annex I and VII, respectively;

3. Additionally, the following notes define the information to be included in the fiche on the heating mode, when efficiency is declared on the basis of seasonal coefficient of performance (SCOP):

(a) the SCOP and the energy efficiency class of the model, or combination, in heating mode determined in accordance with definitions and test procedures in Annex I and VII, respectively, as well as with the class limits defined in Annex II;

(b) the indicative annual electricity consumption for an average heating season Q_{HE} in kWh/a, determined in accordance with definitions and test procedures in Annex I and VII, respectively. It shall be described as: 'Energy consumption "XYZ" kWh per year, based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.';

(c) other designated heating seasons for which the unit is declared fit for purpose, with options of warmer (optional) or colder (optional) seasons, as defined in Annex I;

- (d) the design load $P_{designh}$ in kW of the appliance in heating mode determined in accordance with definitions and test procedures in Annex I and VII;
- (e) the declared capacity and an indication of the back up heating capacity assumed for the calculation of SCOP at reference design conditions.
4. Additionally, the following notes define the information to be included in the fiche of air conditioners, when efficiency is declared on the basis of energy efficiency ratio (EER_{rated}) or coefficient of performance (COP_{rated}):
- (a) the energy efficiency class of the model, determined in accordance with definitions and test procedures in Annex I and VII, as well as the class limits defined in Annex II;
- (b) for double ducts, the indicative hourly electricity consumption Q_{DD} in kWh/60 minutes determined in accordance with definitions and test procedures in Annex I and VII. It shall be described as: 'Energy consumption "X,Y" kWh per 60 minutes, based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.';
- (c) for single ducts, the indicative hourly electricity consumption Q_{SD} in kWh/60 minutes determined in accordance with definitions and test procedures in Annex I and VII. It shall be described as: 'Energy consumption "X,Y" kWh per 60 minutes, based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.';
- (d) the cooling capacity P_{rated} in kW of the appliance determined in accordance with definitions and test procedures in Annex I and VII;
- (e) the heating capacity P_{rated} in kW of the appliance determined in accordance with definitions and test procedures in Annex I and VII.
5. One fiche may cover a number of appliance models supplied by the same supplier.
6. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in points 1-4 not already displayed on the label shall also be provided.

ANNEX V

Technical documentation

The technical documentation referred to in Article 3 (1)(c) shall include at least the following items:

- (a) the name and address of the supplier;
- (b) a general description of the appliance model, sufficient for it to be unequivocally and easily identified. Single ducts shall be referred to as 'local air conditioners';
- (c) where appropriate, the references for the harmonised standards applied;
- (d) where appropriate, the other calculation methods, measurement standards and specifications used;
- (e) identification and signature of the person empowered to bind the supplier;
- (f) where appropriate the technical parameters for measurements, established in accordance with Annex VII:

- (i) overall dimensions;
- (ii) specification of the type of the air conditioner;
- (iii) specification whether the appliance is designed for cooling or heating only or for both;
- (iv) the energy efficiency class of the model as defined in Annex II;

(v) The energy efficiency ratio (EER_{rated}) and coefficient of performance (COP_{rated}) for single and double duct air conditioners or seasonal energy efficiency ratio (SEER) and seasonal coefficient of performance (SCOP) for other air conditioners;

- (vi) The heating season for which the appliance is declared fit for purpose;
- (vii) Sound power levels expressed in dB(A) re1 pW, rounded to the nearest integer;
- (viii) the name and GWP of refrigerant used.

(g) the results of calculations performed in accordance with Annex VII.

Suppliers may include additional information at the end of the above list.

Where the information included in the technical documentation file for a particular air conditioner model has been obtained by calculation on the basis of design, or extrapolation from other equivalent appliances, or both, the documentation shall include details of such calculations or extrapolations, or both, and of tests undertaken by suppliers to verify the accuracy of the calculations undertaken. The information shall also include a list of all other equivalent appliance models where the information was obtained on the same basis.

ANNEX VI**Information to be provided in the cases where end-users
Cannot be expected to see the product displayed**

1. The information referred to in Article 4(b) shall be provided in the following order:
 - (a) The energy efficiency class of the model as defined in Annex II;
 - (b) for air conditioners other than single ducts and double ducts:
 - (i) the seasonal energy efficiency ratio (SEER) and/or seasonal coefficient of performance (SCOP);
 - (ii) the design load (in kW);
 - (iii) the annual electricity consumption;
 - (iv) the cooling and/or each heating ('Average, Colder, Warmer') season the appliance is declared fit for purpose;
 - (c) for single duct and double duct air conditioners:
 - (i) the energy efficiency ratio (EER) and/or coefficient of performance (COP);
 - (ii) the rated capacity (kW);
 - (iii) for double ducts, the hourly electricity consumption for cooling and/or heating;
 - (iv) for single ducts, the hourly electricity consumption for cooling and/or heating;
 - (d) Sound power levels expressed in dB(A) re1 pW, rounded to the nearest integer;
 - (e) Name and GWP of refrigerant used.
2. Where other information contained in the product information fiche is also provided, it shall be in the form and order specified in Annex IV.
3. The size and font in which all the information referred in this Annex is printed or shown shall be legible.

ANNEX VII

Measurements and calculations

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using harmonised standards the reference numbers of which have been published in the Official Journal of European Union, or other reliable, accurate and reproducible method, which takes into account the generally recognised state of the art methods, and whose results are deemed to be of low uncertainty.
2. The determination of the seasonal energy consumption and seasonal energy efficiency ratio (SEER) and seasonal coefficient of performance (SCOP) shall take into account:
 - (a) European seasonal conditions, as defined in Table 1 of this Annex;
 - (b) Reference design conditions, as defined in Table 3 of this Annex;
 - (c) Electric energy consumption for all relevant modes of operation, using time periods as defined in Table 4 of this Annex;
 - (d) Effects of the degradation of the energy efficiency caused by on/off cycling (if applicable) depending on the type of control of the cooling and/or heating capacity;
 - (e) Corrections on the seasonal coefficients of performance in conditions where the heating load can not be met by the heating capacity;
 - (f) The contribution of a back-up heater (if applicable) in the calculation of the seasonal efficiency of a unit in heating mode.
3. Where the information relating to a specific model, being a combination of indoor and outdoor unit(s), has been obtained by calculation on the basis of design, and/or extrapolation from other combinations, the documentation should include details of such calculations and/or extrapolations, and of tests undertaken to verify the accuracy of the calculations undertaken (including details of the mathematical model for calculating performance of such combinations, and of measurements taken to verify this model).
4. The energy efficiency ratio (EER_{rated}) and, when applicable, coefficient of performance (COP_{rated}) for double ducts and single ducts shall be established at the standard rating conditions as defined in Table 2 of this Annex.
5. The calculation of electricity consumption for cooling and/or heating shall take into account electric energy consumption of all relevant modes of operation, when appropriate, using time periods as defined in Table 4 of this Annex.

Table 1

Bin number (j), outdoor temperature (Tj) in °C and number of hours per bin (hj) for the cooling season and for heating seasons 'average', 'warmer' and 'colder'. 'db' = dry bulb temperature

Cooling season			Heating season				
					Average	Warmer	Colder
j	Tj	hj	j	Tj	hjA	hjW	hjC
#	°C	h	#	°C	h	h	h
db			db				
1	17	205	1 to 8	-30 to -23	0	0	0
2	18	227	9	-22	0	0	1
3	19	225	10	-21	0	0	6
4	20	225	11	-20	0	0	13
5	21	216	12	-19	0	0	17
6	22	215	13	-18	0	0	19
7	23	218	14	-17	0	0	26
8	24	197	15	-16	0	0	39
9	25	178	16	-15	0	0	41
10	26	158	17	-14	0	0	35
11	27	137	18	-13	0	0	52
12	28	109	19	-12	0	0	37
13	29	88	20	-11	0	0	41
14	30	63	21	-10	1	0	43
15	31	39	22	-9	25	0	54
16	32	31	23	-8	23	0	90
17	33	24	24	-7	24	0	125
18	34	17	25	-6	27	0	169
19	35	13	26	-5	68	0	195
20	36	9	27	-4	91	0	278
21	37	4	28	-3	98	0	306
22	38	3	29	-2	165	0	454
23	39	1	30	-1	173	0	385
24	40	0	31	0	240	0	490
			32	1	280	0	533
			33	2	320	3	380
			34	3	357	22	228
			35	4	356	63	261

			36	5	303	63	279
			37	6	330	175	229
			38	7	326	162	269
			39	8	348	259	233
			40	9	335	360	230
			41	10	315	428	243
			42	11	215	430	191
			43	12	169	503	146
			44	13	151	444	150
			45	14	105	384	97
			46	15	74	294	61
Total		2602			4910	3590	6446

Table 2

Standard rating conditions, temperatures in 'dry bulb' air temperature

('wet bulb' indicated in brackets)

Appliance	Function	Indoor air temperature (°C)	Outdoor air temperature (°C)
air conditioners, excluding single duct	cooling	27 (19)	35 (24)
	heating	20 (max. 15)	7 (6)
single duct	cooling	35 (24)	35 (24) (*)
	heating	20 (12)	20 (12) (*)

(*) In case of single ducts, the condensor (evaporator) when cooling (heating), is not supplied with outdoor air, but indoor air.

Table 3

Reference design conditions, temperatures in 'dry bulb' air temperature

('wet bulb' indicated in brackets)

Function / season	Indoor air temperature (°C)	Outdoor air temperature (°C)	Bivalent temperature (°C)	Operating limit temperature (°C)
	T_{in}	$T_{designc}/T_{designh}$	T_{biv}	T_{ol}
cooling	27 (19)	$T_{designc} = 35 (24)$		n.a.
heating / Average	20 (15)	$T_{designh} = -10 (-11)$	max. 2	max. -7
heating / Warmer		$T_{designh} = 2 (1)$	max. 7	max. 2
heating / Colder		$T_{designh} = -22 (-23)$	max. -7	max. -15

Table 4

Operational hours per type of appliance per functional mode to be used for calculation of electricity consumption

Type of appliance / functionality (if applicable)		Unit	Heating season	On mode	Thermostat off mode	Stand-by mode	Off mode	Crank-case heater mode
				cooling: H_{CE} heating: H_{HE}	H_{TO}	H_{SB}	H_{OFF}	H_{CK}
Air conditioners, except double ducts and single duct								
Cooling mode, if appliance offers cooling only		h/annum		350	221	2142	5088	7760
Cooling and heating modes, if appliance offers both modes	Cooling mode	h/annum		350	221	2142	0	2672
	Heating mode	h/annum	Average	1400	179	0	0	179
			Warmer	1400	755	0	0	755
	Colder		2100	131	0	0	131	
Heating mode, if appliance offers heating only one mode		h/annum	Average	1400	179	0	3672	3851
			Warmer	1400	755	0	4345	4476
			Colder	2100	131	0	2189	2944
Double duct air conditioner				cooling: H_{CE} heating: H_{HE}	H_{TO}	H_{SB}	H_{OFF}	H_{CK}
Cooling mode, if appliance offers cooling only one mode		h/60 min		1	n/a	n/a	n/a	n/a
Cooling and heating modes, if appliance offers both modes	Cooling mode	h/60 min		1	n/a	n/a	n/a	n/a
	Heating mode	h/60 min		1	n/a	n/a	n/a	n/a
Heating mode, if appliance offers heating only		h/60 min		1	n/a	n/a	n/a	n/a
Single duct air conditioner				cooling: H_{CE} heating: H_{HE}				
Cooling mode		h/60 min		1	n/a	n/a	n/a	n/a
Heating mode		h/60 min		1	n/a	n/a	n/a	n/a

ANNEX VIII⁶

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Contracting Parties shall apply the following procedure:

- (1) The Contracting Party authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the Contracting Party authorities shall select three additional units of the same model for testing.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 1.
- (6) If the result referred to in point 5 is not achieved, the model shall be considered not to comply with this Delegated Regulation.
- (7) The Contracting Party authorities shall provide all relevant information to the authorities of the other Contracting Parties and to the Secretariat without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The Contracting Party authorities shall use the measurement and calculation methods set out in Annex VII.

⁶ Annex VIII is replaced in accordance with Article 5 and Annex V of Delegated Regulation (EU) 2017/254, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 1 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 1
Verification tolerances

Parameters	Verification tolerances
Seasonal energy efficiency ratio (SEER)	The determined value shall not be lower than the declared value by more than 8 %.
Seasonal coefficient of performance (SCOP)	The determined value shall not be lower than the declared value by more than 8 %.
Power consumption in off mode	The determined value shall not exceed the declared value by more than 10 %.
Power consumption in standby mode	The determined value shall not exceed the declared value by more than 10 %.
Energy efficiency ratio (EER _{rated})	The determined value shall not be lower than the declared value by more than 10 %.
Coefficient of performance (COP _{rated})	The determined value shall not be lower than the declared value by more than 10 %.
Sound power level	The determined value shall not exceed the declared value by more than 2 dB(A).'

ANNEX IX⁷

Information to be provided in the case of sale, hire or hire-purchase through the internet

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

(a) “display mechanism” means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) “nested display” means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) “tactile screen” means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) “alternative text” means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(1)(h) shall be shown on the display mechanism in proximity to the price of the product in accordance with the timetable set out in Article 3(4) to 3(6). The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

(b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

⁷ Annex IX is added in accordance with Article 5(3) of Delegated Regulation (EU) 518/2014, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3(1) (i) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

DELEGATED REGULATION (EU) 1062/2010 of 28 September 2010 supplementing Directive 2010/30/EU with regard to energy labelling of televisions

Incorporated and adapted by Ministerial Council Decision 2011/03/MC-EnC of 6 October 2011 on adopting certain Delegated Regulations on energy related products, and amended by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products.

*The adaptations made by Ministerial Council Decisions 2011/03/MC-EnC and 2018/03/MC-EnC are highlighted in **bold and blue**.*

Article 1

Subject matter

This Regulation establishes requirements for the labelling and the provision of supplementary product information for televisions.

Article 2

Definitions

In addition to the definitions laid down in Article 2 of Directive 2010/30/EU, the following definitions shall apply:

- (1) "television" means a television set or a television monitor;
- (2) "television set" means a product designed primarily for the display and reception of audiovisual signals which is placed on the market under one model or system designation, and which consists of:
 - (a) a display;
 - (b) one or more tuner(s)/receiver(s) and optional additional functions for data storage and/or display such as digital versatile disc (DVD), hard disk drive (HDD) or videocassette recorder (VCR), either in a single unit combined with the display, or in one or more separate units;
- (3) "television monitor" means a product designed to display on an integrated screen a video signal from a variety of sources, including television broadcast signals, which optionally controls and reproduces audio signals from an external source device, which is linked through standardised video signal paths including cinch (component, composite), SCART, HDMI, and future wireless standards (but excluding non-standardised video signal paths like DVI and SDI), but cannot receive and process broadcast signals;
- (4) "on-mode" means the condition where the television is connected to the mains power source and produces sound and picture;
- (5) "home-mode" means the television setting which is recommended by the manufacturer for normal home use;
- (6) "standby-mode(s)" means a condition where the equipment is connected to the mains power source,

depends on energy input from the mains power source to function properly and offers the following functions only, which may persist for an indefinite time:

- (a) reactivation function, or reactivation function and only an indication of enabled reactivation function; and/or
 - (b) information or status display;
- (7) "off-mode" means a condition in which the equipment is connected to the mains power source and is not providing any function; the following shall also be considered as off-mode:
- (a) conditions providing only an indication of off-mode condition;
 - (b) conditions providing only functionalities intended to ensure electromagnetic compatibility pursuant to Directive 2004/108/EC of the European Parliament and of the Council;
- (8) "reactivation function" means a function facilitating the activation of other modes, including on-mode, by remote switch including remote control, internal sensor, timer to a condition providing additional functions, including on-mode;
- (9) "information or status display" means a continuous function providing information or indicating the status of the equipment on a display, including clocks;
- (10) "forced menu" means a set of television settings, pre-defined by the manufacturer, of which the user of the television must select a particular setting upon initial start-up of the television;
- (11) "peak luminance ratio" means the ratio of the peak luminance of the home-mode condition or of the on-mode condition of the television as set by the supplier, as applicable, and the peak luminance of the brightest on-mode condition;
- (12) "point of sale" means a location where televisions are displayed or offered for sale, hire or hire purchase;
- (13) "end-user" means a consumer buying or expected to buy a television.

Article 3

Responsibilities of suppliers

1. Suppliers shall ensure that:

- (a) each television is supplied with a printed label in the format and containing information as set out in Annex V;
- (b) a product fiche, as set out in Annex III, is made available;
- (c) the technical documentation, as set out in Annex IV, is made available on request to the authorities of **Contracting Parties** and to the **Secretariat**;
- (d) any advertisement for a specific television model contains the energy efficiency class, if the advertisement discloses energy-related or price information;
- (e) any technical promotional material concerning a specific television model, which describes its specific technical parameters, includes the energy efficiency class of that model;
- (f) an electronic label in the format and containing the information set out in Annex V is made available to dealers for each television model placed on the market from 1 January 2020 with**

a new model identifier. It may also be made available to dealers for other television models; (g) an electronic product fiche as set out in Annex III is made available to dealers for each television model placed on the market from 1 January 2020 with a new model identifier. It may also be made available to dealers for other television models.¹

2. The energy efficiency classes shall be based on the Energy Efficiency Index calculated in accordance with Annex II.

3. The format of the label set out in Annex V shall be applied according to the following timetable:

(a) for televisions placed on the market from 30 November 2011, labels for televisions with energy efficiency classes:

(i) A, B, C, D, E, F, G shall be in accordance with point 1 of Annex V or, where suppliers deem appropriate, with point 2 of that Annex;

(ii) A⁺ shall be in accordance with point 2 of Annex V;

(iii) A⁺⁺ shall be in accordance with point 3 of Annex V;

(iv) A⁺⁺⁺ shall be in accordance with point 4 of Annex V;

(b) for televisions placed on the market from 1 January 2014 with energy efficiency classes A⁺, A, B, C, D, E, F, labels shall be in accordance with point 2 of Annex V or, where suppliers deem appropriate, with point 3 of that Annex;

(c) for televisions placed on the market from 1 January 2017 with energy efficiency classes A⁺⁺, A⁺, A, B, C, D, E, labels shall be in accordance with point 3 of Annex V or, where suppliers deem appropriate, with point 4 of that Annex;

(d) for televisions placed on the market from 1 January 2020 with energy efficiency classes A⁺⁺⁺, A⁺⁺, A⁺, A, B, C, D labels shall be in accordance with point 4 of Annex V.

Article 4

Responsibilities of dealers

Dealers shall ensure that:

(a) each television, at the point of sale, bears the label provided by suppliers in accordance with Article 3(1) on the front of the television, in such a way as to be clearly visible;

(b) televisions offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the television displayed, are marketed with the information to be provided by the suppliers in accordance with Annex VI. Where the offer is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with Article 3(1)(f) and 3(1)(g) the provisions in Annex IX shall apply instead;²

(c) any advertisement for a specific television model contains the energy efficiency class, if the advertisement discloses energy-related or price information;

¹ Article 3, points (f) and (g) are added in accordance with Article 4(1) of Delegated Regulation (EU) 518/2014, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

² Article 4, point (b) is replaced in accordance with Article 4(2) of Delegated Regulation (EU) 518/2014, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

(d) any technical promotional material concerning a specific television model, which describes its specific technical parameters, includes the energy efficiency class of that model.

Article 5

Measurement methods

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement procedures, which take into account the recognised state-of-the-art measurement methods, as set out in Annex VII.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure laid down in Annex VIII when assessing the conformity of the declared energy efficiency class.

Article 7

Revision

<...>

Article 8

Transitional provision

Article 3(1)(d) and (e) and Article 4(b), (c) and (d) shall not apply to printed advertisement and printed technical promotional material published before **30 April 2013**.

Article 9

Entry into force

This Decision [2011/03/MC-EnC] enters into force upon its adoption <...>³

It shall apply from **31 December 2012**. However, Article 3(1)(d) and (e) and Article 4(b), (c) and (d) shall apply from **30 April 2013**.

This Regulation shall be binding in its entirety and directly applicable in all **Contracting Parties**.

³ The text displayed here corresponds to Article 3(1) of Decision 2011/03/MC-EnC.

Article 2(5) of Decision 2011/03/MC-EnC

The Secretariat shall monitor and review the implementation of [this] Delegated Regulation <...> and shall submit a progress report to the Permanent High Level Group by 1 October 2013.

ANNEX I
Energy efficiency class

The energy efficiency class of a television shall be determined on the basis of its Energy Efficiency Index (EEI) as set out in Table 1. The Energy Efficiency Index of a television shall be determined in accordance with point 1 of Annex II.

Table 1

Energy efficiency class of a television

Energy Efficiency Class	Energy Efficiency Index
A⁺⁺⁺ (most efficient)	EEI < 0.10
A⁺⁺	$0.10 \leq \text{EEI} < 0.16$
A⁺	$0.16 \leq \text{EEI} < 0.23$
A	$0.23 \leq \text{EEI} < 0.30$
B	$0.30 \leq \text{EEI} < 0.42$
C	$0.42 \leq \text{EEI} < 0.60$
D	$0.60 \leq \text{EEI} < 0.80$
E	$0.80 \leq \text{EEI} < 0.90$
F	$0.90 \leq \text{EEI} < 1.00$
G (least efficient)	$1.00 \geq \text{EEI}$

ANNEX II

Method for calculating the energy efficiency index and the Annual on-mode energy consumption

1. The Energy Efficiency Index (EEI) is calculated as $EEI = P/P_{ref}(A)$, where:

- $P_{ref}(A) = P_{basic} + A \times 4.3224 \text{ Watts/dm}^2$,
- $P_{basic} = 20 \text{ Watts}$ for television sets with one tuner/receiver and no hard disc,
- $P_{basic} = 24 \text{ Watts}$ for television sets with hard disc(s),
- $P_{basic} = 24 \text{ Watts}$ for television sets with two or more tuners/receivers,
- $P_{basic} = 28 \text{ Watts}$ for television sets with hard disc(s) and two or more tuners/receivers,
- $P_{basic} = 15 \text{ Watts}$ for television monitors,
- A is the visible screen area expressed in dm^2 ,
- P is the on-mode power consumption of the television in Watts measured in accordance with Annex VII, rounded to one decimal place.

2. The annual on-mode energy consumption E in kWh is calculated as $E = 1,46 \times P$.

3. Televisions with automatic brightness control

For the purposes of calculating the Energy Efficiency Index and the annual on-mode energy consumption referred to in points 1 and 2, the on-mode power consumption as established according to the procedure set out in Annex VII is reduced by 5% if the following conditions are fulfilled when the television is placed on the market:

- (a) the luminance of the television in the home-mode or the on-mode condition as set by the supplier, is automatically reduced between an ambient light intensity of at least 20 lux and 0 lux;
- (b) the automatic brightness control is activated in the home-mode condition or the on-mode condition of the television as set by the supplier.

ANNEX III

Product fiche

1. The information in the product fiche of the television shall be provided in the following order, and shall be included in the product brochure or other literature provided with the product:

(a) supplier's name or trade mark;

(b) supplier's model identifier; where model identifier means the code, usually alphanumeric, which distinguishes a specific television model from other models of the same trade mark or supplier's name;

(c) the energy efficiency class of the model in accordance with Annex I, Table 1; where the television has been awarded an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council,

this information may be included;

(d) the visible screen diagonal in centimetres and in inches;

(e) the on-mode power consumption measured in accordance with the procedure set out in Annex VII;

(f) the annual energy consumption calculated in accordance with Annex II in kWh per year, rounded to the first integer; it shall be described as: 'Energy consumption XYZ kWh per year, based on the power consumption of the television operating 4 hours per day for 365 days. The actual energy consumption will depend on how the television is used.';

(g) the standby and off-mode power consumption or both measured in accordance with the procedure set out in Annex VII;

(h) the screen resolution in physical horizontal and vertical pixel count.

2. One fiche may cover a number of television models supplied by the same supplier.

3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1 not already displayed on the label must also be provided.

ANNEX IV

Technical documentation

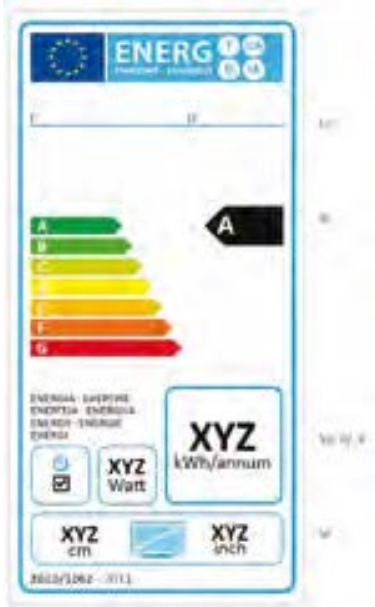
The technical documentation referred to in Article 3(1)(c) shall include:

- (a) the name and address of the supplier;
- (b) a general description of the television model, sufficient for it to be unequivocally and easily identified;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) identification and signature of the person empowered to bind the supplier;
- (f) test parameters for measurements:
 - (i) ambient temperature;
 - (ii) test voltage in V and frequency in Hz;
 - (iii) total harmonic distortion of the electricity supply system;
 - (iv) the input terminal for the audio and video test signals;
 - (v) information and documentation on the instrumentation, set-up and circuits used for electrical testing;
- (g) on-mode parameters:
 - (i) the power consumption data in Watts rounded to the first decimal place for power measurements up to 100 Watts, and to the first integer for power measurements above 100 Watts;
 - (ii) the characteristics of the dynamic broadcast-content video signal representing typical broadcast TV content;
 - (iii) the sequence of steps for achieving a stable condition with respect to power consumption;
 - (iv) for televisions with a forced menu, the ratio of the peak luminance of the home-mode and the peak luminance of the brightest on-mode condition provided by the television, expressed as a percentage;
 - (v) for television monitors, a description of the relevant characteristics of the tuner used for measurements;
- (h) for each standby or off-mode:
 - (i) the power consumption data in Watts rounded to the second decimal place;
 - (ii) the measurement method used;
 - (iii) description of how the mode was selected or programmed;
 - (iv) sequence of events to reach the mode where the television automatically changes modes.

ANNEX V

Label

1. LABEL 1



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier, where 'model identifier' means the code, usually alphanumeric, which distinguishes a specific television model from other models of the same trade mark or supplier's name;

III. the energy efficiency class of the television, determined in accordance with Annex I. The head of the arrow containing the energy efficiency class of the television shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

IV. on-mode power consumption in Watts, rounded to the first integer;

V. annual on-mode energy consumption calculated in accordance with point 2 of Annex II, in kWh, rounded to the first integer;

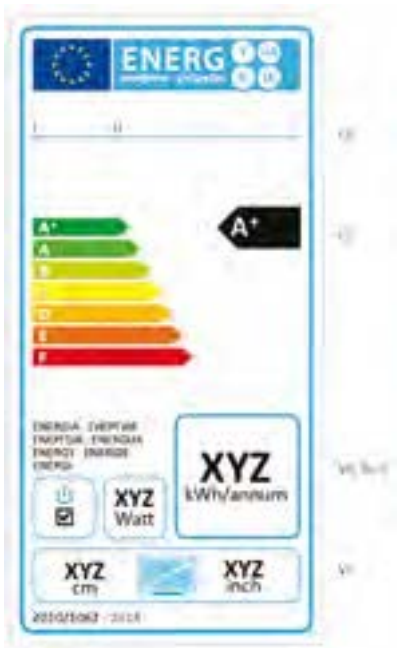
VI. visible screen diagonal in inches and centimetres.

For televisions with an easily visible switch, which puts the television in a condition with power consumption not exceeding 0,01 Watts when operated to the off position, the symbol defined in point 8 of point 5 may be added.

Where a model has been granted a 'European Union Ecolabel' under Regulation (EC) No 66/2010, a copy of the EU Ecolabel may be added.

(b) The design aspects of the label shall be in accordance with point 5.

2. LABEL 2



- (a) The information listed in point 1(a) shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 5.

3. LABEL 3



- (a) The information listed in point 1(a) shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 5.

4. LABEL 4

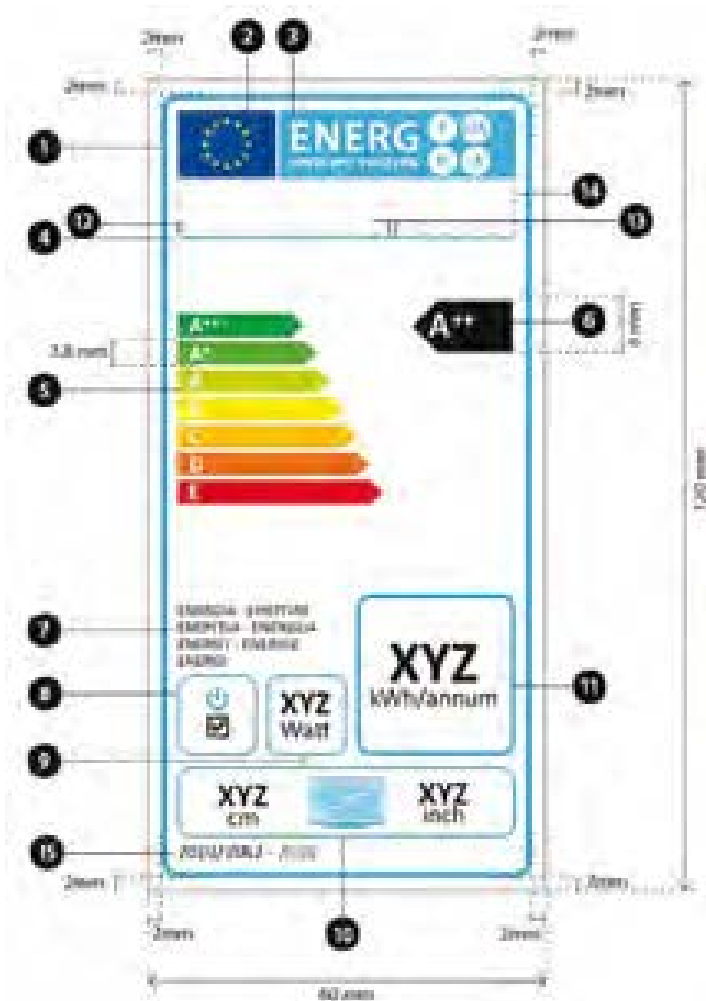


- (a) The information listed in point 1(a) shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 5.

5. THE DESIGN OF THE LABEL SHALL BE THE FOLLOWING:

Whereby:

- The label shall be at least 60 mm wide and 120 mm high. Where the label is printed in a larger format, its content must nevertheless remain proportionate to the specifications above.
- For televisions with screen area above 29 dm² the background shall be white. For televisions with screen area of 29 dm² or below the background shall be white or transparent.
- Colours are CMYK - cyan, magenta, yellow and black and are given following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.
- The label shall fulfil all of the following requirements (numbers refer to the figure above):



- 1 **Border stroke:** 3 pt - colour: Cyan 100% - round corners: 3,5 mm.
- 2 **EU logo - colours:** X-80-00-00 and 00-00-X-00.
- 3 **Label logos: colour:** X-00-00-00
Pictogram as depicted; EU logo and label logo (combined): width: 51 mm, height: 9 mm.
- 4 **Sub-logos border:** 1 pt - colour: Cyan 100 % - length: 51 mm.
- 5 **A-G scale**
 - **Arrow:** height: 3,8 mm, gap: 0,75 mm - colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00.
- 6 – **Text:** Calibri bold 10 pt, capitals, white; '+' symbols: Calibri bold 7 pt, capitals, white.
6. **Energy efficiency class**
 - **Arrow:** width: 26 mm, height: 8 mm, 100 % black.
 - **Text:** Calibri bold 15 pt, capitals, white; '+' symbols: Calibri bold 10 pt, capitals, white.
- 7 **Energy - Text:** Calibri regular 7pt, capitals, 100 % black.
- 8 **Switch logo:**
 - **Pictogram** as depicted, Border: 1 pt - colour: Cyan 100 % - round corners: 3,5 mm.
9. **Text related to on-mode power consumption:**
 - **Border:** 1 pt - colour: Cyan 100 % - round corners: 3,5 mm.
 - **Value:** Calibri bold 14 pt, 100 % black.
 - **Second line:** Calibri regular 11 pt, 100 % black.
- 10 **Television screen diagonal size:**
 - **Pictogram** as depicted
 - **Border:** 1 pt - colour: Cyan 100 % - round corners: 3,5 mm.
 - **Value:** Calibri bold 14 pt, 100 % black. Calibri regular 11pt, 100 % black.
- 11 **Text related to annual energy consumption:**
 - **Border:** 2 pt - colour: Cyan 100 % - round corners: 3,5 mm.
 - **Value:** Calibri bold 25 pt, 100 % black.
 - **Second line:** Calibri regular 11 pt, 100 % black.
- 12 **Supplier's name or trade mark**
- 13 **Supplier's model identifier**

14 The supplier's name or trade mark and model information should fit in a space of 51 × 8 mm.

15 Reference period:

- **Text:** Calibri bold 8 pt
- **Text:** Calibri light 9 pt.

ANNEX VI

Information to be provided in the cases where end-users cannot be expected to see the product displayed

1. The information referred to in Article 4(b) shall be provided in the following order:

- (a) the energy efficiency class of the model as defined in Annex I;
- (b) the on-mode power consumption as referred to in point 1 of Annex II;
- (c) the annual power consumption in accordance with point 2 of Annex II;
- (d) the visible screen diagonal.

2. Where other information contained in the product information fiche is also provided, it shall be in the form and order specified in Annex III.

3. The size and font in which all the information referred in this Annex is printed or shown shall be legible.

ANNEX VII

Measurements

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements shall be made using a reliable, accurate and reproducible measurement procedure that takes into account the generally recognised state-of-the-art measurement methods, including methods set out in documents the reference numbers of which have been published for that purpose in the Official Journal of the European Union.

2. Measurements of on-mode power consumption referred to in point 1 of Annex II

(a) General conditions:

(i) measurements shall be made at an ambient temperature of 23 °C +/- 5 °C;

(ii) measurements shall be made using a dynamic broadcast-content video signal representing typical broadcast TV content; The measurement shall be the average power consumed over ten consecutive minutes;

(iii) measurements shall be made after the television has been in the off-mode for a minimum of 1 hour immediately followed by a minimum of 1 hour in the on-mode and shall be completed before a maximum of 3 hours in on-mode. The relevant video signal shall be displayed during the entire on-mode duration. For televisions that are known to stabilise within 1 hour, these durations may be reduced if the resulting measurement can be shown to be within 2 % of the results that would otherwise be achieved using the durations described here;

(iv) <...>⁴

(v) measurements shall be made with the Automatic Brightness Control function, if such a function exists, made inactive. If the Automatic Brightness Control function exists and cannot be made inactive, then the measurements shall be performed with the light entering directly into the ambient light sensor at a level of 300 lux, or more.

(b) Conditions for measuring the on-mode power consumption of televisions:

(i) television sets without forced menu: The power consumption shall be measured in the on-mode condition of the television as delivered by the manufacturer, that is, the brightness controls of the television shall be in the position adjusted by the manufacturer for the end user;

(ii) television sets with forced menu: The power consumption shall be measured in the 'home- mode' condition;

(iii) television monitors without forced menu: The television monitor shall be connected to an appropriate tuner. The power consumption shall be measured in the on-mode condition of the television as delivered by the manufacturer, that is, the brightness controls of the television

monitor shall be in the position adjusted by the manufacturer for the end user. The power consumption of the tuner is not relevant for the measurements of on-mode power consumption of the television monitor;

⁴ Deleted in accordance with Article 4 and Annex IV of Delegated Regulation (EU) 2017/254, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

(iv) television monitors with forced menu: The television monitor shall be connected to an appropriate tuner. The power consumption shall be measured in the 'home-mode' condition.

3. <...>⁵

4. Measurements of peak luminance ratio referred to in Table 2 of Annex VIII⁶

(a) Measurements of peak luminance shall be made with a luminance meter, detecting that portion of the screen exhibiting a full (100 %) white image, which is part of a 'full screen test' test pattern that does not exceed the average picture level (APL) point where any power limiting occurs in the display luminance drive system.

(b) Measurements of luminance ratio shall be made without disturbing the luminance meter's detection point on the display whilst switching between the home-mode condition or the on-mode condition of the television as set by the supplier, as applicable, and the brightest on-mode condition.

⁵ Deleted in accordance with Article 4 and Annex IV of Delegated Regulation (EU) 2017/254, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

⁶ Title is replaced in accordance with Article 4 and Annex IV of Delegated Regulation (EU) 2017/254, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

Annex VIII⁷

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Contracting Parties shall apply the following procedure:

- (1) The Contracting Party authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 2.
- (3) If the result referred to in points 2(a) or (b) are not achieved, the model shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the Contracting Party authorities shall select three additional units of the same model for testing.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 2.
- (6) If the result referred to in point 5 is not achieved, the model shall be considered not to comply with this Delegated Regulation.
- (7) The Contracting Party authorities shall provide all relevant information to the authorities of the other Contracting Parties and to the Secretariat without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The Contracting Party authorities shall use the measurement and calculation methods set out in Annex VII.

⁷ Annex VIII is replaced in accordance with Article 4 and Annex IV of Delegated Regulation (EU) 2017/254, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 2 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 2
Verification tolerances

Parameters	Verification tolerances
On-mode power consumption	The determined value shall not exceed the declared value by more than 7 %.
Off-mode/standby power consumption	The determined value shall not exceed the declared value by more than 0,10 W.
Peak luminance ratio	The determined value shall not be lower than 60 % of the peak luminance of the brightest on-mode condition provided by the television.

ANNEX IX⁸**Information to be provided in the case of sale, hire or hire-purchase through the internet**

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

(a) “display mechanism” means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) “nested display” means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) “tactile screen” means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) “alternative text” means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(1)(f) shall be shown on the display mechanism in proximity to the price of the product in accordance with the timetable set out in Article 3(3). The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 5 of Annex V. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

(b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

⁸ Annex IX is added in accordance with Article 4(3) of Delegated Regulation (EU) 518/2014, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3(1)

(g) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

DELEGATED REGULATION (EU) 1061/2010 of 28 September 2010 supplementing Directive 2010/30/EU with regard to energy labelling of household washing machines

Incorporated and adapted by Ministerial Council Decision 2011/03/MC-EnC of 6 October 2011 on adopting certain Delegated Regulations on energy related products, and amended by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products.

*The adaptations made by Ministerial Council Decisions 2011/03/MC-EnC and 2018/03/MC-EnC are highlighted in **bold and blue**.*

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the labelling of and the provision of supplementary product information on electric mains-operated household washing machines and electric mains-operated household washing machines that can also be powered by batteries, including those sold for non-household use and built-in household washing machines.
2. This Regulation shall not apply to household combined washer-driers.

Article 2

Definitions

In addition to the definitions laid down in Article 2 of Directive 2010/30/EU, the following definitions shall apply for the purposes of this Regulation:

- (1) "household washing machine" means an automatic washing machine which cleans and rinses textiles using water, which also has a spin extraction function and which is designed to be used principally for non-professional purposes;
- (2) "built-in household washing machine" means a household washing machine intended to be installed in a cabinet, a prepared recess in a wall or a similar location, requiring furniture finishing;
- (3) "automatic washing machine" means a washing machine where the load is fully treated by the machine without the need for user intervention at any point during the programme;
- (4) "household combined washer-drier" means a household washing machine which includes both a spin extraction function and also a means for drying the textiles, usually by heating and tumbling;
- (5) "programme" means a series of operations that are pre-defined and which are declared by the supplier as suitable for washing certain types of textile;
- (6) "cycle" means a complete washing, rinsing and spinning process, as defined for the selected programme;
- (7) "programme time" means the time that elapses from the initiation of the programme until the completion of the programme excluding any end-user programmed delay;

(8) “rated capacity” means the maximum mass in kilograms stated by the supplier at 0.5 kg intervals of dry textiles of a particular type, which can be treated in a household washing machine on the selected programme, when loaded in accordance with the supplier’s instructions;

(9) “partial load” means half of the rated capacity of a household washing machine for a given programme;

(10) “remaining moisture content” means the amount of moisture contained in the load at the end of the spinning phase;

(11) “off-mode” means a condition where the household washing machine is switched off using appliance controls or switches accessible to and intended for operation by the end-user during normal use to attain the lowest power consumption that may persist for an indefinite time while the household washing machine is connected to a power source and used in accordance with the supplier’s instructions; where there is no control or switch accessible to the end-user, “off-mode” means the condition reached after the household washing machine reverts to a steady-state power consumption on its own;

(12) “left-on mode” means the lowest power consumption mode that may persist for an indefinite time after completion of the programme without any further intervention by the end-user besides unloading of the household washing machine;

(13) “equivalent household washing machine” means a model of household washing machine placed on the market with the same rated capacity, technical and performance characteristics, energy and water consumption and airborne acoustical noise emissions during washing and spinning as another model of household washing machine placed on the market under a different commercial code number by the same supplier;

(14) “end-user” means a consumer buying or expected to buy a household washing machine;

(15) “point of sale” means a location where household washing machines are displayed or offered for sale, hire or hire-purchase.

Article 3

Responsibilities of suppliers

Suppliers shall ensure that:

(a) each household washing machine, is supplied with a printed label in the format and containing information as set out in Annex I;

(b) a product fiche, as set out in Annex II, is made available;

(c) the technical documentation as set out in Annex III is made available on request to the authorities of the **Contracting Parties** and to the **Secretariat**;

(d) any advertisement for a specific model of household washing machine contains the energy efficiency class, if the advertisement discloses energy-related or price information;

(e) any technical promotional material concerning a specific model of household washing machine which describes its specific technical parameters includes the energy efficiency class of that model;

(f) an electronic label in the format and containing the information set out in Annex I is made available to dealers for each household washing machine model placed on the market from 1 January 2020 with a new model identifier. It may also be made available to dealers for other

household washing machine models;

(g) an electronic product fiche as set out in Annex II is made available to dealers for each household washing machine model placed on the market from 1 January 2020 with a new model identifier. It may also be made available to dealers for other household washing machine models.¹

Article 4**Responsibilities of dealers**

Dealers shall ensure that:

(a) each household washing machine, at the point of sale, bears the label provided by suppliers in accordance with Article 3(a) on the outside of the front or top of the household washing machine, in such a way as to be clearly visible;

(b) household washing machines offered for sale, hire or hire-purchase where the end-user cannot be expected to see the product displayed are marketed with the information to be provided by suppliers in accordance with Annex IV. Where the offer is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with Article 3(f) and 3(g) the provisions of Annex VIII shall apply instead;²

(c) any advertisement for a specific model of household washing machine contains a reference to its energy efficiency class, if the advertisement discloses energy-related or price information;

(d) any technical promotional material concerning a specific model of household washing machine, which describes its specific technical parameters includes a reference to the energy efficiency class of that model.

Article 5**Measurement methods**

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement procedures, which take into account the recognised state-of-the-art measurement methods.

Article 6**Verification procedure for market surveillance purposes**

Contracting Parties shall apply the procedure laid down in Annex V when assessing the conformity of the declared energy efficiency class, the annual energy consumption, annual water consumption, spin-drying efficiency class, power consumption in off-mode and left-on mode, duration of the left-on mode, remaining moisture content, spin speed and airborne acoustical noise emissions.

¹ Article 3, points (f) and (g) are added in accordance with Article 3(1) of Delegated Regulation (EU) 518/2014, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

² Article 4, point (b) is replaced in accordance with Article 3(2) of Delegated Regulation (EU) 518/2014, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

Article 7

Revision

<...>

Article 8

Repeal

<...>

Article 9

Transitional provisions

1. Articles 3(d), (e), 4(b), (c) and (d) shall not apply to printed advertisements and printed technical promotional material published before **30 April 2013**.
2. Household washing machines placed on the market before 31 **December 2012** shall comply with the provisions set out in Directive 95/12/EC.
3. <...>

Article 10

Entry into force and application

1. This Decision [2011/03/MC-EnC] enters into force upon its adoption <...>³

2. It shall apply from **31 December 2012**. However, Articles 3(d), (e), 4(b), (c) and (d) shall apply from **30 April 2013**.

This Regulation shall be binding in its entirety and directly applicable in all Contracting Parties.

Article 2(5) of Decision 2011/03/MC-EnC

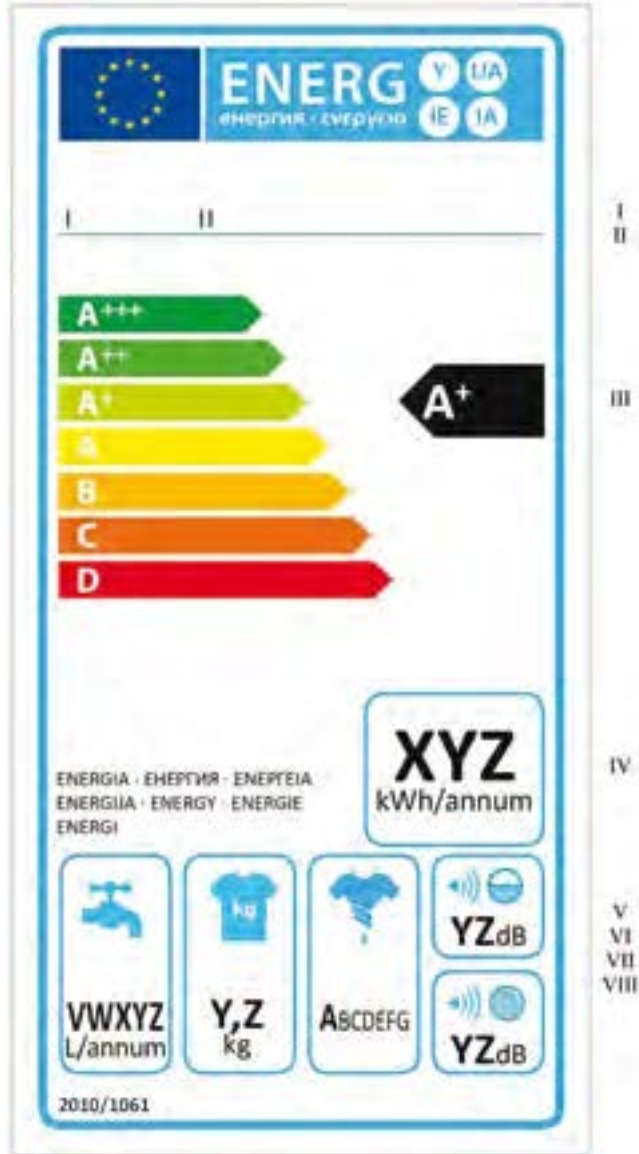
The Secretariat shall monitor and review the implementation of [this] Delegated Regulation <...> and shall submit a progress report to the Permanent High Level Group by 1 October 2013.

³ The text displayed here corresponds to Article 3(1) of Decision 2011/03/MC-EnC.

ANNEX I

Label

1. LABEL



(1) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier, meaning the code, usually alphanumeric, which distinguishes a specific household washing machine model from other models with the same trade mark or supplier's name;

III. the energy efficiency class determined in accordance with point 1 of Annex VI; the head of the arrow containing the energy efficiency class of the household washing machine shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

IV. weighted annual energy consumption (AE_c) in kWh per year, rounded up to the nearest integer in accordance with Annex VII;

V. weighted annual water consumption (AW_c), in litres per year, rounded up to the nearest integer in accordance with Annex VII;

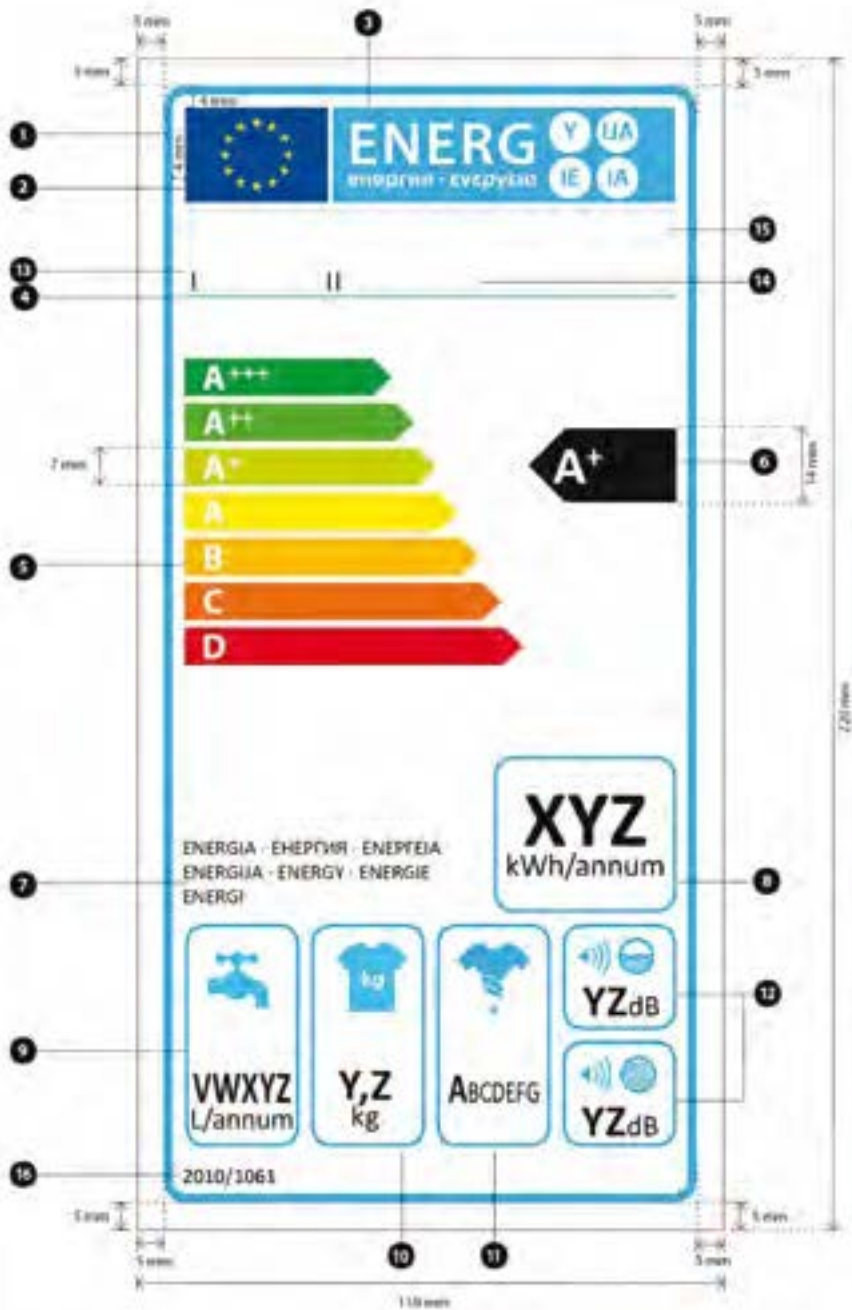
VI. rated capacity, in kg, for the standard 60 °C cotton programme at full load or the standard 40 °C cotton programme at full load, whichever is the lower;

VII. the spin-drying efficiency class as set out in point 2 of Annex VI;

VIII. airborne acoustical noise emissions, during the washing and spinning phases, for the standard 60 °C cotton programme at full load, expressed in dB(A) re 1 pW, rounded to the nearest integer.

(2) The design of the label shall be in accordance with point 2. By way of derogation, where a model has been awarded an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU Ecolabel may be added.

2. LABEL DESIGN



Whereby:

(a) The label must be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content must nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours shall be CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 Border stroke: 5 pt - colour: Cyan 100% - round corners: 3,5 mm.

2 EU logo - colours: X-80-00-00 and 00-00-X-00.

3 Energy logo: colour: X-00-00-00.

Pictogram as depicted: EU logo and energy logo (combined): width: 92 mm, height: 17 mm.

4 Sub-logos border: 1 pt - colour: Cyan 100% - length: 92,5 mm.

5 A-G scale

– **Arrow:** height: 7 mm, gap: 0,75 mm - colours:

– Highest class: X-00-X-00,

– Second class: 70-00-X-00,

– Third class: 30-00-X-00,

– Fourth class: 00-00-X-00,

– Fifth class: 00-30-X-00,

– Sixth class: 00-70-X-00,

– Last class: 00-X-X-00.

– **Text:** Calibri bold 18 pt, capitals and white; ‘+’ symbols: Calibri bold 12 pt, capitals, white, aligned on a single row.

6 Energy efficiency class

– **Arrow:** width: 26 mm, height: 14 mm, 100% black.

– **Text:** Calibri bold 29 pt, capitals and white; ‘+’ symbols: Calibri bold 18 pt, capitals, white, aligned on a single row.

7 Energy: text: Calibri regular 11 pt, capitals, 100% black.

8 Weighted annual energy consumption

– **Border:** 2 pt - colour: Cyan 100% - round corners: 3,5 mm.

– **Value:** Calibri bold 42 pt, 100% black; and Calibri regular 17 pt, 100% black.

9 Weighted annual water consumption

– **Pictogram** as depicted

– **Border:** 2 pt - colour: Cyan 100% - round corners: 3,5 mm.

– **Value:** Calibri bold 24 pt, 100% black; and Calibri regular 16 pt, 100% black.

10 Rated capacity

- **Pictogram** as depicted
- **Border:** 2 pt - colour: Cyan 100% - round corners: 3,5 mm.
- **Value:** Calibri bold 24 pt, 100% black; and Calibri regular 16 pt, 100% black.

11 Spin-drying efficiency class

- **Pictogram** as depicted
- **Border:** 2 pt - colour: Cyan 100% - round corners: 3,5 mm.
- **Value:** Calibri regular 16 pt, horizontal scale 75%, 100% black and Calibri Bold 22 pt, horizontal scale 75%, 100% black.

12 Airborne acoustical noise emissions

- **Pictograms** as depicted
- **Border:** 2 pt - colour: Cyan 100% - round corners: 3,5 mm.
- **Value:** Calibri bold 24 pt, 100% black; and Calibri regular 16 pt, 100% black.

13 Supplier's name or trade mark

14 Supplier's model identifier

15 The supplier's name or trademark and model identifier should fit in a space of 92 × 15 mm.

16 Numbering of the Regulation: Calibri bold 12 pt, 100% black.

ANNEX II

Product fiche

1. The information in the product fiche of the household washing machine shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

(a) supplier's name or trade mark;

(b) supplier's model identifier, meaning the code, usually alphanumeric, which distinguishes a specific household washing machine model from other models with the same trade mark or supplier's name;

(c) rated capacity in kg of cotton for the standard 60 °C cotton programme at full load or the 40 °C cotton programme at full load, whichever is the lower;

(d) energy efficiency class in accordance with point 1 of Annex VI;

(e) where the household washing machine has been awarded an 'EU Ecolabel award' under Regulation (EC) No 66/2010, this information may be included;

(f) weighted annual energy consumption (AE_w) in kWh per year, rounded up to the nearest integer; it shall be described as: 'Energy consumption "X" kWh per year, based on 220 standard washing cycles for cotton programmes at 60 °C and 40 °C at full and partial load, and the consumption of the low-power modes. Actual energy consumption will depend on how the appliance is used.';

(g) the energy consumption ($E_{L,60}$, $E_{L,60\frac{1}{2}}$, $E_{L,40\frac{1}{2}}$) of the standard 60 °C cotton programme at full load and partial load and of the standard 40 °C cotton programme at partial load;

(h) weighted power consumption of the off-mode and of the left-on mode;

(i) weighted annual water consumption (AW_w) in litres per year, rounded up to the nearest integer; it shall be described as: 'Water consumption "X" litres per year, based on 220 standard washing cycles for cotton programmes at 60 °C and 40 °C at full and partial load. Actual water consumption will depend on how the appliance is used.';

(j) spin-drying efficiency class determined in accordance with point 2 of Annex VI, expressed as 'spin-drying efficiency class "X" on a scale from G (least efficient) to A (most efficient)'; this may be expressed by other means provided it is clear that the scale is from G (least efficient) to A (most efficient);

(k) maximum spin speed attained for the standard 60 °C cotton programme at full load or the standard 40 °C cotton programme at partial load, whichever is the lower, and remaining moisture content attained for the standard 60 °C cotton programme at full load or the standard 40 °C cotton programme at partial load, whichever is the greater;

(l) indication that the 'standard 60 °C cotton programme' and the 'standard 40 °C cotton programme' are the standard washing programmes to which the information in the label and the fiche relates, that these programmes are suitable to clean normally soiled cotton laundry and that they are the most efficient programmes in terms of combined energy and water consumption;

(m) the programme time of the 'standard 60 °C cotton programme' at full and partial load and of the 'standard 40 °C cotton programme' at partial load in minutes and rounded to the nearest minute;

(n) the duration of the left-on mode (TI) if the household washing machine is equipped with a power management system;

- (o) airborne acoustical noise emissions expressed in dB(A) re 1 pW and rounded to the nearest integer during the washing and spinning phases for the standard 60 °C cotton programme at full load;
 - (p) if the household washing machine is intended to be built-in, an indication to this effect.
2. One fiche may cover a number of household washing machine models supplied by the same supplier.
 3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1 not already displayed on the label shall also be provided.

ANNEX III

Technical documentation

1. The technical documentation referred to in Article 3(c) shall include:

- (a) the name and address of the supplier;
- (b) a general description of the washing machine model, sufficient for it to be unequivocally and easily identified;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) identification and signature of the person empowered to bind the supplier;
- (f) an indication stating whether the household washing machine model releases or not silver ions during the washing cycle as follows: 'This product releases/does not release silver ions during the washing cycle.';
- (g) technical parameters for measurements as follows:
 - (i) energy consumption;
 - (ii) programme time;
 - (iii) water consumption;
 - (iv) power consumption in 'off-mode';
 - (v) power consumption in 'left-on mode';
 - (vi) 'left-on mode' duration;
 - (vii) remaining moisture content;
 - (viii) airborne acoustical noise emissions;
 - (ix) maximum spin speed;
- (h) the results of calculations performed in accordance with Annex VII.

2. Where the information included in the technical documentation file for a particular household washing machine model has been obtained by calculation on the basis of design, or extrapolation from other equivalent household washing machines or both, the documentation shall include details of such calculations or extrapolations, or both, and of tests undertaken by suppliers to verify the accuracy of the calculations undertaken. The information shall also include a list of all other equivalent household washing machine models where the information was obtained on the same basis.

ANNEX IV

Information to be provided in the cases where end-users cannot be expected to see the product displayed

1. The information referred to in Article 4(b) shall be provided in the following order:
 - (a) the rated capacity in kg of cotton, for the standard 60 °C cotton programme at full load or the standard 40 °C cotton programme at full load, whichever is the lower;
 - (b) the energy efficiency class as defined in point 1 of Annex VI;
 - (c) the weighted annual energy consumption in kWh per year, rounded up to the nearest integer and calculated in accordance with point 1(c) of Annex VII;
 - (d) the weighted annual water consumption in litres per year, rounded up to the nearest integer and calculated in accordance with point 2(a) of Annex VII;
 - (e) the spin-drying efficiency class in accordance with point 2 of Annex VI;
 - (f) the maximum spin speed attained for the standard 60 °C cotton programme at full load or the standard 40 °C cotton programme at partial load, whichever is the lower, and the remaining moisture content attained for the standard 60 °C cotton programme at full load or the standard 40 °C cotton programme at partial load, whichever is the greater;
 - (g) airborne acoustical noise emissions during the washing and spinning phases, for the standard 60 °C cotton programme at full load, expressed in dB(A) re 1 pW and rounded to the nearest integer;
 - (h) if the household washing machine is produced in order to be built-in, an indication to this effect.
2. Where other information contained in the product fiche is also provided, it shall be in the form and order specified in Annex II.
3. The size and font, in which all the information referred in this Annex is printed or shown, shall be legible.

ANNEX V⁴

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Contracting Parties shall apply the following procedure:

- (1) The Contracting Party authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent household washing machine models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the Contracting Party authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 1.
- (6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent household washing machine models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (7) The Contracting Party authorities shall provide all relevant information to the authorities of the other Contracting Parties and to the Secretariat without delay after a decision being

⁴ Annex V is replaced in accordance with Article 3 and Annex III of Delegated Regulation (EU) 2017/254, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

taken on the non-compliance of the model according to points 3 and 6.

Contracting Parties' authorities shall use measurement procedures which take into account the generally recognised, state-of-the-art, reliable, accurate and reproducible measurement methods, including methods set out in documents whose reference numbers have been published for that purpose in the a dedicated section of the website of the Energy Community. The Contracting Party authorities shall use the measurement and calculation methods set out in Annex VII.

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 1 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 1
Verification tolerances

Parameters	Verification tolerances
Annual energy consumption (AE_c)	The determined value shall not exceed the declared value of AE_c by more than 10 %.
Energy consumption (E_t)	The determined value shall not exceed the declared value of E_t by more than 10 %. Where three additional units need to be selected, the arithmetic mean of the determined values of these three units shall not exceed the declared value of E_t by more than 6 %.
Programme time (T_t)	The determined value shall not exceed the declared values T_t by more than 10 %.
Water consumption (W_t)	The determined value shall not exceed the declared value of W_t by more than 10 %.
Remaining moisture content (D)	The determined value shall not exceed the declared value of D by more than 10 %.
Spin speed	The determined value shall not be less than the declared value by more than 10 %.
Power consumption in off mode and left-on mode (P_o and P_l)	Determined values of power consumption P_o and P_l of more than 1,00 W shall not exceed the declared values of P_o and P_l by more than 10 %. The determined values of power consumption P_o and P_l of less than or equal to 1,00 W shall not exceed the declared values of P_o and P_l by more than 0,10 W.
Duration of the left-on mode (T_l)	The determined value shall not exceed the declared value of T_l by more than 10 %.
Airborne acoustical noise emissions	The determined value shall meet the declared value.

ANNEX VI

Energy efficiency classes and spin-drying efficiency classes

1. ENERGY EFFICIENCY CLASSES

The energy efficiency class of a household washing machine shall be determined on the basis of its Energy Efficiency Index (EEI) as set out in Table 1.

The Energy Efficiency Index (EEI) of a household washing machine shall be determined in accordance with point 1 of Annex VII.

Table 1
Energy efficiency classes

Energy Efficiency Class	Energy Efficiency Index
A⁺⁺⁺ (most efficient)	$EEI < 46$
A⁺⁺	$46 \leq EEI < 52$
A⁺	$52 \leq EEI < 59$
A	$59 \leq EEI < 68$
B	$68 \leq EEI < 77$
C	$77 \leq EEI < 87$
D (least efficient)	$EEI \geq 87$

2. SPIN-DRYING EFFICIENCY CLASSES

The spin-drying efficiency class of a household washing machine shall be determined on the basis of the remaining moisture content (D) as set out in Table 2.

The remaining moisture content (D) of a household washing machine shall be determined in accordance with point 3 of Annex VII.

Table 2
Spin-drying efficiency classes

Spin-drying Efficiency Class	Remaining moisture content (%)
A (most efficient)	$D < 45$
B	$45 \leq D < 54$
C	$54 \leq D < 63$
D	$63 \leq D < 72$
E	$72 \leq D < 81$
F	$81 \leq D < 90$
G (least efficient)	$D \geq 90$

ANNEX VII

Method for calculating the energy efficiency index, annual water consumption and remaining moisture content

1. CALCULATION OF THE ENERGY EFFICIENCY INDEX

For the calculation of the Energy Efficiency Index (EEI) of a household washing machine model, the weighted annual energy consumption of a household washing machine for the standard 60 °C cotton programme at full and partial load and for the standard 40 °C cotton programme at partial load is compared to its standard annual energy consumption.

(a) The Energy Efficiency Index (EEI) is calculated as follows and rounded to one decimal place:

$$EEI = \frac{AE_C}{SAE_C} \times 100$$

where:

AE_C = annual energy consumption of the household washing machine;

SAE_C = standard annual energy consumption of the household washing machine.

(b) The standard annual energy consumption (SAE_C) is calculated in kWh/year as follows and rounded to two decimal places:

$$SAE_C = 47,0 \times C + 51,7$$

where:

C = rated capacity of the household washing machine for the standard 60 °C cotton programme at full load or the standard 40 °C cotton programme at full load, whichever is the lower.

(c) The weighted annual energy consumption (AE_C) is calculated in kWh/year as follows and is rounded to two decimal places:

$$AE_C = E_t \times 220 + \frac{P_o \times \frac{525\,600 - (T_t \times 200)}{2} + P_l \times \frac{525\,600 - (T_t \times 200)}{2}}{6 \times 1\,000}$$

where:

E_t = weighted energy consumption;

P_o = weighted power in 'off-mode';

P_l = weighted power in the 'left-on mode';

T_t = weighted programme time;

220 = total number of standard washing cycles per year.

(ii) Where the household washing machine is equipped with a power management system, with the household washing machine reverting automatically to 'off-mode' after the end of the programme, the weighted annual energy consumption (AE_C) is calculated taking into consideration the effective duration of 'left-on mode', according to the following formula:

$$AE_C = E_t \times 220 + \frac{\{(P_l \times T_t \times 220) + P_o \times [525\,600 - (T_t \times 200) - (T_t \times 200)]\}}{6 \times 1\,000}$$

where:

T_l = time in 'left-on mode'.

(d) The weighted energy consumption (E_t) is calculated in kWh as follows and rounded to three decimal places:

$$E_t = \left[3 \times E_{t,60} + 2 \times E_{t,60^{1/2}} + 2 \times E_{t,40^{1/2}} \right] / 7$$

where:

$E_{t,60}$ = energy consumption of the standard 60 °C cotton programme at full load;

$E_{t,60^{1/2}}$ = energy consumption of the standard 60 °C cotton programme at partial load;

$E_{t,40^{1/2}}$ = energy consumption of the standard 40 °C cotton programme at partial load.

(e) The weighted power in 'off-mode' (P_o) is calculated in W as follows and rounded to two decimal places:

$$P_o = \left(3 \times P_{o,60} + 2 \times P_{o,60^{1/2}} + 2 \times P_{o,40^{1/2}} \right) / 7$$

where:

$P_{o,60}$ = power in 'off-mode' of the standard 60 °C cotton programme at full load;

$P_{o,60^{1/2}}$ = power in 'off-mode' of the standard 60 °C cotton programme at partial load;

$P_{o,40^{1/2}}$ = power in 'off-mode' of the standard 40 °C cotton programme at partial load.

(f) The weighted power in the 'left-on mode' (P_l) is calculated in W as follows and rounded to two decimal places:

$$P_l = \left(3 \times P_{l,60} + 2 \times P_{l,60^{1/2}} + 2 \times P_{l,40^{1/2}} \right) / 7$$

where:

$P_{l,60}$ = power in 'left-on mode' of the standard 60 °C cotton programme at full load;

$P_{l,60^{1/2}}$ = power in 'left-on mode' of the standard 60 °C cotton programme at partial load;

$P_{l,40^{1/2}}$ = power in 'left-on mode' of the standard 40 °C cotton programme at partial load.

(g) The weighted programme time (T_t) is calculated in minutes as follows and rounded to the nearest minute:

$$T_t = \left(3 \times T_{t,60} + 2 \times T_{t,60^{1/2}} + 2 \times T_{t,40^{1/2}} \right) / 7$$

where:

$T_{t,60}$ = programme time of the standard 60 °C cotton programme at full load;

$T_{t,60^{1/2}}$ = programme time of the standard 60 °C cotton programme at partial load;

$T_{t,40^{1/2}}$ = programme time of the standard 40 °C cotton programme at partial load.

(h) The weighted time in 'left-on mode' (T_l) is calculated in minutes as follows and rounded to the nearest minute:

$$T_l = \left(3 \times T_{l,60} + 2 \times T_{l,60^{1/2}} + 2 \times T_{l,40^{1/2}} \right) / 7$$

where:

$T_{l,60}$ = time in 'left-on mode' of the standard 60 °C cotton programme at full load;

$T_{l,60^{1/2}}$ = time in 'left-on mode' of the standard 60 °C cotton programme at partial load;

$T_{l,40^{1/2}}$ = time in 'left-on mode' of the standard 40 °C cotton programme at partial load.

2. CALCULATION OF THE WEIGHTED ANNUAL WATER CONSUMPTION

(a) The weighted annual water consumption (AW_c) of a household washing machine is calculated in litres as follows and rounded up to the integer:

$$AW_c = W_t + 220$$

where:

W_t = weighted water consumption;

220 = total number of standard washing cycles per year.

(b) The weighted water consumption (W_t) is calculated in litres as follows and rounded up to the integer

$$W_t = \left(3 \times W_{t,60} + 2 \times W_{t,60^{1/2}} + 2 \times W_{t,40^{1/2}} \right) / 7$$

where:

$W_{t,60}$ = water consumption of the standard 60 °C cotton programme at full load;

$W_{t,60^{1/2}}$ = water consumption of the standard 60 °C cotton programme at partial load;

$W_{t,40^{1/2}}$ = water consumption of the standard 40 °C cotton programme at partial load.

3. CALCULATION OF THE WEIGHTED REMAINING MOISTURE CONTENT

The weighted remaining moisture content (D) of a household washing machine is calculated in percentage as follows and rounded to the nearest whole percent:

$$D = \left(3 \times D_{60} + 2 \times D_{60^{1/2}} + 2 \times D_{40^{1/2}} \right) / 7$$

where:

D_{60} is the residual moisture content for the standard 60 °C cotton programme at full load, in percentage and rounded to the nearest whole per cent;

$D_{60^{1/2}}$ is the residual moisture content for the standard 60 °C cotton programme at partial load, in percentage and rounded to the nearest whole per cent;

$D_{40^{1/2}}$ is the residual moisture content for the standard 40 °C cotton programme at partial load, in percentage and rounded to the nearest whole per cent.

ANNEX VIII⁵

Information to be provided in the case of sale, hire or hire-purchase through the internet

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

- (a) “display mechanism” means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
- (b) “nested display” means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;
- (c) “tactile screen” means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
- (d) “alternative text” means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(f) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 2 of Annex I. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

- (a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;
- (b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and
- (c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

- (a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;
- (b) the image shall link to the label;
- (c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;
- (d) the label shall be displayed by pop up, new tab, new page or inset screen display;

⁵ Annex VIII is added in accordance with Article 3(3) of Delegated Regulation (EU) 518/2014, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3(g) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

DELEGATED REGULATION (EU) 1060/2010 of 28 September 2010 supplementing Directive 2010/30/EU with regard to energy labelling of household refrigerating appliances

Incorporated and adapted by Ministerial Council Decision 2011/03/MC-EnC of 6 October 2011 on adopting certain Delegated Regulations on energy related products, and amended by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products.

*The adaptations made by Ministerial Council Decisions 2011/03/MC-EnC and 2018/03/MC-EnC are highlighted in **bold and blue**.*

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the labelling of and the provision of supplementary product information on electric mains-operated household refrigerating appliances with a storage volume between 10 and 1500 litres.

2. This Regulation shall apply to electric mains-operated household refrigerating appliances, including those sold for non-household use or for the refrigeration of items other than foodstuffs and including built-in appliances.

It shall also apply to electric mains-operated household refrigerating appliances that can be battery-operated.

3. This Regulation shall not apply to:

(a) refrigerating appliances that are primarily powered by energy sources other than electricity, such as liquefied petroleum gas (LPG), kerosene and bio-diesel fuels;

(b) battery-operated refrigerating appliances that can be connected to the mains through an AC/DC converter, purchased separately;

(c) custom-made refrigerating appliances, made on a one-off basis and not equivalent to other refrigerating appliance models;

(d) refrigerating appliances for tertiary sector application where the removal of refrigerated foodstuffs is electronically sensed and that information can be automatically transmitted through a network connection to a remote control system for accounting;

(e) appliances where the primary function is not the storage of foodstuffs through refrigeration, such as stand-alone ice-makers or chilled drinks dispensers.

Article 2

Definitions

In addition to the definitions laid down in Article 2 of Directive 2010/30/EU, the following definitions shall apply:

- (1) "foodstuffs" means food, ingredients, beverages including wine, and other items primarily intended for consumption which require refrigeration at specified temperatures;
- (2) "household refrigerating appliance" means an insulated cabinet, with one or more compartments, intended for refrigerating or freezing foodstuffs, or for the storage of refrigerated or frozen foodstuffs for non-professional purposes, cooled by one or more energy-consuming processes, including appliances sold as building kits to be assembled by the end-user;
- (3) "built-in appliance" means a fixed refrigerating appliance intended to be installed in a cabinet, in a prepared recess in a wall or similar location, and requiring furniture finishing;
- (4) "refrigerator" means a refrigerating appliance intended for the preservation of foodstuffs with at least one compartment suitable for the storage of fresh food and/or beverages, including wine;
- (5) "compression-type refrigerating appliance" means a refrigerating appliance in which refrigeration is effected by means of a motor-driven compressor;
- (6) "absorption-type refrigerating appliance" means a refrigerating appliance in which refrigeration is effected by an absorption process using heat as the energy source;
- (7) "refrigerator-freezer" means a refrigerating appliance with at least one fresh-food storage compartment and at least one compartment suitable for the freezing of fresh food and the storage of frozen foodstuffs under three-star storage conditions (the food-freezer compartment);
- (8) "frozen-food storage cabinet" means a refrigerating appliance with one or more compartments suitable for the storage of frozen foodstuffs;
- (9) "food freezer" means a refrigerating appliance with one or more compartments suitable for freezing foodstuffs with temperatures ranging from ambient temperature down to $-18\text{ }^{\circ}\text{C}$, and which is also suitable for the storage of frozen foodstuffs under three-star storage conditions; a food freezer may also include two-star sections and/or compartments within the compartment or cabinet;
- (10) "wine storage appliance" means a refrigerating appliance that has no compartment other than one or more wine storage compartments;
- (11) "multi-use appliance" means a refrigerating appliance that has no compartment other than one or more multi-use compartments;
- (12) "equivalent household refrigerating appliance" means a household refrigerating appliance model placed on the market with the same gross and storage volumes, same technical, efficiency and performance characteristics, and same compartment types as another household refrigerating appliance model placed on the market under a different commercial code number by the same manufacturer;
- (13) "end-user" means a consumer buying or expected to buy a household refrigerating appliance;
- (14) "point of sale" means a location where household refrigerating appliances are displayed or offered for sale, hire or hire-purchase.

The definitions set out in Annex I shall also apply.

Article 3

Responsibilities of suppliers

Suppliers shall ensure that:

- (a) each household refrigerating appliance is supplied with a printed label in the format and containing information as set out in Annex II;
- (b) a product fiche, as set out in Annex III, is made available;
- (c) the technical documentation as set out in Annex IV is made available on request to the authorities of **Contracting Parties** and to the **Secretariat**;
- (d) any advertisement for a specific model of household refrigerating appliance contains the energy efficiency class, if the advertisement discloses energy-related or price information;
- (e) any technical promotional material concerning a specific model of household refrigerating appliance which describes its specific technical parameters includes the energy efficiency class of that model;
- (f) an electronic label in the format and containing the information set out in Annex II is made available to dealers for each household refrigerating appliance model placed on the market from 1 January 2020 with a new model identifier. It may also be made available to dealers for other household refrigerating appliance models;**
- (g) an electronic product fiche as set out in Annex III is made available to dealers for each household refrigerating appliance model placed on the market from 1 January 2020 with a new model identifier. It may also be made available to dealers for other household refrigerating appliance models.¹**

Article 4

Responsibilities of dealers

Dealers shall ensure that:

- (a) each household refrigerating appliance at the point of sale bears the label provided by suppliers in accordance with Article 3(a) on the outside of the front or top of the appliance, in such a way as to be clearly visible;
- (b) household refrigerating appliances offered for sale, hire or hire purchase where the end-user cannot be expected to see the product displayed, are marketed with the information to be provided by the suppliers in accordance with Annex V. Where the offer for is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with Article 3(f) and 3(g) the provisions of Annex X shall apply instead;²**
- (c) any advertisement for a specific model of household refrigerating appliance contains its energy efficiency class, if the advertisement discloses energy-related or price information;

¹ Article 3, points (f) and (g) are added in accordance with Article 2(1) of Delegated Regulation (EU) 518/2014, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

² Article 4, point (b) is replaced in accordance with Article 2(2) of Delegated Regulation (EU) 518/2014, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

(d) any technical promotional material concerning a specific model of household refrigerating appliance, which describes its specific technical parameters, includes the energy efficiency class of that model.

Article 5

Measurement methods

The information to be provided pursuant to Article 3 shall be obtained by reliable, accurate and reproducible measurement procedures, which take into account the recognised state-of-the-art measurement methods, as set out in Annex VI.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure laid down in Annex VII when assessing the conformity of the declared energy efficiency class, the annual energy consumption, the fresh and frozen food volumes, the freezing capacity and the airborne acoustical noise emissions.

Article 7

Revision

<...>

Article 8

Repeal

<...>

Article 9

Transitional provisions

1. Articles 3(d), (e), 4(b), (c) and (d) shall not apply to printed advertisement and printed technical promotional material published before **30 April 2013**.
2. Household refrigerating appliances placed on the market before **31 December 2012** shall comply with the provisions set out in Directive 94/2/EC.
3. Household refrigerating appliances which comply with the provisions of this Regulation and which are placed on the market or offered for sale, hire or hire-purchase before **31 December 2012** shall be regarded as complying with the requirements of Directive 94/2/EC.

Article 10

Entry into force and application

1. This Decision [2011/03/MC-EnC] enters into force upon its adoption <...>³

2. It shall apply from **31 December 2012**. However, Articles 3(d), (e), 4(b), (c) and (d) shall apply from **30 April 2013**.

This Regulation shall be binding in its entirety and directly applicable in all **Contracting Parties**.

Article 2(5) of Decision 2011/03/MC-EnC

The Secretariat shall monitor and review the implementation of [this] Delegated Regulation <...> and shall submit a progress report to the Permanent High Level Group by 1 October 2013.

³ The text displayed here corresponds to Article 3(1) of Decision 2011/03/MC-EnC

ANNEX I

Definitions applicable for the purposes of Annexes II to IX

For the purposes of Annexes II to IX, the following definitions shall apply:

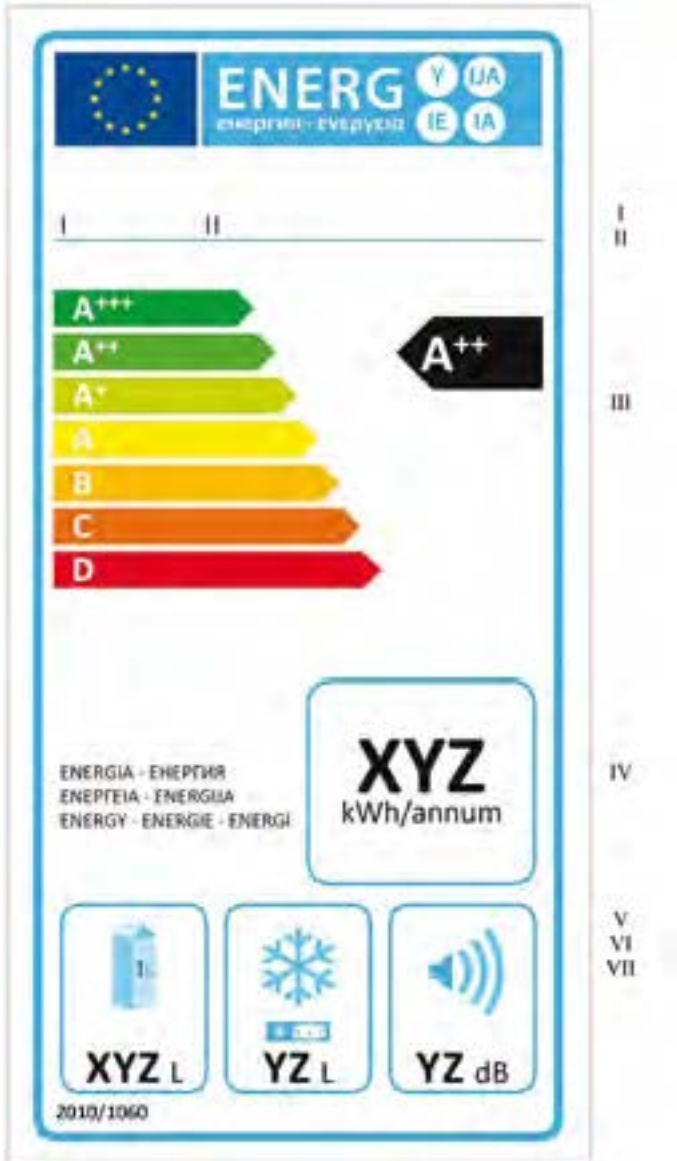
- (a) 'frost-free system' means a system automatically operated to prevent the permanent formation of frost, where cooling is provided by forced air circulation, the evaporator or evaporators are defrosted by an automatic defrost system, and the water from defrosting is disposed of automatically;
- (b) 'frost-free compartment' means any compartment defrosted by a frost-free system;
- (c) 'refrigerator-cellar' means a refrigerating appliance where at least one fresh-food storage compartment and one cellar compartment, but no frozen-food storage, chill or ice-making compartments, are present;
- (d) 'cellar' means a refrigerating appliance where only one or more cellar compartments are present;
- (e) 'refrigerator-chiller' means a refrigerating appliance where at least a fresh-food storage compartment and a chill compartment, but no frozen-food storage compartments, are present;
- (f) 'compartments' means any of the compartments listed in points (g) to (n);
- (g) 'fresh-food storage compartment' means a compartment designed for the storage of unfrozen foodstuffs, which may itself be divided into sub-compartments;
- (h) 'cellar compartment' means a compartment intended for the storage of particular foodstuffs or beverages at a temperature warmer than that of a fresh-food storage compartment;
- (i) 'chill compartment' means a compartment intended specifically for the storage of highly perishable foodstuffs; (j) 'ice-making compartment' means a low-temperature compartment intended specifically for the freezing and storage of ice;
- (k) 'frozen-food storage compartment' means a low-temperature compartment intended specifically for the storage of frozen foodstuffs and classified according to temperature as follows:
 - (i) 'one-star compartment': a frozen-food storage compartment in which the temperature is not warmer than $-6\text{ }^{\circ}\text{C}$;
 - (ii) 'two-star compartment': a frozen-food storage compartment in which the temperature is not warmer than $-12\text{ }^{\circ}\text{C}$;
 - (iii) 'three-star compartment': a frozen-food storage compartment in which the temperature is not warmer than $-18\text{ }^{\circ}\text{C}$;
 - (iv) 'food freezer compartment' (or 'four-star compartment'): a compartment suitable for freezing at least 4,5 kg of foodstuffs per 100 l of storage volume, and in no case less than 2 kg, from ambient temperature down to $-18\text{ }^{\circ}\text{C}$ over a period of 24 hours, which is also suitable for the storage of frozen food under three-star storage conditions, and may include two-star sections within the compartment;
 - (v) '0-star compartment': a frozen-food storage compartment in which the temperature is $< 0\text{ }^{\circ}\text{C}$ and which can also be used for the freezing and storage of ice but is not intended for the storage of highly perishable foodstuffs;
- (l) 'wine storage compartment' means a compartment exclusively designed either for short-term wine storage to bring wines to the ideal drinking temperature or for long-term wine storage to allow wine to mature, with the following features:

- (i) continuous storage temperature, either pre-set or set manually according to the manufacturer's instructions, in the range from + 5 °C to + 20 °C;
 - (ii) storage temperature(s) within a variation over time of less than 0,5 K at each declared ambient temperature specified by the climate class for household refrigerating appliances;
 - (iii) active or passive control of the compartment humidity in the range from 50% to 80%;
 - (iv) constructed to reduce the transmission of vibration to the compartment, whether from the refrigerator compressor or from any external source;
- (m) 'multi-use compartment' means a compartment intended for use at two or more of the temperatures of the compartment types and capable of being set by the end-user to continuously maintain the operating temperature range applicable to each compartment type according to the manufacturer's instructions; however, where a feature can shift temperatures in a compartment to a different operating temperature range for a period of limited duration only (such as a fast-freeze facility), the compartment is not a 'multi-use compartment' as defined by this Regulation;
- (n) 'other compartment' means a compartment, other than a wine storage compartment, intended for the storage of particular foodstuffs at a temperature warmer than + 14 °C;
- (o) 'two-star section' means part of a food-freezer, a food-freezer compartment, a three-star compartment or a three-star frozen-food storage cabinet which does not have its own individual access door or lid and in which the temperature is not warmer than – 12 °C;
- (p) 'chest freezer', means a food freezer in which the compartment(s) is (are) accessible from the top of the appliance or which has both top-opening type and upright type compartments but where the gross volume of the top-opening type compartment(s) exceeds 75% of the total gross volume of the appliance;
- (q) 'top-opening type' or 'chest type' means a refrigerating appliance with its compartment(s) accessible from the top of the appliance;
- (r) 'upright type' means a refrigerating appliance with its compartment(s) accessible from the front of the appliance;
- (s) 'fast freeze' means a reversible feature to be activated by the end-user according to the manufacturer's instructions, which decreases the storage temperature of the freezer or freezer compartment to achieve faster freezing of unfrozen foodstuffs;
- (t) 'model identifier' means the code, usually alphanumeric, which distinguishes a specific refrigerating appliance model from other models with the same trade mark or supplier's name.

ANNEX II

Label

1. LABEL FOR HOUSEHOLD REFRIGERATING APPLIANCES CLASSIFIED IN ENERGY EFFICIENCY CLASSES A+++ TO C



(1) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the energy efficiency class determined in accordance with Annex IX; the head of the arrow containing the energy efficiency class of the household refrigerating appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

IV. annual energy consumption (AE_c) in kWh per year, rounded up to the nearest integer and calculated in accordance with point 3(2) of Annex VIII;

V. sum of the storage volumes of all compartments that do not merit a star rating (i.e. operating temperature > -6 °C), rounded to the nearest integer;

VI. sum of the storage volumes of all frozen-food storage compartments that merit a star rating (i.e. operating temperature ≤ -6 °C), rounded to the nearest integer and star rating of the compartment with the highest share of that sum; where the household refrigerating appliances has no frozen-food storage compartment(s) the supplier shall declare '- L' instead of a value and leave the position for star rating blank;

VII. airborne acoustical noise emissions expressed in dB(A) re 1 pW, rounded to the nearest integer.

However, for wine storage appliances, points V and VI are replaced by the rated capacity in number of standard bottles of 75 centilitres that may be fitted in the appliance in accordance with the manufacturer's instructions.

(2) The design of the label shall be in accordance with point 3(1) of this Annex. By way of derogation, where a model has been awarded an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU Ecolabel may be added.

2. LABEL FOR HOUSEHOLD REFRIGERATING APPLIANCES CLASSIFIED IN ENERGY EFFICIENCY CLASSES D TO G

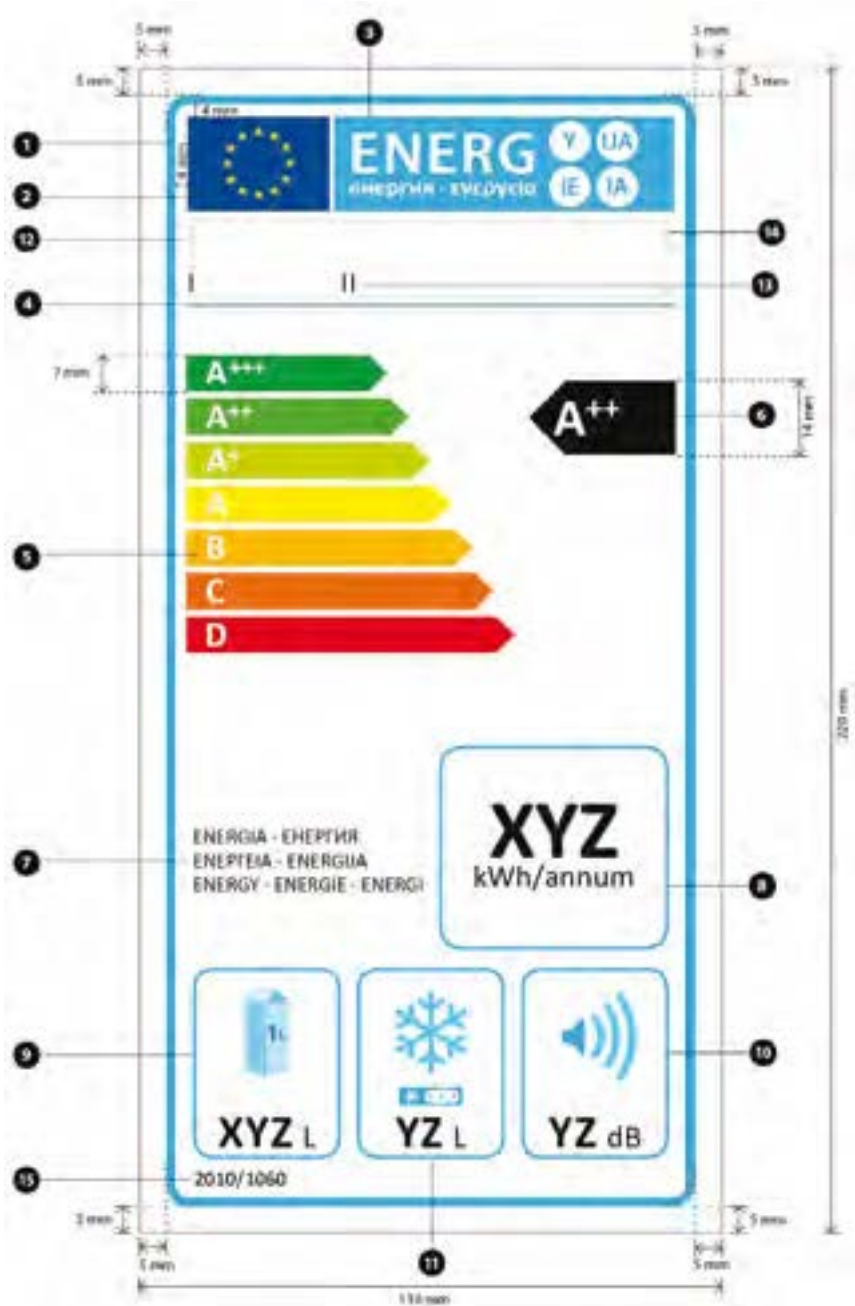


(1) The information listed in point 1(1) shall be included in this label.

(2) The design of the label shall be in accordance with point 3(2) of this Annex. By way of derogation, where a model has been awarded an 'EU Ecolabel' under Regulation (EC) No 66/2010, a copy of the EU Ecolabel may be added.

3. LABEL DESIGN

(1) For household refrigerating appliances classified in energy efficiency classes A+++ to C, except for wine storage appliances, the design of the label shall be as the following:



Whereby:

(a) The label shall be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background of the label shall be white.

(c) Colours shall be CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 EU label border stroke: 5 pt - colour: Cyan 100% – round corners: 3,5 mm.

2 EU logo - colours: X-80-00-00 and 00-00-X-00.

3 Energy label: colour: X-00-00-00.

Pictogram as depicted: EU logo + energy label: width: 92 mm, height: 17 mm.

4 Sub-logos border: 1 pt - colour: Cyan 100% – length: 92,5 mm.

5 A-G scale

– **Arrow:** height: 7 mm, gap: 0,75 mm - colours:

– Highest class: X-00-X-00,

– Second class: 70-00-X-00,

– Third class: 30-00-X-00,

– Fourth class: 00-00-X-00,

– Fifth class: 00-30-X-00,

– Sixth class: 00-70-X-00,

– Last class: 00-X-X-00.

– **Text:** Calibri bold 19 pt, capitals and white; '+' symbols: Calibri bold 13 pt, capitals, white, aligned on a single row.

6 Energy efficiency class

– **Arrow:** width: 26 mm, height: 14 mm, 100% black;

– **Text:** Calibri bold 29 pt, capitals and white; '+' symbols: Calibri bold 18 pt, capitals, white and aligned on a single row.

7 Energy

– **Text:** Calibri regular 11 pt, capitals, black.

8 Annual energy consumption:

– **Border:** 3 pt - colour: Cyan 100% - round corners: 3,5 mm.

– **Value:** Calibri bold 45 pt, 100% black.

– **Second line:** Calibri regular 17 pt, 100% black.

9 Storage volumes of all compartments that do not merit a star rating:

– **Border:** 3 pt - colour: Cyan 100% - round corners: 3,5 mm.

– **Value:** Calibri bold 25 pt, 100% black. Calibri regular 17 pt, 100% black.

10 Airborne acoustical noise emissions:

– **Border:** 3 pt - colour: Cyan 100% - round corners: 3,5 mm.

– **Value:** Calibri bold 25 pt, 100% black.

Calibri regular 17 pt, 100% black.

11 Storage volumes of all frozen-food storage compartments that merit a star rating:

– **Border:** 3 pt - colour: Cyan 100% - round corners: 3,5 mm.

– **Value:** Calibri bold 25 pt, 100% black. Calibri regular 17 pt, 100% black.

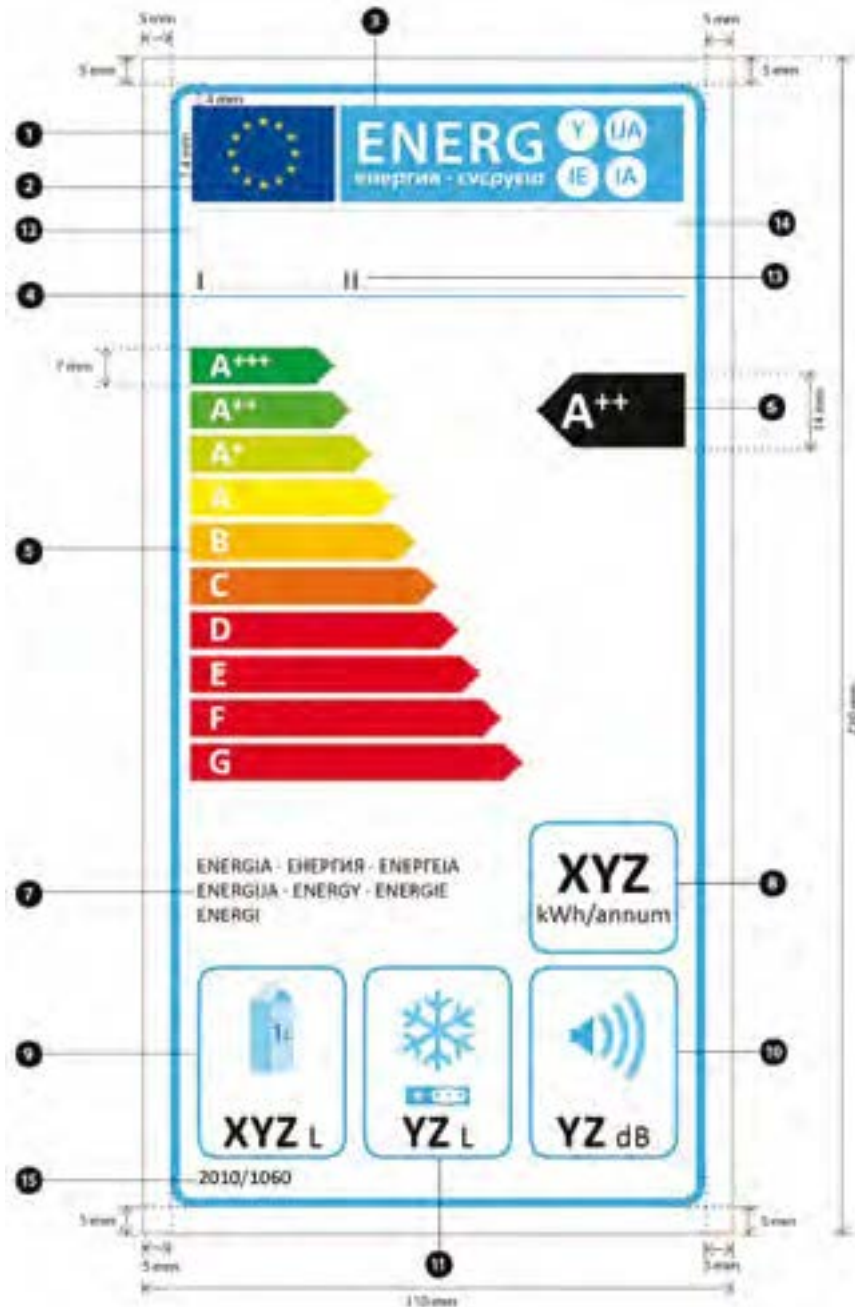
12 Supplier's name or trademark

13 Supplier's model identifier

14 The supplier's name or trademark and model identifier should fit in a space of 90 x 15 mm.

15 Numbering of the Regulation: Text: Calibri bold 11 pt.

(2) For household refrigerating appliances classified in energy efficiency classes D to G, except for wine storage appliances, the design of the label shall be the following:



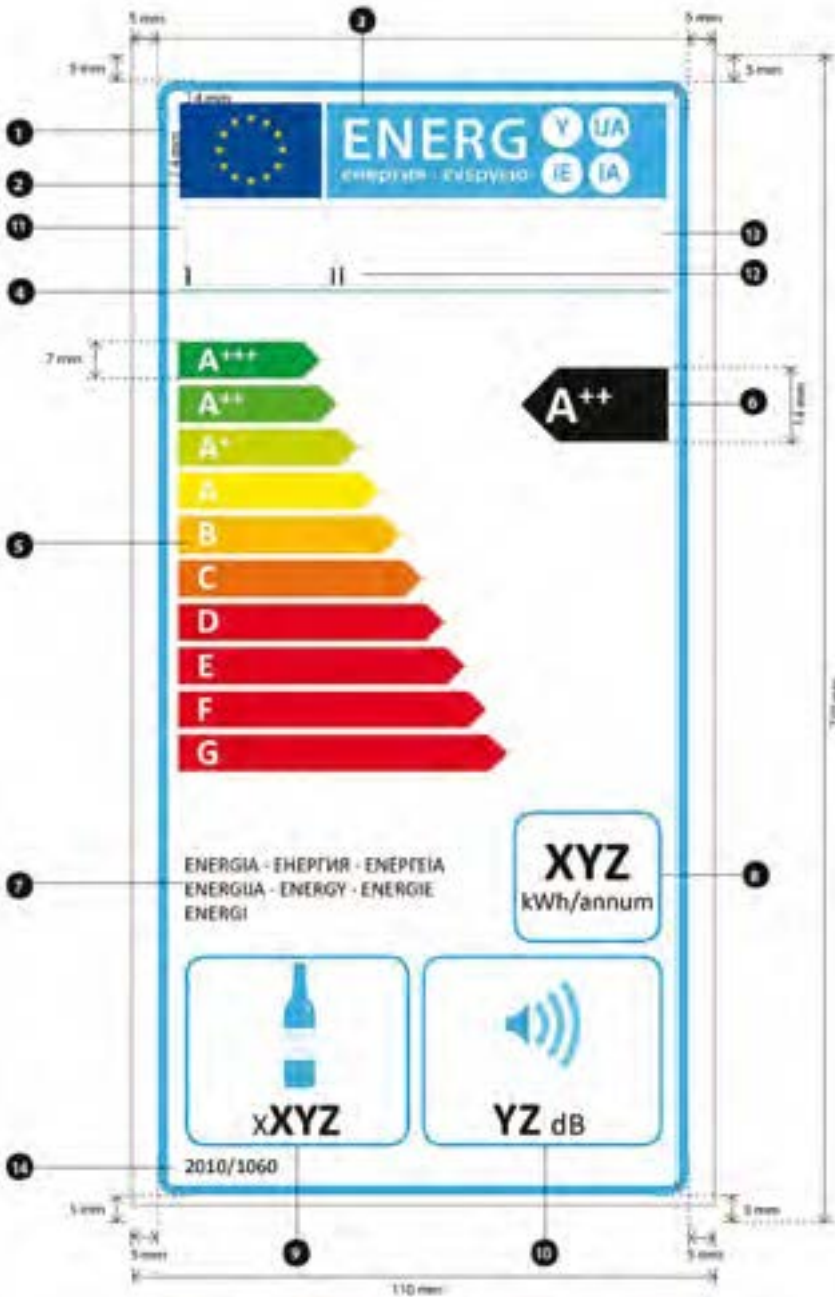
Whereby:

The design of the label shall be in accordance with point 3(1) of this Annex except for Number 8 where the following applies:

8 Annual energy consumption:

- **Border:** 3 pt - colour: Cyan 100% - round corners: 3,5 mm.
- **Value:** Calibri bold 32 pt, 100% black.
- **Second line:** Calibri regular 14 pt, 100% black.

(3) For wine storage appliances, the design of the label shall be the following:



Whereby:

(a) The label shall be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background of the label shall be white.

(c) Colours shall be CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 EU label border stroke: 5 pt - colour: Cyan 100% – round corners: 3,5 mm.

2 EU logo - colours: X-80-00-00 and 00-00-X-00.

3 Energy label: colour: X-00-00-00.

Pictogram as depicted: EU logo + energy label: width: 92 mm, height: 17 mm.

4 Sub-logos border: 1 pt - colour: Cyan 100% - length: 92,5 mm.

5 A-G scale

– **Arrow:** height: 7 mm, gap: 0,75 mm - colours:

– Highest class: X-00-X-00,

– Second class: 70-00-X-00,

– Third class: 30-00-X-00,

– Fourth class: 00-00-X-00,

– Fifth class: 00-30-X-00,

– Sixth class: 00-70-X-00,

– Last class(es): 00-X-X-00.

– **Text:** Calibri bold 19 pt, capitals and white; ‘+’ symbols: Calibri bold 13 pt, capitals, white, aligned on a single row.

6 Energy efficiency class

– **Arrow:** width: 26 mm, height: 14 mm, 100% black;

– **Text:** Calibri bold 29 pt, capitals, white; ‘+’ symbols: Calibri bold 18 pt, capitals, white, aligned on a single row.

7 Energy

– **Text:** Calibri regular 11 pt, capitals, black.

8 Annual energy consumption:

– **Border:** 2 pt - colour: Cyan 100% - round corners: 3,5 mm.

– **Value:** Calibri bold 30 pt, 100% black.

– **Second line:** Calibri regular 14 pt, 100% black.

9 Rated capacity in number of standard wine bottles:

– **Border:** 2 pt - colour: Cyan 100% - round corners: 3,5 mm.

– **Value:** Calibri bold 28 pt, 100% black.

Calibri regular 15 pt, 100% black.

10 Airborne acoustical noise emissions:

– **Border:** 2 pt - colour: Cyan 100% - round corners: 3,5 mm.

– **Value:** Calibri bold 25 pt, 100% black.

Calibri regular 17 pt, 100% black.

11 Supplier's name or trademark

12 Supplier's model identifier

13 The suppliers' name or trade mark and model identifier should fit in a space of 90 × 15 mm

14 Numbering of the Regulation: Text: Calibri bold 11 pt.

ANNEX III

Product fiche

1. The information in the product fiche shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trade mark;
 - (b) supplier's model identifier as defined in Annex I, point (t);
 - (c) category of the household refrigerating appliance model in accordance with point 1 of Annex VIII;
 - (d) energy efficiency class of the model in accordance with Annex IX;
 - (e) where the model has been awarded an 'EU Ecolabel award' under Regulation (EC) No 66/2010, this information may be included;
 - (f) annual energy consumption (AE_c) in kWh per year, rounded up to the nearest integer and calculated in accordance with point 3(2) of Annex VIII. It shall be described as: 'Energy consumption "XYZ" kWh per year, based on standard test results for 24 hours. Actual energy consumption will depend on how the appliance is used and where it is located';
 - (g) storage volume of each compartment and applicable star rating in accordance with point 1(1)VI of Annex II, if any;
 - (h) the design temperature of 'other compartments' within the meaning of point (n) of Annex I. For wine storage compartments, the coldest storage temperature, either pre-set in the compartment or capable of being set by an end-user and capable of being maintained continuously according to the manufacturer's instructions, shall be given;
 - (i) the mention 'frost-free' for the relevant compartment(s), as defined in point (b) of Annex I;
 - (j) 'power cut safe "X" h' defined as 'temperature rise time';
 - (k) 'freezing capacity' in kg/24 h;
 - (l) 'climate class' in accordance with point 1, Table 3 of Annex VIII, and expressed as: 'Climate class: W [climate class]. This appliance is intended to be used at an ambient temperature between "X" [lowest temperature] °C and "X" [highest temperature] °C';
 - (m) airborne acoustical noise emissions expressed in dB(A) re 1 pW, rounded to the nearest integer;
 - (n) if the model is intended to be a built-in appliance, an indication to this effect;
 - (o) for wine storage appliances, the following information: 'This appliance is intended to be used exclusively for the storage of wine'. This point shall not apply to household refrigerating appliances that are not specifically designed for wine storage but may nevertheless be used for this purpose, nor to household refrigerating appliances that have a wine storage compartment combined with any other compartment type.
2. One fiche may cover a number of refrigerating appliances models supplied by the same supplier.
3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1 not already displayed on the label shall also be provided.

ANNEX IV

Technical documentation

1. The technical documentation referred to in Article 3(c) shall include:

- (a) the name and address of the supplier;
- (b) a general description of the refrigerating appliance model, sufficient for it to be unequivocally and easily identified;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) identification and signature of the person empowered to bind the supplier;
- (f) technical parameters for measurements, established in accordance with Annex VIII:
 - (i) overall dimensions;
 - (ii) overall space required in use;
 - (iii) total gross volumes(s);
 - (iv) storage volume(s) and total storage volume(s);
 - (v) star rating(s) of the frozen-food storage compartment(s);
 - (vi) defrosting type;
 - (vii) storage temperature;
 - (viii) energy consumption;
 - (ix) temperature rise time;
 - (x) freezing capacity;
 - (xi) power consumption;
 - (xii) wine storage compartment humidity;
 - (xiii) airborne acoustical noise emissions;
- (g) the results of calculations performed in accordance with Annex VIII.

2. Where the information included in the technical documentation file for a particular household refrigerating appliance model has been obtained by calculation on the basis of design, or extrapolation from other equivalent refrigerating appliances, or both, the documentation shall include details of such calculations or extrapolations, or both, and of tests undertaken by suppliers to verify the accuracy of the calculations undertaken. The information shall also include a list of all other equivalent household refrigerating appliance models where the information was obtained on the same basis.

ANNEX V

Information to be provided in the cases where end-users cannot be expected to see the product displayed

1. The information referred to in Article 4(b) shall be provided in the following order:

- (a) the energy efficiency class of the model as defined in Annex IX;
 - (b) the annual energy consumption in kWh per year, rounded up to the nearest integer and calculated in accordance with point 3(2) of Annex VIII;
 - (c) the storage volume of each compartment and applicable star rating in accordance with point 1(1) VI of Annex II, if any;
 - (d) the 'climate class' in accordance with point 1, Table 3 of Annex VIII;
 - (e) airborne acoustical noise emissions expressed in dB(A) re1 pW, rounded to the nearest integer;
 - (f) if the model is intended to be built-in, an indication to this effect;
 - (g) for wine storage appliances the following information: 'This appliance is intended to be used exclusively for the storage of wine'. This point shall not apply to household refrigerating appliances that are not specifically designed for wine storage but may nevertheless be used for this purpose, nor to household refrigerating appliances that have a wine storage compartment combined with any other compartment type.
2. Where other information contained in the product fiche is also provided, it shall be in the form and order specified in Annex III.
3. The size and font in which all the information referred in this Annex is printed or shown shall be legible.

ANNEX VI

Measurements

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements shall be made using a reliable, accurate and reproducible measurement procedure that takes into account the generally recognised state-of-the-art measurement methods, including methods set out in documents the reference numbers of which have been published for that purpose in the Official Journal of the European Union.

2. GENERAL CONDITIONS FOR TESTING

The following general conditions for testing apply:

- (1) if anti-condensation heaters that can be switched on and off by the end-user are provided, they shall be switched on and - if adjustable - set at maximum heating;
- (2) if 'through-the-door devices' (such as ice or chilled water/drinks dispensers) which can be switched on and off by the end-user are provided, they shall be switched on during the energy consumption measurement but not operated;
- (3) for multi-use appliances and compartments, the storage temperature during the measurement of energy consumption shall be the nominal temperature of the coldest compartment type as claimed for continuous normal use according to the manufacturer's instructions;
- (4) the energy consumption of a household refrigerating appliance shall be determined in the coldest configuration, according to the manufacturer's instructions for continuous normal use for any 'other compartment' as defined in Annex VIII, Table 5.

3. TECHNICAL PARAMETERS

The following parameters shall be established:

- (a) 'overall dimensions', which are measured to the nearest millimetre;
- (b) 'overall space required in use', which is measured to the nearest millimetre;
- (c) 'total gross volume(s)', which is measured to the nearest whole number of cubic decimetres or litres;
- (d) 'storage volume(s) and total storage volume(s)', which is measured to the nearest whole number of cubic decimetres or of litres;
- (e) 'defrosting type';
- (f) 'storage temperature';
- (g) 'energy consumption' which is expressed in kilowatt hours per 24 hours (kWh/24h), to three decimal places;
- (h) 'temperature rise time';
- (i) 'freezing capacity';
- (j) 'wine storage compartment humidity', which is expressed as a percentage rounded to the nearest integer; and
- (k) 'airborne acoustical noise emissions'.

ANNEX VII⁴

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Contracting Parties shall apply the following procedure:

- (1) The Contracting Party authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent household refrigerating appliance models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the Contracting Party authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 1.
- (6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent household refrigerating appliance models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (7) The Contracting Party authorities shall provide all relevant information to the authorities of the other Contracting Parties and to the Secretariat without delay after a decision being

⁴ Annex VII is replaced in accordance with Article 2 and Annex II of Delegated Regulation (EU) 2017/254, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

taken on the non-compliance of the model according to points 3 and 6.

The Contracting Party authorities shall use the measurement and calculation methods set out in Annexes VI and VIII.

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 1 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 1
Verification tolerances

Parameters	Verification tolerances
Gross volume	The determined value shall not be less than the declared value by more than 3 % or 1 litre, whichever is the greater value.
Storage volume	The determined value shall not be less than the declared value by more than 3 % or 1 litre, whichever is the greater value. Where the volumes of the cellar compartment and the fresh food storage compartment can be adjusted, relative to one another, by the user, the volume shall be tested when the cellar compartment is adjusted to its minimum volume.
Freezing capacity	The determined value shall not be less than the declared value by more than 10 %.
Energy consumption	The determined value shall not exceed the declared value (E_{24h}) by more than 10 %.
Humidity of wine storage appliances	The determined value for the relative humidity observed in testing shall not exceed the declared range by more than 10 % in any direction.
Airborne acoustical noise emissions	The determined value shall meet the declared value.

ANNEX VIII

Classification of household refrigerating appliances, method for calculating the equivalent volume and the energy efficiency index

1. CLASSIFICATION OF HOUSEHOLD REFRIGERATING APPLIANCES

Household refrigerating appliances are classified into categories as listed in Table 1.

Each category is defined by the specific compartment composition as specified in Table 2 and is independent of the number of doors and/or drawers.

Table 1
Household refrigerating appliances categories

Category	Designation
1	Refrigerator with one or more fresh-food storage compartments
2	Refrigerator-cellar, Cellar and Wine storage appliances
3	Refrigerator-chiller and Refrigerator with a 0-star compartment
4	Refrigerator with a one-star compartment
5	Refrigerator with a two-star compartment
6	Refrigerator with a three-star compartment
7	Refrigerator-freezer
8	Upright freezer
9	Chest freezer
10	Multi-use and other refrigerating appliances

Household refrigerating appliances that cannot be classified in categories 1 to 9 because of compartment temperature are classified in category 10.

Table 2
Household refrigerating appliance classification and relevant compartment composition

Nominal temperature (for the EEL) (°C)	Design T	+ 12	+ 12	+ 5	0	0	- 6	- 12	- 18	- 18	Category (number)
	Other	Wine storage	Cellar	Fresh food storage	Chill	0-star/ice making	one-star	two-star	three-star	four-star	
Compartments composition											
Appliance category											
REFRIGERATOR WITH ONE OR MORE FRESH-FOOD STORAGE COMPARTMENTS	N	N	N	Y	N	N	N	N	N	N	1
REFRIGERATOR-CELLAR, CELLAR and WINE STORAGE APPLIANCE	O	O	O	Y	N	N	N	N	N	N	2
	O	O	Y	N	N	N	N	N	N	N	
	N	Y	N	N	N	N	N	N	N	N	
REFRIGERATOR-CHILLER and REFRIGERATOR WITH A 0-STAR COMPARTMENT	O	O	O	Y	Y	N	N	N	N	N	3
REFRIGERATOR WITH A ONE-STAR COMPARTMENT	O	O	O	Y	O	Y	N	N	N	N	4
	O	O	O	Y	O	O	Y	N	N	N	
REFRIGERATOR WITH A TWO-STAR COMPARTMENT	O	O	O	Y	O	O	O	Y	N	N	5
REFRIGERATOR WITH A THREE-STAR COMPARTMENT	O	O	O	Y	O	O	O	O	Y	N	6
REFRIGERATOR-FREEZER	O	O	O	Y	O	O	O	O	O	Y	7
UPRIGHT FREEZER	N	N	N	N	N	N	N	O	(Y) ^(a)	Y	8
CHEST FREEZER	N	N	N	N	N	N	N	O	N	Y	9
MULTI-USE AND OTHER APPLIANCES	O	O	O	O	O	O	O	O	O	O	10

Notes: Y = the compartment is present; N = the compartment is not present; O = the presence of the compartment is optional; (a) also includes three-star frozen-food cabinets.

Household refrigerating appliances are classified in one or more climate classes as specified in Table 3.

Table 3
Climate classes

Class	Symbol	Ambient average temperature °C
Extended temperate	SN	+ 10 to + 32
Temperate	N	+ 16 to + 32
Subtropical	ST	+ 16 to + 38
Tropical	T	+ 16 to + 43

The refrigerating appliance shall be capable of maintaining the required storage temperatures in the different compartments simultaneously and within the permitted temperature deviations (during the for the appropriate climate classes.

Multi-use appliances and compartments shall be capable of maintaining the required storage temperatures of the different compartment types where these temperatures can be set by the end-user according to the manufacturer's instructions.

Table 4
Storage temperatures

Storage temperatures (°C)							
Other compartment	Wine storage compartment	Cellar compartment	Fresh-food storage compartment	Chill compartment	One-star compartment	Two-star compartment/section	Food freezer and threestar compartment/ cabinet
t_{om}	t_{wma}	t_{cm}	$t_{1m'}, t_{2m'}, t_{3m'}$ t_{ma}	t_{cc}	t^*	t^{**}	t^{***}
$> + 14$	$+ 5 \leq t_{wma} \leq + 20$	$+ 8 \leq t_{cm} \leq + 14$	$0 \leq t_{1m'}, t_{2m'}, t_{3m'} \leq + 8;$ $t_{ma} \leq + 4$	$- 2 \leq t_{cc} \leq + 3$	$\leq - 6$	$\leq - 12$ ^(a)	$\leq - 18$ ^(a)

Notes:

- t_{om} : storage temperature of the other compartment.
- t_{wma} : storage temperature of the wine storage compartment with a variation of 0.5 K.
- t_{cm} : storage temperature of the cellar compartment.
- $t_{1m'}, t_{2m'}, t_{3m'}$: storage temperatures of the fresh-food compartment.
- t_{ma} : average storage temperature of the fresh-food compartment.
- t_{cc} : instantaneous storage temperature of the chill compartment.

- t^* , t^{**} , t^{***} : maximum temperatures of the frozen-food storage compartments.
 - storage temperature for the ice-making compartment and for the '0-star' compartment is below 0 °C.
- (^o) for frost-free household refrigerating appliances during the defrost cycle, a temperature deviation of no more than 3 K during a period of 4 hours or 20% of the duration of the operating cycle, whichever is the shorter, is allowed.

2. CALCULATION OF THE EQUIVALENT VOLUME

The equivalent volume of a household refrigerating appliance is the sum of the equivalent volumes of all compartments. It is calculated in litres and rounded to the nearest integer as:

$$V_{eq} = \left[\sum_{c=1}^{c=n} V_c \times \frac{(25 - T_c)}{20} \times FF_c \right] \times CC \times BI$$

where:

- n is the number of compartments,
- V_c is the storage volume of the compartment(s),
- T_c is the nominal temperature of the compartment(s) as set out in Table 2,
- $25 - T_c/20$ is the thermodynamic factor as set in Table 5,
- FF_c , CC and BI are volume correction factors as set out in Table 6.

The thermodynamic correction factor $25 - T_c/20$ is the temperature difference between the nominal temperature of a compartment T_c (defined in Table 2) and the ambient temperature under standard test conditions at + 25 °C, expressed as a ratio of the same difference for a fresh-food compartment at + 5 °C.

The thermodynamic factors for the compartments described in Annex I, points (g) to (n), are set out in Table 5.

Table 5
Thermodynamic factors for refrigerating compartments

Compartment	Nominal temperature	$(25 - T_c)/20$
Other compartment	Design temperature	$(25 - T_c)/20$
Cellar compartment/Wine storage compartment	+ 12 °C	0.65
Fresh-food storage compartment	+ 5 °C	1.00
Chill compartment	0 °C	1.25
Ice-making compartment and 0-star compartment	0 °C	1.25
One-star compartment	- 6 °C	1.55
Two-star compartment	- 12 °C	1.85
Three-star compartment	- 18 °C	2.15
Food freezer compartment (four-star compartment)	- 18 °C	2.15

Notes:

(i) for multi-use compartments, the thermodynamic factor is determined by the nominal temperature as given in Table 2 of the coldest compartment type capable of being set by the end-user and maintained continuously according to the manufacturer's instructions;

(ii) for any two-star section (within a freezer) the thermodynamic factor is determined at $T_c = -12\text{ °C}$;

(iii) for other compartments the thermodynamic factor is determined by the coldest design temperature capable of being set by the end-user and maintained continuously according to the manufacturer's instructions.

Table 6
Value of the correction factors

Correction factor	Value	Conditions
FF (frost-free)	1.2	For frost-free frozen-food storage compartments
	1	Otherwise
CC (climate class)	1.2	For T class (tropical) appliances
	1.2	For ST class (subtropical) appliances
	1	Otherwise
BI (built-in)	1.2	For built-in appliances under 58 cm in width
	1	Otherwise

Notes:

(i) FF is the volume correction factor for frost-free compartments;

(ii) CC is the volume correction factor for a given climate class. If a refrigerating appliance is classified in more than one climate class, the climate class with the highest correction factor is used for the calculation of the equivalent volume;

(iii) BI is the volume correction factor for built-in appliances.

3. CALCULATION OF THE ENERGY EFFICIENCY INDEX

For the calculation of the Energy Efficiency Index (EEI) of a household refrigerating appliance model, the annual energy consumption of the household refrigerating appliance is compared to its standard annual energy consumption.

(1) The Energy Efficiency Index (EEI) is calculated and rounded to the first decimal place, as:

$$EEI = \frac{AE_c}{SAE_c} \times 100$$

where:

– AE_c = annual energy consumption of the household refrigerating appliance

– SAE_c = standard annual energy consumption of the household refrigerating appliance.

(2) The annual energy consumption (AE_C) is calculated in kWh/year and rounded to two decimal places, as:

$$AE_C = E_{24h} \times 365$$

where:

– E_{24h} is the energy consumption of the household refrigerating appliance in kWh/24h and rounded to three decimal places.

(3) The standard annual energy consumption (SAE_C) is calculated in kWh/year and rounded to two decimal places, as:

$$SAE_C = V_{eq} \times M + N + CH$$

where:

- V_{eq} is the equivalent volume of the household refrigerating appliance
- CH is equal to 50 kWh/year for household refrigerating appliances with a chill compartment with a storage volume of at least 15 litres
- the M and N values are given in Table 7 for each household refrigerating appliance category.

Table 7
M and N values by household refrigerating appliance category

Category	M	N
1	0.233	245
2	0.233	245
3	0.233	245
4	0.643	191
5	0.450	245
6	0.777	303
7	0.777	303
8	0.539	315
9	0.472	286
10	(*)	(*)

(*) Note: for Category 10 household refrigerating appliances the M and N values depend on the temperature and star rating of the compartment with the lowest storage temperature capable of being set by the end-user and maintained continuously according to the manufacturer's instructions. When only an 'other compartment' as defined in Table 2 and Annex I, point (n), is present, the M and N values for Category 1 are used. Appliances with three-star compartments or food-freezer compartments are considered to be refrigerator-freezers.

ANNEX IX

Energy efficiency classes

The energy efficiency class of a household refrigerating appliance shall be determined on the basis of its Energy Efficiency Index (EEI) as set out in Table 1 from 20 December 2011 until 30 June 2014 and Table 2 from 1 July 2014.

The Energy Efficiency Index of a household refrigerating appliance shall be determined in accordance with point 3 of Annex VIII.

Table 1
Energy efficiency classes until 30 June 2014

Energy Efficiency Class	Energy Efficiency Index
A+++ (most efficient)	EEI < 22
A++	$22 \leq \text{EEI} < 33$
A+	$33 \leq \text{EEI} < 44$
A	$44 \leq \text{EEI} < 55$
B	$55 \leq \text{EEI} < 75$
C	$75 \leq \text{EEI} < 95$
D	$95 \leq \text{EEI} < 110$
E	$110 \leq \text{EEI} < 125$
F	$125 \leq \text{EEI} < 150$
G (least efficient)	EEI ≥ 150

Table 2
Energy efficiency classes from 1 July 2014

Energy Efficiency Class	Energy Efficiency Index
A+++ (most efficient)	EEI < 22
A++	$22 \leq \text{EEI} < 33$
A+	$33 \leq \text{EEI} < 42$
A	$42 \leq \text{EEI} < 55$
B	$55 \leq \text{EEI} < 75$
C	$75 \leq \text{EEI} < 95$
D	$95 \leq \text{EEI} < 110$
E	$110 \leq \text{EEI} < 125$
F	$125 \leq \text{EEI} < 150$
G (least efficient)	EEI ≥ 150

ANNEX X⁵

Information to be provided in the case of sale, hire or hire-purchase through the internet

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

- (a) “display mechanism” means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
- (b) “nested display” means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;
- (c) “tactile screen” means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
- (d) “alternative text” means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(f) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 3 of Annex II. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

- (a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;
- (b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and
- (c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

- (a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;
- (b) the image shall link to the label;
- (c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;
- (d) the label shall be displayed by pop up, new tab, new page or inset screen display;

⁵ Annex X is added in accordance with Article 2(3) and Annex II of Delegated Regulation (EU) 518/2014, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3(g) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.'

DELEGATED REGULATION (EU) 1059/2010 of 28 September 2010 supplementing Directive 2010/30/EU with regard to energy labelling of household dishwashers

Incorporated and adapted by Ministerial Council Decision 2011/03/MC-EnC of 6 October 2011 on adopting certain Delegated Regulations on energy related products, and amended by Ministerial Council Decision 2018/03/MC-EnC of 29 November 2018 adapting and implementing Regulation (EU) 2017/1369 setting a framework for energy labelling, and certain Delegated Regulations on energy-related products.

*The adaptations made by Ministerial Council Decisions 2011/03/MC-EnC and 2018/03/MC-EnC are highlighted in **bold and blue**.*

Article 1

Subject matter and scope

This Regulation establishes requirements for the labelling of and the provision of supplementary product information on electric mains-operated household dishwashers and electric mains-operated dishwashers that can also be powered by batteries, including those sold for non-household use and built-in household dishwashers.

Article 2

Definitions

In addition to the definitions laid down in Article 2 of Directive 2010/30/EU, the following definitions shall apply for the purpose of this Regulation:

- (1) "household dishwasher" means a machine which cleans, rinses, and dries dishware, glassware, cutlery and cooking utensils by chemical, mechanical, thermal, and electric means and which is designed to be used principally for non-professional purposes;
- (2) "built-in household dishwasher" means a household dishwasher intended to be installed in a cabinet, a prepared recess in a wall or a similar location, requiring furniture finishing;
- (3) "place settings" means a defined set of crockery, glass and cutlery for use by one person;
- (4) "rated capacity" means the maximum number of place settings together with the serving pieces, as stated by the supplier, which can be treated in a household dishwasher on the programme selected, when loaded in accordance with the supplier's instructions;
- (5) "programme" means a series of operations that are pre-defined and are declared as suitable by the supplier for specified levels of soil or type of load, or both, and together form a complete cycle;
- (6) "programme time" means the time that elapses from the initiation of the programme until the completion of the programme, excluding any end-user-programmed delay;
- (7) "cycle" means a complete cleaning, rinsing, and drying process, as defined for the selected programme;
- (8) "off-mode" means a condition where the household dishwasher is switched off using appliance con-

trols or switches accessible to and intended for operation by the end-user during normal use to attain the lowest power consumption that may persist for an indefinite time while the household dishwasher is connected to a power source and used in accordance with the supplier's instructions; where there is no control or switch accessible to the end-user, "off-mode" means the condition reached after the household dishwasher reverts to a steady-state power consumption on its own;

(9) "left-on mode" means the lowest power consumption mode that may persist for an indefinite time after completion of the programme and unloading of the household dishwasher without any further intervention by the end-user;

(10) "equivalent household dishwasher" means a model of household dishwasher placed on the market with the same rated capacity, technical and performance characteristics, energy and water consumption and airborne acoustical noise emissions as another model of household dishwasher placed on the market under a different commercial code number by the same supplier;

(11) "end-user" means a consumer buying or expected to buy a household dishwasher;

(12) "point of sale" means a location where household dishwashers are displayed or offered for sale, hire or hire-purchase.

Article 3

Responsibilities of suppliers

Suppliers shall ensure that:

(a) each household dishwasher is supplied with a printed label in the format and containing information as set out in Annex I;

(b) a product fiche, as set out in Annex II, is made available;

(c) the technical documentation as set out in Annex III is made available on request to the authorities of the **Contracting Parties** and to the **Secretariat**;

(d) any advertisement for a specific model of household dishwasher contains the energy efficiency class, if the advertisement discloses energy-related or price information;

(e) any technical promotional material concerning a specific model of household dishwasher which describes its specific technical parameters includes the energy efficiency class of that model;

(f) an electronic label in the format and containing the information set out in Annex I is made available to dealers for each household dishwasher model placed on the market from 1 January 2020 with a new model identifier. It may also be made available to dealers for other household dishwasher models;

(g) an electronic product fiche as set out in Annex II is made available to dealers for each household dishwasher model placed on the market from 1 January 2020 with a new model identifier. It may also be made available to dealers for other household dishwasher models.¹

¹ Article 3, points (f) and (g) are added in accordance with Article 1(1) of Delegated Regulation (EU) 518/2014, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

Article 4

Responsibilities of dealers

Dealers shall ensure that:

(a) each household dishwasher, at the point of sale, bears the label provided by suppliers in accordance with Article 3(a) on the outside of the front or top of the household dishwasher, in such a way as to be clearly visible;

(b) household dishwashers offered for sale, hire or hire-purchase where the end-user cannot be expected to see the household dishwasher displayed, are marketed with the information provided by suppliers in accordance with Annex IV. Where the offer is made through the internet and an electronic label and an electronic product fiche have been made available in accordance with Article 3(f) and 3(g) the provisions of Annex VIII shall apply instead;²

(c) any advertisement for a specific model of household dishwasher contains a reference to its energy efficiency class, if the advertisement discloses energy-related or price information;

(d) any technical promotional material concerning a specific model of household dishwasher which describes its specific technical parameters includes a reference to the energy efficiency class of that model.

Article 5

Measurement methods

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement methods, which take into account the recognised state-of-the-art measurement methods.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure laid down in Annex V when assessing the conformity of the declared energy efficiency class, the annual energy consumption, annual water consumption, drying efficiency index, programme time, power consumption in off-mode and left-on mode, duration of the left-on mode and airborne acoustical noise emissions.

Article 7

Revision

<...>

² Article 4, point (b) is replaced in accordance with Article 1(2) of Delegated Regulation (EU) 518/2014, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

Article 8

Repeal

<...>

Article 9

Transitional provisions

1. Articles 3(d), (e), 4(b), (c) and (d) shall not apply to printed advertisement and printed technical promotional material published before **30 April 2013**.
2. Household dishwashers placed on the market before **31 December 2012** shall comply with the provisions set out in Directive 97/17/EC.
3. <...>

Article 10

Entry into force and application

This Decision [2011/03/MC-EnC] enters into force upon its adoption <...>³

It shall apply from **31 December 2012**. However, Articles 3(d), (e), 4(b), (c) and (d) shall apply from 30 April 2013.

This Regulation shall be binding in its entirety and directly applicable in all Contracting Parties.

Article 2(5) of Decision 2011/03/MC-EnC

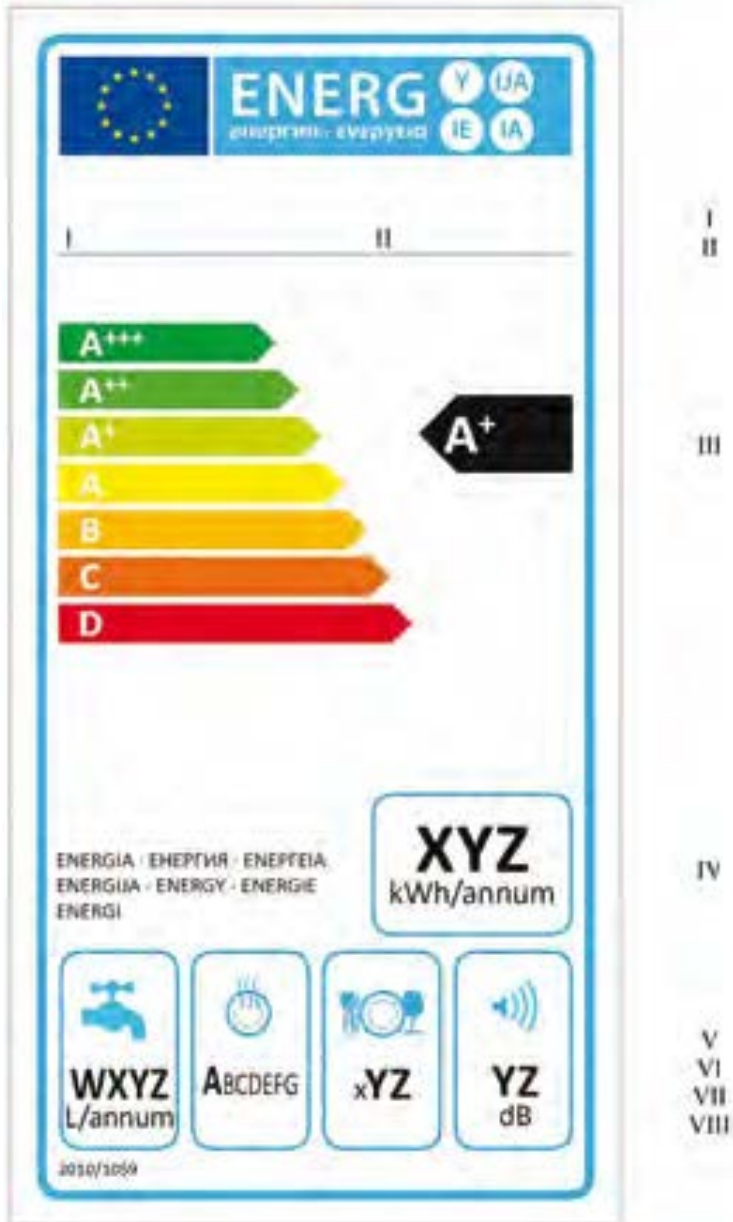
The Secretariat shall monitor and review the implementation of [this] Delegated Regulation <...> and shall submit a progress report to the Permanent High Level Group by 1 October 2013.

³ The text displayed here corresponds to Article 3(1) of Decision 2011/03/MC-EnC.

ANNEX I

Label

1. LABEL



(1) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier, where 'model identifier' means the code, usually alphanumeric, which distinguishes a specific household dishwasher model from other models with the same trade mark or supplier's name;

III. the energy efficiency class determined in accordance with point 1 of Annex VI; the head of the arrow containing the energy efficiency class of the household dishwasher shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

IV. annual energy consumption (AE_c) in kWh per year, rounded up to the nearest integer and calculated in accordance with point 1(b) of Annex VII;

V. annual water consumption (AW_c) in litres per year, rounded up to the nearest integer and calculated in accordance with point 3 of Annex VII;

VI. the drying efficiency class determined in accordance with point 2 of Annex VI;

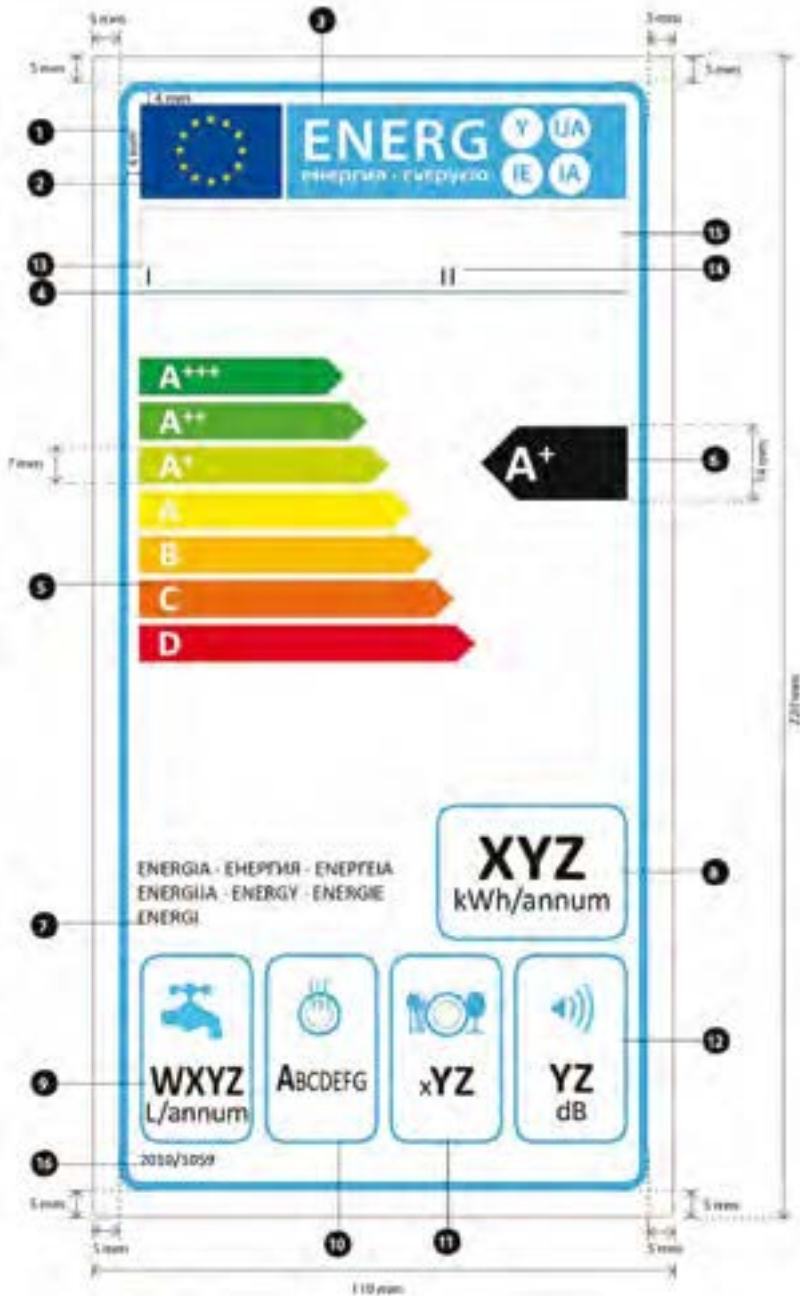
VII. rated capacity in standard place settings, for the standard cleaning cycle;

VIII. airborne acoustical noise emissions expressed in dB(A) re 1 pW and rounded to the nearest integer.

(2) The design of the label shall be in accordance with point 2. By way of derogation, where a model has been granted an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU Ecolabel may be added.

2. LABEL DESIGN

The design of the label shall be as in the figure below.



Whereby

(a) The label shall be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content must nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours shall be CMYK – cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 Border stroke: 5 pt - colour: Cyan 100% - round corners: 3,5 mm.

2 EU logo - colours: X-80-00-00 and 00-00-X-00.

3 Energy logo: colour: X-00-00-00. Pictogram as depicted; EU logo and energy logo (combined): width: 92 mm, height: 17 mm.

4 Sub-logos border: 1 pt - colour: Cyan 100% - length: 92,5 mm.

5 A-G scale

– **Arrow:** height: 7 mm, gap: 0,75 mm - colours:

– Highest class: X-00-X-00,

– Second class: 70-00-X-00,

– Third class: 30-00-X-00,

– Fourth class: 00-00-X-00,

– Fifth class: 00-30-X-00,

– Sixth class: 00-70-X-00,

– Last class: 00-X-X-00.

– **Text:** Calibri bold 18 pt, capitals and white; '+' symbols: Calibri bold 12 pt, capitals, white, aligned on a single row.

6 Energy efficiency class

– **Arrow:** width: 26 mm, height: 14 mm, 100% black.

– **Text:** Calibri bold 29 pt, capitals and white; '+' symbols: Calibri bold 18 pt, capitals, white, aligned on a single row.

7 Energy

– **Text:** Calibri regular 11 pt, capitals, 100% black.

8 Annual energy consumption

– **Border:** 2 pt - colour: Cyan 100% - round corners: 3,5 mm.

– **Value:** Calibri bold 37 pt, 100% black.

– **Second line:** Calibri regular 17 pt, 100% black.

9 Annual water consumption:

– **Pictogram** as depicted

– **Border:** 2 pt - colour: Cyan 100% - round corners: 3,5 mm.

– **Value:** Calibri bold 24 pt, 100% black; and Calibri regular 16 pt, 100% black.

10 Drying efficiency class:

– **Pictogram** as depicted

– **Border:** 2 pt - colour: Cyan 100% - round corners: 3,5 mm.

– **Value:** Calibri regular 16 pt, horizontal scale 75%, 100% black; and Calibri bold 22 pt, horizontal scale 75%, 100% black.

11 Rated capacity:

– **Pictogram** as depicted

– **Border:** 2 pt - colour: Cyan 100% - round corners: 3,5 mm.

– **Value:** Calibri bold 24 pt, 100% black; and Calibri regular 16 pt, 100% black.

12 Noise emissions:

– **Pictogram** as depicted

– **Border:** 2 pt - colour: Cyan 100% - round corners: 3,5 mm.

– **Value:** Calibri bold 24 pt, 100% black; and Calibri regular 16 pt, 100% black.

13 Supplier's name or trade mark

14 Supplier's model identifier

15 The supplier's name or trademark and model identifier should fit in a space of 92 × 15 mm.

16 Numbering of the Regulation: Calibri bold 9 pt, 100% black.

ANNEX II

Product fiche

1. The information in the product fiche of the household dishwasher shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trade mark;
- (b) supplier's model identifier, meaning the code, usually alphanumeric, which distinguishes a specific household dishwasher model from other models with the same trade mark or supplier's name;
- (c) rated capacity, in standard place settings, for the standard cleaning cycle;
- (d) energy efficiency class, in accordance with point 1 of Annex VI;
- (e) where the household dishwasher has been awarded an 'EU Ecolabel' under Regulation (EC) No 66/2010, this information may be included;
- (f) annual energy consumption (AE_c) in kWh per year, rounded up to the nearest integer and calculated in accordance with point 1(b) of Annex VII. It shall be described as 'Energy consumption "X" kWh per year, based on 280 standard cleaning cycles using cold water fill and the consumption of the low power modes. Actual energy consumption will depend on how the appliance is used.';
- (g) the energy consumption (E_c) of the standard cleaning cycle;
- (h) the power consumption in off-mode and left-on mode (P_o and P_l);
- (i) annual water consumption (AW_c), in litres per year, rounded up to the nearest integer and calculated in accordance with point 3 of Annex VII; it shall be described as: 'Water consumption "X" litres per year, based on 280 standard cleaning cycles. Actual water consumption will depend on how the appliance is used.';
- (j) drying efficiency class determined in accordance with point 2 of Annex VI expressed as 'Drying efficiency class "X" on a scale from G (least efficient) to A (most efficient)'. Where this information is provided in a table, this may be expressed by other means provided it is clear that the scale is from G (least efficient) to A (most efficient);
- (k) indication that the 'standard programme' is the standard cleaning cycle to which the information in the label and the fiche relates, that this programme is suitable to clean normally soiled tableware, and that it is the most efficient programme in terms of combined energy and water consumption;
- (l) programme time for the standard cleaning cycle, in minutes and rounded to the nearest integer;
- (m) the duration of the left-on mode (T_l) if the household dishwasher is equipped with a power management system;
- (n) airborne acoustical noise emissions expressed in dB(A) re 1 pW and rounded to the nearest integer;
- (o) if the household dishwasher is intended to be built-in, an indication to this effect.

2. One fiche may cover a number of household dishwasher models supplied by the same supplier.

3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1 not already displayed on the label shall also be provided.

ANNEX III

Technical documentation

1. The technical documentation referred to in Article 3(c) shall include:

- (a) the name and address of the supplier;
- (b) a general description of the dishwasher model, sufficient for it to be unequivocally and easily identified;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) identification and signature of the person empowered to bind the supplier;
- (f) technical parameters for measurements as follows:
 - (i) energy consumption;
 - (ii) water consumption;
 - (iii) programme time;
 - (iv) drying efficiency;
 - (v) power consumption in 'off-mode';
 - (vi) power consumption in 'left-on mode';
 - (vii) 'left-on mode' duration;
 - (viii) airborne acoustical noise emissions;
- (g) the results of calculations performed in accordance with Annex VII.

2. Where the information included in the technical documentation file for a particular household dishwasher model has been obtained by calculation on the basis of design, or extrapolation from other equivalent household dishwashers, or both, the documentation shall include details of such calculations or extrapolations, or both, and of tests undertaken by suppliers to verify the accuracy of the calculations undertaken. The information shall also include a list of all other equivalent household dishwasher models where the information was obtained on the same basis.

ANNEX IV

Information to be provided in the cases where end-users cannot be expected to see the product displayed

1. The information referred to in Article 4(b) shall be provided in the following order:

(a) the energy efficiency class, as defined in point 1 of Annex VI;

(b) the rated capacity in standard place settings for the standard cleaning cycle;

(c) the annual energy consumption (AE_c) in kWh per year, rounded up to the nearest integer and calculated in accordance with point 1(b) of Annex VII;

(d) the annual water consumption (AW_c) in litres per year, rounded up to the nearest integer and calculated in accordance with point 3 of Annex VII;

(e) the drying efficiency class in accordance with point 2 of Annex VI;

(f) airborne acoustical noise emissions in dB(A) re 1 pW and rounded to the nearest integer;

(g) if the model is intended to be built-in, an indication to this effect.

2. Where other information contained in the product fiche is also provided, it shall be in the form and order specified in Annex II.

3. The size and font in which all the information referred in this Annex is printed or shown shall be legible.

ANNEX V⁴

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Contracting Party authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, for the requirements referred to in this Annex, the authorities of the Contracting Parties shall apply the following procedure:

- (1) The Contracting Parties authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 5(b) of Directive 2010/30/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports pursuant to point (iii) of the abovementioned Article; and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the Contracting Party authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent household dishwasher models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the Contracting Party authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.
- (5) The model shall be considered to comply with the applicable requirements if, for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 1.
- (6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent household dishwasher models in the supplier's technical documentation shall be considered not to comply with this Delegated Regulation.
- (7) The Contracting Party authorities shall provide all relevant information to the authorities of the other Contracting Parties and to the Secretariat without delay after a decision being

⁴ Annex V is replaced in accordance with Article 1 and Annex I of Delegated Regulation (EU) 2017/254, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

taken on the non-compliance of the model according to points 3 and 6.

Contracting Parties' authorities shall use measurement procedures which take into account the generally recognised, state-of-the-art, reliable, accurate and reproducible measurement methods, including methods set out in documents whose reference numbers have been published for that purpose in a dedicated section of the website of the Energy Community. The Contracting Party authorities shall use the measurement and calculation methods set out in Annex VII.

The Contracting Party authorities shall only apply the verification tolerances that are set out in Table 1 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 1
Verification tolerances

Parameters	Verification tolerances
Annual energy consumption (AE_c)	The determined value shall not exceed the declared value of AE_c by more than 10 %.
Water consumption (W_t)	The determined value shall not exceed the declared value of W_t by more than 10 %.
Drying efficiency index (I_D)	The determined value shall not be less than the declared value of I_D by more than 19 %.
Energy consumption (E_t)	The determined value shall not exceed the declared value of E_t by more than 10 %. Where three additional units need to be selected, the arithmetic mean of the determined values of these three units shall not exceed the declared value of E_t by more than 6 %.
Programme time (T_t)	The determined value shall not exceed the declared values T_t by more than 10 %.
Power consumption in off mode and left-on mode (P_o and P_l)	The determined value of power consumption P_o and P_l of more than 1,00 W shall not exceed the declared values of P_o and P_l by more than 10 %. The determined value of power consumption P_o and P_l of less than or equal to 1,00 W shall not exceed the declared value of P_o and P_l by more than 0,10 W.
Duration of left-on mode (T_l)	The determined value shall not exceed the declared value of T_l by more than 10 %.
Airborne acoustical noise emissions	The determined value shall meet the declared value.

ANNEX VI

Energy efficiency classes and drying efficiency classes

1. ENERGY EFFICIENCY CLASSES

The energy efficiency class of a household dishwasher shall be determined on the basis of its Energy Efficiency Index (EEI) as set out in Table 1.

The Energy Efficiency Index (EEI) of a household dishwasher shall be calculated in accordance with point 1 of Annex VII.

Table 1
Energy efficiency classes

Energy Efficiency Class	Energy Efficiency Index
A+++ (most efficient)	$EEI < 50$
A++	$50 \leq EEI < 56$
A+	$56 \leq EEI < 63$
A	$63 \leq EEI < 71$
B	$71 \leq EEI < 80$
C	$80 \leq EEI < 90$
D (least efficient)	$EEI \geq 90$

2. DRYING EFFICIENCY CLASSES

The drying efficiency class of a household dishwasher shall be determined on the basis of its Drying Efficiency Index (I_d) as set out in Table 2.

The Drying Efficiency Index (I_d) shall be calculated in accordance with point 2 of Annex VII.

Table 2
Drying efficiency classes

Drying Efficiency Class	Drying Efficiency Index
A	$I_d > 1.08$
B	$1.08 \geq I_d > 0.86$
C	$0.86 \geq I_d > 0.69$
D	$0.69 \geq I_d > 0.55$
E	$0.55 \geq I_d > 0.44$
F	$0.44 \geq I_d > 0.33$
G (least efficient)	$0.33 \geq I_d$

ANNEX VII

Method for calculating the energy efficiency index, the drying efficiency index and water consumption

1. CALCULATION OF THE ENERGY EFFICIENCY INDEX

For the calculation of the Energy Efficiency Index (EEI) of a household dishwasher model, the annual energy consumption of the household dishwasher is compared to its standard annual energy consumption.

(a) The Energy Efficiency Index (EEI) is calculated as follows and rounded to one decimal place:

$$EEI = \frac{AE_C}{SAE_C} \times 100$$

where:

- AE_C = annual energy consumption of the household dishwasher;
- SAE_C = standard annual energy consumption of the household dishwasher.

(b) The annual energy consumption (AE_C) is calculated in kWh/year as follows and rounded to two decimal places:

$$AE_C = E_t \times 280 + \frac{\left[P_o \times \frac{525\,600 - (T_t \times 280)}{2} + P_l \times \frac{525\,600 - (T_t \times 280)}{2} \right]}{60 \times 1\,000}$$

where:

- E_t = energy consumption for the standard cycle, in kWh and rounded to three decimal places;
- P_l = power in 'left-on mode' for the standard cleaning cycle, in W and rounded to two decimal places;
- P_o = power in 'off-mode' for the standard cleaning cycle, in W and rounded to two decimal places;
- T_t = programme time for the standard cleaning cycle, in minutes and rounded to the nearest minute;
- 280 = total number of standard cleaning cycles per year;

(ii) Where the household dishwasher is equipped with a power management system, with the household dishwasher reverting automatically to 'off-mode' after the end of the programme, AE_C is calculated taking into consideration the effective duration of 'left-on mode', according to the following formula:

$$AE_C = E_t \times 280 + \frac{\{(P_l \times T_l \times 280) + P_o \times [525\,600 - (T_t \times 280) - (T_l \times 280)]\}}{60 \times 1\,000}$$

where:

- T_l = measured time in 'left-on mode' for the standard cleaning cycle, in minutes and rounded to the nearest minute;
- 280 = total number of standard cleaning cycles per year.

(c) The standard annual energy consumption (SAE_C) is calculated in kWh/year as follows and rounded to two decimal places:

(i) for household dishwashers with rated capacity $ps \geq 10$ and width > 50 cm:

$$SAE_C = 25,2 \times ps + 378$$

(ii) for household dishwashers with rated capacity $ps \leq 9$ and household dishwashers with rated capacity $9 < ps \leq 11$ and width ≤ 50 cm:

$$SAE_C = 25,2 \times ps + 126$$

where:

– ps = number of place settings.

2. CALCULATION OF THE DRYING EFFICIENCY INDEX

For the calculation of the Drying Efficiency Index (I_D) of a household dishwasher model, the drying efficiency of the household dishwasher is compared to the drying efficiency of a reference dishwasher, where the reference dishwasher shall have the characteristics indicated in the generally recognised state-of-the-art measurement methods, including methods set out in documents, the reference numbers of which have been published for that purpose in the Official Journal of the European Union.

(a) The Drying Efficiency Index (I_D) is calculated as follows and rounded to two decimal places:

$$\ln I_D = \frac{1}{n} \times \sum_{i=1}^n \ln \left(\frac{D_{T,i}}{D_{R,i}} \right)$$

$$I_D = \exp(\ln I_D)$$

where:

- $D_{T,i}$ = drying efficiency of the household dishwasher under test for one test cycle (i);
- $D_{R,i}$ = drying efficiency of the reference dishwasher for one test cycle (i);
- n = number of test cycles, $n \geq 5$.

(b) The drying efficiency (D) is the average of the wet score of each load item after completion of a standard cleaning cycle. The wet score is calculated as shown in Table 1:

Table 1

Number of water traces (W_T) or wet streak (W_S)	Total wet area (A_w) in mm ²	Wet score
$W_T = 0$ and $W_S = 0$	Not applicable	2 (most efficient)
$1 < W_T \leq 2$ or $W_S = 1$	$A_w < 50$	1
$2 < W_T$ or $W_S = 2$ or $W_S = 1$ and $W_T = 1$	$A_w > 50$	0 (least efficient)

3. CALCULATION OF THE ANNUAL WATER CONSUMPTION

The annual water consumption (AW_C) of a household dishwasher is calculated, in litres and rounded up to the nearest integer, as:

$$AW_C = W_t \times 280$$

where:

– W_t = water consumption for the standard cleaning cycle, in litres and rounded to one decimal place.

ANNEX VIII⁵

Information to be provided in the case of sale, hire or hire-purchase through the internet

(1) For the purpose of points 2 to 5 of this Annex the following definitions shall apply:

(a) “display mechanism” means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

(b) “nested display” means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

(c) “tactile screenf” means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

(d) “alternative text” means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

(2) The appropriate label made available by suppliers in accordance with Article 3(f) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 2 of Annex I. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

(3) The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;

(b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and

(c) have one of the following two formats:



(4) In the case of nested display, the sequence of display of the label shall be as follows:

(a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the image shall link to the label;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

⁵ Annex VIII is added in accordance with Article 1(3) of Delegated Regulation (EU) 518/2014, as incorporated and adapted by Ministerial Council Decision 2018/03/MC-EnC

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

(5) The appropriate product fiche made available by suppliers in accordance with Article 3(g) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate "Product fiche". If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

DIRECTIVE 96/60/EC of 19 September 1996 implementing Directive 92/75/EEC with regard to energy labelling of household combined washer-driers

Incorporated and adapted by Ministerial Council Decision 2010/02/MC-EnC of 24 September 2010 amending Decision 2009/05/MC-EnC of 18 December 2009 on the implementation of certain Directives on Energy Efficiency.

*The adaptations made by Ministerial Council Decision 2010/02/MC-EnC are highlighted in **bold and blue**.*

Article 1

1. This Directive shall apply to electric mains operated household combined washer-driers. Appliances that can also use other energy sources are excluded.
2. The information required by this Directive shall be measured in accordance with harmonized standards, the reference numbers of which have been published in the Official Journal of the European Communities and for which **Contracting Parties** have published the reference numbers of the national standards transposing those harmonized standards. Throughout this Directive any provisions requiring the giving of information relating to noise shall apply only where that information is required pursuant to Article 3 of Council Directive 86/594/EEC. This information, where required, shall be measured in accordance with that Directive.
3. The harmonized standards referred to in paragraph 2 shall be drawn up under mandate from the Commission in accordance with Directive 83/189/EEC.
4. In this Directive, except where the context otherwise requires, expressions used have the same meaning as in Directive 92/75/EEC.

Article 2

1. The technical documentation referred to in Article 2 (3) of Directive 92/75/EEC shall include:
 - the name and address of the supplier,
 - a general description of the model, sufficient for it to be uniquely identified,
 - information, including drawings as relevant, on the main design features of the model and in particular items which appreciably affect its energy consumption,
 - reports of relevant measurement tests carried out on the model under the test procedures of the harmonized standards referred to in Article 1 (2) of this Directive,
 - operating instructions, if any.
2. The label referred to in Article 2 (1) of Directive 92/75/EEC shall be as specified in Annex I to this Directive. The label shall be placed on the outside of the front or top of the appliance, in such a way as to be clearly visible and not obscured.
3. The content and format of the fiche referred to in Article 2 (1) of Directive 92/75/EEC shall be as specified

in Annex II to this Directive.

4. In the circumstances covered by Article 5 of Directive 92/75/EEC, and where the offer for sale, hire or hire purchase is provided by means of a printed communication, such as a mail order catalogue, then that printed communication shall include all the information specified in Annex III to this Directive.

5. The energy efficiency class of an appliance, and its washing performance class, shall be as determined in accordance with Annex IV.

Article 3

Contracting Parties shall take all necessary measures to ensure that all suppliers and dealers established in their territory fulfil their obligations under this Directive.

Article 4

1. The Contracting Parties shall implement this Directive by 31 December 2011.

However, **Contracting Parties** shall, until **30 June 2012**, permit:

- the placing on the market, the commercialization and/or the display of products and
- the distribution of printed communications referred to in Article 2 (4) which do not conform with this Directive.

When **Contracting Parties** adopt these provisions, these shall contain a reference to this Directive or shall be accompanied by such reference at the time of their official publication. The procedure for such reference shall be adopted by **Contracting Parties**.

2. **Contracting Parties** shall communicate to the **Secretariat** the text of the provisions of national law which they adopt in the field covered by this Directive.

Article 5 and 6¹

This Decision [2010/02/MC-EnC] enters into force upon its adoption and is addressed to the Contracting Parties.

Article 2(5) of Decision 2010/02/MC-EnC

The Secretariat shall monitor and review the implementation of [this] Directive ... and shall submit a progress report to the Permanent High Level Group by 30 June 2012.

This Directive will be repealed and new provisions laid down by Delegated Regulation, upon proposal by European Commission and adoption by Ministerial Council of the Energy Community

¹ The text displayed here corresponds to Article 3 of Decision 2010/02/MC-EnC.

ANNEX I

The label

Label design

1. The label shall be the appropriate language version, chosen from the following illustration

Energy		Washer-drier	
Manufacturer		Logo	— I
Model		ABC 123	— II
More efficient			— III
A			— IV
B			— V
C			— VI
D			— VII
E			— VIII
F			— IX
G			— X
Less efficient			— XI
Energy consumption kWh <i>(to wash and dry a full capacity wash load at 60 °C)</i>		X.YZ	— XII
Washing (only) kWh <small>Actual energy consumption will depend on how the appliance is used</small>		X.YZ	
Washing performance <small>A: higher G: lower Spin speed (rpm)</small>		A B C D E F G 1 100	
Capacity (cotton) kg	Washing	y.z	
	Drying	y.z	
Water consumption (total) l		yx	
Noise (dB(A) re 1 pW)	Washing	xyz	
	Spinning	xyz	
	Drying	xyz	
Further information is contained in product brochures			
<small>Norm EN 50229 Washer-drier Label Directive No 96/60/EC</small>			

Notes concerning the label

2. The following notes define the information to be included:

Note:

I. Supplier's name or trade mark.

II. Supplier's model identifier.

III. The energy efficiency class of the model, determined in accordance with Annex IV. This indicator letter shall be placed at the same level as the relevant arrow.

IV. Without prejudice to any requirements under the Community Eco-label scheme, where a model has been granted a 'Community Eco-label' pursuant to Council Regulation (EEC) No 880/9², a copy of the Eco-label may be added here. The 'washer-drier label design guide' referred to below, explains how the Eco-label may be included in the label.

V. Energy consumption in kWh per complete operating (washing, spinning and drying) cycle using standard 60° C cotton cycle, and 'dry cotton' drying cycle, determined in accordance with the test procedures of the harmonized standards referred to in Article 1 (2).

VI. Energy consumption in kWh per washing (washing and spinning only) cycle using standard 60° C cotton cycle, determined in accordance with the test procedures of the harmonized standards referred to in Article 1 (2).

VII. Washing performance class determined in accordance with Annex IV.

VIII. Maximum spin speed attained for standard 60° C cotton cycle, determined in accordance with the test procedures of the harmonized standards referred to in Article 1 (2).

IX. Capacity (in kg) of appliance for standard 60° C cotton cycle (without drying), determined in accordance with the harmonized standards referred to in Article 1 (2).

X. Capacity (in kg) of appliance for 'dry cotton' (drying) cycle, determined in accordance with the harmonized standards referred to in Article 1 (2).

XI. Water consumption, in litres, per complete operating (washing, spinning and drying) cycle using standard 60° C cotton washing cycle and 'dry cotton' drying cycle, determined in accordance with the test procedures of the harmonized standards referred to in Article 1 (2).

XII. Where applicable, noise during washing, spinning and drying cycles using standard 60° C cotton washing cycle and 'dry cotton' drying cycle, determined in accordance with Council Directive 86/594/EEC.³

Note:

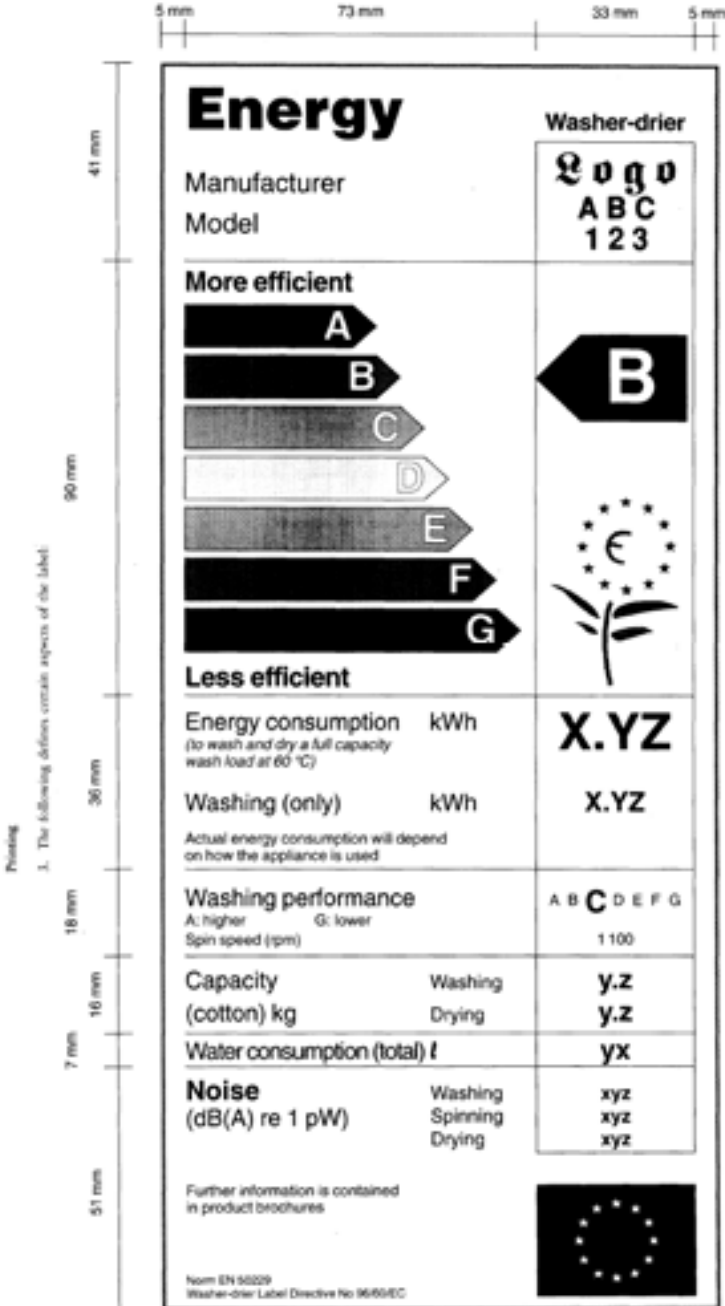
The equivalent terms in other languages to those given above are set out in Annex V.

² OJ No L99, 11.4.1992, p. 1.

³ OJ No L 344, 6.12.1986, p. 24. The relevant noise measurement standards are EN 60704-2-4 for washing and spinning, and EN 60704-2-6 for drying and EN 60704-3.

Printing

3. The following defines certain aspects of the label:



Colours used:

CMYK cyan, magenta, yellow, black.

Ex. 07XO: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black. Arrows

- A: XOXO

- B: 7OXO

- C 3OXO

- D: OOXO

- E: 03XO

- F: 07XO

- G: OXXO

Outline colour X070

All text is in black. The background is white.

Complete printing information is contained in a 'Washer-drier energy label design guide', which is for information only, obtainable from:

The Secretary of the Committee on energy labelling and standard product information for household appliances,

Directorate-General Energy XVII,

European Commission,

Rue de la Loi/Wetstraat 200,

B-1049 Brussels.

ANNEX II

The fiche

The fiche shall contain the following information. The information may be given in the form of a table covering a number of models supplied by the same supplier. The information shall be given in the order specified below unless it is contained in a more general description of the appliance:

1. Supplier's trade mark.
2. Supplier's model identifier.
3. The energy efficiency class of the model determined in accordance with Annex IV. Expressed as ,Energy efficiency class ... on a scale of A (more efficient) to G (less efficient)'. Where this information is provided in a table this may be expressed by other means provided it is clear that the scale is from A (more efficient) to G (less efficient).
4. Where the information is provided in a table, and where some of the appliances listed in the table have been granted a ,Community Eco-label' pursuant to Regulation (EEC) No 880/92, this information may be included here. In this case the row heading shall state ,Community Eco-label', and the entry shall consist of a copy of the Eco-label mark. This provision is without prejudice to any requirements under the EU Eco-label scheme.
5. Energy consumption for washing, spinning, and drying in kWh per complete operating cycle as defined in Annex I note V.
6. Energy consumption for washing and spinning only, in kWh per washing cycle as defined in Annex I note VI.
7. Washing performance class determined in accordance with Annex IV. Expressed as ,Washing performance class ... on a scale of A (higher) to G (lower)'. This may be expressed by other means provided it is clear that the scale is from A (higher) to G (lower).
8. Water extraction efficiency for a standard 60° C cotton washing cycle, determined in accordance with the test procedures of the harmonized standards referred to in Article 1 (2). Expressed as ,Water remaining after spin ... % (as a proportion of dry weight of wash)'.
9. Maximum spin speed attained as defined in Annex I note VIII.
10. Washing capacity of appliance for a standard 60° C cotton washing cycle, as defined in Annex I note IX.
11. Drying capacity of appliance for a standard ,dry cotton' drying cycle, as defined in Annex I note X.
12. Water consumption for washing, spinning and drying, in litres per complete operating cycle as defined in Annex I note XI.
13. Water consumption for washing and spinning only, in litres, per standard 60°C cotton washing (and spinning) cycle determined in accordance with the test procedures of the harmonized standards referred to in Article 1 (2).
14. Washing and drying time. Programme time for complete operating cycle (60° C cotton washing and ,dry cotton' drying), for rated washing capacity, determined in accordance with the test procedures of the harmonized standards referred to in Article 1 (2).
15. Suppliers may include information under points 5 to 14 above in respect of other wash and/or drying cycles.

16. The consumption of energy and water equal to 200 times the consumption expressed in points 5 (energy) and 12 (water). This shall be expressed as ,estimated annual consumption for a four-person household, always using the drier (200 cycles)'.

17. The consumption of energy and water equal to 200 times the consumption expressed in points 6 (energy) and 13 (water). This shall be expressed as ,estimated annual consuming for four-person household, never using the drier (200 cycles)'.

18. Where applicable, noise during washing, spinning and drying cycles using standard 60° C cotton washing cycle and ,dry cotton' drying cycle, in accordance with Directive 86/594/EEC.

The information on the label may be given in the form of a representation of the label in colour or in black and white.

Note:

The equivalent terms in other languages to those given above are set out in Annex V.

ANNEX III**Mail order and other distance selling**

Mail order catalogues and other printed communications referred to in Article 2 (4) shall contain the following information, given in the order specified:

1. Energy efficiency class (Annex 11 point 3)
2. Energy consumption (washing, spinning, drying) (Annex 11 point 5)
3. Energy consumption (washing, spinning only) (Annex 11 point 6)
4. Washing performance class (Annex 11 point 7)
5. Water extraction efficiency (Annex 11 point 8)
6. Maximum spin speed (Annex 11 point 9)
7. Capacity (washing) (Annex 11 point 10)
8. Capacity (drying) (Annex 11 point 11)
9. Water consumption (washing, spinning, drying) (Annex 11 point 12)
10. Water consumption (washing, spinning only) (Annex 11 point 13)
11. Estimated annual consumption for a four-person household, always using the drier (200 cycles) (Annex 11 point 16)
12. Estimated annual consumption for a four-person household, never using the drier (200 cycles) (Annex 11 point 17)
13. Noise, where applicable (Annex 11 point 18)

Where other information contained in the fiche is provided, it shall be in the form specified in Annex 11 and shall be included in the above table in the order required for the fiche.

Note:

The equivalent terms in other languages to those given above are set out in Annex V.

ANNEX IV

Energy efficiency class

The energy efficiency class of an appliance shall be determined in accordance with Table 1:

Table 1

Energy Efficiency class	Energy consumption 'C' in kWh per kg complete operating (washing, spinning and drying) cycle using standard 60°C cotton cycle, and 'dry cotton' drying cycle, determined in accordance with the test procedures of the harmonized standards referred to in Article 1 (2)
A	$C \leq 0.68$
B	$0.68 < C \leq 0.81$
C	$0.81 < C \leq 0.93$
D	$0.93 < C \leq 1.05$
E	$1.05 < C \leq 1.17$
F	$1.17 < C \leq 1.29$
G	$1.29 < C$

The washing performance class of an appliance shall be determined in accordance with Table 2:

Table 2

Washing performance class	Washing standard index 'P' as defined in the harmonized standards referred in Article 1 (2), using a standard 60°C cotton cycle
A	$P > 1.03$
B	$1.03 \geq P > 1.00$
C	$1.00 \geq P > 0.97$
D	$0.97 \geq P > 0.94$
E	$0.94 \geq P > 0.91$
F	$0.91 \geq P > 0.88$
G	$0.88 \geq P$





PART II

ACQUIS COMMUNAUTAIRE

STATISTICS

REGULATION (EC) 1099/2008 of 22 October 2008 on energy statistics

Incorporated and adapted by Ministerial Council Decision 2012/02/MC-EnC of 18 October 2012 concerning the implementation of the rules of energy statistics in the Energy Community, amended by Decision 2013/02/MC-EnC of 24 October 2013 on implementation of Regulation (EU) 147/2013 on statistics, by Decision 2015/02/MC-EnC of 16 October 2015 on implementation of Regulation 431/2014 and amending Regulation 1099/2008 on Energy Statistics and by Decision 2021/12/MC-EnC of 30 November 2021 on adapting and implementing Commission Regulation (EU) 2019/2146

*The adaptations made by Ministerial Council Decisions 2012/02/MC-EnC, 2013/02/MC-EnC, 2015/02/MC-EnC and 2021/12/MC-EnC are highlighted in **blue and bold**.*

Article 1

Subject matter and scope

1. This Regulation establishes a common framework for the production, transmission, evaluation and dissemination of comparable energy statistics in the Community.
2. This Regulation shall apply to statistical data concerning energy products and their aggregates in the Community.

Article 2

Definitions

For the purpose of this Regulation, the following definitions shall apply:

- (a) "Community statistics" mean Community statistics as defined in the first indent of Article 2 of Regulation (EC) No 322/97;
- (b) "production of statistics" means production of statistics as defined in the second indent of Article 2 of Regulation (EC) No 322/97;
- (c) "Commission (Eurostat)" means the Community authority as defined in the fourth indent of Article 2 of Regulation (EC) No 322/97;
- (d) "energy products" mean combustible fuels, heat, renewable energy, electricity, or any other form of energy;
- (e) "aggregates" mean data aggregated at national level on the treatment or use of energy products, namely production, trade, stocks, transformation, consumption, and structural characteristics of the energy system such as installed capacities for electricity generation or production capacities for oil products;
- (f) "quality of data" means the following aspects of statistical quality: relevance, accuracy, timeliness and punctuality, accessibility and clarity, comparability, coherence and completeness.

Article 3

Data sources

1. While applying the principles of maintaining a reduced burden on respondents and of administrative simplification, Member States¹ shall compile data concerning energy products and their aggregates in the Community from the following sources:

(a) specific statistical surveys addressed to the primary and transformed energy producers and traders, distributors and transporters, importers and exporters of energy products;

(b) other statistical surveys addressed to final energy users in the sectors of manufacturing industry, transport, and other sectors, including households;

(c) other statistical estimation procedures or other sources, including administrative sources, such as regulators of the electricity and gas markets.

2. Member States shall lay down the detailed rules concerning the reporting of the data needed for the national statistics as specified in Article 4 by undertakings and other sources.

3. The list of data sources may be modified in accordance with the regulatory procedure with scrutiny referred to in Article 11(2).

Article 4

Aggregates, energy products and the transmission frequency of national statistics

1. The national statistics to be reported shall be as set out in the Annexes. They shall be transmitted with the following frequencies:

(a) annual, for the energy statistics in Annex B;

(b) monthly, for the energy statistics in Annex C;

(c) short-term monthly, for the energy statistics in Annex D.-

2. Applicable clarifications or definitions of the technical terms used are provided in the individual Annexes and also in Annex A (Clarifications of terminology).

3. The data to be forwarded and the applicable clarifications or definitions may be modified in accordance with the regulatory procedure with scrutiny referred to in Article 11(2).

Article 5

Transmission and dissemination

1. Member States shall transmit to the Commission (Eurostat) the national statistics referred to in Article 4.

2. The arrangements for their transmission, including the applicable time limits, derogations and exemptions therefrom, shall be as set out in the Annexes.

3. The arrangements for the transmission of the national statistics may be modified in accordance with

¹ Decision 2012/02/MC-EnC incorporating this Regulation is addressed to Contracting Parties.

the regulatory procedure with scrutiny referred in Article 11(2).

4. At the duly justified request of a Member States, additional exemptions or derogations may be granted by the Commission in accordance with the regulatory procedure referred to in Article 11(3), for those parts of the national statistics for which the collection would lead to an excessive burden on respondents.

5. The Commission (Eurostat) shall disseminate yearly energy statistics by 31 January of the second year following the reported period.

Article 6

Quality assessment and reports

1. Member States shall ensure the quality of the data transmitted.

2. Every reasonable effort shall be undertaken to ensure coherence between energy data declared in accordance with Annex B and data declared in accordance with Commission Decision 2005/166/EC of 10 February 2005 laying down the rules for implementing Decision No 280/2004/EC of the European Parliament and of the Council concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol.

3. For the purposes of this Regulation, the following quality assessment dimensions shall apply to the data to be transmitted:

(a) "relevance" shall refer to the degree to which statistics meet current and potential needs of the users;

(b) "accuracy" shall refer to the closeness of estimates to the unknown true values;

(c) "timeliness" shall refer to the delay between the availability of the information and the event or phenomenon it describes;

(d) "punctuality" shall refer to the delay between the date of the release of the data and the target date when it should have been delivered;

(e) "accessibility" and "clarity" shall refer to the conditions and modalities by which users can obtain, use and interpret data;

(f) "comparability" shall refer to the measurement of the impact of differences in applied statistical concepts and measurement tools and procedures where statistics are compared between geographical areas, sectoral domains or over time;

(g) "coherence" shall refer to the adequacy of the data to be reliably combined in different ways and for various uses.

4. Every five years, Member States shall provide the Commission (Eurostat) with a report on the quality of the data transmitted as well as on any methodological changes that have been made.

5. Within six months of receipt of a request from the Commission (Eurostat), and in order to allow it to assess the quality of the data transmitted, Member States shall send to the Commission (Eurostat) a report containing any relevant information concerning the implementation of this Regulation.

Article 7

Time reference and frequency

Member States shall compile all data specified in this Regulation from the beginning of the calendar year following the adoption of this Regulation, and shall transmit them from then onwards with the frequencies laid down in Article 4(1).

Article 8

Annual nuclear statistics

The Commission (Eurostat) shall, in cooperation with the nuclear energy sector in the EU, define a set of annual nuclear statistics which shall be reported and disseminated from 2009 onwards, that year being the first reported period, without prejudice to confidentiality, where it is necessary, and avoiding any duplication of data collection, while at the same time keeping production costs low and the reporting burden reasonable.

The set of annual nuclear statistics shall be established and may be modified in accordance with the regulatory procedure with scrutiny referred to in Article 11(2).

Article 9

Renewable energy statistics and final energy consumption statistics

1. With a view to improving the quality of renewable energy and final energy consumption statistics, the Commission (Eurostat), in collaboration with the Member States, shall make sure that these statistics are comparable, transparent, detailed and flexible by:

(a) reviewing the methodology used to generate renewable energy statistics in order to make available additional, pertinent, detailed statistics on each renewable energy source, annually and in a cost-effective manner. The Commission (Eurostat) shall present and disseminate the statistics generated from 2010 (reference year) onwards;

(b) reviewing and determining the methodology used at national and Community level to generate final energy consumption statistics (sources, variables, quality, costs) based on the current situation, existing studies and feasibility pilot studies, as well as cost-benefit analyses yet to be conducted, and evaluating the findings of the pilot studies and cost-benefit analyses with a view to establishing breakdown keys for final energies by sector and main energy uses and gradually integrating the resulting elements into the statistics from 2012 (reference year) onwards.

2. The set of renewable energy statistics may be modified in accordance with the regulatory procedure with scrutiny referred to in Article 11(2).

3. The set of final energy consumption statistics shall be established and may be modified in accordance with the regulatory procedure with scrutiny referred to in Article 11(2).

Article 10

Implementing measures

1. The following measures necessary for implementation of this Regulation, designed to amend non-essential elements of this Regulation, *inter alia*, by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 11(2):

- (a) modifications to the list of data sources (Article 3(3));
 - (b) modifications to the national statistics and to the applicable clarifications or definitions (Article 4(3));
 - (c) modifications to the transmission arrangements (Article 5(3));
 - (d) establishment of and modifications to the annual nuclear statistics (Article 8(2));
 - (e) modifications to the renewable energy statistics (Article 9(2));
 - (f) establishment of and modifications to the final energy consumption statistics (Article 9(3)).
2. Additional exemptions or derogations (Article 5(4)) shall be granted in accordance with the regulatory procedure referred to in Article 11(3).
3. Consideration is to be given to the principle that additional costs and the reporting burden remain within reasonable limits.

Article 11 **Committee**

<...>

Article 12 **Entry into force and Addressees²**

This Decision [2012/02/MC-EnC] enters into force upon its adoption and is addressed to the Contracting Parties.

Article 1 of Decision 2012/02/MC-EnC

Each Contracting Party shall implement Regulation (EC) 1099/2008 of 22 October 2008 on energy statistics not later than 31 December 2013.

Article 3 of Decision 2012/02/MC-EnC

The Secretariat shall monitor and review the preparation of the implementation of Regulation (EC) No 1099/2008 <...> in the Contracting Parties and shall submit an annual progress report to the Ministerial Council, the first of which shall be submitted in 2013.

Article 1 of Decision 2013/02/MC-EnC

Each Contracting Part shall implement Commission Regulation (EU) No 147/2013 of 13 February 2013 amending Regulation (EC) No 1099/2008 of the European Parliament and of the

² The text displayed here corresponds to Article 4 of Decision 2012/02/MC-EnC.

Council on energy statistics, as regards the implementation of updates for the monthly and annual energy statistics not later than 31 December 2013.

Article 1 of Decision 2015/02/MC-EnC

Each Contracting Party shall implement Commission Regulation (EU) No 431/2014 of 24 April 2014 amending Regulation (EC) No 1099/2008 of the European Parliament and of the Council on energy statistics, as regards the implementation of annual statistics on energy consumption in households, not later than 31 December 2016.

Article 1 of Decision 2021/12/MC-EnC

Each Contracting Party shall implement Commission Regulation (EU) 2019/2146 of 26 November 2019 amending Regulation (EC) No 1099/2008 of the European Parliament and of the Council on energy statistics, as regards the implementation of updates for the annual, monthly and short-term monthly energy statistics not later than [31 December 2021].

The annual and monthly statistics, as set out in the Annexes to Regulation (EU) 2019/2146, shall be reported for the reference period starting from 1 January 2022.

The monthly statistics related to Annex D, point 2 on Crude oil imports and supply shall be reported for the reference months starting from January 2023.

Article 3 of Decision 2021/12/MC-EnC

Commission Regulations amending Regulation (EC) No 1099/2008 of the European Parliament and of the Council may need to be adapted to the institutional framework of the Energy Community. They shall be adapted and adopted by the Permanent High Level Group following the procedure laid down in Article 79 of the Treaty establishing the Energy Community.

ANNEX A

CLARIFICATIONS OF TERMINOLOGY

This Annex supplies explanations, geographical notes and definitions of terms that are used in the other annexes, unless specified differently in these annexes.

1. GEOGRAPHICAL NOTES

For statistical reporting purposes only, the following geographical definitions apply:

- Australia excludes its external territories,
- Denmark excludes the Faeroe Islands and Greenland,
- France includes Monaco and the French overseas departments of Guadeloupe, Martinique, Guyane, Reunion and Mayotte,
- Italy includes San Marino and the Vatican (Holy See),
- Japan includes Okinawa
- Portugal includes the Açores and Madeira,
- Spain includes the Canary Islands, the Balearic Islands, and Ceuta and Melilla,
- Switzerland does not include Liechtenstein,
- United States includes the 50 states, the District of Columbia, the US Virgin Islands, Puerto Rico and Guam.

2. AGGREGATES

Producers of electricity and heat are classified according to the purpose of production:

- main activity producers are privately- or publicly owned producers that generate electricity and/or heat for sale to third parties as their principal activity,
- autoproducers are privately- or publicly owned producers that generate electricity and/or heat wholly or partly for their own use as an activity which supports their primary activity.

Note: the Commission may further clarify the terminology by adding relevant NACE ⁽³⁾ references in accordance with the regulatory procedure with scrutiny referred to in Article 11(2), after a revision of the NACE classification has entered into force.

2.1. Supply

2.1.1. Production/Indigenous Production

Quantities of fuels extracted or produced are calculated after any operation that removes inert matter. Production includes the quantities consumed by the producer during the production process (e.g. for heating or operation of equipment and auxiliaries), as well as supplies to other producers of energy for transformation or other uses.

'Indigenous production' means production from resources within a specific territory — national territory of the reporting country.

³ NACE Rev. 2 – Statistical Classification of Economic Activities in the European Community, Rev. 2 (2008)

2.1.2. Recovered products

Applies to hard coal only. Slurries and waste-heap shale recovered by mines.

2.1.3. Receipts from other sources

Quantities of fuels whose production is covered in other fuel reporting, but which are mixed in other fuel and consumed as a mix. Further details of this component are to be provided as:

- Receipts from other sources: Coal
- Receipts from other sources: Oil and petroleum products
- Receipts from other sources: Natural Gas
- Receipts from other sources: Renewables

2.1.4. Imports/Exports

Unless otherwise specified, 'imports' refer to ultimate origin (the country in which the energy product was produced) for use in the country and 'exports' refer to the ultimate country of consumption of the produced energy product. Amounts are considered as imported or exported when they have crossed the political boundaries of the country, whether customs clearance has taken place or not.

Where no origin or destination can be reported 'Non-specified/Other' may be used.

2.1.5. International Marine Bunkers

Quantities of fuels delivered to ships of all flags that are engaged in international navigation. The international navigation may take place at sea, on inland lakes and waterways, and in coastal waters. The following are excluded:

- consumption by ships engaged in domestic navigation; the domestic/international split should be determined based on port of departure and port of arrival, and not by the flag or nationality of the ship;
- consumption by fishing vessels;
- consumption by military forces.

2.1.6. Stock Changes

The difference between the opening stock level and closing stock level for stocks held on national territory. Unless specified differently, a stock build is shown as a negative number and a stock draw is shown as a positive number.

2.1.7. Opening and Closing Total Stocks On National Territory

All stocks on national territory, including stocks held by governments, by major consumers or by stockholding organisations, stocks held on board incoming ocean vessels, stocks held in bonded areas and stocks held for others, whether under bilateral government agreement or not. Opening and closing refers to the first and last day of the reporting period, respectively. Stock includes stocks held in all types of special storage facilities, either on the surface or underground.

2.1.8. Direct use

Oil (Crude oil and petroleum products) used directly without being processed in petroleum refineries. Includes crude oil burned for electricity generation.

2.1.9. Primary Product Receipts

Includes quantities of indigenous or imported crude oil (including condensate) and indigenous NGL⁽⁴⁾ used directly without being processed in a petroleum refinery, and quantities of backflows from the petrochemical industry which, although not primary fuel, are used directly.

2.1.10. Gross Refinery Output

Production of finished products at a refinery or blending plant. Excludes refinery losses, but includes refinery fuel.

2.1.11. Recycled Products

Finished products that pass through the marketing network a second time, after having been delivered to final consumers (e.g. used lubricants which are reprocessed). These quantities should be distinguished from petrochemical backflows.

2.1.12. Backflows

Finished or semi-finished products which are returned from final consumers to refineries for processing, blending or sale. They are usually by-products of petrochemical manufacturing.

2.1.13. Interproduct Transfers

Quantities reclassified either because their specification has changed or because they are blended into another product. A negative entry for one product is compensated by a positive entry (or several entries) for one or several products and vice versa; the total net effect should be zero.

2.1.14. Products Transferred

Imported petroleum products which are reclassified as feedstocks for further processing in the refinery, without delivery to final consumers.

2.1.15. Statistical Differences

Calculated value, defined as difference between calculation from the supply perspective (top-down approach) and the calculation from the consumption perspective (bottom-up approach). Any major statistical differences should be explained.

2.2. Transformation sector

In the transformation sector, only quantities of fuels that were transformed into other fuels shall be reported. Quantities of fuels used for heating, operation of equipment and as general support for transformation should be declared in the energy sector.

2.2.1. Main Activity Producer Electricity ONLY

Quantities of fuels used by main activity producers to produce electricity in electricity-only units/plants.

2.2.2. Main Activity Producer Combined Heat and Power (CHP) Units

Quantities of fuels used by main activity producers to produce electricity and/or heat in CHP units.

2.2.3. Main Activity Producer Heat ONLY

Quantities of fuels used by main activity producers to produce heat in heat-only units/plants.

2.2.4. Autoproducer Electricity ONLY

Quantities of fuels used by autoproducers to produce electricity in electricity-only units/plants.

⁴ Natural gas liquids.

2.2.5. *Autoproducer Combined Heat and Power (CHP) Units*

All quantities of fuels used by autoproducers to produce electricity and the proportional part of fuels used to produce heat sold in CHP units. The proportional part of fuels used to produce heat that was not sold (auto-consumed heat) is to be reported in the relevant sector of final energy consumption based on NACE classification. Heat not sold but delivered to other entities under non-financial agreements or to entities with different ownership shall be reported based on the same principle as heat sold.

2.2.6. *Autoproducer Heat ONLY*

The proportional part of fuels used to produce heat sold in heat-only units/plants by autoproducers. The proportional part of fuels used to produce heat that was not sold (auto-consumed heat) is to be reported in the relevant sector of final energy consumption based on NACE classification. Heat not sold but delivered to other entities under non-financial agreements or to entities with different ownership shall be reported based on the same principle as heat sold.

2.2.7. *Patent Fuel Plants*

Quantities of fuels used in patent fuel plants to produce patent fuel.

2.2.8. *Coke Ovens*

Quantities of fuels used in coke ovens to produce coke oven coke and coke oven gas.

2.2.9. *BKB/PB plants*

Quantities of fuels used to produce brown coal briquettes (BKB) in BKB plants and quantities of fuels used in peat briquette plants to produce peat briquettes (PB).

2.2.10. *Gas Works*

Quantities of fuels used to produce gas work gas in gas works and in coal gasification plants.

2.2.11. *Blast furnace*

Quantities of fuels entering the blast furnace vessel, whether through the top along with the iron ore, or through the tuyeres in the bottom along with the heated blast air.

2.2.12. *Coal Liquefaction*

Quantities of fuel used to produce synthetic oil.

2.2.13. *Gas-to-liquid plants*

Quantities of gaseous fuels converted to liquid fuels.

2.2.14. *Charcoal production plant*

Quantities of solid biofuels converted to charcoal.

2.2.15. *Petroleum refineries*

Quantities of fuels used to produce petroleum products.

2.2.16. *Natural gas blending plants (for blended natural gas)*

Quantities of gases blended with natural gas into the gas grid (gas network).

2.2.17. *For Blending with motor gasoline/diesel/kerosene:*

Quantities of liquid biofuels blended with their fossil counterparts.

2.2.18. *Not Elsewhere Specified*

Quantities of fuels used for transformation activities not included elsewhere. If used, what is included under this heading should be explained in the report.

2.3. Energy sector

Quantities consumed by the energy industry to support extraction (mining, oil and gas production) or plant operations related to transformation activities. This corresponds to NACE Rev. 2 Divisions 05, 06, 19 and 35, NACE Rev. 2 Group 09.1 and NACE Rev. 2 classes 07.21 and 08.92.

Excludes quantities of fuels transformed into another energy form (which should be reported under the transformation sector) or used in support of the operation of oil, gas and coal slurry pipelines (which should be reported in the transport sector).

Includes the manufacture of chemical materials for atomic fission and fusion and the products of these processes.

2.3.1. *Own use of Electricity, CHP and Heat Plants*

Quantities of fuels consumed as energy for support operations at plants with electricity-only, heat-only and CHP units.

2.3.2. *Coal Mines*

Quantities of fuels consumed as energy to support the extraction and preparation of coal within the coal mining industry. Coal burned in pithead power stations should be reported in the transformation sector.

2.3.3. *Patent fuel plants*

Quantities of fuels consumed as energy for support operations at patent fuel plants.

2.3.4. *Coke Ovens*

Quantities of fuels consumed as energy for support operations in coke ovens (coking plants).

2.3.5. *BKB/PB plants*

Quantities of fuels used as energy for support operations in BKB/PB plants (briquetting plants).

2.3.6. *Gas Works/gasification works*

Quantities of fuels consumed as energy for support operations at gas works and coal gasification plants.

2.3.7. *Blast Furnaces*

Quantities of fuels consumed as energy for support operations at blast furnaces.

2.3.8. *Coal Liquefaction*

Quantities of fuels consumed as energy for support operations at coal liquefaction plants.

2.3.9. *Liquefaction (LNG)/regasification*

Quantities of fuels consumed as energy for support operations in natural gas liquefaction and regasification plants.

2.3.10. *Gasification plants (biogas)*

Quantities of fuels consumed as energy for support operations in biogas gasification plants.

2.3.11. *Gas-to-liquid (GTL) plants*

Quantities of fuels consumed as energy for support operations in gas-to-liquid conversion plants.

2.3.12. Charcoal production plants

Quantities of fuels consumed as energy for support operations in charcoal production plants.

2.3.13. Petroleum Refineries

Quantities of fuels consumed as energy for support operations at petroleum refineries.

2.3.14. Oil and Gas extraction

Quantities of fuels consumed in oil and natural gas extraction facilities. Excludes pipeline losses (to be reported as distribution losses) and energy quantities used to operate pipelines (to be reported in the transport sector).

2.3.15. Not elsewhere specified — Energy

Quantities of fuels related to energy activities not included elsewhere. If used, what is included under this heading should be explained in the report.

2.4. Distribution losses

Quantities of fuel losses which occur due to transport and distribution.

2.5. Final non-energy consumption

Quantities of fossil fuels used for non-energy purposes — fuels not combusted.

2.6. Final energy consumption (end-use specifications)

2.6.1. Industry Sector

This refers to fuel quantities consumed by the industrial undertaking in support of its primary activities.

For heat-only or CHP units, only quantities of fuels consumed for the production of heat used by the entity itself (heat auto-consumed) are to be reported. Quantities of fuels consumed for the production of heat sold and for the production of electricity should be reported under the appropriate transformation sector.

2.6.1.1. Mining and Quarrying: NACE Rev. 2 Divisions 07 (excluding 07.21) and 08 (excluding 08.92); NACE Rev. 2 Group 09.9.

2.6.1.1.1. Mining of metal ores [NACE Rev. 2 Division 07; excludes NACE Rev. 2 Class 07.21 Mining of uranium and thorium ores]

2.6.1.1.2. Other mining and quarrying [NACE Rev. 2 Div. 08; excludes NACE Rev. 2 Class 08.92 Extraction of peat]

2.6.1.1.3. Mining support service activities [NACE Rev. 2 Div. 09; excludes NACE Rev. 2 Group 09.1 Support activities for petroleum and natural gas extraction]

2.6.1.2. Food, Beverages and Tobacco: NACE Rev. 2 Divisions 10, 11 and 12.

2.6.1.2.1. Manufacture of food products [NACE Rev. 2 Div. 10]

2.6.1.2.2. Manufacture of beverages [NACE Rev. 2 Div. 11]

2.6.1.2.3. Manufacture of tobacco products [NACE Rev. 2 Div. 12]

2.6.1.3. Textile and Leather [NACE Rev. 2 Div. 13, 14 and 15; includes the Manufacture of textiles, the Manufacture of wearing apparel and the Manufacture of leather and related products]

2.6.1.4. Wood and Wood Products — Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials [NACE Rev. 2 Div. 16]

2.6.1.5. Pulp, Paper and Printing: NACE Rev. 2 Divisions 17 and 18.

- 2.6.1.5.1. Manufacture of paper and paper products [NACE Rev. 2 Div. 17]
- 2.6.1.5.1.1. Manufacture of pulp [NACE Rev. 2 Class 17.11]
- 2.6.1.5.1.2. Other paper and paper products [NACE Rev. 2 Class 17.12 and NACE Rev. 2 Group 17.2]
- 2.6.1.5.2. Printing and reproduction of recorded media [NACE Rev. 2 Div. 18]
- 2.6.1.6. Chemical and Petrochemical: NACE Rev. 2 Divisions 20 and 21.
- 2.6.1.6.1. Manufacture of chemicals and chemical products [NACE Rev. 2 Div. 20]
- 2.6.1.6.2. Manufacture of basic pharmaceutical products and pharmaceutical preparations [NACE Rev. 2 Div. 21]
- 2.6.1.7. Non-Metallic Minerals [NACE Rev. 2 Div. 23]
- 2.6.1.7.1. Manufacture of glass and glass products [NACE Rev. 2 Group 23.1]
- 2.6.1.7.2. Manufacture of cement, lime and plaster (incl. Clinker) [NACE Rev. 2 Group 23.5]
- 2.6.1.7.3. Other non-metallic mineral products [NACE Rev. 2 Groups 23.2, 23.3, 23.4, 23.6, 23.7 and 23.9]
- 2.6.1.8. Iron and Steel [Manufacture of basic metals A: NACE Rev. 2 Groups 24.1, 24.2 and 24.3 and Classes 24.51 and 24.52]
- 2.6.1.9. Non-ferrous metals industries [Manufacture of basic metals B: NACE Rev. 2 Group 24.4 and Classes 24.53 and 24.54]
- 2.6.1.9.1. Aluminium production [NACE Rev. 2 Class 24.42]
- 2.6.1.9.2. Other non-ferrous metals industries [NACE Rev. 2 Group 24.4 — excl. NACE Rev. 2 Class 24.42; NACE Rev. 2 Classes 24.53 and 24.54]
- 2.6.1.10. Machinery: NACE Rev. 2 Divisions 25, 26, 27 and 28.
- 2.6.1.10.1. Manufacture of fabricated metal products, except machinery and equipment [NACE Rev. 2 Div. 25]
- 2.6.1.10.2. Manufacture of computer, electronic and optical products [NACE Rev. 2 Div. 26]
- 2.6.1.10.3. Manufacture of electrical equipment [NACE Rev. 2 Div. 27]
- 2.6.1.10.4. Manufacture of machinery and equipment n.e.c. [NACE Rev. 2 Div. 28]
- 2.6.1.11. Transport Equipment: Industries related to the equipment used for transport [NACE Div. 29 and 30; includes the Manufacture of motor vehicles, trailers and semi-trailers and the Manufacture of other transport equipment]
- 2.6.1.12. Not Elsewhere Specified — Industry: NACE Divisions 22, 31 and 32
- 2.6.1.12.1. Manufacture of rubber and plastic products [NACE Div. 22]
- 2.6.1.12.2. Manufacture of furniture [NACE Rev. 2 Div. 31]
- 2.6.1.12.3. Other manufacturing [NACE Rev. 2 Div. 32]
- 2.6.1.13. Construction [NACE Rev. 2 Div. 41, 42 and 43]
- 2.6.2. *Transport Sector*

Energy used in all transport activities irrespective of the NACE category (economic sector) in which the activity occurs. Fuels used for heating and lighting at railway stations, bus stations, shipping piers and airports should be reported under 'Commercial and Public Services' and not in the transport sector.

2.6.2.1. Rail

Quantities of fuels used by rail traffic, including industrial railways and rail transport as part of urban or suburban transport systems (for example trains, trams, metros).

2.6.2.2. Domestic navigation

Quantities of fuels delivered to vessels of all flags not engaged in international navigation (see international marine bunkers). The domestic/international split should be determined based on the port of departure and port of arrival and not by the flag or nationality of the ship.

2.6.2.3. Road

Quantities of fuels used in road vehicles. Includes fuel used by agricultural vehicles on highways and lubricants for use in road vehicles.

Excludes energy used in stationary engines (see 'Other sector'), for non-highway use in tractors (see 'Agriculture'), military use in road vehicles (see 'Other sector — Not elsewhere specified'), bitumen used in road surfacing and energy used in engines at construction sites (see 'Industry' sub-sector 'Construction').

2.6.2.4. Pipeline Transport

Quantities of fuels used as energy in the support and operation of pipelines transporting gases, liquids, slurries and other commodities. Includes energy used for pump stations and maintenance of the pipeline. Excludes energy used for the pipeline distribution of natural or manufactured gas, hot water or steam from the distributor to final users (to be reported in the energy sector), energy used for the final distribution of water to households, industrial, commercial and other users (to be included in Commercial and Public Services) and losses occurring during the transport between distributor and final users (to be reported as distribution losses).

2.6.2.5. International Aviation

Quantities of fuels delivered to aircrafts for international aviation. The domestic/international split should be determined based on departure and landing locations and not by the nationality of the airline. Excludes fuels used by airlines for their road vehicles (to be reported in 'Not elsewhere specified — Transport') and military use of aviation fuels (to be reported in 'Not Elsewhere Specified — Other').

2.6.2.6. Domestic Aviation

Quantities of fuels delivered to aircraft for domestic aviation. Includes fuel used for purposes other than flying, e.g. the bench testing of engines. The domestic/international split should be determined based on departure and landing locations and not by the nationality of the airline. This includes journeys of considerable length between two airports in a country with overseas territories. Excludes fuels used by airlines for their road vehicles (to be reported in 'Not Elsewhere Specified — Transport') and military use of aviation fuels (to be reported in 'Not Elsewhere Specified — Other').

2.6.2.7. Not Elsewhere Specified — Transport

Quantities of fuels used for transport activities not included elsewhere. Includes fuels used by airlines for their road vehicles and fuels used in ports for ships' unloaders, various types of cranes. If used, what is included under this heading should be explained in the report.

2.6.3. Other Sectors

This category covers quantities of fuels used in sectors not specifically mentioned or not belonging to transformation, energy, industry or transport.

2.6.3.1. Commercial and Public Services

Quantities of fuels consumed by business and offices in the public and private sectors. NACE Rev. 2 Divisions 33, 36, 37, 38, 39, 45, 46, 47, 52, 53, 55, 56, 58, 59, 60, 61, 62, 63, 64, 65, 66, 68, 69, 70, 71, 72, 73, 74, 75, 77, 78, 79, 80, 81, 82, 84 (excluding Class 84.22), 85, 86, 87, 88, 90, 91, 92, 93, 94, 95, 96 and 99. Fuels used for heating and lighting at railway, bus stations, shipping piers and airports should be reported in this category, including fuels used for all non-transport activities of NACE Rev. 2 Division 49, 50 and 51.

2.6.3.2. Households

Quantities of fuels consumed by all households including 'households with employed persons'. NACE Rev. 2 Divisions 97 and 98.

The following specific definitions apply for the households sector:

A household is a person living alone or a group of people living together in the same private dwelling and sharing expenditure, including the joint provision of the essentials of living. The households sector, also known as the residential or domestic sector, is therefore a collective pool of all households in a country.

Collective residences, either permanent (e.g. prisons) or temporary (e.g. hospitals), should be excluded as they are covered under consumption in the service sector. Energy used in transport activities should be reported in the transport sector and not in the households sector.

Energy consumption associated with significant economic activities carried out by households should also be excluded from total household energy consumption. Such activities include agricultural economic activities on small farms and other economic activities carried out in a household's residence and should be reported in the appropriate sector of final consumption.

2.6.3.2.1. Space heating

This energy service refers to the use of energy to provide heat in an interior area of a dwelling.

2.6.3.2.2. Space cooling:

This energy service refers to the use of energy for cooling in a dwelling, by a refrigeration system and/or unit.

Fans, blowers and other appliances not connected to a refrigeration unit are excluded from this section, but should be covered in the 'lighting and electrical appliances' section.

2.6.3.2.3. Water heating:

This energy service refers to the use of energy to heat water for hot running water, bathing, cleaning and other non-cooking applications.

Swimming pool heating is excluded, but should be covered in the 'other end uses' section.

2.6.3.2.4. Cooking:

This energy service refers to the use of energy to prepare meals.

Appliances for auxiliary cooking (microwave ovens, kettles, coffee makers, etc.) are excluded and should be covered in the 'lighting and electrical appliances' section.

2.6.3.2.5. Lighting and electrical appliances (electricity only):

Use of electricity for lighting and any other electrical appliances in a dwelling not considered within other end uses.

2.6.3.2.6. Other end uses:

Any other energy consumption in households, such as use of energy for outdoor and any other activities not included into the five energy end-uses mentioned above (e.g. lawn mowers, swimming pool heating, outdoor heaters, outdoor barbecues, saunas etc.).

2.6.3.3. Agriculture/Forestry

Quantities of fuels consumed by users classified as agriculture, hunting and forestry; NACE Rev. 2 Divisions 01 and 02.

2.6.3.4. Fishing

Quantities of fuels delivered for inland, coastal and deep-sea fishing. Fishing should cover fuels delivered to ships of all flags that have refuelled in the country (including international fishing) and energy used in the fishing industry. NACE Rev. 2 Division 03.

2.6.3.5. Not Elsewhere Specified — Other

Quantities of fuels used for activities not included elsewhere (such as NACE Rev. 2 Class 84.22). This category includes military fuel use for all mobile and stationary consumption (e.g. ships, aircraft, road and energy used in living quarters), regardless of whether the fuel delivered is for the military of that country or for the military of another country. If used, what is included under this heading should be explained in the report.

3. PRODUCTS

3.1. Coal (solid fossil fuels and manufactured gases)

3.1.1. *Hard coal*

Hard coal is a product aggregate equal to the sum of anthracite, coking coal and other bituminous coal.

3.1.2. *Anthracite*

High rank coal used for industrial and household applications. It generally has less than 10 % volatile matter and a high carbon content (about 90 % fixed carbon). Its gross calorific value is greater than 24 000 kJ/kg on an ash-free but moist basis.

3.1.3. *Coking coal*

Bituminous coal with a quality that allows the production of a coke (coke oven coke) suitable to support a blast furnace charge. Its gross calorific value is greater than 24 000 kJ/kg on an ash-free but moist basis.

3.1.4. *Other bituminous coal*

Coal used for steam raising purposes and includes all bituminous coal that is not included under coking coal nor anthracite. It is characterised by higher volatile matter than anthracite (more than 10 %) and lower carbon content (less than 90 % fixed carbon). Its gross calorific value is greater than 24 000 kJ/kg on an ash-free but moist basis.

3.1.5. *Brown coal*

Brown coal is a product aggregate equal to the sum of sub-bituminous coal and lignite.

3.1.6. *Sub-bituminous coal*

Refers to non-agglomerating coal with a gross calorific value between 20 000 kJ/kg and 24 000 kJ/kg containing more than 31 % volatile matter on a dry mineral matter free basis.

3.1.7. Lignite

Non-agglomerating coal with a gross calorific value less than 20 000 kJ/kg and greater than 31 % volatile matter on a dry mineral matter free basis.

3.1.8. Patent fuel

A composition fuel manufactured from hard coal fines with the addition of a binding agent. The amount of patent fuel produced may, therefore, be slightly higher than the actual amount of coal consumed in the transformation process.

3.1.9. Coke oven coke

The solid product obtained from the carbonisation of coal, principally coking coal, at high temperature; it is low in moisture and volatile matter. Coke oven coke is used mainly in the iron and steel industry, acting as an energy source and chemical agent.

Coke breeze and foundry coke are to be reported in this category.

Semi-coke (a solid product obtained from the carbonisation of coal at a low temperature) should be included in this category. Semi-coke is used as a heating fuel or by the transformation plant itself.

This heading also includes coke, coke breeze and semi-coke made from lignite.

3.1.10. Gas coke

By-product of hard coal used for production of town gas in gas works. Gas coke is used for heating purposes.

3.1.11. Coal tar

A result of the destructive distillation of bituminous coal. Coal tar is the liquid by-product of the distillation of coal to make coke in the coke oven process or is produced from brown coal ('low-temperature tar').

3.1.12. BKB (Brown Coal Briquettes)

BKB is a composition fuel manufactured from lignite or sub-bituminous coal, produced by briquetting under high pressure without the addition of a binding agent, including dried lignite fines and dust.

3.1.13. Manufactured gases

Manufactured gases is a product aggregate equal to the sum of gas works gas, coke oven gas, blast furnace gas and other recovered gases.

3.1.14. Gas works gas

Covers all types of gases produced in public utility or private plants whose main purpose is the manufacture, transport and distribution of gas. It includes gas produced by carbonisation (including gas produced by coke ovens and transferred to gas works gas), by total gasification with or without enrichment with oil products (LPG, residual fuel oil, etc.), and by reforming and simple mixing of gases and/or air, including blending with natural gas which will be distributed and consumed through the natural gas grid. The amount of gas resulting from transfers of other coal gases to gas works gas should be reported as the production of the gas works gas.

3.1.15. Coke Oven Gas

Coke oven gas is a gas obtained as a by-product of the manufacture of coke oven coke for the production of iron and steel.

3.1.16. Blast furnace gas

Blast furnace gas is produced during the combustion of coke in blast furnaces in the iron and steel industry. It is recovered and used as a fuel partly within the plant and partly in other steel industry processes or in power stations equipped to burn it.

3.1.17. Other recovered gases

By-product of the production of steel in an oxygen furnace, recovered on leaving the furnace. The gases are also known as converter gas, LD gas or BOS gas. The quantity of recuperated fuel should be reported on a gross calorific value basis. Also covers non-specified manufactured gases not mentioned above, such as combustible gases of solid carbonaceous origin recovered from manufacturing and chemical processes not defined elsewhere.

3.1.18. Peat

Peat is a combustible soft, porous or compressed, sedimentary deposit of plant origin with high water content (up to 90 % in the raw state), easily cut, of light to dark brown colour. Peat includes sod peat and milled peat. Peat used for non-energy purposes is not included.

3.1.19. Peat Products

Products such as peat briquettes derived directly or indirectly from sod peat and milled peat.

3.1.20. Oil shale and oil sands

Oil shale and oil sands are sedimentary rock that contains organic matter in the form of kerogen. Kerogen is a waxy hydrocarbon-rich material regarded as a precursor of petroleum. Oil shale may be burned directly or processed by heating to extract shale oil. Shale oil and other products derived from liquefaction should be reported as other hydrocarbons within petroleum products.

3.2. Natural gas

3.2.1. Natural gas

Natural gas comprises gases occurring in underground deposits, whether liquefied or gaseous, consisting mainly of methane, independent from the extraction method (conventional and non-conventional). It includes both 'non-associated' gas originating from fields producing hydrocarbons only in gaseous form, and 'associated' gas produced in association with crude oil, as well as methane recovered from coal mines (colliery gas) or from coal seams (coal seam gas). Natural gas does not include biogas or manufactured gases. Transfers of these products to the natural gas network are to be reported separately from natural gas. Natural gas includes liquefied natural gas (LNG) and compressed natural gas (CNG).

3.3. Electricity and heat

3.3.1. Electricity

Electricity refers to the transfer of energy through the physical phenomenon involving electric charges and their effects when at rest and in motion. All electricity that is used, produced and consumed is to be reported, including off-grid and self-consumed.

3.3.2. Heat (Derived heat)

Heat refers to the energy obtained from the translational, rotational and vibrational motion of the constituents of matter as well as changes in its physical state. All heat produced, except for heat produced by autoproducers for their own use and not sold, is to be reported; all other forms of heat are reported as use of products from which the heat was produced.

3.4. Oil (Crude oil and petroleum products)

3.4.1. Crude Oil

Crude oil is a mineral oil of natural origin comprising a mixture of hydrocarbons and associated impurities, such as sulphur. It exists in the liquid state under normal surface temperature and pressure and its physical characteristics (density, viscosity, etc.) are highly variable. This category includes field or lease condensate recovered from associated and non-associated gas where it is commingled with the commercial crude oil stream. Report quantities independent from the extraction method (conventional and non-conventional). Crude oil excludes NGL.

3.4.2. Natural gas liquids (NGL)

NGL are liquid or liquefied hydrocarbons recovered from natural gas in separation facilities or gas processing plants. NGL include ethane, propane, butane (normal and iso-), (iso) pentane and pentanes plus (sometimes referred to as natural gasoline or plant condensate).

3.4.3. Refinery Feedstocks

A refinery feedstock is a processed oil destined for further processing (e.g. straight run fuel oil or vacuum gas oil) excluding blending. With further processing, it will be transformed into one or more components and/or finished products. This definition also covers returns from the petrochemical industry to the refining industry (e.g. pyrolysis gasoline, C4 fractions, gasoil and fuel oil fractions).

3.4.4. Additives/Oxygenates

Additives are non-hydrocarbon compounds added to or blended with a petroleum products to modify their properties (octane, cetane, cold properties, etc.). Additives include oxygenates (such as alcohols (methanol, ethanol), ethers (methyl tertiary butyl ether (MTBE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), etc.), esters (such as rapeseed oil or dimethylester, etc.), chemical compounds (such as tetramethyl lead (TML), tetraethyl lead (TEL) and detergents). Quantities of additives/oxygenates (alcohols, ethers, esters and other chemical compounds) reported in this category should relate to the quantities blended with fuels or for fuel use. This category includes biofuels that are blended with liquid fossil fuels.

3.4.5. Biofuels in Additives/Oxygenates

Quantities of liquid biofuels reported in this category relate to blended liquid biofuels and refer only to the liquid biofuel portion and not to the total volume of liquids into which the liquid biofuels are blended. Excludes all liquid biofuels that have not been blended.

3.4.6. Other Hydrocarbons

Synthetic crude oil from tar sands, shale oil, etc., liquids from coal liquefaction, output of liquids from natural gas conversion into gasoline, hydrogen and emulsified oils (e.g. orimulsion); excludes oil shale; includes the shale oil (secondary product).

3.4.7. Petroleum products

Petroleum products are a product aggregate equal to the sum of refinery gas, ethane, liquefied petroleum gases, naphtha, motor gasoline, aviation gasoline, gasoline type jet fuel, kerosene type jet fuel, other kerosene, gas/diesel oil, fuel oil, white spirit ad SPB, lubricants, bitumen, paraffin waxes, petroleum coke and other products.

3.4.8. Refinery Gas

Refinery gas includes a mixture of non-condensed gases mainly consisting of hydrogen, methane, ethane

and olefins obtained during the distillation of crude oil or treatment of oil products (e.g. cracking) in refineries. This also includes gases which are returned from the petrochemical industry.

3.4.9. Ethane

A naturally gaseous straight-chain hydrocarbon, (C₂H₆) extracted from natural gas and refinery gas streams.

3.4.10. Liquefied Petroleum Gases (LPG)

LPG are light paraffinic hydrocarbons derived from refinery processes, crude oil stabilisation and natural gas processing plants. They consist mainly of propane (C₃H₈) and butane (C₄H₁₀) or a combination of the two. They could also include propylene, butylene, isopropylene and isobutylene. LPG are normally liquefied under pressure for transportation and storage.

3.4.11. Naphtha

Naphtha is a feedstock destined for either the petrochemical industry (e.g. ethylene manufacture or aromatics production) or for gasoline production by reforming or isomerisation within the refinery. Naphtha comprises material in the 30 °C and 210 °C distillation range or part of this range.

3.4.12. Motor Gasoline

Motor gasoline consists of a mixture of light hydrocarbons distilling at between 35 °C and 215 °C. It is used as a fuel for land-based spark ignition engines. Motor gasoline may include additives, oxygenates and octane enhancers, including lead compounds. Includes motor gasoline blending components (excluding additives/oxygenates), e.g. alkylates, isomerate, reformate, cracked gasoline destined for use as finished motor gasoline. Motor gasoline is a product aggregate equal to the sum of blended biogasoline (biogasoline in motor gasoline) and non-biogasoline.

3.4.12.1. Blended biogasoline (biogasoline in motor gasoline)

Biogasoline that was blended in motor gasoline.

3.4.12.2. Non-biogasoline

The remaining part of motor gasoline — motor gasoline excluding blended biogasoline (this is mostly motor gasoline of fossil origin).

3.4.13. Aviation gasoline

Motor spirit prepared especially for aviation piston engines, with an octane number suited to the engine, a freezing point of — 60 °C and a distillation range usually within the limits of 30 °C and 180 °C.

3.4.14. Gasoline type jet fuel (Naphtha type jet fuel or JP4)

This includes all light hydrocarbon oils for use in aviation turbine power units, distilling at between 100 °C and 250 °C. They are obtained by blending kerosenes and gasoline or naphthas in such a way that the aromatic content does not exceed 25 % in volume, and the vapour pressure is between 13.7 kPa and 20.6 kPa.

3.4.15. Kerosene type jet fuel

Distillate used for aviation turbine power units. It has the same distillation characteristics at between 150 °C and 300 °C (generally not above 250 °C) and flash point as kerosene. In addition, it has particular specifications (such as freezing point) which are established by the International Air Transport Association. Includes kerosene blending components. Kerosene type jet fuel is a product aggregate equal to the sum of blended bio jet kerosene (bio jet kerosene in kerosene type jet fuel) and non-bio jet kerosene.

3.4.15.1. Blended bio jet kerosene (bio jet kerosene in kerosene type jet fuel)

Bio jet kerosene that was blended in kerosene type jet fuel.

3.4.15.2. Non-bio jet kerosene

The remaining part of kerosene type jet fuel — kerosene type jet fuel excluding blended bio jet kerosene (this is mostly kerosene type jet fuel of fossil origin).

3.4.16. Other kerosene

Refined petroleum distillate used in sectors other than aircraft transport. It distils at between 150 °C and 300 °C.

3.4.17. Gas/Diesel oil (Distillate fuel oil)

Gas/diesel oil is primarily a medium distillate distilling at between 180 °C and 380 °C. Includes blending components. Several grades are available depending on uses. Gas/diesel oil includes on-road diesel oil for diesel compression ignition engines of cars and trucks. Gas/diesel oil includes light heating oil for industrial and commercial uses, marine diesel and diesel used in rail traffic, other gas oil including heavy gas oils which distil at between 380 °C and 540 °C and which are used as petrochemical feedstocks. Gas/diesel oil is a product aggregate equal to the sum of blended biodiesels (biodiesels in gas/diesel oil) and non-biodiesels.

3.4.17.1. Blended biodiesels (biodiesels in gas/diesel oil)

Biodiesels that were blended in gas/diesel oil.

3.4.17.2. Non-biodiesels

The remaining part of gas/diesel oil — gas/diesel oil excluding blended biodiesels (this is mostly gas/diesel oil of fossil origin).

3.4.18. Fuel oil (heavy fuel oil)

All residual (heavy) fuel oils (including those obtained by blending). Kinematic viscosity is above 10 cSt at 80 °C. The flash point is always above 50 °C and density is always more than 0,90 kg/l. Fuel oil is a product aggregate equal to the sum of low sulphur fuel oil and high sulphur fuel oil.

3.4.18.1. Low sulphur fuel oil (LSFO)

Fuel oil with sulphur content lower than 1 %.

3.4.18.2. High sulphur fuel oil (HSFO)

Fuel oil with sulphur content of 1 % or higher.

3.4.19. White spirit and SBP

White spirit and SBP are defined as refined distillate intermediates with a distillation in the naphtha/kerosene range. They include industrial spirit (also called SBP; light oils distilling at between 30 °C and 200 °C in 7 or 8 grades of industrial spirit, depending on the position of the cut in the distillation range — the grades are defined according to the temperature difference between the 5 % volume and 90 % volume distillation points, which is not more than 60 °C) and white spirits (industrial spirit with a flash point above 30 °C and the distillation range between 135 °C and 200 °C).

3.4.20. Lubricants

Hydrocarbons produced from distillate by product. They are mainly used to reduce friction between bearing surfaces. Includes all finished grades of lubricating oil, from spindle oil to cylinder oil, and those used in greases, motor oils and all grades of lubricating oil base stocks.

3.4.21. *Bitumen*

Solid, semi-solid or viscous hydrocarbon with a colloidal structure, being brown to black in colour, obtained as a residue in the distillation of crude oil, by vacuum distillation of oil residues from atmospheric distillation. Bitumen is often referred to as asphalt and is primarily used for the construction of roads and for roofing material. Includes fluidised and cut back bitumen.

3.4.22. *Paraffin waxes*

These are saturated aliphatic hydrocarbons. They are residues extracted when dewaxing lubricant oils. They have a crystalline structure which is more-or-less fine according to the grade. Their main characteristics are as follows: they are colourless, odourless and translucent, with a melting point above 45 °C.

3.4.23. *Petroleum coke*

Black solid by-product, obtained mainly by cracking and carbonising petroleum derived feedstock, vacuum bottoms, tar and pitches in processes such as delayed coking or fluid coking. It consists mainly of carbon (90 to 95 %) and has a low ash content. It is used as a feedstock in coke ovens for the steel industry, for heating purposes, for electrode manufacture and for the production of chemicals. The two most important qualities are 'green coke' and 'calcinated coke'. Includes 'catalyst coke' deposited on the catalyst during refining processes; this coke is not recoverable and is usually burned as refinery fuel.

3.4.24. *Other products*

All other products not specifically mentioned above, for example: tar and sulphur. Includes aromatics (e.g. BTX or benzene, toluene and xylene) and olefins (e.g. propylene) produced within refineries.

3.5. Renewables and waste

3.5.1. *Hydro*

Potential and kinetic energy of water converted into electricity in hydroelectric plants. Hydro is a product aggregate equal to the sum of pure hydro plants, mixed hydro plants and pure pumped storage plants.

3.5.1.1. Pure hydro plants

Hydro plants that only use direct natural water inflow and have no capacity for hydro pump storage (pumping water uphill).

3.5.1.2. Mixed hydro plants

Hydro plants with natural water inflow into an upper reservoir where part or all equipment can be used for pumping water uphill; the electricity generated is a consequence of both natural water inflow and water previously pumped uphill.

3.5.1.3. Pure pumped storage plants

Hydro plants with no natural water inflow into the upper reservoir; the vast majority of water that generates electricity was previously pumped uphill; excluding rainfall and snowfall.

3.5.2. *Geothermal*

Energy available as heat emitted from within the earth's crust, usually in the form of hot water or steam; excluding ambient heat captured by ground source heat pumps. Geothermal energy production is the difference between the enthalpy of the fluid produced in the production borehole and that of the fluid eventually disposed of.

3.5.3. Solar

Solar is a product aggregate equal to the sum of solar photovoltaic and solar thermal.

3.5.3.1. Solar photovoltaic

Sunlight converted into electricity by the use of solar cells which exposed to light will generate electricity. All electricity produced is to be reported (including small-scale production and off-grid installations).

3.5.3.2. Solar thermal

Heat from solar radiation (sunlight) exploited for useful energy purposes. This includes, for example, solar thermal-electric plants and active systems for the production of sanitary hot water or for space heating of buildings. This energy production is the heat available to the heat transfer medium, i.e. the incident solar energy less the optical and collectors losses. Solar energy captured by passive systems for heating, cooling and lighting of buildings is not to be included; only solar energy in relation to the active systems is to be included.

3.5.4. Tide, wave, ocean

Mechanical energy derived from tidal movement, wave motion or ocean current and exploited for electricity generation.

3.5.5. Wind

Kinetic energy of wind exploited for electricity generation in wind turbines. Wind is a product aggregate equal to the sum of on-shore wind and off-shore wind.

3.5.5.1. On-shore wind

Production of electricity by wind in locations on-shore (inland, including lakes and other bodies of water located inland).

3.5.5.2. Off-shore wind

Production of electricity in locations off-shore (e.g. sea, ocean and artificial islands). For off-shore wind production outside of the territorial waters of the concerned territory, all installations located in a country's exclusive economic zone should be taken into account.

3.5.6. Industrial waste (non-renewable portion)

Report waste of industrial non-renewable origin combusted directly at specific installations for meaningful energy purposes. The quantity of fuel used should be reported on a net calorific value basis. Waste incinerated without any energy recovery is excluded. The renewable portion of industrial waste should be reported in the biofuels category that best describes it.

3.5.7. Municipal waste

Wastes produced by households, hospitals and the tertiary sector (in general all waste that resembles household waste), combusted directly at specific installations for meaningful energy purposes. The quantity of fuel used should be reported on a net calorific value basis. Waste incinerated without any energy recovery is excluded. Municipal waste is a product aggregate equal to the sum of renewable municipal waste and non-renewable municipal waste.

3.5.7.1. Renewable municipal waste

The portion of municipal waste which is of biological origin.

3.5.7.2. Non-renewable municipal waste

The portion of municipal waste which is of non-biological origin.

3.5.8. Biofuels

Biofuels is a product aggregate equal to the sum of solid biofuels, biogas and liquid biofuels. Biofuels used for non-energy purposes are excluded from the scope of energy statistics (for example wood used for construction or as furniture, biolubricant for engine lubrication and biobitumen used for road surface).

3.5.8.1. Solid biofuels

Covers solid organic, non-fossil material of biological origin (also known as biomass) which may be used as fuel for heat production or electricity generation. Solid biofuels is a product aggregate equal to the sum of charcoal, fuelwood, wood residues and by-products, black liquor, bagasse, animal waste, other vegetal materials and residuals and renewable fraction of industrial waste.

3.5.8.1.1. Charcoal

Charcoal is a manufactured fuel from solid biofuels — the solid residue of the destructive distillation and pyrolysis of wood and other vegetal material.

3.5.8.1.2. Fuelwood, wood residues and by-products

Fuelwood or firewood (in log, brushwood, pellet or chip form) obtained from natural or managed forests or isolated trees. Included are wood residues used as fuel and in which the original composition of wood is retained; wood pellets are included. Charcoal and black liquor are excluded. The quantity of fuel used should be reported on a net calorific value basis.

3.5.8.1.2.1. Wood pellets

Wood pellets are a cylindrical product which has been agglomerated from wood residues by compression.

3.5.8.1.3. Black liquor

Energy from the alkaline-spent liquor obtained from the digesters during the production of sulphate or soda pulp required for paper manufacture. The quantity of fuel used should be reported on a net calorific value basis.

3.5.8.1.4. Bagasse

Fuel obtained from the fibre which remains after juice extraction in sugar cane processing. The quantity of fuel used should be reported on a net calorific value basis.

3.5.8.1.5. Animal waste

Energy from excreta of animals, meat and fish residues which when dry is used directly as a fuel. This excludes waste used in anaerobic fermentation plants. Fuel gases from these plants are included under biogases. The quantity of fuel used should be reported on a net calorific value basis.

3.5.8.1.6. Other vegetal materials and residuals

Biofuels not specified elsewhere and including straw, vegetable husks, ground nut shells, pruning brushwood, olive pomace and other wastes arising from the maintenance, cropping and processing of plants. The quantity of fuel used should be reported based on the net calorific value.

3.5.8.1.7. Renewable portion of industrial waste

Solid renewable portion of industrial waste combusted directly at specific installations for meaningful energy purposes (for example but not only, the portion of natural rubber in waste rubber tires or the portion of

natural fibres in textile waste – from waste categories 07.3 and 07.6, respectively <...>⁵. The quantity of fuel used should be reported on a net calorific value basis.

3.5.8.2. Biogas

A gas composed principally of methane and carbon dioxide produced by anaerobic digestion of biomass or by thermal processes from biomass, including biomass in waste. The quantity of fuel used should be reported on a net calorific value basis. Biogas is a product aggregate equal to the sum of landfill gas, sewage sludge gas, other biogases from anaerobic digestion and biogases from thermal processes.

3.5.8.2.1. Landfill gas

Biogas produced from the anaerobic digestion of landfill waste.

3.5.8.2.2. Sewage sludge gas

Biogas produced from the anaerobic fermentation of sewage sludge.

3.5.8.2.3. Other biogases from anaerobic digestion

Biogas produced from the anaerobic fermentation of animal slurries and of waste in abattoirs, breweries and other agro-food industries.

3.5.8.2.4. Biogases from thermal processes

Biogas produced from thermal processes (by gasification or pyrolysis) of biomass.

3.5.8.3. Liquid biofuels

This category includes all liquid fuels of natural origin (e.g. produced from biomass and/or the biodegradable fraction of waste) suitable to be blended with or to replace liquid fuels from fossil origin. The quantities of liquid biofuels reported in this category should include the quantities of pure biofuel that were not blended with fossil fuels. In the particular case of imports and exports of liquid biofuels, only trade of quantities that have not been blended with transport fuels (i.e. in their pure form) is relevant; trade of liquid biofuels blended into transport fuels should be reported within the oil category of products. Only liquid biofuels used for energy purposes — combusted directly or blended with fossil fuels — are to be reported. Liquid biofuels is a product aggregate equal to the sum of biogasoline, biodiesels, bio jet kerosene and other liquid biofuels.

3.5.8.3.1. Biogasoline

Liquid biofuels suitable to be blended with or to replace motor gasoline from fossil origin.

3.5.8.3.1.1. Bioethanol

Ethanol as part of biogasoline.

3.5.8.3.2. Biodiesels

Liquid biofuels suitable to be blended with or to replace gas/diesel oil from fossil origin.

3.5.8.3.3. Bio jet kerosene

Liquid biofuels suitable to be blended with or to replace jet kerosene from fossil origin.

3.5.8.3.4. Other liquid biofuels

Liquid biofuels not included in any of the previous categories.

⁵ Not applicable according to Article 2 of Ministerial Council Decision 2021/12/MC-EnC

3.5.9. *Ambient heat*

Heat energy at a useful temperature level, extracted (captured) by means of heat pumps that need electricity or other auxiliary energy to function. This heat energy can be stored in the ambient air, beneath the surface of solid earth or in surface water. Values shall be reported using the same methodology as the one used for reporting heat energy captured by heat pumps under Directive 2009/28/EC, **as adopted and adapted by Ministerial Council Decision 2012/04/MC-EnC**. All heat pumps should be included regardless of their performance level.

ANNEX B

ANNUAL ENERGY STATISTICS

This Annex describes the scope, units, reported period, frequency, deadline and transmission modalities for the annual collection of energy statistics.

The following provisions apply to all data collections specified in this annex:

- (a) Reported period: The reported period of declared data shall be a calendar year (1 January to 31 December), starting at reference year 2017.
- (b) Frequency: Data shall be declared on an annual basis.
- (c) Deadline for transmission of data: Data shall be sent in by 30 November of the year following the reported year, unless specified otherwise.
- (d) Transmission format: The transmission format shall conform to the relevant interchange standard specified by Eurostat.
- (e) Transmission method: Data shall be sent in or uploaded by electronic means to the single entry point for data at Eurostat.

Annex A includes explanations of terms for which a specific explanation is not supplied in this Annex.

1. SOLID FOSSIL FUELS AND MANUFACTURED GASES

1.1. Applicable energy products

Unless otherwise specified, this data collection applies to all energy products listed in Annex A, Chapter 3.1. COAL (solid fossil fuels and manufactured gases).

1.2. List of aggregates

The following list of aggregates must be declared for all energy products listed in the previous paragraph unless otherwise specified.

1.2.1. Supply

1.2.1.1. Production

1.2.1.1.1. Underground production

Applicable only for anthracite, coking coal, other bituminous coal, subbituminous coal and lignite.

1.2.1.1.2. Surface production

Applicable only for anthracite, coking coal, other bituminous coal, subbituminous coal and lignite.

1.2.1.2. Receipts from other sources

This consists of two components:

- recovered slurries, middlings and other low-grade coal products, which cannot be classified according to type of coal, including coal recovered from waste piles and other waste receptacles,
- receipts from other sources.

1.2.1.3. Receipts from other sources: from oil products

Not applicable for anthracite, coking coal, other bituminous coal, subbituminous coal, lignite, peat, and

oil shale and oil sands.

1.2.1.4. Receipts from other sources: from natural gas

Not applicable for anthracite, coking coal, other bituminous coal, subbituminous coal, lignite, peat, and oil shale and oil sands.

1.2.1.5. Receipts from other sources: from renewables

Not applicable for anthracite, coking coal, other bituminous coal, subbituminous coal, lignite, peat, oil shale and oil sands.

1.2.1.6. Imports

1.2.1.7. Exports

1.2.1.8. International Marine Bunkers

1.2.1.9. Stock changes

1.2.2. Transformation Sector

1.2.2.1. Main Activity Producer Electricity Only

1.2.2.2. Main Activity Producer Combined Heat and Power (CHP) Units

1.2.2.3. Main Activity Producer Heat Only

1.2.2.4. Autoproducer Electricity Only

1.2.2.5. Autoproducer Combined Heat and Power (CHP) Units

1.2.2.6. Autoproducer Heat Only

1.2.2.7. Patent Fuel Plants

1.2.2.8. Coke Ovens

1.2.2.9. BKB/PB Plants

1.2.2.10. Gas Works

1.2.2.11. Blast Furnaces

1.2.2.12. Coal Liquefaction

1.2.2.13. For Blended Natural Gas

1.2.2.14. Not Elsewhere Specified — Transformation

1.2.3. Energy Sector

1.2.3.1. Electricity, CHP and Heat plants

1.2.3.2. Coal Mines

1.2.3.3. Patent Fuel Plants

1.2.3.4. Coke Ovens

1.2.3.5. BKB/PB Plants

1.2.3.6. Gas Works

1.2.3.7. Blast Furnaces

1.2.3.8. Petroleum Refineries

1.2.3.9. Coal Liquefaction

1.2.3.10. Not Elsewhere Specified — Energy

1.2.4. *Distribution losses*

Distribution losses also include flaring of manufactured gases.

1.2.5. *Non-energy use*

1.2.5.1. Industry, Transformation and Energy Sectors

Non-energy use in all industry, transformation and energy sub-sectors, e.g. coal used to make methanol or ammonia.

1.2.5.1.1. Chemical and petrochemical sector

NACE Rev. 2 Divisions 20 and 21; non-energy use of coal includes use as feedstocks to produce fertiliser and as feedstocks for other petrochemical products.

1.2.5.2. Transport Sector

Non-energy use in all transport sub-sectors.

1.2.5.3. Other Sectors

Non-energy use in Commercial and Public Services, Households, Agriculture and Not Elsewhere Specified Other.

1.2.6. *Final Energy Consumption — Industry Sector*

1.2.6.1. Iron and Steel

1.2.6.2. Chemical and Petrochemical

1.2.6.3. Non-Ferrous Metals

1.2.6.4. Non-Metallic Minerals

1.2.6.5. Transport Equipment

1.2.6.6. Machinery

1.2.6.7. Mining and Quarrying

1.2.6.8. Food, Beverages and Tobacco

1.2.6.9. Pulp, Paper and printing

1.2.6.10. Wood and Wood Products

1.2.6.11. Construction

1.2.6.12. Textile and Leather

1.2.6.13. Not Elsewhere Specified — Industry

1.2.7. *Final Energy Consumption — Transport Sector*

1.2.7.1. Rail

1.2.7.2. Domestic Navigation

1.2.7.3. Not Elsewhere Specified — Transport

1.2.8. *Final Energy Consumption — Other Sectors*

1.2.8.1. Commercial and Public Services

1.2.8.2. Households

1.2.8.3. Agriculture/Forestry

1.2.8.4. Fishing

1.2.8.5. Not Elsewhere Specified — Other

1.2.9. Imports by country of origin AND exports by country of destination

Imports by country of origin and exports by country of destination shall be reported. Applicable to anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite, patent fuel, coke oven coke, coal tar, BKB, peat, peat products and oil shale and oil sands.

1.2.10. Calorific values

Applicable for anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite, patent fuel, coke oven coke, gas coke, coal tar, BKB, peat, peat products, oil shale and oil sands.

Both gross and net calorific values are to be declared for the following aggregates:

1.2.10.1. Production

1.2.10.2. Imports

1.2.10.3. Exports

1.2.10.4. Used in coke ovens

1.2.10.5. Used in blast furnaces

1.2.10.6. Used in Main Activity Producer Electricity only, Heat only and CHP units

1.2.10.7. Used in Industry

1.2.10.8. For Other Uses

1.3. Units of measurement

Reported quantities must be declared in kt (kilo-tonnes), except for manufactured gases (gas works gas, coke oven gas, blast furnace gas, other recovered gases), where the reported quantity must be declared in TJ GCV (tera-joules based on gross calorific values).

Calorific values must be declared in MJ/t (mega-joules per tonne).

1.4. Derogations and exemptions

Not applicable.

2. NATURAL GAS

2.1. Applicable energy products

This chapter covers the reporting of natural gas.

2.2. List of aggregates

The following list of aggregates shall be declared for natural gas.

2.2.1. Supply Sector

Declared quantities for the supply sector shall be expressed in both volume and energy units, and shall include the gross and net calorific values.

2.2.1.1. Indigenous Production

Includes off-shore production.

2.2.1.1.1. Associated Gas

Natural gas produced in association with crude oil.

2.2.1.1.2. Non-Associated Gas

Natural gas originating from fields producing hydrocarbons only in gaseous form.

2.2.1.1.3. Colliery Gas

Methane produced at coal mines or from coal seams, piped to the surface and consumed at collieries or transmitted by pipeline to consumers.

2.2.1.2. Receipts From Other Sources

2.2.1.2.1. Receipts from other sources: Oil and petroleum products

2.2.1.2.2. Receipts from other sources: Coal

2.2.1.2.3. Receipts from other sources: Renewables

2.2.1.3. Imports

2.2.1.4. Exports

2.2.1.5. International Marine Bunkers

2.2.1.6. Stock changes

2.2.1.7. Inland consumption (Observed)

2.2.1.8. Recoverable gas

Opening and closing stock levels shall be declared separately, as stocks on national territory and stocks held abroad, respectively. 'Stock level' means the quantity of gas available for delivery during any input-output cycle. This refers to recoverable natural gas stored in special storage facilities (depleted gas and/or oil field, aquifer, salt cavity, mixed caverns, or other), as well as stored liquefied natural gas. Cushion gas shall be excluded. The requirement of declaring calorific values is not applicable here.

2.2.1.9. Gas Vented

The volume of gas released into the air on the production site or at the gas processing plant. The requirement of declaring calorific values is not applicable here.

2.2.1.10. Gas Flared

The volume of gas burned in flares on the production site or at the gas processing plant. The requirement of declaring calorific values is not applicable here.

2.2.2. Transformation Sector

2.2.2.1. Main Activity Producer Electricity Only

2.2.2.2. Autoproducer Electricity Only

2.2.2.3. Main Activity Producer CHP Units

2.2.2.4. Autoproducer CHP Units

2.2.2.5. Main Activity Producer Heat Only

2.2.2.6. Autoproducer Heat Only

2.2.2.7. Gas Works

2.2.2.8. Coke Ovens

- 2.2.2.9. Blast Furnaces
- 2.2.2.10. Gas to liquids
- 2.2.2.11. Non specified — Transformation

2.2.3. Energy Sector

- 2.2.3.1. Coal Mines
- 2.2.3.2. Oil and Gas extraction
- 2.2.3.3. Inputs to oil refineries
- 2.2.3.4. Coke Ovens
- 2.2.3.5. Blast Furnaces
- 2.2.3.6. Gas Works
- 2.2.3.7. Electricity, CHP and Heat Plants
- 2.2.3.8. Liquefaction (LNG) or Gasification
- 2.2.3.9. Gas to Liquids
- 2.2.3.10. Not Elsewhere Specified — Energy

2.2.4. Distribution losses

2.2.5. Transport Sector

Final energy consumption and final non-energy consumption shall be declared separately for the following aggregates.

- 2.2.5.1. Road
- 2.2.5.2. Pipeline transport
- 2.2.5.3. Not Elsewhere Specified — Transport

2.2.6. Industry Sector

Final energy consumption and final non-energy consumption shall be declared separately for the following aggregates.

- 2.2.6.1. Iron and Steel
- 2.2.6.2. Chemical and Petrochemical
- 2.2.6.3. Non-Ferrous Metals
- 2.2.6.4. Non-Metallic Minerals
- 2.2.6.5. Transport Equipment
- 2.2.6.6. Machinery
- 2.2.6.7. Mining and Quarrying
- 2.2.6.8. Food, Beverages and Tobacco
- 2.2.6.9. Pulp, Paper and printing
- 2.2.6.10. Wood and Wood Products
- 2.2.6.11. Construction
- 2.2.6.12. Textile and Leather

2.2.6.13. Not Elsewhere Specified — Industry

2.2.7. *Other Sectors*

Final energy consumption and final non-energy consumption shall be declared separately for the following aggregates.

2.2.7.1. Commercial and Public Services

2.2.7.2. Households

2.2.7.3. Agriculture/Forestry

2.2.7.4. Fishing

2.2.7.5. Not Elsewhere Specified — Other

2.2.8. *Imports by country of origin and exports by country of destination*

Both the quantities of total natural gas and of the LNG part of it shall be declared, per country of origin for imports and per country of destination for exports.

2.2.9. *Gas Storage Capacities*

To be reported separately as gaseous gas storage facilities and LNG terminals (to be further distinguished as LNG import terminals or LNG export terminals).

2.2.9.1. Name

Name of the site of the storage facility or the LNG terminal.

2.2.9.2. Type (for the gaseous gas storage facilities only)

Type of storage, such as depleted gas field, aquifer, salt cavern, etc.

2.2.9.3. Working Capacity

For gaseous gas storage facilities: total gas storage capacity, minus the cushion gas. The cushion gas is the total volume of gas required as a permanent inventory to maintain adequate underground storage reservoir pressures and deliverability rates throughout the output cycle.

For LNG terminals: total gas storage capacity expressed in gaseous gas equivalent.

2.2.9.4. Peak Output

Maximum rate at which gas can be withdrawn from the storage concerned; this corresponds to the maximum withdrawal capacity.

2.2.9.5. Regasifying or Liquefying Capacity (for LNG terminals only)

The regasifying capacity must be reported for import terminals and the liquefying capacity must be reported for export terminals.

2.3. Units of measurement

Quantities of natural gas shall be declared as their energy content, i.e. in TJ, based on the gross calorific value. Where physical quantities are required, the unit is in 10^6 m^3 assuming reference gas conditions (15 °C, 101 325 Pa).

Calorific values shall be declared in kJ/m^3 , assuming reference gas conditions (15 °C, 101 325 Pa).

Working capacity shall be declared in 10^6 m^3 , assuming reference gas conditions (15 °C, 101 325 Pa).

Peak output, regasifying capacity and liquefying capacity shall be declared in $10^6 \text{ m}^3/\text{day}$, assuming reference gas conditions (15 °C, 101 325 Pa).

3. ELECTRICITY AND HEAT

3.1. Applicable energy products

This chapter covers heat and electricity.

3.2. List of aggregates

The following list of aggregates shall be declared for heat and electricity unless otherwise specified.

3.2.1. Electricity and heat production

The following specific definitions apply to the electricity and heat aggregates discussed in this chapter:

- Gross Electricity Production: the sum of the electrical energy produced by all the generating sets concerned (including pumped storage) measured at the output terminals of the main generators.
- Gross Heat Production: the total heat produced by the installation, including the heat used by the installation's auxiliaries that use a hot fluid (space heating, liquid fuel heating etc.) and losses in the installation/network heat exchanges, as well as heat from chemical processes used as a primary energy form.
- Net Electricity Production: the gross electricity production less the electrical energy absorbed by the generating auxiliaries and the losses in the main generator transformers.
- Net Heat Production: the heat supplied to the distribution system as determined based on measurements of the outgoing and return flows.

Aggregates 3.2.1.1 to 3.2.1.11 must be declared separately for main activity producers and for autoproducers. Within these two types of plant, both gross and net electricity and heat production must be declared for electricity-only, heat-only and CHP units, separately wherever applicable.

3.2.1.1. Nuclear

3.2.1.2. Hydro (applicable only for electricity)

3.2.1.3. Geothermal

3.2.1.4. Solar

3.2.1.5. Tide, wave, ocean (applicable only for electricity)

3.2.1.6. Wind (applicable only for electricity)

3.2.1.7. Combustible fuels

Fuels capable of igniting or burning, i.e. reacting with oxygen to produce a significant rise in temperature, and combusted directly for the production of electricity and/or heat.

3.2.1.8. Heat Pumps (applicable only for heat)

3.2.1.9. Electric Boilers (applicable only for heat)

3.2.1.10. Heat from Chemical Processes

Heat originating from processes without input energy, such as a chemical reaction. Excludes waste heat originating from energy-driven processes, which should be reported as heat produced from the corresponding fuel.

3.2.1.11. Other Sources

3.2.2. Supply

For 3.2.2.1 and 3.2.2.2., quantities declared shall be in coherence with the values declared for aggregates 3.2.1.1 to 3.2.1.11.

3.2.2.1. Total Gross Production

3.2.2.2. Total Net Production

3.2.2.3. Imports

Amounts of electricity are considered as imported or exported when they have crossed the political boundaries of a country, whether customs clearance has taken place or not. If electricity transits through a country, the amount should be reported as both an import and an export.

3.2.2.4. Exports

See explanation under 3.2.2.3. 'Imports'.

3.2.2.5. Used for Heat Pumps (applicable only for electricity)

3.2.2.6. Used for Electric Boilers (applicable only for electricity)

3.2.2.7. Used for Pumped Storage — pure pumped storage plants (applicable only for electricity)

3.2.2.8. Used for Pumped Storage — Mixed hydro plants (applicable only for electricity)

3.2.2.9. Used for Electricity Production (applicable only for heat)

3.2.3. *Distribution losses*

For electricity, includes losses in transformers which are not considered as integral parts of power plants.

3.2.4. *Final energy consumption — Transport Sector*

Final energy consumption and final non-energy consumption shall be declared separately for the following aggregates.

3.2.4.1. Rail

3.2.4.2. Pipeline transport

3.2.4.3. Road

3.2.4.4. Not Elsewhere Specified — Transport

3.2.5. *Final energy consumption — Other sectors*

3.2.5.1. Commercial and Public Services

3.2.5.2. Households

3.2.5.3. Agriculture/Forestry

3.2.5.4. Fishing

3.2.5.5. Not Elsewhere Specified — Other

3.2.6. *Energy Sector*

Excludes plants' own use for pumped storage, heat pumps and electric boilers.

3.2.6.1. Coal Mines

3.2.6.2. Oil and Gas Extraction

3.2.6.3. Patent Fuel Plants

3.2.6.4. Coke Ovens

3.2.6.5. BKB/PB Plants

3.2.6.6. Gas Works

- 3.2.6.7. Blast Furnaces
- 3.2.6.8. Petroleum Refineries
- 3.2.6.9. Nuclear Industry
- 3.2.6.10. Coal Liquefaction Plants
- 3.2.6.11. Liquefaction (LNG)/Regasification Plants
- 3.2.6.12. Gasification Plants (biogas)
- 3.2.6.13. Gas-to-Liquids
- 3.2.6.14. Charcoal Production Plants
- 3.2.6.15. Not Elsewhere Specified — Energy

3.2.7. *Industry sector*

- 3.2.7.1. Iron and Steel
- 3.2.7.2. Chemical and Petrochemical
- 3.2.7.3. Non-Ferrous Metals
- 3.2.7.4. Non-Metallic Minerals
- 3.2.7.5. Transport Equipment
- 3.2.7.6. Machinery
- 3.2.7.7. Mining and Quarrying
- 3.2.7.8. Food, Beverages and Tobacco
- 3.2.7.9. Pulp, Paper and printing
- 3.2.7.10. Wood and Wood Products
- 3.2.7.11. Construction
- 3.2.7.12. Textile and Leather
- 3.2.7.13. Not Elsewhere Specified — Industry

3.2.8. *Imports and exports*

Imports and exports of quantities of electricity and heat by country of origin and destination, respectively, have to be reported. See explanation under 3.2.2.3. 'Imports'.

3.2.9. *Net production from autoproducers*

For the following plants or activities, net production of electricity and net generation of heat from autoproducers shall be declared separately for electricity-only, heat-only and CHP units:

- 3.2.9.1. Energy Sector: Coal Mines
- 3.2.9.2. Energy Sector: Oil and Gas Extraction
- 3.2.9.3. Energy Sector: Patent Fuel Plants
- 3.2.9.4. Energy Sector: Coke Ovens
- 3.2.9.5. Energy Sector: BKB/PB Plants
- 3.2.9.6. Energy Sector: Gas Works
- 3.2.9.7. Energy Sector: Blast Furnaces

- 3.2.9.8. Energy Sector: Petroleum Refineries
- 3.2.9.9. Energy Sector: Coal Liquefaction Plants
- 3.2.9.10. Energy Sector: Liquefaction (LNG)/Regasification Plants
- 3.2.9.11. Energy Sector: Gasification Plants (biogas)
- 3.2.9.12. Energy Sector: Gas-to-Liquids
- 3.2.9.13. Energy Sector: Charcoal Production Plants
- 3.2.9.14. Energy Sector: Not Elsewhere Specified — Energy
- 3.2.9.15. Industry sector: Iron and Steel
- 3.2.9.16. Industry sector: Chemical and Petrochemical
- 3.2.9.17. Industry sector: Non-Ferrous Metals
- 3.2.9.18. Industry sector: Non-Metallic Minerals
- 3.2.9.19. Industry sector: Transport Equipment
- 3.2.9.20. Industry sector: Machinery
- 3.2.9.21. Industry sector: Mining and Quarrying
- 3.2.9.22. Industry sector: Food, Beverages and Tobacco
- 3.2.9.23. Industry sector: Pulp, Paper and printing
- 3.2.9.24. Industry sector: Wood and Wood Products
- 3.2.9.25. Industry sector: Construction
- 3.2.9.26. Industry sector: Textile and Leather
- 3.2.9.27. Industry sector: Not Elsewhere Specified — Industry
- 3.2.9.28. Transport Sector: Rail
- 3.2.9.29. Transport Sector: Pipeline transport
- 3.2.9.30. Transport Sector: Road
- 3.2.9.31. Transport Sector: Not Elsewhere Specified — Transport
- 3.2.9.32. Other sectors: Households
- 3.2.9.33. Other sectors: Commercial and Public Services
- 3.2.9.34. Other sectors: Agriculture/Forestry
- 3.2.9.35. Other sectors: Fishing
- 3.2.9.36. Other sectors: Not Elsewhere Specified — Other

3.2.10. *Gross electricity and heat production from combustible fuels*

The gross electricity produced, the heat sold and the fuel quantities used, including their corresponding total energy from the combustibles listed below, must be declared separately for main activity producers and for autoproducers. For these two types of producer, electricity and heat production must be declared separately wherever applicable for electricity-only, heat-only and CHP units.

- 3.2.10.1. Anthracite
- 3.2.10.2. Coking Coal

- 3.2.10.3. Other Bituminous Coal
- 3.2.10.4. Sub-Bituminous Coal
- 3.2.10.5. Lignite
- 3.2.10.6. Peat
- 3.2.10.7. Patent Fuel
- 3.2.10.8. Coke Oven Coke
- 3.2.10.9. Gas Coke
- 3.2.10.10. Coal Tar
- 3.2.10.11. BKB (Brown Coal Briquettes)
- 3.2.10.12. Gas Works Gas
- 3.2.10.13. Coke Oven Gas
- 3.2.10.14. Blast Furnace Gas
- 3.2.10.15. Other recovered Gases
- 3.2.10.16. Peat products
- 3.2.10.17. Oil shale and oil sands
- 3.2.10.18. Crude Oil
- 3.2.10.19. NGL
- 3.2.10.20. Refinery Gas
- 3.2.10.21. LPG
- 3.2.10.22. Naphtha
- 3.2.10.23. Kerosene Type Jet Fuel
- 3.2.10.24. Other Kerosene
- 3.2.10.25. Gas/Diesel oil
- 3.2.10.26. Fuel Oil
- 3.2.10.27. Bitumen
- 3.2.10.28. Petroleum Coke
- 3.2.10.29. Other Oil Products
- 3.2.10.30. Natural Gas
- 3.2.10.31. Industrial Waste
- 3.2.10.32. Renewable Municipal Waste
- 3.2.10.33. Non-Renewable Municipal Waste
- 3.2.10.34. Solid biofuels
- 3.2.10.35. Biogases
- 3.2.10.36. Biodiesels
- 3.2.10.37. Biogasolines

3.2.10.38. Other Liquid Biofuels

3.2.11. *Net Maximum Electrical Capacity*

The capacity shall be declared as on 31 December of the relevant reported year. Includes electrical capacity of both electricity-only and CHP units. The net maximum electrical capacity must be declared for both main activity producers and autoproducers. It is the sum of the net maximum capacities of all stations taken individually over a given period of operation. The period of operation assumed for present purposes is continuous running; in practice 15 hours or more per day. The net maximum capacity is the maximum power assumed to be solely active power that can be supplied, continuously, with the whole plant running, at the point of outlet to the network.

3.2.11.1. Nuclear

3.2.11.2. Pure hydro plants

3.2.11.3. Mixed hydro plants

3.2.11.4. Pure pumped storage plants

3.2.11.5. Geothermal

3.2.11.6. Solar photovoltaic

3.2.11.7. Solar thermal

3.2.11.8. Tide, wave, ocean

3.2.11.9. Wind

3.2.11.10. Combustible fuels

3.2.11.10.1. Type of generation: Steam

3.2.11.10.2. Type of generation: Internal combustion

3.2.11.10.3. Type of generation: Gas turbine

3.2.11.10.4. Type of generation: Combined cycle

3.2.11.10.5. Type of generation: Other

3.2.11.11. Other sources

3.2.12. *Net Maximum Electrical Capacity Of Combustible Fuels*

Net maximum electrical capacity of combustible fuels must be declared for both main activity producers and autoproducers, and separately for each type of single-fired or multi-fired plant mentioned below. Multi-fired systems include only units which can burn more than one fuel type on a continuous basis. Stations which have separate units using different fuels should be divided into the appropriate single-fuel categories. Indications on which type of fuel is used as primary and alternate must be added for each category of multi-fired plants.

3.2.12.1. Single Fuel Fired (for all categories of primary fuels)

3.2.12.2. Multi-Fired solids and liquids

3.2.12.3. Multi-Fired solids and natural gas

3.2.12.4. Multi-Fired liquids and natural gas

3.2.12.5. Multi-Fired solids, liquids and natural gas

3.3. Units of measurement

Electricity shall be declared in GWh (giga-watt hours), heat in TJ (tera-joules) and capacity in MW (mega-watts)

If reporting of other fuels is required, the applicable units are defined in the relevant chapters of this Annex.

4. OIL AND PETROLEUM PRODUCTS

4.1. Applicable energy products

Unless otherwise specified, this data collection applies to all energy products listed in Annex A, Chapter 3.4. Oil (crude oil and petroleum products)

4.2. List of aggregates

The following list of aggregates shall be declared for all energy products listed in the previous paragraph, unless otherwise specified.

4.2.1. *Supply of crude oil, NGL, refinery feedstocks, additives and other hydrocarbons*

The following aggregates shall be declared for crude oil, NGL, refinery feedstocks, additives/oxygenates, biofuels in additives/oxygenates and other hydrocarbons:

4.2.1.1. Indigenous Production

Not applicable for refinery feedstocks and for biofuels.

4.2.1.2. Receipts From Other Sources.

Not applicable for crude oil, NGL and refinery feedstocks.

4.2.1.2.1. Receipts from other sources: from coal

4.2.1.2.2. Receipts from other sources: from natural gas

4.2.1.2.3. Receipts from other sources: from Renewables

4.2.1.3. Backflows From Petrochemical Sector

Only applicable for refinery feedstocks.

4.2.1.4. Products Transferred

Only applicable for refinery feedstocks.

4.2.1.5. Imports

Includes quantities of crude oil and products imported or exported under processing agreements (i.e. refining on account). Crude oil and NGLs should be reported as coming from the country of ultimate origin; refinery feedstocks and finished products should be reported as coming from the country of last consignment. Includes any gas liquids (e.g. LPG) extracted during the regasification of imported liquefied natural gas and petroleum products imported or exported directly by the petrochemical industry. Note: all trade of biofuels which have not been blended with transport fuels (i.e. in their pure form) should not be reported here. Re-exports of oil imported for processing within bonded areas should be included as an export of product from the processing country to the final destination.

4.2.1.6. Exports

The note for imports (4.2.1.5.) also applies to exports.

4.2.1.7. Direct Use

4.2.1.8. Stock changes

4.2.1.9. Observed Refinery Intake

Amounts measured as input to refineries

4.2.1.10. Refinery Losses

The difference between refinery intake (observed) and gross refinery output. Losses may occur during the distillation processes due to evaporation. Reported losses are positive. There may be volumetric gains but no gains in mass.

4.2.1.11. Opening Total Stocks On National Territory

4.2.1.12. Closing Total Stocks On National Territory

4.2.1.13. Net Calorific Value

4.2.1.13.1. Production (not applicable for refinery feedstocks and Biofuels in Additives/Oxygenates)

4.2.1.13.2. imports (not applicable for Biofuels in Additives/Oxygenates)

4.2.1.13.3. exports (not applicable for Biofuels in Additives/Oxygenates)

4.2.1.13.4. overall average

4.2.2. *Supply of oil products*

The following aggregates apply to finished products (refinery gas, ethane, LPG, naphtha, motor gasoline as well as its part of biogasoline, aviation gasoline, gasoline type jet fuel, kerosene type jet fuel as well as its bio part, other kerosene, gas/diesel oil, low and high sulphur fuel oil, white spirit and SBP, lubricants, bitumen, paraffin waxes, petroleum coke and other products). Crude oil and NGL used for direct burn should be included in deliveries of finished products and interproduct transfers.

4.2.2.1. Primary Product Receipts

4.2.2.2. Gross Refinery Output

4.2.2.3. Recycled Products

4.2.2.4. Refinery fuel (Petroleum Refineries)

Fuels used for production at refineries of electricity and heat sold should also be included in this category.

4.2.2.4.1. used in electricity only units/plants

4.2.2.4.2. used in CHP units

4.2.2.4.3. used in heat only units/plants

4.2.2.5. Imports

The note for imports in section 4.2.1.5. also applies here.

4.2.2.6. Exports

The note for imports in section 4.2.1.5. also applies here.

4.2.2.7. International Marine Bunkers

4.2.2.8. Interproduct Transfers

4.2.2.9. Products Transferred

4.2.2.10. Stock Changes

4.2.2.11. Opening Stock Levels

4.2.2.12. Closing Stock Levels

4.2.2.13. Stock Changes at main activity producers

Changes in stocks which are held by public utilities and are not included in stock levels and stock changes reported elsewhere. A stock build is shown as a negative number and a stock draw is shown as a positive number.

4.2.2.14. Average Net Calorific Values

4.2.3. *Deliveries To The Petrochemical Sector*

The observed delivery of finished petroleum products from primary sources (e.g. refineries, blending plants, etc.) to the inland market.

4.2.3.1. Gross Deliveries To The Petrochemical Sector

4.2.3.2. Energy Use In The Petrochemical Sector

Quantities of oil used as fuel for petrochemical processes such as steam cracking.

4.2.3.3. Non-Energy Use In The Petrochemical Sector

Quantities of oil used in the petrochemical sector for the purpose of producing ethylene, propylene, butylene, synthesis gas, aromatics, butadiene and other hydrocarbon-based raw materials in processes such as steam cracking, aromatics plants and steam reforming. Excludes amounts of oil used for fuel purposes.

4.2.3.4. Backflows From Petrochemical Sector To Refineries

4.2.4. *Transformation sector*

Both the quantities involved in energy use and non-energy use shall be declared.

4.2.4.1. Main Activity Producer Electricity Only

4.2.4.2. Autoproducer Electricity Only

4.2.4.3. Main Activity Producer CHP units

4.2.4.4. Autoproducer CHP units

4.2.4.5. Main Activity Producer Heat Only

4.2.4.6. Autoproducer Heat Only

4.2.4.7. Gas Works/Gasification Plants

4.2.4.8. Blended Natural Gas

4.2.4.9. Coke Ovens

4.2.4.10. Blast Furnaces

4.2.4.11. Petrochemical Industry

4.2.4.12. Patent Fuel Plants

4.2.4.13. Not Elsewhere Specified — Transformation

4.2.5. *Energy sector*

Both the quantities involved in energy use and non-energy use shall be declared.

4.2.5.1. Coal Mines

4.2.5.2. Oil and Gas Extraction

4.2.5.3. Coke Ovens

4.2.5.4. Blast Furnaces

4.2.5.5. Gas Works

4.2.5.6. Own use Electricity, CHP and heat plants.

4.2.5.7. Not Elsewhere Specified — Energy

4.2.6. *Distribution losses*

Both the quantities involved in energy use and non-energy use shall be declared.

4.2.7. *Final Energy Consumption — Industry Sector*

Both the quantities involved in energy use and non-energy use shall be declared.

4.2.7.1. Iron and Steel

4.2.7.2. Chemical and Petrochemical

4.2.7.3. Non-Ferrous Metals

4.2.7.4. Non-Metallic Minerals

4.2.7.5. Transport Equipment

4.2.7.6. Machinery

4.2.7.7. Mining and Quarrying

4.2.7.8. Food, Beverages and Tobacco

4.2.7.9. Pulp, Paper and printing

4.2.7.10. Wood and Wood Products

4.2.7.11. Construction

4.2.7.12. Textile and Leather

4.2.7.13. Not Elsewhere Specified — Industry

4.2.8. *Final Energy Consumption — Transport Sector*

Both the quantities involved in energy use and non-energy use shall be declared.

4.2.8.1. International Aviation

4.2.8.2. Domestic Aviation

4.2.8.3. Road

4.2.8.4. Rail

4.2.8.5. Domestic Navigation

4.2.8.6. Pipeline Transport

4.2.8.7. Not Elsewhere Specified — Transport

4.2.9. *Final Energy Consumption — Other Sectors*

Both the quantities involved in energy use and non-energy use shall be declared.

4.2.9.1. Commercial and Public Services

4.2.9.2. Households

4.2.9.3. Agriculture/Forestry

4.2.9.4. Fishing

4.2.9.5. Not Elsewhere Specified — Other

4.2.10. *Imports by country of origin and exports by country of destination*

Imports shall be declared by country of origin and exports by country of destination. The note for imports in section 4.2.1.5 also applies here.

4.2.11. *Refinery capacity*

Report the national total refining capacity and the breakdown of annual capacity by refinery in thousand metric tons per year. The following items shall be reported:

4.2.11.1. Name/Location

4.2.11.2. Atmospheric Distillation

4.2.11.3. Vacuum Distillation

4.2.11.4. Cracking (Thermal)

4.2.11.4.1. Of which Visbreaking

4.2.11.4.2. Of which Coking

4.2.11.5. Cracking (Catalytic)

4.2.11.5.1. Of which Fluid catalytic cracking (FCC)

4.2.11.5.2. Of which Hydro-cracking (HCK)

4.2.11.6. Reforming

4.2.11.7. Desulphurisation

4.2.11.8. Alkylation, Polymerisation, Isomeration

4.2.11.9. Etherification

4.3. Units of measurement

Reported quantities must be declared in kt (kilo-tonnes). Calorific values must be declared in MJ/t (mega-joules per tonne).

4.4. Exemptions

Cyprus is exempted from reporting the aggregates specified in Section 4.2.9 (Final energy consumption — Other Sectors); only the total values shall be reported. Cyprus is also exempted from reporting non-energy use under Sections 4.2.4 (Transformation sector), 4.2.5 (Energy Sector), 4.2.7 (Industry), 4.2.7.2 (Industry sector — of which Chemical and Petrochemical), 4.2.8 (Transport) and 4.2.9 (Other sectors).

5. RENEWABLE ENERGY AND ENERGY FROM WASTE

5.1. Applicable energy products

Unless otherwise specified, this data collection applies to all energy products listed in Annex A, Chapter 3.5. Renewables and waste. Only quantities of fuels used for energy purposes (for example in electricity and heat generation, combustion with energy recovery, in mobile engines in transport and for use in stationary

engines) should be reported. Quantities used for non-energy purposes shall be excluded from reporting (for example: wood in construction and for producing furniture, use of biolubricants for lubrication, use of biobitumen for road surface). Passive thermal energy shall also be excluded from reporting (for example: passive solar thermal heating of buildings).

5.2. List of aggregates

Unless otherwise specified, the following list of aggregates shall be declared for all energy products listed in the previous paragraph. Ambient heat (heat pumps) only needs to be reported for the following sectors: Transformation (only for aggregates related to heat sold), Energy (only total, no subcategories), Industry total (only total, no subcategories), Commercial and Public Services, Households and Not elsewhere specified — Other.

5.2.1. Gross Electricity and Heat Production

The definitions of chapter 3.2.1. apply. The aggregates 5.2.1.1 to 5.2.1.18 must be declared separately for main activity producers and for autoproducers. For these two types of plant, gross electricity and gross heat production must be declared for electricity-only, heat-only and CHP units, separately wherever applicable.

5.2.1.1. Pure hydro plants (applicable only for electricity)

5.2.1.2. Mixed hydro plants (applicable only for electricity)

5.2.1.3. Pure pumped storage plants (applicable only for electricity)

5.2.1.4. Geothermal

5.2.1.5. Solar photovoltaic (applicable only for electricity)

5.2.1.6. Solar thermal

5.2.1.7. Tide, wave, ocean (applicable only for electricity)

5.2.1.8. Wind (applicable only for electricity)

5.2.1.9. On-shore wind

5.2.1.10. Off-shore wind

5.2.1.11. Renewable municipal waste

5.2.1.12. Non-renewable municipal waste

5.2.1.13. Solid biofuels

5.2.1.14. Biogases

5.2.1.15. Biodiesels

5.2.1.16. Biogasolines

5.2.1.17. Other liquid biofuels

5.2.1.18. Heat pumps (applicable only for heat)

5.2.2. Supply

5.2.2.1. Production

5.2.2.2. Imports

5.2.2.3. Exports

5.2.2.4. Stock changes

5.2.3. *Transformation Sector*

- 5.2.3.1. Main Activity Producer Electricity Only
- 5.2.3.2. Main Activity Producer Combined Heat and Power (CHP) Units
- 5.2.3.3. Main Activity Producer Heat Only
- 5.2.3.4. Autoproducer Electricity Only
- 5.2.3.5. Autoproducer Combined Heat and Power (CHP) Units
- 5.2.3.6. Autoproducer Heat Only
- 5.2.3.7. Patent Fuel Plants
- 5.2.3.8. BKB/PB Plants
- 5.2.3.9. Gas Works
- 5.2.3.10. Blast Furnaces
- 5.2.3.11. Natural gas blending plants
- 5.2.3.12. For Blending with motor gasoline/diesel/kerosene:
- 5.2.3.13. Charcoal production plants
- 5.2.3.14. Not Elsewhere Specified — Transformation

5.2.4. *Energy Sector*

- 5.2.4.1. Gasification plants (biogas)
- 5.2.4.2. Electricity, CHP and Heat plants
- 5.2.4.3. Coal Mines
- 5.2.4.4. Patent Fuel Plants
- 5.2.4.5. Coke Ovens
- 5.2.4.6. Petroleum Refineries
- 5.2.4.7. BKB/PB Plants
- 5.2.4.8. Gas Works
- 5.2.4.9. Blast Furnaces
- 5.2.4.10. Charcoal production plants
- 5.2.4.11. Not Elsewhere Specified — Energy

5.2.5. *Distribution losses*

5.2.6. *Final Energy Consumption — Industry Sector*

- 5.2.6.1. Iron and Steel
- 5.2.6.2. Chemical and Petrochemical
- 5.2.6.3. Non-Ferrous Metals
- 5.2.6.4. Non-Metallic Minerals
- 5.2.6.5. Transport Equipment
- 5.2.6.6. Machinery

- 5.2.6.7. Mining and Quarrying
 - 5.2.6.8. Food, Beverages and Tobacco
 - 5.2.6.9. Pulp, Paper and printing
 - 5.2.6.10. Wood and Wood Products
 - 5.2.6.11. Construction
 - 5.2.6.12. Textile and Leather
 - 5.2.6.13. Not Elsewhere Specified — Industry
 - 5.2.7. *Final Energy Consumption — Transport Sector*
 - 5.2.7.1. Rail
 - 5.2.7.2. Road
 - 5.2.7.3. Domestic Navigation
 - 5.2.7.4. Not Elsewhere Specified — Transport
 - 5.2.8. *Final Energy Consumption — Other Sectors*
 - 5.2.8.1. Commercial and Public Services
 - 5.2.8.2. Households
 - 5.2.8.3. Agriculture/Forestry
 - 5.2.8.4. Fishing
 - 5.2.8.5. Not Elsewhere Specified — Other
 - 5.2.9. *Net maximum electrical capacity*
- Capacity shall be declared as on 31 December of the relevant reported year. Includes the electrical capacity of both electricity-only and CHP units. The net maximum electrical capacity is the sum of the net maximum capacities of all stations taken individually over a specific period of operation. The period of operation assumed for present purposes is continuous running: in practice 15 hours or more per day. The net maximum capacity is the maximum power assumed to be solely active power that can be supplied, continuously, with the whole plant running, at the point of outlet to the network.
- 5.2.9.1. Pure hydro plants
 - 5.2.9.2. Mixed hydro plants
 - 5.2.9.3. Pure pumped storage plants
 - 5.2.9.4. Geothermal
 - 5.2.9.5. Solar photovoltaic
 - 5.2.9.6. Solar thermal
 - 5.2.9.7. Tide, wave, ocean
 - 5.2.9.8. On-shore wind
 - 5.2.9.9. Off-shore wind
 - 5.2.9.10. Industrial waste
 - 5.2.9.11. Municipal waste

5.2.9.12. Solid biofuels

5.2.9.13. Biogases

5.2.9.14. Biodiesels

5.2.9.15. Biogasolines

5.2.9.16. Other liquid biofuels

5.2.10. *Technical characteristics*

5.2.10.1. Solar collector surface

The total surface area of the installed solar collectors is to be declared. The solar collector surface relates only to solar collectors used for the production of solar thermal heat; solar collector surface used for electricity generation does not have to be reported here (solar PV and concentrated solar power). The surface area of all solar collectors shall be included: glazed and unglazed collectors, flat-plate and vacuum tube with a liquid or air as the energy carrier.

5.2.10.2. Production capacity for Biogasoline

5.2.10.3. Production capacity for Biodiesels

5.2.10.4. Production capacity for Bio jet kerosene

5.2.10.5. Production capacity for Other Liquid Biofuels

5.2.10.6. Average net calorific value for Biogasoline

5.2.10.7. Average net calorific value for Bioethanol

5.2.10.8. Average net calorific value for Biodiesels

5.2.10.9. Average net calorific value for Bio jet kerosene

5.2.10.10. Average net calorific value for Other Liquid Biofuels

5.2.10.11. Average net calorific value for Charcoal

5.2.11. *Production of solid biofuels and biogases*

The total production of solid biofuels (excluding charcoal) shall be split among the following fuels:

5.2.11.1. Fuelwood, wood residues and by-products

5.2.11.1.1. Wood pellets as part of Fuelwood, wood residues and by-products

5.2.11.2. Black liquor

5.2.11.3. Bagasse

5.2.11.4. Animal waste

5.2.11.5. Other vegetal materials and residues

5.2.11.6. Renewable fraction of industrial waste

The total production of biogases shall be split among the following production methods:

5.2.11.7. Biogases from anaerobic fermentation: landfill gas

5.2.11.8. Biogases from anaerobic fermentation: sewage sludge gas

5.2.11.9. Biogases from anaerobic fermentation: other biogases from anaerobic fermentation

5.2.11.10. Biogases from thermal processes

5.2.12. Imports by country of origin AND exports by country of destination

Imports shall be reported by country of origin and exports by country of destination. Applicable to biogasolines, bioethanol, bio jet kerosene, biodiesels, other liquid biofuels, wood pellets.

5.3. Units of measurement

Electricity shall be declared in GWh (giga-watt hours), heat in TJ (tera-joules) and electrical capacity in MW (megawatts).

Reported quantities shall be declared in TJ NCV (tera-joules based on net calorific value), except for charcoal, biogasoline, bioethanol, bio jet kerosene, biodiesels, and other liquid biofuels which shall be declared in kt (kilo-tonnes).

Calorific values must be declared in MJ/t (mega-joules per tonne).

Solar collector surface shall be declared in 1000 m².

Production capacity shall be declared in kt (kilo-tonnes) per year.

6. ANNUAL NUCLEAR STATISTICS

The following data concerning the civil use of nuclear energy must be declared:

6.1. List of aggregates

6.1.1. Enrichment capacity

The annual separative work capacity of operational enrichment plants (isotopic separation of uranium).

6.1.2. Production capacity of fresh fuel elements

The annual production capacity of fuel fabrication plants. MOX fuel fabrication plants are excluded.

6.1.3. Production capacity of MOX fuel fabrication plants

The annual production capacity of MOX fuel fabrication plants.

MOX is a fuel that contains a mixture of plutonium and uranium (mixed oxide).

6.1.4. Production of fresh fuel elements

Production of finished fresh fuel elements in nuclear fuel fabrication plants. Rods or other partial products are not included. Fabrication plants producing MOX fuel are also excluded.

6.1.5. Production of MOX fuel elements

Production of finished fresh fuel elements in MOX fuel fabrication plants. Rods or other partial products are not included.

6.1.6. Production of nuclear heat

The total amount of heat generated by nuclear reactors for the production of electricity or for other useful applications of heat.

6.1.7. Annual average burnup of definitively discharged irradiated fuel elements

Calculated average of the burnup of the fuel elements which have been definitively discharged from nuclear reactors during the reference year concerned. Excludes fuel elements which are temporarily discharged and are likely to be reloaded again later.

6.1.8. *Production of Uranium and Plutonium in reprocessing plants*

Uranium and plutonium produced in reprocessing plants during the reference year.

6.1.9. *Capacity (Uranium and Plutonium) of reprocessing plants*

Annual reprocessing capacity of uranium and plutonium.

6.2. Units of measurement

tSWU (tonnes of separative work units) for 6.1.1.

tHM (tonnes of heavy metal) for 6.1.4, 6.1.5., 6.1.8.

tHM (tonnes of heavy metal) per year for 6.1.2., 6.1.3, 6.1.9

TJ (tera-joules) for 6.1.6.

GWd/tHM (gigawatt-day per tonne of heavy metal) for 6.1.7.

7. DETAILED STATISTICS ON FINAL ENERGY CONSUMPTION

The following disaggregated data concerning final energy consumption must be declared.

7.1. List of aggregates

7.1.1. *Industry sector*

To be reported as per the definitions provided in section 2.6.1 of Annex A.

7.1.1.1. Mining and Quarrying

7.1.1.1.1. Mining of metal ores

7.1.1.1.2. Other mining and quarrying

7.1.1.1.3. Mining support service activities

7.1.1.2. Food, Beverages and Tobacco

7.1.1.2.1. Manufacture of food products

7.1.1.2.2. Manufacture of beverages

7.1.1.2.3. Manufacture of tobacco products

7.1.1.3. Textile and Leather

7.1.1.4. Wood and Wood Products

7.1.1.5. Pulp, Paper and Printing

7.1.1.5.1. Manufacture of paper and paper products

7.1.1.5.1.1. Manufacture of pulp

7.1.1.5.1.2. Other paper and paper products

7.1.1.5.2. Printing and reproduction of recorded media

7.1.1.6. Chemical and Petrochemical

7.1.1.6.1. Manufacture of chemicals and chemical products

7.1.1.6.2. Manufacture of basic pharmaceutical products and pharmaceutical preparations

7.1.1.7. Non-Metallic Minerals

- 7.1.1.7.1. Manufacture of glass and glass products
- 7.1.1.7.2. Manufacture of cement, lime and plaster (incl. Clinker)
- 7.1.1.7.3. Other non-metallic mineral products
- 7.1.1.8. Iron and Steel [Manufacture of basic metals A]
- 7.1.1.9. Non-ferrous metals industries [Manufacture of basic metals B]
- 7.1.1.9.1. Aluminium production
- 7.1.1.9.2. Other non-ferrous metals industries
- 7.1.1.10. Machinery
- 7.1.1.10.1. Manufacture of fabricated metal products, except machinery and equipment
- 7.1.1.10.2. Manufacture of computer, electronic and optical products
- 7.1.1.10.3. Manufacture of electrical equipment
- 7.1.1.10.4. Manufacture of machinery and equipment n.e.c.
- 7.1.1.11. Transport Equipment
- 7.1.1.12. Not Elsewhere Specified — Industry
- 7.1.1.12.1. Manufacture of rubber and plastic products
- 7.1.1.12.2. Manufacture of furniture
- 7.1.1.12.3. Other manufacturing

7.1.2. Households sector

To be reported as per the definitions provided in section 2.6.3.2 of Annex A.

- 7.1.2.1. Households: Space heating
- 7.1.2.2. Households: Space cooling
- 7.1.2.3. Households: Water heating
- 7.1.2.4. Households: Cooking
- 7.1.2.5. Households: Lighting and appliances

Only concerns electricity

- 7.1.2.6. Households: Other end uses

7.2. Applicable energy products

Unless otherwise specified, this data collection applies to all energy products listed in Annex A.

Eurostat will specify the actual list of energy products for which data covered by point 7 of Annex B should be reported in the reporting template, as a subset of those listed in point 3 of Annex A.

7.3. Units of measurement

Quantities of solid fossil fuels shall be declared in kt (kilo-tonnes);

Quantities of crude oil and petroleum products must be declared in kt (kilo-tonnes);

Quantities of natural gas and manufactured gases (gas works gas, coke oven gas, blast furnace gas, other recovered gases) must be declared by energy content, in TJ GCV (terajoules based on gross calorific values);

Electricity shall be declared in GWh (giga-watt hours);

Quantities of heat must be declared in TJ (tera-joules based on net calorific values);

Quantities of renewables and waste must be declared in TJ NCV (tera-joules based on net calorific value), except for charcoal, biogasoline, bioethanol, bio jet kerosene, biodiesels, and other liquid biofuels, which shall be declared in kt (kilo-tonnes).

Calorific values for solid fossil fuels, crude oil and petroleum products and renewables and waste must be declared in MJ/t (mega-joules per tonne).

Calorific values for natural gas and manufactured gases shall be declared in kJ/m³, assuming reference gas conditions (15 °C, 101 325 Pa).

For other energy products for which reporting is required, the applicable units are defined in the relevant chapters of this Annex.

7.4. Deadline for transmission of data:

Data shall be submitted by 31 March of the second year following the reported year.

7.5. Exemptions

Cyprus is exempted from reporting the disaggregated final energy consumption of crude oil and petroleum products (as defined in Section 3.4 of Annex A) for all aggregates covered by section 7.1.2 of this Annex (Households).

ANNEX C

MONTHLY ENERGY STATISTICS

This Annex describes the scope, units, reported period, frequency, deadline and transmission modalities for the monthly collection of energy statistics.

Explanations of terms for which a specific explanation is not supplied in this Annex can be found in Annex A.

The following provisions apply to all data collections specified in this Annex:

- (a) Reported period: The reported period of declared data shall be one calendar month.
- (b) Frequency: Data shall be declared on a monthly basis.
- (c) Transmission format: The transmission format shall conform to the relevant interchange standard specified by Eurostat.
- (d) Transmission method: Data shall be submitted or uploaded by electronic means to the single entry point for data at Eurostat.

1. SOLID FUELS

1.1. Applicable energy products

This chapter covers the reporting of:

- 1.1.1. *Hard coal*
- 1.1.2. *Brown coal*
- 1.1.3. *Peat*
- 1.1.4. *Oil shale and oil sands*
- 1.1.5. *Coke oven coke*

1.2. List of aggregates

1.2.1. *The following aggregates shall be declared for hard coal:*

- 1.2.1.1. Production
- 1.2.1.2. Recovered products
- 1.2.1.3. Imports
- 1.2.1.4. Imports from outside EU
- 1.2.1.5. Exports
- 1.2.1.6. Opening Total Stocks On National Territory

These are the quantities held by mines, importers and consumers who import directly.

1.2.1.7. Closing Total Stocks On National Territory

These are the quantities held by mines, importers and consumers who import directly.

- 1.2.1.8. Deliveries to main activity producers
- 1.2.1.9. Deliveries to coking plants
- 1.2.1.10. Deliveries to total industry

1.2.1.11. Deliveries to iron and steel industry

1.2.1.12. Other deliveries (services, households, etc.). The amount of hard coal delivered to sectors not specifically mentioned or not belonging to transformation, energy, industry or transport.

1.2.2. The following aggregates shall be declared for brown coal, peat and oil shale and oil sands:

1.2.2.1. Production

1.2.2.2. Imports

1.2.2.3. Exports

1.2.2.4. Opening Total Stocks On National Territory

These are the quantities held by mines, importers and consumers who import directly.

1.2.2.5. Closing Total Stocks On National Territory

These are the quantities held by mines, importers and consumers who import directly.

1.2.2.6. For peat, stock changes can be declared instead of opening and closing total stocks.

1.2.2.7. Deliveries to main activity producers

1.2.3. The following aggregates shall be declared for coke oven coke:

1.2.3.1. Production

1.2.3.3. Imports

1.2.3.4. Imports from outside the EU

1.2.3.5. Exports

1.2.3.6. Opening Total Stocks On National Territory

These are the quantities held by producers, importers and consumers who import directly.

1.2.3.7. Closing Total Stocks On National Territory

These are the quantities held by producers, importers and consumers who import directly.

1.2.3.8. Deliveries to iron and steel industry

1.3. Units of measurement

Reported quantities must be declared in kt (kilo-tonnes).

1.4. Deadline for transmission of data

Within two calendar months following the reported month.

2. ELECTRICITY

2.1. Applicable energy products

This chapter covers the reporting of electricity.

2.2. List of aggregates

The following aggregates shall be declared for electricity:

2.2.1. Net electricity production from nuclear plants

2.2.2. Net electricity production from conventional thermal power generation using coal

2.2.3. Net electricity production from conventional thermal power generation using oil

- 2.2.4. *Net electricity production from conventional thermal power generation using gas*
- 2.2.5. *Net electricity production from conventional thermal power generation using combustible renewables (such as solid biofuels, biogases, liquid biofuels, renewable municipal waste)*
- 2.2.6. *Net electricity production from conventional thermal power generation using other non-renewable combustible fuels (such as non-renewable industrial and non-renewable municipal waste)*
- 2.2.7. *Net electricity production from pure hydro plants*
- 2.2.8. *Net electricity production from mixed hydro plants*
- 2.2.9. *Net electricity production from pure pumped storage hydro plants*
- 2.2.10. *Net electricity production from wind installations on shore*
- 2.2.11. *Net electricity production from wind installations off shore*
- 2.2.12. *Net electricity production from solar PV installations*
- 2.2.13. *Net electricity production from solar thermal installations*
- 2.2.14. *Net electricity production from geothermal power generation*
- 2.2.15. *Net electricity production from other renewable sources (such as tide, wave, ocean and other non-combustible renewable sources)*
- 2.2.16. *Net electricity production from non-specified origin*
- 2.2.17. *Imports*
- 2.2.17.1. *Of which from the EU*
- 2.2.18. *Exports*
- 2.2.18.1. *Of which to the EU*
- 2.2.19. *Electricity used for pumped storage*

2.3. Units of measurement

Reported quantities must be declared in GWh (giga-watt hours).

2.4. Deadline for transmission of data

Within two calendar months following the reported month.

3. OIL AND PETROLEUM PRODUCTS

3.1. Applicable energy products

Unless otherwise specified, this data collection applies to all energy products listed in Annex A, Chapter 3.4. Oil (crude oil and petroleum products).

The 'Other Products' category includes both the quantities that correspond to the definition in Annex A Chapter 3.4 and also the quantities of white spirit and SBP, lubricants, bitumen and paraffin waxes; these products should not be declared separately.

3.2. List of aggregates

The following aggregates shall be declared for all energy products listed in the previous paragraph unless otherwise specified.

- 3.2.1. *Supply of crude oil, NGL, refinery feedstocks, additives and other hydrocarbons*

Note for additives and biofuels: include here not only already blended volumes, but also all quantities destined for blending.

The following aggregates shall be declared for crude oil, NGL, refinery feedstocks, additives/oxygenates, biofuels and other hydrocarbons:

3.2.1.1. Indigenous Production (not applicable for refinery feedstocks and biofuels).

3.2.1.2. Receipts from other sources (not applicable for crude oil, NGL, refinery feedstocks)

3.2.1.3. Backflows

Finished or semi-finished products which are returned from final consumers to refineries for processing, blending or sale. They are usually by-products of petrochemical manufacturing. Only applicable for refinery feedstocks.

3.2.1.4. Products Transferred

Imported petroleum products which are reclassified as feedstocks for further processing in the refinery, without delivery to final consumers. Only applicable for refinery feedstocks.

3.2.1.5. Imports

3.2.1.6. Exports

Note for import and exports: Includes quantities of crude oil and products imported or exported under processing agreements (i.e. refining on account). Crude oil and NGLs should be reported as coming from the country of ultimate origin; refinery feedstocks and finished products should be reported as coming from the country of last consignment. Includes any gas liquids (e.g. LPG) extracted during the regasification of imported liquefied natural gas and petroleum products imported or exported directly by the petrochemical industry.

3.2.1.7. Direct Use

3.2.1.8. Stock changes

A stock build is shown as a positive number and a stock draw is shown as a negative number.

3.2.1.9. Observed Refinery Intake

This is defined as the total amount of oil (including Other hydrocarbons and Additives) observed to have entered the refinery process (input to refineries).

3.2.1.10. Refinery Losses

The difference between observed refinery intake and gross refinery output. Losses may occur during distillation processes due to evaporation. Reported losses are positive. There may be volumetric gains but no gains in mass.

3.2.2. *Supply of finished products*

The following aggregates shall be declared for Crude oil, NGL, Refinery gas, Ethane, LPG, Naphtha, Biogasoline, Non-biogasoline, Aviation gasoline, Gasoline type jet fuel, Bio jet kerosene, Non-bio jet Kerosene, Other kerosene, Biodiesels, Non-bio gas/diesel oil, LSFO, HSFO, Petroleum coke, and Other products:

3.2.2.1. Primary Product Receipts

3.2.2.2. Gross Refinery Output (not applicable for crude oil and NGL)

3.2.2.3. Recycled Products (not applicable for crude oil and NGL)

3.2.2.4. Refinery Fuel (not applicable for crude oil and NGL)

Annex A Chapter 2.3. Energy sector — Petroleum Refineries; Includes fuels used at the refineries for the production of electricity and heat sold.

3.2.2.5. Imports (not applicable for crude oil, NGL and refinery gas)

3.2.2.6. Exports (not applicable for crude oil, NGL and refinery gas)

The note made for imports and exports in section 3.2.1 also applies here.

3.2.2.7. International Marine Bunkers (not applicable for crude oil and NGL)

3.2.2.8. Interproduct Transfers

3.2.2.9. Products Transferred (not applicable for crude oil and NGL)

3.2.2.10. Stock Changes (not applicable for crude oil, NGL and refinery gas)

A stock build is shown as a positive number and a stock draw is shown as a negative number.

3.2.2.11. Observed Gross Inland Deliveries

The observed delivery of finished petroleum products from primary sources (e.g. refineries, blending plants, etc.) to the inland market.

3.2.2.11.1. International Aviation (applicable only for Aviation gasoline, Gasoline type jet fuel, Bio jet kerosene, Non-bio jet Kerosene)

3.2.2.11.2. Main activity producer power plants

3.2.2.11.3. Road (applicable only for LPG)

3.2.2.11.4. Domestic navigation and Rail (applicable only for Biodiesels, Non-bio gas/diesel oil)

3.2.2.12. Petrochemical

3.2.2.13. Backflow to refineries (not applicable for crude oil and NGL)

3.2.3. Imports by origin — exports by destination

Imports shall be reported by country of origin and exports by country of destination. The note made for imports and exports in section 3.2.1 also applies here.

3.2.4. Stock levels

The following opening and closing stocks must be declared for all energy products, including for additives/oxygenates but except for refinery gas:

3.2.4.1. Stocks on national territory

Stocks in the following locations: refinery tanks, bulk terminals, pipeline tankage, barges and coastal tankers (when port of departure and destination are in the same country), tankers in a port of a member country (if their cargo is to be discharged at the port), inland ship bunkers. Excludes stocks of oil held in pipelines, in rail tanks cars, in truck tanks cars, in sea-going ships' bunkers, in service stations, in retail stores and in bunkers at sea.

3.2.4.2. Stocks held for other countries under bilateral government agreements

Stocks on national territory which belong to another country and to which access is guaranteed by an agreement between the respective governments.

3.2.4.3. Stocks with known foreign destination

Stocks not included in point 3.2.4.2 on national territory which belong to and are destined for another country. These stocks may be located inside or outside bonded areas.

3.2.4.4. Other stocks held in bonded areas

Includes stocks not included in point 3.2.4.2 nor 3.2.4.3 irrespective of whether they have received customs clearance or not.

3.2.4.5. Stocks held by major consumers

Include stocks which are subject to government control. This definition does not include other consumer stocks.

3.2.4.6. Stocks held on board incoming ocean vessels in port or at mooring

Stocks irrespective of whether they have been cleared by customs or not. This category excludes stocks on board vessels at high seas.

Includes oil in coastal tankers if both their port of departure and destination are in the same country. In the case of incoming vessels with more than one port of unloading, only report the amount to be unloaded in the reporting country.

3.2.4.7. Stocks held by government on national territory

Includes non-military stocks that are held by the government within the national territory, and are government owned or controlled and held exclusively for emergency purposes.

Excludes stocks held by state oil companies or electric utilities or stocks held directly by oil companies on behalf of governments.

3.2.4.8. Stocks held by stock holding organisation on national territory

Stocks held by both public and private corporations established to maintain stocks exclusively for emergency purposes.

Excludes mandatory stocks held by private companies.

3.2.4.9. All other stocks held on national territory

All other stocks satisfying the conditions described in point 3.2.4.1 above.

3.2.4.10. Stocks held abroad under bilateral government agreements

Stocks belonging to the reporting country but held in another country, to which access is guaranteed by an agreement between the respective governments.

3.2.4.10.1. Of which: Government stocks

3.2.4.10.2. Of which: Holding organisation's stocks

3.2.4.10.3. Of which: Other stocks

3.2.4.11. Stocks held abroad designated definitely for import stocks

Stocks that are not included in category 10 and that belong to the reporting state but are held in another state and are awaiting import there.

3.2.4.12. Other stocks in bonded areas

Other stocks in the national territory not included in the above categories.

3.2.4.13. Pipeline fill

Oil (crude oil and petroleum products) contained in pipelines, necessary to maintain flow in the pipelines.

In addition, a breakdown of quantities per corresponding country must be declared for:

- 3.2.4.13.1. closing stocks held for other countries under official agreement, by beneficiary,
- 3.2.4.13.2. closing stocks held for other countries under official agreement, of which held as stock tickets, by beneficiary,
- 3.2.4.13.3. closing stocks with known foreign destination, by beneficiary,
- 3.2.4.13.4. closing stocks held abroad under official agreement, by location,
- 3.2.4.13.5. closing stocks held abroad under official agreement, of which held as stock tickets, by location,
- 3.2.4.13.6. closing stocks held abroad designated definitely for import into the declarer's country, by location.

'Opening stocks' means the stocks on the last day of the month preceding the reported one. 'Closing stocks' means the stocks on the last day of the reported month.

3.3. Units of measurement

Reported quantities must be declared in kt (kilo-tonnes).

3.4. Deadline for transmission of data

Within 55 days following the reported month.

3.5. Geographical notes

For statistical reporting purposes only, the clarifications in Annex A Chapter 1 apply with the following specific exception: Switzerland includes Liechtenstein

4. NATURAL GAS

4.1. Applicable energy products

This chapter covers the reporting of natural gas.

4.2. List of aggregates

The following aggregates shall be declared for natural gas.

4.2.1. Indigenous Production

All dry marketable production within national boundaries, including offshore production. Production is measured after purification and extraction of NGLs and sulphur. Excludes extraction losses and quantities reinjected, vented or flared. Includes quantities used within the natural gas industry, in gas extraction, pipeline systems and processing plants.

4.2.2. Imports (Entries)

4.2.3. Exports (Exits)

Note for imports and exports: Report all natural gas volumes which have physically crossed the national boundaries of the country, whether customs clearance has taken place or not. This includes quantities transiting your country; transit volumes should be included as an import and as an export. Imports of liquefied natural gas should cover only the dry marketable equivalent, including amounts used as own consumption in the regasification process. The amounts used as own consumption during regasification should be reported under Own use and losses of the natural gas industry (see 4.2.10). Any gas liquids (e.g. LPG) extracted during the regasification process of imported LNG should be reported under 'Receipts from other

sources' of 'Other hydrocarbons' as defined in Chapter 3 of this annex (OIL AND PETROLEUM PRODUCTS).

4.2.4. Stock changes

A stock build is shown as a positive number and a stock draw is shown as a negative number.

4.2.5. Observed Gross Inland Deliveries

This category represents deliveries of marketable gas to the inland market, including gas used by the gas industry for heating and operation of their equipment (i.e. consumption in gas extraction, in the pipeline system and in processing plants); losses in transmission and distribution should also be included.

4.2.6. Opening levels of stocks held on national territory

4.2.7. Closing levels of stocks held on national territory

4.2.8. Opening levels of stocks held abroad

4.2.9. Closing levels of stocks held abroad

Note for levels of stocks: includes natural gas stored in gaseous form as well as in liquefied form.

4.2.10. Own use and losses of the natural gas industry

Quantities used by the gas industry for heating and operation of its equipment (i.e. consumption in gas extraction, in the pipeline system and in processing plants); includes losses in transmission and distribution.

4.2.11. Imports (entries) by origin and exports (exits) by destination

Imports (entries) shall be reported by country of origin and exports (exits) by country of destination. The note made for imports and exports in section 4.2.3 also applies here. Imports and exports are to be declared only for the neighbouring country or country with a direct pipeline connection or, in the case of LNG, for the country where the gas has been loaded onto the transport ship.

4.2.12. Deliveries to power generation

4.3. Units of measurement

Quantities must be declared in two units:

4.3.1. *in physical quantity, in million m³ (million cubic metres) assuming reference gas conditions (15 °C, 101 325 Pa),*

4.3.2. *in energy content, in TJ (tera-joules), based on the gross calorific value.*

4.4. Deadline for transmission of data

Within 55 days following the reported month.

ANNEX D

SHORT TERM MONTHLY STATISTICS

This Annex describes the scope, units, reported period, frequency, deadline and transmission modalities for the short-term monthly collection of statistical data.

Explanations of terms for which a specific explanation is not supplied in this Annex can be found in Annex A.

The following provisions apply to all data collections specified in this Annex:

- (a) Reported period: The reported period of declared data shall be one calendar month.
- (b) Frequency: Data shall be declared on a monthly basis.
- (c) Transmission format: The transmission format shall conform to the relevant interchange standard specified by Eurostat.
- (d) Transmission method: Data shall be submitted or uploaded by electronic means to the single entry point for data at Eurostat.

1. NATURAL GAS

1.1. Applicable energy products

This chapter covers the reporting of natural gas.

1.2. List of aggregates

The following aggregates shall be declared.

1.2.1. Production

1.2.2. Imports

1.2.3. Exports

Note for imports and exports: report all natural gas volumes which have physically crossed the national boundaries of the country, whether customs clearance has taken place or not. This includes quantities transiting your country; transit volumes should be included as an import and as an export. Imports of liquefied natural gas should cover only the dry marketable equivalent, including amounts used as own consumption in the regasification process.

1.2.4. Stock change

1.2.5. Total closing stocks on national territory

1.3. Units of measurement

Reported quantities must be declared in TJ (tera-joules), based on the gross calorific value (GCV).

1.4. Deadline for transmission of data

Within one calendar month following the reported month.

2. CRUDE OIL IMPORTS AND SUPPLY

2.1. Applicable energy products

This chapter covers the reporting of crude oil.

2.2. Definitions

2.2.1. Imports

Imports cover every quantity of crude oil which either enters the customs territory of the **Contracting Party** or comes from another **Contracting Party** for purposes other than transit. Crude oil used for stock building shall be included.

Oil extracted from the seabed over which a **Contracting Party** exercises exclusive rights for the purposes of exploitation and entering the customs territory of the Community shall be excluded from imports.

2.2.2. Supply:

Supply covers the crude oil imported and the crude oil produced in the **Contracting Party** during the reference period. The provision of crude oil from previously built stocks is excluded.

2.2.3. CIF price:

The CIF (cost, insurance and freight) price includes the FOB (free on board) price, which is the price actually invoiced at the port/place of loading in addition to the cost of transport, insurance and charges linked to crude oil transfer operations.

The CIF price of the crude oil produced in a **Contracting Party** is to be calculated free at port of discharge or free at frontier, i.e. at the moment when the crude oil falls under the customs jurisdiction of the importing country.

2.2.4. API gravity:

The API gravity is a measure of how heavy/light crude oil is compared to water. The API gravity is to be reported according to the following formula, with respect to the specific gravity (SG): $API = (141,5 \div SG) - 131,5$

2.3. List of aggregates

2.3.1. *The following list of aggregates shall be declared for crude oil imports split by type and geographical area of production:*

2.3.1.1. the designation of the crude oil

2.3.1.2. the average API gravity

2.3.1.3. the average sulphur content

2.3.1.4. the total volume imported

2.3.1.5. the total CIF price

2.3.1.6. the number of reporting entities.

2.3.2. *The following list of aggregates shall be declared for crude oil supply:*

2.3.2.1. the volume supplied

2.3.2.2. the weighted average CIF price

2.4. Units of measurement

bbl (barrel) for 2.3.1.4 and 2.3.2.1.

kt (thousand tonnes) for 2.3.2.1.

% (percentage) for 2.3.1.3.

° (degrees) for 2.3.1.2.

\$ (US Dollar) per barrel for 2.3.1.5 and 2.3.2.2.

\$ (US Dollar) per tonne for 2.3.2.2.

2.5. Applicable provisions

2.5.1. Reported period:

One calendar month.

2.5.2. Frequency:

Monthly.

2.5.3. Deadline for transmission of data:

Within one calendar month following the reported month.

2.5.4. Transmission format:

The transmission format shall conform to the relevant interchange standard specified by Eurostat.

2.5.5. Transmission method:

Data shall be submitted or uploaded by electronic means to the single entry point for data at Eurostat.

3. OIL AND PETROLEUM PRODUCTS

3.1. Applicable energy products

This chapter covers the reporting of:

3.1.1. Crude oil

3.1.2. LPG

3.1.3. Gasoline (which is the sum of motor gasoline and aviation gasoline)

3.1.4. Kerosene (which is the sum of kerosene type jet fuel and other kerosene)

3.1.5. Gas/diesel oil

3.1.6. Fuel oil.

3.1.7. 'Total oil' means the sum of all the above listed products except crude oil, and must also include all other petroleum products defined in Annex A (such as refinery gas, ethane, naphtha, petroleum coke, white spirit and SBP, paraffin waxes, bitumen, lubricants and others).

3.2. List of aggregates

The following aggregates shall be declared for all energy products listed in the previous paragraph.

3.2.1. Production for crude oil and refinery output (gross output, including refinery fuel) for all other products listed in section 3.1.

3.2.2. Imports

3.2.3. Exports

3.2.4. Closing stocks

3.2.5. Stock change

A stock build is shown as a positive number and a stock draw is shown as a negative number.

3.2.6. *Refinery Intake (Observed refinery throughput) for crude oil and Demand for all other products that are listed in section 3.1.*

Demand is defined as deliveries or sales to the inland market (domestic consumption) plus Refinery Fuel plus International Marine and Aviation Bunkers. Demand for Total Oil includes Crude Oil.

3.3. Units of measurement

Reported quantities must be declared in kt (kilo-tonnes).

3.4. Deadline for transmission of data

Within 25 days following the reported month.

REGULATION (EU) 2016/1952 of 26 October 2016 on European statistics on natural gas and electricity prices

Incorporated and adapted by Ministerial Council Decision 2018/1/MC-EnC of 3 January 2018 on adopting Regulation (EU) 2016/1952 of 26 October 2016 on European statistics on natural gas and electricity prices and repealing Directive 2008/92/EC

*The adaptations made by Ministerial Council Decision 2018/1/MC-EnC are highlighted in **bold and blue**.*

Article 1

Subject matter

This Regulation establishes a common framework for the development, production and dissemination of comparable European statistics on natural gas and electricity prices for household and final non-household customers in the Union.

Article 2

Definitions

For the purposes of this Regulation, the following definitions apply:

- (1) 'autoproducers', 'final energy consumption' and 'household' have the same meaning as that attributed to those terms in Annex A to Regulation (EC) No 1099/2008 of the European Parliament and of the Council;
- (2) 'transmission', 'distribution', 'customer', 'final customer', 'household customer', 'non-household customer' and 'supply' have the same meaning as that attributed to those terms in Article 2 of Directive 2009/72/EC of the European Parliament and of the Council, when used in relation to electricity;
- (3) 'transmission', 'distribution', 'supply', 'customer', 'household customer', 'non-household customer' and 'final customer' have the same meaning as that attributed to those terms in Article 2 of Directive 2009/73/EC of the European Parliament and of the Council, when used in relation to natural gas;
- (4) 'network component' means the combination of transmission and distribution network costs as set out in point 6 of Annex I and in point 5 of Annex II.

Article 3

Data sources

Contracting Parties shall compile data on natural gas and electricity prices, and their components and sub-components concerning network costs, taxes, fees, levies and charges, and on consumption volumes, in accordance with Annexes I and II. One or more of the following sources shall be used, after taking into account the principles of reducing burden on respondents and of administrative simplification:

- (a) statistical surveys;
- (b) administrative sources;
- (c) other sources applying statistical estimation methods.

Article 4

Coverage

1. **Contracting Parties** shall ensure that the data collection and compilation in accordance with Annexes I and II provide comprehensible and comparable high-quality data that are representative of their respective natural gas and electricity prices and consumption.
2. **Contracting Parties** shall not be obliged to transmit data on natural gas prices for household customers if the consumption of natural gas in the household sector accounts for less than 1,5% of national final energy consumption in the household sector.
3. At least every three years, **Energy Community Secretariat** shall review which **Contracting Parties** are not obliged to transmit data pursuant to paragraph 2.

Article 5

Data transmission

1. **Contracting Parties** shall provide to the Commission (Eurostat) the data as set out in Annexes I and II.
2. The Commission shall adopt implementing acts establishing the format and arrangements for the transmission of the data as set out in Annexes I and II. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 10(2).
3. **Contracting Parties** shall provide statistics to the Commission (Eurostat) within three months of the end of the relevant reference period.

Article 6

Reference periods and transmission frequency

1. The reference periods for the data specified in Annexes I and II shall be annual (January to December) or biannual (January to June and July to December). The first reference periods shall start in 2017.
2. The transmission frequency shall be:
 - (a) annual (for the period from January to December) for data referred to in points 6(a) and 7 of Annex I and points 5(a) and 6 of Annex II;
 - (b) biannual (for the periods from January to June and from July to December) for data referred to in point 6(b) of Annex I and point 5(b) of Annex II.

Article 7

Quality assurance

1. **Contracting Parties** shall ensure the quality of the data provided in accordance with this Regulation. To that end, the standard quality criteria laid down in Article 12(1) of Regulation (EC) No 223/2009 apply.
2. Contracting Parties shall inform the Commission (Eurostat), without delay, of any methodological or other changes that might have a significant impact on natural gas and electricity price statistics, and in any event no later than one month after that change occurs.
3. Every three years, **Contracting Parties** shall provide the Commission (Eurostat) with a standard quality report on the data in accordance with the quality criteria laid down in Article 12(1) of Regulation (EC) No 223/2009. Those reports shall include information on the scope and collection of the data, the calculation criteria, the methodology and data sources used, and any changes thereto.
4. The Commission (Eurostat) shall assess the quality of the data provided and shall use that assessment and an analysis of the quality reports referred to in paragraph 3 in order to prepare and publish a report on the quality of European statistics covered by this Regulation.
5. The Commission shall adopt implementing acts establishing technical quality assurance requirements regarding the content of the quality reports referred to in paragraph 3 of this Article. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 10(2).

Article 8

Dissemination

The Commission (Eurostat) shall disseminate natural gas and electricity price statistics no later than five months after the end of each reference period.

Article 9

Derogations

1. Derogations may be granted by the **Energy Community Secretariat** by means of implementing acts in relation to specific obligations for which the application of this Regulation to the national statistical system of a **Contracting Party** requires major adaptations or is likely to lead to a significant additional burden on respondents. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 10(2).
2. For the purposes of paragraph 1, the **Contracting Party** concerned shall submit a duly reasoned request to the **Energy Community Secretariat** by 8 August 2017.
3. Derogations granted pursuant to paragraph 1 shall remain in force for the shortest period of time possible and in any event for no longer than three years.
4. A **Contracting Party** that has been granted a derogation pursuant to paragraph 1 shall apply the relevant provisions of Directive 2008/92/EC for the duration of the derogation.

Article 10

Committee procedure

1. The Commission shall be assisted by the European Statistical System Committee established by Regulation (EC) No 223/2009. That Committee shall be a committee within the meaning of Regulation (EU) No 182/2011.
2. Where reference is made to this paragraph, Article 5 of Regulation (EU) No 182/2011 shall apply.

Article 11

Repeal of Directive 2008/92/EC

1. Directive 2008/92/EC is repealed with effect from 1 March 2017.
2. Notwithstanding paragraph 1 of this Article, Directive 2008/92/EC shall continue to apply under the conditions provided for in Article 9 of this Regulation.
3. References to the repealed Directive shall be construed as references to this Regulation.

Article 12

Entry into force

This Decision enters into force on the day of its adoption and is addressed to the Contracting Parties.

Each Contracting Party shall, not later than 1 March 2018, bring into force the laws, regulations and administrative provisions necessary to comply with Regulation (EU) 2016/1952 of 26 October 2016 on European statistics on natural gas and electricity prices and repealing Directive 2008/92/EC.

ANNEX I

NATURAL GAS PRICES

This Annex sets out the methodology for the collection and compilation of statistical data on natural gas prices for household and final non-household customers.

1 Prices

Prices shall be those charged to household and final non-household customers buying natural gas for their own use that is distributed through mains.

2 Natural gas

Natural gas shall include natural gas and other gaseous fuels blended with natural gas in the transmission and distribution network, such as biogas. Other gaseous fuels that are distributed through dedicated networks without being blended with natural gas (e.g. gas works gas, coke oven gas, blast furnace gas and biogas) shall be excluded.

3 Reporting units

The data shall include all household and final non-household customers of natural gas, but shall exclude customers who use natural gas only for:

- electricity generation in power plants or in combined heat and power (CHP) plants; or
- non-energy purposes (e.g. for use in the chemicals industry).

4 Units of measurement

Prices shall be the national average prices charged to household and final non-household customers.

Prices shall be expressed in national currency per gigajoule (GJ). The unit of energy used shall be measured on the basis of the gross calorific value (GCV).

Prices shall be weighted according to the market share of natural gas supply undertakings in each consumption band. If it is not possible to calculate weighted average prices, arithmetic average prices may be provided. In either case, the data shall cover a representative share of the national market.

5 Consumption bands

Prices shall be based on a system of standard annual natural gas consumption bands.

(a) For household customers, the following bands shall be applied:

Consumption band	Annual natural gas consumption (GJ)	
	Minimum	Maximum
Band D1		< 20
Band D2	≥ 20	< 200
Band D3	≥ 200	

(b) For final non-household customers, the following bands shall be applied:

Consumption band	Annual natural gas consumption (GJ)	
	Minimum	Maximum
Band I1		< 1 000
Band I2	≥ 1 000	< 10 000
Band I3	≥ 10 000	< 100 000
Band I4	≥ 100 000	< 1 000 000
Band I5	≥ 1 000 000	< 4 000 000
Band I6	≥ 4 000 000	

6 Level of detail

Prices shall include all charges payable: network charges plus energy consumed, minus any rebates or premiums, plus any other charges (e.g. meter rental, standing charges). Initial connection charges shall be excluded.

Detailed data shall be transmitted as specified below.

(a) Level of detail required for components and sub-components

Prices shall be subdivided into three main components and into separate sub-components.

The final customer price for natural gas by consumption band is the sum of the three main components: the energy and supply component, the network component (transmission and distribution) and the component comprising taxes, fees, levies and charges.

Component and sub-component	Description
Energy and supply	This component shall include the commodity price for natural gas paid by the supplier or the price of natural gas at the point of entry into the transmission system, including, if applicable, the following end-user costs: storage costs plus costs relating to the sale of natural gas to final customers.

Network	The network price shall include the following end-user costs: transmission and distribution tariffs, transmission and distribution losses, network costs, after-sale service costs, system service costs and meter rental and metering costs.
Sub-component	The network component shall be subdivided into end-user transmission and distribution network costs, as follows:
	1. Average relative share of transmission costs for household customers and average relative share of transmission costs for final non-household customers, expressed as a percentage of total network costs.
	2. Average relative share of distribution costs for household customers and average relative share of distribution costs for final non-household customers, expressed as a percentage of total network costs.
Taxes, fees, levies and charges	This component is the sum of all the sub-components (taxes, fees, levies and charges) listed below.
Sub-component	The following sub-components shall be transmitted as individual items for each consumption band defined in point 5.
	1. Value added tax as defined in Council Directive 2006/112/EC.
	2. Taxes, fees, levies or charges relating to the promotion of renewable energy sources, energy efficiency and CHP generation.
	3. Taxes, fees, levies or charges relating to strategic stockpiles, capacity payments and energy security; taxes on natural gas distribution; stranded costs and levies on financing energy regulatory authorities or market and system operators.
	4. Taxes, fees, levies or charges relating to air quality and for other environmental purposes; taxes on emissions of CO ₂ or other greenhouse gases.
	5. All other taxes, fees, levies or charges not covered by any of the previous four categories: support for district heating; local or regional fiscal charges; island compensation; concession fees relating to licences and fees for the occupation of land and public or private property by networks or other devices.

(b) Level of detail based on taxation

Prices shall be broken down into the following three levels:

Level	Description
Prices excluding all taxes, fees, levies and charges	This price level shall include only the energy and supply component and the network component.

Prices excluding value added tax (VAT) and other recoverable taxes	This price level shall include the energy and supply component, the network component and taxes, fees, levies and charges considered as non-recoverable for final non-household customers. For household customers this price level shall include the energy and network components and taxes, fees, levies and charges but excludes VAT.
Prices including all taxes	This price level shall include the energy and supply component, the network component, and all recoverable and non-recoverable taxes, fees, levies and charges, including VAT.

7 Consumption volumes

Contracting Parties shall transmit information on the relative share of natural gas in each consumption band based on the total volume to which the prices refer.

The annual consumption volumes for each consumption band shall be transmitted once per year, together with the price data for the second semester.

The data shall not be older than two years.

ANNEX II

ELECTRICITY PRICES

This Annex sets out the methodology for the collection and compilation of statistical data on electricity prices for household and final non-household customers.

1 Prices

Prices shall be those charged to household and final non-household customers buying electricity for their own use.

2 Reporting units

The data shall include all household and final non-household customers of electricity, but electricity generated and subsequently consumed by autoproducers shall be excluded from the reporting obligation.

3 Units of measurement

Prices shall be the national average prices charged to household and final non-household customers. Prices shall be expressed in national currency per kilowatt-hour (kWh).

Prices shall be weighted according to the market share of electricity supply undertakings in each consumption band. If it is not possible to calculate weighted average prices, arithmetic average prices may be provided. In either case, the data shall cover a representative share of the national market.

4 Consumption bands

Prices shall be based on a system of standard annual electricity consumption bands.

(a) For household customers, the following bands shall be applied:

Consumption band	Annual electricity consumption (kWh)	
	Minimum	Maximum
Band DA		< 1 000
Band DB	≥ 1 000	< 2 500
Band DC	≥ 2 500	< 5 000
Band DD	≥ 5 000	< 15 000
Band DE	≥ 15 000	

(b) For final non-household customers, the following bands shall be applied:

Consumption band	Annual electricity consumption (kWh)	
	Minimum	Maximum
Band IA		< 20
Band IB	≥ 20	< 500
Band IC	≥ 500	< 2 000
Band ID	≥ 2 000	< 20 000
Band IE	≥ 20 000	< 70 000
Band IF	≥ 70 000	< 150 000
Band IG	≥ 150 000	

5 Level of detail

Prices shall include all charges payable: network charges plus energy consumed, minus any rebates or premiums, plus any other charges (e.g. meter rental, standing charges). Initial connection charges shall be excluded.

Detailed data shall be transmitted as specified below.

(a) Level of detail required for components and sub-components

Prices shall be subdivided into three main components and into separate sub-components.

The final customer price for electricity by consumption band is the sum of the three main components: the energy and supply component, the network component (transmission and distribution) and the component comprising taxes, fees, levies and charges.

Component and sub-component	Description
Energy and supply	This component shall include the following end-user costs: generation, aggregation, balancing energy, supplied energy costs, customer services, after-sales management and other supply costs.
Network	The network price shall include the following end-user costs: transmission and distribution tariffs, transmission and distribution losses, network costs, after-sale service costs, system service costs, and meter rental and metering costs.
Sub-component	The network component shall be subdivided into end-user transmission and distribution network costs, as follows: <ol style="list-style-type: none"> 1. Average relative share of transmission costs for household customers and average relative share of transmission costs for final non-household customers, expressed as a percentage of total network costs. 2. Average relative share of distribution costs for household customers and average relative share of distribution costs for final non-household customers, expressed as a percentage of total network costs.
Taxes, fees, levies and charges	This component is the sum of all the sub-components (taxes, fees, levies and charges) listed below.

Sub-component	The following sub-components shall be transmitted as individual items for each consumption band defined in point 4.
	1. Value added tax as defined in Directive 2006/112/EC.
	2. Taxes, fees, levies or charges relating to the promotion of renewable energy sources, energy efficiency and CHP generation.
	3. Taxes, fees, levies or charges relating to capacity payments, energy security and generation adequacy; taxes on coal industry restructuring; taxes on electricity distribution; stranded costs and levies on financing energy regulatory authorities or market and system operators.
	4. Taxes, fees, levies or charges relating to air quality and for other environmental purposes; taxes on emissions of CO ₂ or other greenhouse gases.
	5. Taxes, fees, levies or charges relating to the nuclear sector, including nuclear decommissioning, inspections and fees for nuclear installations.
	6. All other taxes, fees, levies or charges not covered by any of the previous five categories: support for district heating; local or regional fiscal charges; island compensation; concession fees relating to licences and fees for the occupation of land and public or private property by networks or other devices.

(b) Level of detail based on taxation

Prices shall be broken down into the following three levels:

Level	Description
Prices excluding all taxes, fees, levies and charges	This price level shall include only the energy and supply component and the network component.
Prices excluding value added tax (VAT) and other recoverable taxes	This price level shall include the energy and supply component, the network component and taxes, fees, levies and charges considered as non-recoverable for final non-household customers. For household customers this price level shall include the energy and the network components and taxes, fees, levies and charges but excludes VAT.
Prices including all taxes	This price level shall include the energy and supply component, the network component, and all recoverable and non-recoverable taxes, fees, levies and charges, including VAT.

6 Consumption volumes

Contracting Parties shall transmit information on the relative share of electricity in each consumption band based on the total volume to which the prices refer.

The annual consumption volumes for each consumption band shall be transmitted once per year, together with the price data for the second semester. The data shall not be older than two years.

IMPLEMENTING REGULATION (EU) 2019/803 of 17 May 2019 concerning the technical requirements regarding the content of quality reports on European statistics on natural gas and electricity prices pursuant to Regulation (EU) 2016/1952

Incorporated and adapted by Decision 2020/03/MC-EnC adapting and implementing the Commission Implementing Regulation (EU) 2019/803 of 17 May 2019 concerning the technical requirements regarding the content of quality reports on European statistics on natural gas and electricity prices pursuant to Regulation (EU) 2016/1952 of the European Parliament and of the Council

*The adaptations made by Ministerial Council Decision 2020/03/MC-EnC are highlighted in **bold and blue**.*

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) 2016/1952 of the European Parliament and of the Council of 26 October 2016 on European statistics on natural gas and electricity prices and in particular Article 7(5) thereof, **as adopted and adapted by Decision 2018/01/MC-EnC of the Ministerial Council of the Energy Community and in particular Article 7(5) thereof.**

Article 1

(1) The technical quality assurance requirements regarding the content of the quality reports on the data on natural gas and electricity prices are set out in the Annex.

(2) **Contracting Parties** shall submit the first quality reports by **15 June 2022**.

(3) Each quality report shall cover the full years elapsed since the date of the previous quality report. However, the first quality reports shall cover reference years **2019 to 2021**.

Article 2

The quality reports shall be provided through the single entry point provided by the Commission (Eurostat) in order to enable the Commission (Eurostat) to receive those quality reports by electronic means.

Article 3

This Decision shall enter into force on the day of its adoption.

It is addressed to the Contracting Parties

ANNEX

TECHNICAL QUALITY ASSURANCE REQUIREMENTS REGARDING THE CONTENT OF THE QUALITY REPORTS OF EUROPEAN STATISTICS ON NATURAL GAS AND ELECTRICITY PRICES

The quality reports shall include information on all the quality criteria laid down in Article 12(1) of Regulation (EC) No 223/2009.

1 RELEVANCE

Contracting Parties shall provide the following information in the quality reports:

- (a) a description of users, their respective needs and a justification of these needs;
- (b) procedures used to measure user satisfaction and produce the results;
- (c) the extent to which the required statistics are available.

2 ACCURACY

The quality reports shall contain:

- (a) an accuracy assessment which summarises the various dataset components;
- (b) a description of the sampling errors;
- (c) a description of any other errors.

3 TIMELINESS AND PUNCTUALITY

Contracting Parties shall report on:

- (a) the length of time between the event or phenomenon they describe and the data availability (timeliness);
- (b) the length of time between the target date for data delivery and the actual data delivery date (punctuality);
- (c) the number of iterations needed in order to have fully validated data (validation iterations).

4 ACCESSIBILITY AND CLARITY

Contracting Parties shall report on the conditions and means by which users can:

- (a) obtain and use the data (including, but not limited to news releases, publications, online databases, micro data access);
- (b) interpret the data such as providing documentation on methodology and quality management.

5 COMPARABILITY

Contracting Parties shall report on the extent to which statistics are comparable:

- (a) between geographical areas;

(b) over time.

6 COHERENCE

Contracting Parties shall report on the extent to which statistics are:

- (a) reconcilable with data obtained through other sources (cross domain coherence);
- (b) consistent within a given dataset (internal coherence).

Contracting Parties shall also report on the following additional quality aspects:

1 QUALITY MANAGEMENT

Contracting Parties shall report on the systems and frameworks in place to manage the quality of statistical products and processes. They shall also report on their assessment of the quality of the data.

2 DATA REVISION

Contracting Parties shall explain why validated data have been revised. The reasons may include information of new source of data available, new methods or other relevant information. The report shall also include the date, the size and the magnitude of the revisions.

In accordance with Article 7(3) of Regulation (EU) 2016/1952, those reports shall include information on the scope and collection of the data, the calculation criteria, the methodology and data sources used, and any changes made.

1 STATISTICAL PRESENTATION

Contracting Parties shall provide the following description of the disseminated data which can be displayed to users as tables, graphs or maps:

- (a) data description;
- (b) classification system;
- (c) sector coverage;
- (d) statistical concepts and definitions;
- (e) statistical unit;
- (f) statistical population;
- (g) reference area (geographical scope);
- (h) time coverage (length of time for which data are available);
- (i) reference period (period covered by the report);
- (j) unit of measure.

2 STATISTICAL PROCESSING

The quality reports shall cover a description of all procedures used to collect, validate and compile the data and to derive new information.

3 RELEASE POLICY

The quality reports shall report on the rules for disseminating the data at national level.

4 FREQUENCY OF DISSEMINATION

The reports shall also indicate the frequency with which the data is disseminated at national level.

In line with the statistical principles laid down in points (e) and (f) of Article 2(1) of Regulation (EC) No 223/2009, Contracting Parties shall report on:

1 CONFIDENTIALITY

The quality reports shall contain information on the legislative measures or other formal procedures, which prevent any unauthorised disclosure of data that could directly or indirectly cause a person or economic entity to be identified. They will also outline the rules applied to ensure statistical confidentiality and prevent unauthorised disclosure.

2 COST AND BURDEN

The quality reports shall contain information on the cost and burden associated with the collection and production of the statistical product.



PART III

MEASURES AND PROCEDURAL ACTS BY ENERGY COMMUNITY INSTITUTIONS



RULES OF PROCEDURE of 16 October 2015 of the Ministerial Council of the Energy Community

Procedural Act 2006/01/MC-EnC of 17 November 2006 on adoption of internal Rules of Procedures of Ministerial Council of Energy Community as amended by Procedural Acts 2013/01/MC-EnC of 24 October 2013 and 2015/02/MC-EnC of 15 October 2015 amending Procedural Act of the Ministerial Council 2006/01/MC-EnC of 17 November 2006

I. GENERAL

1. These rules establish the internal procedures for operation of the Ministerial Council (the "Council") as an institution under the Treaty establishing Energy Community (the "Treaty").
2. In case of any contradiction between these rules and the Treaty, the rules of the Treaty shall be applied.

II. MEMBERS, PARTICIPANTS, OBSERVERS

1. The Council shall consist of representatives of the Parties to the Treaty. Each Party to the Treaty, with the exception of the European Community, shall have one representative at the Council; the European Community shall have two representatives determined pursuant to its internal decision. Parties should in principle be represented in the Council at ministerial level or equivalent.
2. In accordance with Article 95 of the Treaty, one non-voting representative of each Participant may participate in the Council meetings.
3. In accordance with Article 96 of the Treaty, Observers may attend the meetings of the Council.
4. The Presidency and the Vice-Presidency may agree to invite representatives of other institutions to attend a relevant meeting on an *ad hoc* basis.
5. Where the Presidency and the Vice-Presidency agreed to invite other bodies, including representatives of Civil Society Organizations and participants in the meetings of the Parliamentary Plenum, the President shall inform the Parties at least three weeks before the meeting. The Parties decide on the invitation by simple majority by submitting their views to the Secretariat within five working days from receiving this information. Tacit agreement is assumed where no reaction is received by the Secretariat within this deadline.

III. PRESIDENCY

1. The Presidency of the Council shall be held in turn by each Contracting Party¹ in alphabetical order, following the names of the Parties as indicated in the Treaty, starting with the former Yugoslav Republic of Macedonia.
2. The Presidency shall chair the Ministerial Council. It will be assisted by one representative of the European Community and one representative of the incoming Presidency as Vice-Presidency.

¹ A Contracting Party is any Party, for which the Treaty is into force, excluding the European Community.

3. Should the Presidency be not in a position to perform its duties for a particular meeting, the latter will be chaired by the Vice-President who represents the European Community.

IV. PREPARATION OF THE MEETINGS

1. The Council shall meet at least once per year. In urgent circumstances, agreed between the Presidency and the Vice-Presidents, the Presidency may convene the Council also outside the regular meetings.

2. The place of Council meetings shall be decided upon by the Presidency after consultations with the Vice-Presidency and the Energy Community Secretariat (the Secretariat). Normally, this decision shall be made at least two months prior to the relevant meeting.

3. The date of the meetings shall be agreed between the Presidency, the Vice-Presidency and the Energy Community Secretariat (the Secretariat). In principle, the dates shall be agreed at least two months prior to the relevant meeting.

4. The draft agenda of the meetings shall be agreed by the Presidency and the Vice-Presidency. It shall be distributed at least two weeks prior to the relevant meeting. Should there be documents related to any agenda item, these should be distributed to the representatives specified in section II paragraphs 1 to 3 together with the agenda.

5. Without prejudice to the decision making process under Title VI of the Energy Community Treaty, the Permanent High Level Group may identify Measures for adoption by the Ministerial Council without further discussion. The identified Measures shall be included in the draft agenda of the next Ministerial Council as "A" items. The draft Agenda shall specify the Title and Chapter of the Treaty under which the draft Measure identified as an "A" item will be presented for voting in the Ministerial Council. This does not exclude the possibility for any Party to have statements included in the conclusions.

6. The Secretariat is responsible for the preparation of the meetings. It will inform the Presidency and the Vice-Presidency periodically and upon request about the preparation process and follow their requests and guidance in this relation.

7. Should this be found necessary, the Presidency and the Vice-Presidency may propose that a particular committee/commission is established. The decision of the Council shall take the form of a Procedural Act and include concrete list of participants as well as the scope of work, which should be performed, together with relevant deadlines.

V. MEETINGS OF THE COUNCIL – PROCEDURAL RULES

1. The meetings of the Council shall not be public unless the Council decides otherwise.

2. Any member of the Council or any other attendee of the meeting may be accompanied by officials who assist them. The names and functions of those officials shall be notified in advance to the Secretariat. As a principle, these officials should not be more than three for any Party to the Treaty, and not more than two for any other participant in the meeting. However, the Presidency may further advise on the maximum number of representatives per delegation.

3. The Council may take decisions only if two thirds of the Parties are represented. Abstentions in a vote from the Parties present shall not count as votes cast.
4. As provided in Article 80 of the Treaty, each Party shall have one vote.
5. The Agenda for the meeting shall be approved at its beginning. In urgent circumstances, new items may be included also during the meeting subject to the agreement of the President and Vice-Presidency.
6. Re-opening discussion on Measures included in the draft agenda of the next Ministerial Council as "A" items requires simple majority.
7. The Participants may participate in the discussions but they do not take part in voting.
8. The observers may make statements upon permission or invited by the Presidency. The Observers do not have voting rights.
9. Conclusions of each meeting shall be drawn up with the assistance of the Secretariat. These shall be signed by the Presidency and distributed to the members and the attendees. In case it is not possible to finalize the conclusions by the end of the relevant meeting, the Presidency shall assure that they are drafted and distributed within 7 days after its end². Further, any member of the Council might request corrections within 7 days upon receipt of the draft. The Presidency shall arrange that the final version is distributed within 7 days upon the expiry of the deadline for comments.
10. Any vote shall be explicitly described in the Conclusions.
11. The conclusions cannot in any way restrict the scope or effects of legal acts or the Treaty. No statements or conclusions which contradict binding legal provisions shall be made. Conclusions cannot form part of legal acts nor have any normative effect.

VI. ACTS OF THE COUNCIL – PROCEDURAL ASPECTS

1. To ensure that the objectives set out in the Treaty are attained, the Council provides general policy guidelines, takes Measures and adopt Procedural Acts.

1. General Policy Guidelines

2. The Council shall provide general policy guidelines, when requested or upon its own initiative.
3. The general policy guidelines shall reflect the political consensus of the Parties on strategic issues of mutual interest in line with the Treaty objectives.
4. The issue or amendment of general policy guidelines may be requested by any member of the Council. The request shall be in writing and shall contain sufficient information explaining the necessity of adoption of the proposed guidelines by the Council.
5. The written request shall be submitted by the requesting member of the Council to the Presidency with copy to the Vice-Presidency. The Presidency notifies all members of the Council within seven days after the request has been received.
6. The Presidency, in consultation with the Vice-Presidency, shall organize the preparation of a draft position

² All days are calendar days.

of the Council, which shall be presented for discussion at the next Council meeting. The draft position shall be sent to the Members of the Council at least 30 days before the meeting.

7. General policy guidelines might be adopted ad hoc on the ground of consensus of all members of the Council.

2. Measures

8. Unless otherwise specified in these rules or in a separate decision of the Council, the adoption of Measures (Decisions and Recommendations) shall follow the same procedure.

9. Any proposal for a Measure from the European Commission, from the relevant Party or from the Secretariat shall be made in writing at least 60 days before the meeting of the Council at which it shall be discussed.

10. The proposal shall be sent to the Presidency with copy to all the members of the Council and to the Secretariat. It shall be accompanied by relevant explanatory notes. Where necessary, position of the Regulatory Board shall be requested by the Party or the institution, which makes the relevant proposal for a Measure.

11. During the meeting of the Council at which the proposal for a Measure shall be discussed, the Presidency shall identify the required quorum in accordance with the Treaty. The Presidency shall do so prior to the discussion of the proposal. The quorum availability will be respectively reflected in a protocol.

12. Measures under Title II of the Treaty – extension of the *acquis communautaire* – shall be taken by a majority of the votes cast only on the ground of a proposal from the European Commission, which may alter or withdraw its proposal at any time before the final adoption of the Measure.

13. Measures under Title III of the Treaty – Mechanism for operation of Network Energy Markets – shall be taken by a two third majority of the votes cast, including a positive vote of the European Community, upon a proposal from a Party or the Secretariat, which also shall take account of a position of the Regulatory Board.

14. Measures under Title IV – The Creation of a Single Energy Market – may be taken on a proposal from a Party only by unanimity. The European Commission on its own initiative or upon request of any party may request a position of the Regulatory Board.

3. Procedural Acts

15. The Council adopts Procedural Acts in cases envisaged in the Treaty and in accordance with the required majority. During the meeting of the Council at which the proposal for a Procedural Act shall be discussed, the Presidency shall identify the required quorum in accordance with the Treaty. The Presidency shall do so prior to the discussion of the proposal. The quorum availability will be respectively reflected in a protocol.

16. Unless otherwise envisaged by the Treaty, any member of the Council may propose adoption of a Procedural Act.

17. The preparation of draft Procedural Acts is coordinated by the Presidency in consultation with the Vice-Presidency. The Presidency may ask the Party, which has initiated the preparation of a Procedural Act, and/or the Secretariat to assist in the process of this preparation.

18. Draft Procedural Acts, related to organizational, budgetary and transparency issues, shall be distributed

at least 30 days before the meeting at which they will be discussed.

19. Procedural Act related to the appointment of the Director of the Secretariat, provided for in Article 69 of the Treaty, shall be proposed by the European Commission. The draft shall be distributed at least 30 days before the meeting at which it will be discussed.

20. Procedural Act on budgetary matters, provided for in Article 73 and 74 of the Treaty, shall be proposed by the European Commission at least 30 days before the meeting at which it will be discussed.

21. Procedural Act conferring powers on the Regulatory Board, provided for in Article 47(c) of the Treaty, may be proposed by any member of the Council or by the Secretariat, at least 30 days before the meeting at which the relevant proposal shall be discussed. In case the opinion of the Regulatory Board is requested through the Presidency, it shall be part of explanatory documents to be submitted with the proposal for that act.

4. Work Programme

22. The Council shall adopt a work programme for the next two years. A proposal for the work programme is prepared by the Secretariat and sent to the Council Members upon agreement by the President and Vice-President.

5. Rules For Decision-Making by Correspondence

23. The Council may, in the intervals between the meetings of the Council, take decisions by correspondence. The Presidency, upon the proposal by a Party for a decision to be taken by correspondence or upon its own initiative shall decide, after consulting and in agreement with the Vice-Presidency, whether the matter warrants the taking of the decision by correspondence.

24. When it is decided that a decision should be taken by correspondence, the Presidency shall instruct the Secretariat to dispatch a letter or telefacsimile to each Party containing the proposed decision together with such information as the Presidency, after consultation and in agreement with the Vice-Presidency, considers necessary to an informed decision. The Presidency, after consultation and in agreement with the Vice-Presidency, shall also specify whether and, if so, under which conditions, amendments to the proposal may be made by the Parties.

25. Presidency, after consultation and in agreement with the Vice-Presidency, shall determine the date and hour by which responses must be received, which shall in no case be earlier than 10 calendar days from the date of transmission of the letter or facsimile referred to above. In exceptional circumstances, upon request or at its own discretion, may the Presidency, after consultation and in agreement with the Vice-Presidency, extend the time limit for the receipt of responses. Any Party who has not replied in writing (including telefacsimile) within the given time limit is regarded as abstaining from the vote.

26. The votes cast by correspondence shall be reviewed by at least three persons, including a representative of the Presidency, the European Commission and the Secretariat. Once a decision is adopted, it shall be promptly circulated by the Secretariat to all Parties and Participants, together with the information on the votes cast in favor of the decision. It shall be formally signed by the Presidency at the earliest meeting of the PHLG.

27. This procedure may be used for adoption of Measures or other decisions following agreement of the President and Vice-Presidents.

VII. RULINGS ON DISPUTE SETTLEMENT AND IMPLEMENTATION OF DECISIONS

1. Any Party to the Treaty, the Secretariat or the Regulatory Board may bring to the Council's attention circumstances which suggest that a Party failed to comply with a Treaty obligation or failed to implement a Decision addressed to it within the required period.
2. A Party's, Secretariat's or Regulatory Board's communication to the ministerial Council pursuant to the preceding paragraph shall take the form of a reasoned request. The request shall therefore be based on concrete factual findings and backed up by sufficient analysis. The request also shall contain a proposal for a Council's decision.
3. The request shall be made at least 30 days before the meeting of the Council.
4. The notification shall be sent to the Presidency and the Vice-Presidency. Prior to including the item on the Council's agenda, the Presidency, in consultation with the Vice-Presidency, may request additional information from the Party or the institution which has made the notification.
5. The Presidency shall inform the Party, which is subject to the claim, within 7 days after receiving it, by sending the relevant materials, and ask it to present its views in writing.
6. During the meeting of the Council at which the request or other issue under Title VII of the Treaty is discussed, the Presidency shall identify the required quorum in accordance with the Treaty. The Presidency shall do so prior to the discussion of the proposal. The quorum availability will be respectively reflected in a protocol.

VIII. INTERPRETATION OF THE TREATY

1. The Council may give guidance to the interpretation of the Treaty upon request by any Party or any of the institutions established by the Treaty.
2. The request for interpretation shall be submitted to the Presidency and copied to the Vice-Presidency.
3. The Presidency shall ask the European Commission and the Secretariat for a reasoned opinion regarding the interpretative issue specified in the request.
4. Unless otherwise decided, any guidance on interpretation of the Treaty, given by the Council, shall be immediately enforceable and is binding on the Parties and the institutions under the Treaty.

IX. DISCLOSURE OF DOCUMENTS

1. The draft agenda and the relevant materials shall be distributed to all the members of the Council, to the Participants and to the Observers. Material of interest to them will also be distributed to the representatives of any other institutions, which are invited to take part in the relevant meeting. Any of the Presidency and the Vice-Presidency may request that the draft agenda and the relevant materials are distributed to other institutions.

2. Unless otherwise decided, the finalized documents of the meetings (agenda, conclusions, etc.) shall be made public via the website of the Secretariat.

X. FINAL PROVISIONS

1. The Participants, Observers and other attendees are expected to follow any requirements for confidentiality, which are valid to the Parties. Such requirements are reflected in the conclusions of the relevant meeting.
2. All acts of the Ministerial Council shall be signed by the Presidency.
3. The Rules have been adopted by the Council on the ground of Article 49 of the Treaty. In accordance with that provision, any amendments to these Rules shall be adopted by a Procedural Act.
4. If application of these Rules to a specific situation is unclear or ambiguous, the Presidency in consultation and agreement with the Vice-Presidency shall interpret the Rules to resolve the situation.
5. The Council meetings shall be conducted in a businesslike manner.
6. At the latest one year from the entry of these Rules into force, based on the practical experience with their application, the Secretariat may propose eventual amendments to these Rules it deems useful or necessary. Where a Party wishes to propose such amendment, it is encouraged to consult it first with the Secretariat.

The Rules become effective on 16 October 2015, which is the day of their adoption by the Energy Community Ministerial Council.



RULES OF PROCEDURE of 16 October 2015 of the Permanent High Level Group of the Energy Community

Procedural Act 2006/01/PHLG-EnC of 17 October 2006 on adoption of internal Rules of Procedure of the Permanent High Level Group of Energy Community as amended by Procedural Acts 2013/01/PHLG-EnC of 23 October 2013 and 2015/01/PHLG-EnC of 16 October 2015 amending Procedural Act of the Permanent High Level Group of 17 October 2006

I. GENERAL

1. These rules establish the internal procedures for operation of the Permanent High Level Group (called "PHLG") as an institution under the Treaty establishing the Energy Community.
2. In case of any contradiction between these rules and the Treaty establishing the Energy Community (the "Treaty"), the rules of the Treaty shall be applied.

II. MEMBERS – PARTICIPANTS - OBSERVERS

1. (i) The PHLG shall consist of representatives of the Parties to the Treaty. Each Contracting Party to the Treaty shall have one representative at the PHLG; the European Community shall have two representatives upon its internal decision.
(ii) The members of the PHLG shall be senior officials in the ministry in charge of energy. The act of appointment shall provide evidence that the member is mandated to express the position of the respective Party in a manner binding on that Party and has the obligation as well as all necessary powers to coordinate positions internally before expressing them at the meetings of the PHLG.
2. The members of the PHLG shall express the positions of the relevant Parties. In case a member of the PHLG cannot attend its meeting, he/she might be represented by another person at the appropriate level.
3. In accordance with Article 54 of the Treaty, one non-voting representative of each Participant may participate in the meetings.
4. In accordance with Article 96 of the Treaty, Observers may attend the meetings of the PHLG. Each Observer may have one representative.
5. The Presidency and the Vice-Presidency may agree to invite any other bodies to attend a relevant meeting on *ad hoc* basis.
6. Where the Presidency and the Vice-Presidency agreed to invite other bodies as observers, including representatives of Civil Society Organizations and participants in the meetings of the Parliamentary Plenum, the President shall inform the Parties at least three weeks before the meeting. The Parties decide on the invitation by simple majority by submitting their views to the Secretariat within five working days from receiving this information. Tacit agreement is assumed where no reaction is received by the Secretariat within this deadline.

III. PRESIDENCY

1. The Contracting Party holding the Presidency of the Ministerial Council shall also hold the Presidency of the PHLG.
2. The Presidency shall chair the PHLG meetings with the operational support of the European Commission.¹
3. The Presidency shall be assisted by one representative of the European Community and one representative of the incoming Presidency as Vice-Presidency.
4. Should the Presidency be not in a position to perform its duties for a particular meeting, the latter will be chaired by the Vice-Presidency who represents the European Community.

IV. PREPARATION OF THE MEETINGS

1. The PHLG shall meet on regular basis at least once every six months. In urgent circumstances, agreed between the Presidency and the Vice-Presidency, the Presidency shall convene PHLG also outside the regular meetings.
2. The Presidency shall convene the PHLG in a place decided upon by the Presidency after consultation with the Vice-Presidency. In principle, following the requirements of most cost effective approach, the meetings of the PHLG shall take place in Vienna, Austria. Any proposal for a meeting in other place shall consider the relevant financial, administrative and organizational aspects.
3. The date of the meetings shall be agreed between the Presidency, the Vice-Presidency and the Energy Community Secretariat ("the Secretariat"). In principle, the dates shall be agreed at least two months prior to the relevant meeting.
4. The draft agenda of the meetings shall be agreed by the Presidency and the Vice-Presidency. It shall be distributed at least two weeks prior to the relevant meeting. Should there be documents, related to any agenda item, these should be distributed to the representatives specified in Section II, Paras. 1 to 4 together with the agenda.
5. The Secretariat is responsible for the preparation of the meetings. It will inform the Presidency and the Vice-Presidents periodically and upon request about the preparation process and follow their requests and guidance in this relation.
6. Should this be found necessary, the Presidency and the Vice-Presidents may propose that a committee/commission under the authority of the PHLG is established. The decision of the PHLG shall take a form of a Procedural Act and shall include concrete list of participants as well as the scope of work, which should be performed, together with relevant deadlines.

¹ See Article 4 of the Treaty, page 13.

V. MEETINGS OF THE PHLG – PROCEDURAL RULES

1. The PHLG meetings shall be conducted in a business-like manner.
2. The meetings of the PHLG shall not be public unless the PHLG decides otherwise.
3. Any member of the PHLG or any other attendee of the meeting may be accompanied by experts who assist them. The names and functions of those experts shall be notified in advance to the Secretariat. As a principle, these experts should not be more than three for any Party to the Treaty, and not more than two for any other participant in the meeting. However, the Presidency may further advise on the maximum number of representatives per delegation.
4. PHLG may act only, if two third of the Parties are represented. Abstentions in a vote from the Parties present shall not count as votes cast.
5. The PHLG shall act in accordance with the voting rules required by the Treaty, depending on the agenda item. The Presidency shall identify the necessary majority before the vote on the ground of the substance of the agenda item.
6. As provided in Article 80 of the Treaty, each Party shall have one vote.
7. The Agenda for the meeting shall be approved in its beginning. In urgent circumstances, new items may be included also during the meeting subject to the agreement of the Presidency and Vice-Presidency.
8. The Participants may participate in the discussions, but they do not take part in voting (cf II.3).
9. The Observers may make statements upon permission or when invited by the Presidency. The Observers do not have voting rights.
10. At the end of each meeting, conclusions shall be drafted and discussed. They shall be distributed to the members and attendees by the Secretariat, The conclusions are final if, within five working days from their distribution, no change requests are submitted to the Secretariat. If a member or attendee requests amendments to a particular item in the conclusions, the items concerned shall be put on the agenda of and discussed at the next meeting. Items of the conclusions for which no changes have been requested within five working days shall be considered adopted. They are to be made publicly available by the Secretariat.
11. The Secretariat shall distribute draft conclusions for each Permanent High Level Group meeting one week ahead of the meeting to the Parties, Participants and Observers on the basis of the draft agenda and the documents received.
12. Any vote shall be explicitly described in the Conclusions.
13. The conclusions cannot in any way restrict the scope or effects of legal acts or the Treaty. No statements or conclusions which contradict binding legal provisions shall be made. Conclusions cannot form part of legal acts nor have any normative effect. Without prejudice to the decision making process under Title VI of the Energy Community Treaty, the Permanent High Level Group may identify Measures for adoption by the Ministerial Council without further discussion. This does not exclude the possibility for any Party to have statements included in the conclusions of the PHLG.

VI. ACTS OF THE PHLG – PROCEDURAL ASPECTS

1. General

1. The PHLG may take Measures (Decisions and Recommendations), if so empowered by the Ministerial Council, and adopt Procedural Acts.
2. The PHLG adopts Procedural Acts, not involving the conferral of tasks, powers or obligations on other institutions of the Energy Community, upon proposal of the Parties or the Secretariat.

2. Measures

3. Unless otherwise specified in these rules or in a separate decision of the PHLG or the Ministerial Council, the adoption of Decisions and Recommendations shall follow the same procedure.
4. Any proposal for a Measure from the European Commission, from the relevant Party or from the Secretariat shall be made in writing at least 30 days before the meeting of the PHLG when it shall be discussed.
5. The proposal shall be sent to the Presidency with copy to all the members of the PHLG and the Secretariat. It shall be accompanied by relevant explanatory notes. Where necessary in accordance with its competences, position of the Regulatory Board shall be requested by the Party or the institution, which makes the relevant proposal for a measure.
6. Measures under Title II of the Treaty – extension of the *acquis communautaire* – shall be taken by a majority of the votes cast only on the ground of a proposal from the European Commission, which may alter or withdraw its proposal at any time before the final adoption of the measure.
7. Measures under Title III of the Treaty – Mechanism for operation of Network Energy Markets – shall be taken by a two third majority of the votes cast, including a positive vote of the European Community, upon a proposal from a Party or the Secretariat, which shall also take account of a position of the Regulatory Board.
8. Measures under Title IV – The Creation of a Single Energy Market – may be taken on a proposal from a Party only by unanimity. The European Commission on its own request or upon request of any Party, might request a position of the Regulatory Board.

3. Rules for Decision-Making by Correspondence

9. The PHLG may, in the intervals between the meetings of the PHLG, take decisions by correspondence. The Presidency, upon the proposal by a Party for a decision to be taken by correspondence or upon its own initiative shall decide, after consulting and in agreement with the Vice-Presidents, whether the matter warrants the taking of the decision by correspondence.
10. When it is decided that a decision should be taken by correspondence, the Presidency shall instruct the Secretariat to dispatch a letter or telefacsimile to each Party containing the proposed decision together with such information as the Presidency, after consultation and in agreement with the Vice-Presidency, considers necessary to an informed decision. The Presidency, after consultation and in agreement with

the Vice-Presidency, shall also specify whether and, if so, under which conditions, amendments to the proposal may be made by the Parties.

11. Presidency, after consultation and in agreement with the Vice-Presidents, shall determine the date and hour by which responses must be received, which shall in no case be earlier than 10 calendar days from the date of transmission of the letter or facsimile referred to above. In exceptional circumstances, upon request or at its own discretion, may the Presidency, after consultation and in agreement with the Vice-Presidency, extend the time limit for the receipt of responses. Any Party, that has not replied in writing (including telefacsimile) within the given time limit, is regarded as abstaining from the vote.

12. The votes cast by correspondence shall be reviewed by at least three persons, including a representative of the Presidency, the European Commission and the Secretariat. Once a decision is adopted, it shall be promptly circulated by the Secretariat to all Parties and Participants, together with the information on the votes cast in favor of the decision. It shall be formally signed by the Presidency at the earliest meeting of the PHLG.

13. This procedure may be used for adoption of Measures or other decisions following agreement of the President and Vice-Presidency.

4. Procedural Acts

14. Procedural Acts shall regulate organizational and other issues, envisaged in the Treaty and also referred to in these Rules. They shall be binding.

15. Any member of the PHLG may propose adoption of a Procedural Act and submit the draft of the act itself.

16. When the PHLG has agreed on the necessity for a Procedural Act, it may ask the Presidency to organize its preparation in consultation with the Vice-Presidency.

17. The Presidency may ask the Party, which has initiated the preparation of a procedural act, and/ or the Secretariat to assist in the process of this preparation.

18. The drafts of Procedural Acts with the relevant materials shall be distributed at least 30 days before the meeting at which they will be discussed.

VII. DISCLOSURE OF DOCUMENTS

1. The draft agenda and the relevant materials shall be distributed to all the members of the PHLG, to the Participants and to the Observers. Material of interest to them will also be distributed to the representatives of any other institutions, which are invited to take part in the relevant meeting. Any of the Presidency and the Vice-Presidency may request that the draft agenda and the relevant materials are distributed to other institutions.

2. Unless otherwise decided, the finalized documents of the meetings (agenda, conclusions) shall be made public via the website of the Secretariat.

VIII. FINAL PROVISIONS

1. All acts of the PHLG shall be signed by the Presidency.
2. The Rules have been adopted by the PHLG on the ground of Article 55 of the Treaty.
3. If application of these Rules to a specific situation is unclear or ambiguous, the Presidency in consultation and agreement with the Vice-Presidency shall interpret the Rules to resolve the situation.
4. At the latest one year from the entry of these Rules into force, based on the practical experience with their application, the Secretariat may propose eventual amendments to these Rules it deems useful or necessary. Where a Party wishes to propose such amendment, it is encouraged to consult it first with the Secretariat.
5. In accordance with Article 55 of the Treaty, any amendments to these Rules shall be adopted by a Procedural Act.

The Rules become effective on 15 October 2015, which is the day of their adoption by the PHLG.

RULES OF PROCEDURE of 24 April 2019 of the Energy Community Regulatory Board

Procedural Act 2007/01/ECRB-EnC of 1 March 2007 on adoption of internal Rules of Procedure of the Energy Community Regulatory Board as amended by Procedural Acts 2009/01/ECRB-EnC of 25 February 2009, 2011/01/ECRB-EnC of 15 December 2011, 2012/01/ECRB-EnC of 28 March 2012, 2013/02/ECRB-EnC of 11 December 2013, 2015/01/ECRB-EnC of 8 April 2015, 2017/01/ECRB-EnC of 21 December 2017 and 2019/01/ECRB-EnC of 24 April 2019 on the amendment of the internal Rules of Procedure of the Energy Community Regulatory Board.

Article 1

Purpose

- 1.1 The Rules regulate the organization of the Energy Community Regulatory Board and establish the procedures of its meetings.
- 1.2 The Energy Community Regulatory Board (hereinafter: "ECRB" or "Board") shall discharge the tasks entrusted to it by Article 58 of the Energy Community Treaty.
- 1.3 The ECRB, upon request of the Ministerial Council, the PHLG and the European Commission, or on its own initiative and in accordance with the objectives of the Energy Community Treaty, shall undertake the function of advising on statutory, technical and regulatory rules in the region to the Energy Community Treaty Institutions.
- 1.4 The ECRB shall provide advice to the Ministerial Council and the PHLG with regard to monitoring and assessing the operation of the regional energy networks and network energy market and issue recommendations to the Parties when so entrusted by the Treaty or the Ministerial Council.
- 1.5 The ECRB shall facilitate consultation, co-operation and co-ordination amongst regulatory authorities towards a consistent application of the *acquis communautaire*. The ECRB makes recommendations and reports with respect to the functioning of the energy markets.
- 1.6 The ECRB may decide, in accordance with the procedure laid down in 4.7 hereunder, to issue a request to the Ministerial Council pursuant to the provisions of Articles 90 and 92 of the Treaty.

Article 2

Members

- 2.1 In accordance with Article 59 of the Treaty, the ECRB is composed of one representative of the energy regulator of each Contracting Party and a representative of the European Commission representing the European Union (hereinafter: "Members" of the ECRB). The representative of the Regulatory Authority of the Contracting Parties shall be at the level of Head of the Energy Regulatory Authority or his nominated representative.
- 2.2 The European Commission is assisted by one regulator of each Energy Community Participant country

(hereinafter: "Participants" of the ECRB) and one representative of the Agency for the Cooperation of Energy Regulators (hereinafter: "ACER"). The representative of the Regulatory Authority of the Participants shall be at the level of the Head of the Energy Regulatory Authority or his nominated representative. The representative of ACER shall be at the level of the Director or his nominated representative.

2.3 Members of the ECRB shall abide by a Code of Ethics, which shall be adopted by the ECRB as a Procedural Act. The Code of Ethics shall set forth the criteria by which a representative to the ECRB, including the President of the ECRB may be removed or recalled.

2.4 The Members of the ECRB shall act in good faith and resolve to adhere to these Internal Rules of procedure.

Article 3

President and Vice President

Duties

3.1 The President of the ECRB carries out the tasks entrusted to her/him by the provisions below. The President shall fulfill a unifying role and ensure by his/her authority that all Members and Participants work with a common purpose towards the discharge of the tasks entrusted to the ECRB under the Treaty.

3.2 The President shall not represent his/her Institution but this task shall be undertaken by a suitable representative of the Contracting Party Regulatory Authority and this representative will exercise the Contracting Party Regulatory Authority vote.

3.3 In addition to exercising the powers conferred upon him/her elsewhere in these rules, the President, after consulting the Vice-President, shall declare the opening and closing of each ECRB meeting, shall direct the discussion, shall ensure the observance of these Rules, shall accord the right to speak and announce decisions. The President may also call a speaker to order if his or her remarks are not relevant to the subject under discussion.

3.4 The European Commission shall act as Vice-President. The Vice-President shall also fulfill a unifying role and ensure, by his/her authority that all the Members and Participants work with a common purpose towards the discharge of the tasks entrusted to the ECRB under the Treaty.

3.5 The Vice-President assists the President in accordance with the provisions set out below. In the event of absence, impediment or incapacity of the President, the Vice-President is empowered to replace and exercise the responsibilities of the President.

Election

3.6 The President is elected by the ECRB members by secret ballot and by a two third majority of the votes cast, provided presence of at minimum two thirds of its Members

3.7 The nomination procedure shall be initiated by a Vice Presidency's written call for applications addressed to the ECRB member, entailing a nomination period of at least two weeks.

3.7.1 The Head and / or Commissioners of Contracting Parties Regulatory Authorities are eligible for the ECRB Presidency.

3.7.2 In case no nominees from the Contracting Parties Regulatory Authorities' candidate or are proposed,

the Vice-Presidency shall open a second application round entailing a nomination period of at least two weeks. In this case, also the Head and / or Commissioners of Energy Community Participant countries are eligible for the ECRB Presidency.

3.7.3 In case an ECRB President cannot be elected based on 3.7.1 and 3.7.2, the term of the existing President can be prolonged for up to six month. In this case the Vice Presidency shall initiate another nomination procedure in line with 3.7.

3.8 Any candidature or any proposal for candidature shall be put forward to the Vice President of the ECRB.

3.9 The Vice President brings the candidacies to the attention of the members of the ECRB.

3.10 The President's term of office is two years and may be terminated upon decision of the ECRB or resignation. A President of the ECRB may not assume the Presidency more than two terms consecutively.

3.11 In the event of resignation, incapacity or recall of the President during his or her term of office, a new President shall be appointed in accordance with the above mentioned procedure, as soon as possible.

3.12 A decision of the ECRB as referred to in 3.10 requires presence of at minimum two thirds of its Members and two third majority of the votes cast. The decision of the ECRB must be duly justified and published.

Article 4

Decision making process

4.1 The Board acts within the mandate set forth in Article 58 of the Energy Community Treaty and takes Measures if so empowered by the Ministerial Council.

4.2 Each Member shall have one vote. Abstentions to voting from Members present shall not count as votes cast.

4.3 The Board may act in accordance with the provisions of Articles 4.4, 4.5 and 4.6 only if two thirds of Members are present.

4.4 Under Title II of the Energy Community Treaty, the Board shall act on a proposal from the European Commission, and each Contracting party shall have one vote.

4.4.1 The European Commission may alter or withdraw its proposal at any time during the procedure leading to its adoption.

4.4.2 The Board shall act by a majority of the votes cast.

4.5 Under Title III of the Energy Community Treaty the Board shall act on a proposal from a Party or the Secretariat. The Parties and the Secretariat are encouraged to consult their proposal with the European Commission four weeks before the meeting upon which the proposal shall be presented. The Board shall act by a two third majority of the votes cast, including a positive vote of the European Union.

4.6 Under Title IV of the Energy Community Treaty the Board shall act on a proposal from a Party. The Party or Parties interested in putting forward a proposal are encouraged to consult with the European Commission three weeks before the proposal is tabled to the Board for consideration. The Board shall act with unanimity.

4.7 The ECRB may decide by unanimity excluding any Party concerned, to issue the request pursuant to paragraph 4.1.

4.8 Proposals are submitted to the President and the Vice President of the ECRB.

4.9 The vote(s) against a proposal for a Measure that was adopted by the Board shall be, upon request by the outvoted Member, recorded in the minutes and the conclusions of ECRB, together with the proposal as adopted, according to Article 58 of the Energy Community Treaty.

4.10 The outcome of any votes has to be recorded in the minutes of the ECRB meetings.

4.11 The communication of opinions of Members and Participants is possible by electronic correspondence in case of urgent matters but excluding Measures. The President may seek agreement to a position or opinion by electronic procedure. In such cases, the President shall ensure that each Member is aware that an agreement or opinion is sought by electronic procedure and shall set out a clear deadline for comments.

Article 5

Meetings

5.1 If a Contracting Party, Participant or Observer has established one regulator for gas and one regulator for electricity, presence shall be determined taking into account the agenda.

5.2 The ECRB Section shall establish a register of Members and Participants and shall record attendance at all official meetings.

5.3 Notwithstanding Article 71 of the Treaty, the Energy Community Secretariat shall be represented by the Head of the ECRB Section of the Secretariat unless excused by the President.

5.4 The Observers' regulatory authorities may attend ECRB meetings without participating in the discussions and without voting rights, in accordance with the Energy Community Treaty, Title IX, Article 96. The President in agreement with the Vice-President may invite an Observer to make a statement. The President in agreement with the Vice President may also decide that Observers be absent for specific points of the agenda due to confidentiality concerns. This will be specified as far as possible when the agenda is circulated.

5.5 The ECRB will be convened in principle four times a year and, extraordinarily when appropriate.

5.6 At its last meeting of a calendar year, the ECRB decides the dates of its meetings in the next calendar year. These are published on the Energy Community website.

5.7 The ECRB meetings shall be convened by either the President or the Vice President.

5.8 An extraordinary meeting of the ECRB may be convened by the President or Vice-President. An extraordinary meeting shall also be called at the request of at least of one fifth of the Members, within one month of the receipt of the request by the ECRB Section.

5.9 Upon endorsement of the draft agenda by the President and Vice-President, the ECRB Section circulates the proposed agenda to those entitled to attend the respective meeting of the ECRB. The draft agenda shall indicate the subjects to be considered clearly.

5.10 The agenda shall be circulated to those entitled to attend the respective meeting of the ECRB at least two weeks ahead of the meeting. In case of urgency the President may deviate from this rule.

5.11 All meeting related documents shall be made available in the Energy Community website's ECRB members' area at least two weeks ahead of the meeting. In case of urgency the President may deviate from this rule. In any case, documents related to agenda items scheduled for ECRB approval shall be submitted to the ECRB 10 (ten) days before the ECRB the latest.

5.12 With the President's permission, Members may be accompanied by experts.

Article 6

Organization of work

6.1 The ECRB shall adopt an annual work program in accordance with the procedure laid down in Article 11.2. The work program shall be published on the Energy Community web site.

6.2 At the beginning of every calendar year, the ECRB shall adopt an annual report of summarizing its activities over the preceding year, prepared by the ECRB Section.

6.3 Both documents referred to in 6.1 and 6.2 will be transmitted to the Ministerial Council.

Article 7

Working Groups

Organisation

7.1 The ECRB may set up working groups composed of Members, Participants and ACER and chaired by a Member, a Participant, or ACER, and mandates them to study specific subjects. The mandate may provide that the composition of the working groups will be flexible in order to involve other relevant authorities when necessary. The mandate shall be time limited and shall further specify in which way the working group will report back to the Board and how it will be assisted by the ECRB Section. The Members, Participants and ACER representatives involved in the working groups shall nominate their representatives and notify the Chair in a timely fashion prior to the start of the relevant working group.

7.2 The decision to establish a group and its terms of reference is taken by simple majority of the votes cast, including a positive vote of the Vice-President.

7.3 Unless decided otherwise by the ECRB for a specific working group, Observers' representatives shall be allowed to participate in the working groups and be invited by the chairmen of the working groups.

Chairwomen / -men

7.4 Meetings of the Working Groups shall be convened by their Chairs. In addition to exercising the powers conferred upon him/her elsewhere in these rules, the Chair shall declare the opening and closing of each Working Group meeting, shall direct the discussion, shall ensure the observance of these Rules, shall accord the right to speak and announce decisions. The Chair may also call a speaker to order if his or her remarks are not relevant to the subject under discussion.

7.5 The Working Group Chairs are elected by the ECRB for a period of two years, which may be extended. Proposals for candidature shall be put forward to the President and Vice President of the ECRB including proof of support by the Head of the candidate's authority. The nomination procedure shall be initiated by a President's and Vice President's written call for applications addressed to the ECRB member, entailing a nomination period of at least two weeks. The President brings the candidacies to the attention of the members of the ECRB in agreement with the Vice President.

7.6 The Working Group Chairs' term can be terminated upon a decision of the ECRB pursuant to Article 7.7. In the case of resignation of the Chairperson during its term, a new Chairperson will be appointed under the same terms for a period of up to two years, which may be extended.

7.7 The election of Working Group Chairs by the ECRB requires the presence of two thirds of Members and simple majority of the votes cast.

7.7.1 If in the first voting round out of more than two candidates none reaches a simple majority of votes, a run-off ballot shall be executed between the two candidates who obtained the highest number of votes. In case the percentage of votes of one of those two applicants equals to the percentage a third candidate received in the first voting round, the latter shall also participate in the run-off ballot.

7.7.2 The procedure laid down in item 7.7.1 shall be repeated until any of the candidates reaches a simple majority of votes.

7.7.3 Candidates are entitled to withdraw their application at any stage of the voting procedure.

7.7.4 The rules laid down in item 7.7.1 shall not prevent ECRB to unanimously decide on the successful candidate in case the procedure pursuant to item 7.7.1 does not succeed to allocate a simple majority of votes to any of the applicants.

Deputy Chairwomen / -men

7.9 Each Working Group shall designate a deputy to the Chair. In the event of absence, impediment or incapacity of the Working Group Chair, the Deputy Chair shall be empowered to replace and exercise the responsibilities of the Working Group Chair. The Deputy Chair shall coordinate with the relevant Working Group Chair before executing her/his tasks.

7.10 The Deputy Chair is appointed by the Working Group members.

7.11 The term of the Deputy Chair is limited to the term of the relevant Working Group Chair and may be extended.

7.12 Articles 7.6 and 7.7 apply to the Working Group Deputy Chairs.

7.13 Working Groups can refrain from designating a Deputy Chair in case co- Working Group Chairpersons are appointed.

Article 8

Communications and Exchange of Information

8.1 Every Member, ACER representative, Participant and Observer shall appoint a communications officer. His/her task will consist of facilitating the relevant information exchange between his/her organisation and the other Members and the ECRB Section. This information is related to the work carried out by the ECRB or its working groups.

8.2 Members and Participants shall endeavour to keep the other national and regional energy regulators of their States informed about activities of the ECRB and, where necessary, make all appropriate arrangements to be in a position to speak as the competent energy regulator in the event that other national or regional regulators have an interest in the matter discussed.

Article 9

Conclusions and Minutes

9.1 Conclusions that record decisions taken shall be adopted at the following meeting by consensus.

9.2 The minutes of each meeting shall be drawn up by the ECRB Section. Opinions may be recorded in the minutes, when requested. The draft minutes shall ideally be sent to Members, Participants and ACER representatives within 15 working days after the meeting and shall be submitted to the next meeting of the ECRB or the working group for approval. Any comments on meetings' draft conclusions shall be submitted by the (ECRB or the relevant working group) members prior to the next meeting in writing to the ECRB President and Vice President, respectively the Chairman in case of working groups, and the ECRB Section.

9.3 The minutes shall include

- The scope of the agenda item (for discussion/information/approval);
- The related document(s);
- A brief reference to the core discussion points raised by members;
- The decision(s) taken and action points following including responsibilities and the timeline for completion;
- A summary table of the main conclusion(s).

The final minutes shall normally not exceed a maximum number of 5 (five) pages excluding annexes. External annexes, such as presentations, may be separately attached to the minutes.

9.4 The minutes of the ECRB and its working groups shall be treated confidentially and not be published. A summary table of the main conclusion(s) of the Board meetings shall be published on the Energy Community website.

9.5 The agenda of the ECRB meeting and its working groups established by ECRB shall not be considered confidential unless a specific decision is made and shall be published on the Energy Community website as soon as possible after a meeting.

9.6 Where the European Commission or a Contracting Party informs the ECRB that the advice requested or the question raised is of a confidential nature, Members, Participants, ACER representatives, Observers and any other person involved shall not disclose that information unless allowed by the Party raising the issue. The President may decide in such cases that only Members, Participants and ACER representatives may be present at meetings.

9.7 The ECRB can adopt its rules on confidentiality.

Article 10

Public Consultation and Transparency

10.1 The ECRB will use appropriate processes to consult consumers, market participants, system operators, market operators and interested parties which may include, *inter alia*: public hearings and roundtables, industry and the Energy Community Fora, the European Fora (including the European Electricity Regulatory Forum - "Florence Forum", the European Gas Regulatory Forum - "Madrid Forum" and the European Citizen Forum - "London Forum") and written and internet consultations.

10.2 The ECRB may publish on the ECRB web site consultative documents, statements of agreed principles, press releases, consultation procedures, summaries of responses to consultations and other documents which assist interested parties to understand the work of the ECRB. Comments shall be invited either individually or jointly to be addressed to the ECRB in written form, preferably by email. Comments received in response to consultation documents shall be published on the ECRB web site, unless a respondent explicitly requests that their submission is not made available to others on confidentiality grounds.

10.3 The ECRB may decide to meet interested parties to discuss matters of common interests. As appropriate, the President or the Vice-President may represent the ECRB at such a meeting or Members may be nominated to do so. The President or the Vice-President, where appropriate, will communicate the official position of the ECRB. The President may, on his own initiative, describe the work or explain the views of the ECRB to the press or other interested parties, in response to enquiries or otherwise in cases of urgency. Where a Member refers in public to the views or position of the ECRB it must do so in an accurate manner.

10.4 Presentations made on behalf of the ECRB at public events (conferences, workshops et al) shall only present formally approved and publically available positions of the ECRB in ECRB documents, conclusions or similar.

Article 11

ECRB Section of the Secretariat

11.1 There shall be specific staff of the Energy Community Secretariat devoted to the support of the ECRB ("ECRB Section"). The ECRB Section shall report to the Energy Community Secretariat Director with regard to management and employment issues. The Head of the ECRB Section shall direct the staff as to their substantive activities, in line with the ECRB work program. 1.2 The ECRB Section shall prepare the minutes of the meetings, assist the ECRB and the working groups in their functions and execute all other functions assigned to it by the Board, *inter alia*:

- Drawing up the ECRB annual work program for consideration and adoption by the ECRB upon agreement by the President and Vice-President;
- Preparing and presenting to the ECRB for adoption an annual review of the progress achieved;
- Preparing the agenda for the ECRB meetings to be submitted for agreement to the President and Vice President;

11.3 The ECRB Section acts as coordinator for consultations required to take forward the work of the ECRB or its working groups and assist the President and Vice-President in their public relations activities and representation functions.

11.4 The permanent or seconded staff of the ECRB Section is appointed by the Energy Community Secretariat Director pursuant to paragraph 22 of the procedural act of the Energy Community Ministerial Council on the Rules of Recruitment and working conditions of the staff of the Secretariat of the Energy Community. Specifically, the staff of the ECRB Section will operate as much time as needed in Athens in order to ensure the smooth and effective operation of the meetings of the Regulatory Board, which take place in Athens according to the Treaty establishing the Energy Community (Article 62).

Article 12**Accountability and links**

12.1 The ECRB shall submit an Annual Report to the Ministerial Council.

12.2 The ECRB may participate or designate its representative in other European or international committees or groups when that is necessary for the work of ECRB.

Article 13**Publication and modification of the Rules of Procedure**

13.1 The Regulatory Board Internal Rules of Procedures shall be made available on the ECRB website.

13.2 When necessary the ECRB shall agree on interpretation of the Rules of Procedure. These decisions require two thirds majority of Members voting, including a positive vote of the European Union.

13.3 Based on practical experience with these Rules, the President or Vice-President or any Member of the ECRB may propose to the Board any useful and necessary amendments to these Rules. In accordance with Article 60 of the Treaty, any amendments to these Rules are adopted by a Procedural Act of the ECRB, which shall act by two-third majority of the votes cast, including a positive vote of the European Union.

Article 14**Transitional and final provisions**

14.1 These Internal Rules for Procedure come into force immediately upon adoption.

14.2 To the extent possible, the work agreed and done with the Council of European Energy Regulators South East Europe Working Group shall be continued by the Energy Community Regulatory Board.

14.3 Rules of procedures on the implementation of the tasks in Article 58(b) of the Treaty shall be adopted by the ECRB.



RULES of 11 December 2008 on the establishment of a security of supply coordination group

Procedural Act 2008/02/MC-EnC of 11 December 2008 on establishment of a security of supply coordination group as amended by Procedural Act 2021/03/MC-EnC

*The adaptations made by Ministerial Council Procedural Act 2021/03/MC-EnC are highlighted in **bold and blue**.*

The Ministerial Council of the Energy Community,

Having regard to the Treaty Establishing the Energy Community (“the Treaty”), and in particular Articles 46 and 87 thereof,

Having regard to Directives 2004/67/EC and 2005/89/EC as implemented by Ministerial Council Decision No. 2007/06/MC-EnC of 18 December 2007,

Having regard to the deliberations at the Permanent High Level Group and the input from the Contracting Parties,

Having regard to the proposal by the Secretariat,

Whereas securing energy supply through solidarity constitutes one of the main objectives of the Energy Community;

Whereas the implementation of Directives 2004/67/EC and 2005/89/EC requires the setting-up of a coordination mechanism in the Energy Community;

Whereas this objective requires a group of experts to advise Energy Community and national institutions as well as to coordinate crisis management measures;

Whereas such a group should be composed of all relevant stakeholders and should cover both electricity and gas so as to ensure utmost efficiency,

HAS ADOPTED THIS PROCEDURAL ACT:

Article 1

Security of Supply Coordination Group

A Security of Supply Coordination Group is hereby established.

Article 2

Composition

(1) The Security of Supply Coordination Group shall be composed of representatives of the Parties and representative bodies of the industry concerned and of relevant consumers. The composition of the Group may differ for gas and electricity respectively.

(2) Participant and Observer countries may be represented in accordance with Articles 95 and 96 of the

Treaty. **The Member States of the European Union may, under the coordination of the European Commission, participate in the Security of Supply Coordination Group with regard to all matters with which they are concerned.**

(3) The Security of Supply Coordination Group shall be chaired by the European Commission in cooperation with the Energy Community Secretariat.

(4) Each Party shall nominate its representatives and inform the Energy Community Secretariat. The list of representative bodies of the industry concerned and of relevant consumers shall be established and updated by the Permanent High Level Group upon a joint proposal by both the European Commission and the Energy Community Secretariat. The agenda and the draft conclusions of each meeting of the Security of Supply Coordination Group shall be agreed by the European Commission and the Energy Community Secretariat prior to circulating.

(5) The Security of Supply Coordination Group shall establish subgroups for gas and electricity.

Article 3

Tasks

(1) The Security of Supply Coordination Group shall facilitate the coordination of security of supply measures and advise the Energy Community institutions on issues relating to gas and electricity security of supply.

(2) The Security of Supply Coordination Group shall regularly monitor the state of security of supply of network energy within the Energy Community share experience on security of supply mechanisms and develop comprehensive risk analysis. The conclusions of the Group's annual meetings shall be submitted to the Ministerial Council, the Permanent High Level Group and the Regulatory Board.

(3) The tasks of the Security of Supply Coordination Group are without prejudice to the obligations of the Parties to adopt and update security of supply statements in accordance with Article 29 of the Treaty. The Security of Supply Coordination Group shall support the Parties in the preparation and updating of national emergency measures.

(4) In the event of an existing or imminent threat to security of supply or in the event of a supply disruption affecting a Party and involving another Party or a third country, the Security of Supply Coordination Group shall, where appropriate, coordinate measures taken at national levels. In doing so, it shall follow the principles established by Regulation (EU) 2017/1938, as adapted and adopted by Decision of the Ministerial Council 2021/15/MC-EnC, and Regulation (EU) 2019/941, as adapted and adopted by Decision of the Ministerial Council 2021/13/MCEnC, in the gas and electricity sectors respectively.

(5) In the cases mentioned in paragraph 4, the Chair of the Security of Supply Coordination Group or any Party directly affected may request an ad-hoc meeting of the Ministerial Council to take measures in response to the existing or imminent threat to security of supply.

(6) The activities of the Security of Supply Coordination Group may relate to, but are not restricted to, all issues falling within the scope of Regulation (EU) 2017/1938, as adapted and adopted by Decision of the Ministerial Council 2021/15/MC-EnC, and Regulation (EU) 2019/941, as adapted and adopted by Decision of the Ministerial Council 2021/13/MC-EnC, as well as mutual assistance within the meaning of Chapter IV in Title IV of the Treaty and the

handling of unilateral safeguard measures in accordance with Article 39 of the Treaty.

(7) The activities of the Security of Supply Coordination Group shall not have legally binding effects.

Article 4**Meetings**

(1) The Security of Supply Coordination Group, or its subgroups, shall meet regularly and at least once per year.

(2) Ad hoc meetings of the Security of Supply Coordination Group shall be convened by the Chair in case of existing or imminent threat to security of supply on its own initiative or upon request of a Party to the Treaty.

(3) Upon agreement of the European Commission and the Energy Community Secretariat, the Security of Supply Coordination Group may hold additional ad hoc joint sessions with the European Community Gas Coordination Group to discuss issues of common interest.

Article 5**Review**

Within three years of the date of its entry into force, this Procedural Act shall be reviewed in order to assess the functioning of the cooperation mechanisms it establishes. This review may provide for the conferral of powers to take interim measures to the Permanent High Level Group, as foreseen in Article 46 of the Treaty.

Article 6**Addressees**

This Procedural Act shall enter into force on the day of its adoption and is addressed to the Parties.

For the Ministerial Council

Presidency

Tirana, 11 December 2008



RULES OF PROCEDURE of 16 October 2015 on dispute settlement under the Treaty

Procedural Act 2008/01/MC-EnC of 27 June 2008 on Rules of Procedure for dispute settlement under Treaty as amended by Procedural Act 2015/04/MC-EnC of 16 October 2015 on amending Procedural Act 2008/01/MC-EnC

The Ministerial Council of the Energy Community,

Having regard to the Treaty Establishing the Energy Community, and in particular Articles 90 to 94 as well as Articles 47(c), 86, 87, 82 and 83 thereof,

Having regard to the proposal by the Secretariat,

Whereas it is of crucial importance that the provisions of the Treaty, including the Decisions adopted thereunder, are properly implemented in the national legal orders of the Parties and correctly applied by their authorities,

Whereas each Party to the Treaty is responsible for the timely implementation and correct application of Energy Community law within its own legal system,

Whereas the Treaty establishes a system of dispute settlement within the Energy Community by decision of the Ministerial Council,

Whereas the procedure leading up to such a decision may be initiated by a Party, the Secretariat or the Regulatory Board,

Whereas the Treaty gives private bodies the right to approach the Secretariat with complaints,

Whereas a Party concerned has the right to make observations in response to the request or complaint,

Whereas the Ministerial Council may decide on the existence of a breach by a Party of its obligations,

Whereas the Ministerial Council may further decide on the existence of a serious and persistent breach and on possible sanctions resulting therefrom,

Whereas the Treaty provisions establish a framework which requires more detailed procedural rules for practical implementation,

Whereas the institutions of the Energy Community shall interpret any term or other concept used in the Energy Community Treaty that is derived from European Community law in conformity with the case-law of the Court of Justice of the European Union, including its General Court,

Upon review as envisaged by Article 47 of this Procedural Act,

Whereas the Ministerial Council already on 29 June 2007 concluded that a formal process at a level below the Ministerial would have to be considered for the issue of non-implementation of Treaty commitments by Parties to the Treaty,

Whereas the European Commission in 2011 demanded “more effective implementation and enforcement” in the Energy Community¹; the European Parliament in 2013 requested “adapting [the Energy Community’s] decision-making to future challenges, including by setting up legal control mechanisms to deal with

¹ Commission Communication: The EU Energy Policy: Engaging with Partners beyond Our Borders, 7.9.2011, COM(2011) 539 final.

deficient *acquis* implementation”²; and the European Council in 2014 called for the Energy Community to “be reinforced so as to ensure the application of the *acquis* in those countries”³,

Whereas the High Level Reflection Group mandated by the Ministerial Council concluded that “Weak enforcement mechanism constitute one of the major obstacles to implementation of the *acquis communautaire* in the Contracting Parties”⁴ and considered that “a refurbishment of the institutional architecture is necessary, in particular to enable the enforcement of the far-reaching commitments the Parties accepted under the Treaty”⁵,

Whereas the Permanent High Level Group, at its meetings on 15 October 2015 endorsed the present Procedural Act, as amended,

HAS ADOPTED THIS PROCEDURAL ACT:

Article 1

Purpose

These rules specify the procedure to be followed in cases of failure by a Party (hereinafter “the Party concerned”) to comply with a Treaty obligation or to implement a Decision or Procedural Act addressed to it within the required period (hereinafter “Energy Community law”) as established by Articles 90 to 93 of the Treaty (hereinafter “dispute settlement procedure”, Titles II-IV), as well as a cooperation mechanism between national authorities or courts and the Secretariat in cases concerning the interpretation or application of Energy Community law without prejudice to Article 94 of the Treaty (Title I).

Title I

COOPERATION BETWEEN NATIONAL AUTHORITIES OF THE CONTRACTING PARTIES AND THE SECRETARIAT

Article 2

Cooperation between national authorities of the Contracting Parties and the Secretariat

(1) Where a question concerning the interpretation or application of Energy Community law is raised in proceedings before a national authority of a Contracting Party, such authority, upon request of a party to the procedure before it or on its own motion, notifies the Secretariat in writing at the earliest stage possible in the procedure. The Secretariat shall ensure the confidentiality of all information received.

(2) Contracting Parties shall ensure that, where a question concerning the interpretation or application of Energy Community law is raised in proceedings before a national court, such court, upon request of a party to the procedure before it or on its own motion, may notify the Secretariat in writing at the earliest

² European Parliament Resolution of 23 October 2013 on the European Neighborhood Policy: towards a strengthening of the partnership, (2013/2621(RSP)).

³ European Council Conclusions of 27 June 2014, EUCO 79/14.

⁴ An Energy Community for the Future, p. 19.

⁵ An Energy Community for the Future, p. 19.

stage possible in the procedure. The Secretariat shall ensure the confidentiality of all information received.

(3) Where the coherent interpretation or application of Energy Community law so requires, the Secretariat shall submit its opinion to the national authority or court of the Contracting Party in writing within the timelines set by national procedural rules, but not later than within four weeks. It may consult the Advisory Committee before submitting an opinion. The Secretariat's opinion must be in conformity with the case-law of the Court of Justice of the European Union.

(4) In its final decision or judgment, the national authority or court of the Contracting Party takes into account of the opinion submitted by the Secretariat.

(5) The Secretariat shall submit to the Ministerial Council an annual report on the application and interpretation of Energy Community law by national authorities of the Contracting Parties.

Title II

PROCEDURES UNDER ARTICLES 90 TO 93

Article 3

Failure to comply

(1) A Party fails to comply with its obligations under the Treaty if any of its measures (actions or omissions) are incompatible with a provision or a principle of Energy Community law.

(2) Failure by a Party to comply with Energy Community law may consist of any measure by the public authorities of the Party (central, regional or local as well as legislative, administrative or judicative), including undertakings within the meaning of Article 19 of the Treaty, to which the measure is attributable.

Article 4

Burden of proof

The burden of proving the allegation of non-compliance by a Party with Energy Community law and to place before the Ministerial Council the information needed to enable it to determine whether the obligation has not been fulfilled shall rest on the initiator of the proceedings. Where, however, the Party invokes an exemption to a rule or general principle of Energy Community law, it is incumbent upon the Party concerned to prove that the requirements for such exemption are fulfilled.

Article 5

Dispute settlement procedures and private disputes

Dispute settlement procedures must relate to a violation by a Party of Energy Community law and may not concern disputes between private parties.

Article 6

Case register

- (1) The Secretariat keeps a case register at its premises under the control of the Legal Counsel.
- (2) Each dispute settlement procedure case shall be assigned an official case number. Incoming and outgoing documents shall be registered under this number in the case file. If several pending cases concern the same subject matter, they may be consolidated and processed under the same case number.
- (3) The representatives of the Energy Community institutions and their staff shall not disclose information acquired or exchanged by them pursuant to this Procedural Act and of the kind covered by Energy Community Staff Regulation 3.5. a), unless the present Rules permit such disclosure.

Article 7

Access to the case file

- (1) At their request, Parties, Participants and Observers to the Treaty, the complainant as well as private or public bodies with a legitimate interest (hereinafter "interested parties") shall have access to the case file, subject to an eventual request by complainants to confidential treatment.
- (2) In cases of doubt, the Director of the Secretariat shall take a decision on the existence of a legitimate interest of private or public bodies requesting access to the case file.
- (3) The Secretariat shall adopt a Procedural Act⁶ laying down specific rules on access to the case file.

Article 8

Procedural documents

- (1) The language of the procedure is English. Any procedural documents expressed in another language shall be accompanied by a translation into English.
- (2) All procedural documents shall bear a date, the case number and the name and the address of the sender.
- (3) The original of every procedural document shall be signed by a person authorised to represent the sender by law, by its constitution or by authorisation.
- (4) If a procedural document does not comply with the requirements set out in paragraphs 1 to 3, the Secretariat shall prescribe a reasonable period within which the sender is to comply with them.

Article 9

Costs

Costs incurred by all parties to or persons participating in the procedure are not recoverable.

⁶ Procedural Act 2018/06/ECS-EnC of 10 December 2018 on Rules on access to the case file

Article 10**Time-limits**

- (1) Unless otherwise indicated, time-limits established by these Rules and time-limits prescribed by the competent institutions shall be binding.
- (2) Time-limits shall be prescribed so as to specify the precise date on which the required action is to take place rather than expressing periods in days, weeks, months etc. Where that day is a Saturday, Sunday or an official holiday, the deadline shall be extended until the end of the first following working day.
- (3) Time-limits may be extended by the institution that prescribed it upon a reasoned application.
- (4) Communication by telefax and email shall be deemed sufficient for the purposes of compliance with the time-limits.

Title III**THE COURSE OF DISPUTE SETTLEMENT PROCEEDINGS****Chapter I - Preliminary Procedure****Article 11****Scope and purpose**

- (1) When initiating a dispute settlement procedure within the meaning of Article 11, the Secretariat shall carry out the preliminary procedure set out in this Title. A Party or the Regulatory Board shall initiate dispute settlement procedures either by notification to the Secretariat or directly by submitting a reasoned request to the Ministerial Council in accordance with Article 29 below.
- (2) The purpose of the preliminary procedure is to establish the factual and legal background of cases of alleged non-compliance, and to give the Party concerned ample opportunity to be heard. In this respect, the preliminary procedure shall enable the Party concerned to comply of its own accord with the requirements of the Treaty or, if appropriate, to justify its position.
- (3) Where the Secretariat initiates a dispute settlement procedure on the grounds that a Party has failed to fulfil its obligation to notify measures transposing a Decision addressed to it within the deadline specified in that Decision, the Secretariat shall submit a reasoned request to the Ministerial Council without preliminary procedure.

Article 12**Initiation of a dispute settlement procedure by the Secretariat**

- (1) A dispute settlement procedure may be initiated by the Secretariat by way of an opening letter in accordance with Article 13 below.

(2) The Secretariat initiates procedures in response to alleged non-compliance arising from either a complaint by a private body, a notification by a Party or by the Regulatory Board or by its own initiative. Within the Secretariat, the Legal Counsel shall coordinate the procedure.

(3) The decision to initiate a dispute settlement procedure shall be made publicly available on the Energy Community website, stating the date of sending out the opening letter, the Party concerned and a brief summary of the subject matter.

Article 13

Opening letter

(1) If the Secretariat considers that a possible non-compliance of which it has become aware or issues raised in a complaint warrant the opening of a dispute settlement procedure, it addresses an opening letter to the Party concerned, requesting it to submit its observations within a specified time period. This period shall normally be two months.

(2) The Party concerned is requested to adopt a position on the points of fact and of law raised in the opening letter.

Article 14

Reasoned opinion

(1) In the light of the reply or absence of a reply from the Party concerned, the Secretariat may address a reasoned opinion to that Party. The reasoned opinion must contain a coherent and detailed statement of the reasons which led the Secretariat to conclude that the Party concerned failed to fulfil its obligations under the Treaty.

(2) The reasoned opinion shall call on the Party concerned to comply with the law within a specified time period. This period shall normally be two months.

Article 15

Submission to the Ministerial Council

In the light of the reply or absence of a reply from the Party concerned, the Secretariat may bring the matter to the attention of the Ministerial Council by way of a reasoned request in accordance with Article 29 below.

Article 16

Request for information

(1) The Secretariat may, by simple request, require any authority of the Party concerned to provide all necessary information at any stage of the preliminary procedure.

(2) The Secretariat may also request information from other natural or legal persons.

(3) The Secretariat may ask national authorities of Contracting Parties to conduct inspections of undertakings and associations of undertakings in line with the respective authorities' competences under national law.

Article 17

Interested parties

(1) Interested parties may submit written observations to the Secretariat at any stage of the preliminary procedure.

(2) Private and public bodies other than Parties, Participants and Observers shall substantiate the required legitimate interest.

(3) Any written observations received shall be immediately forwarded to the Party concerned and shall be attached to the reasoned request referred to the Ministerial Council.

Article 18

Urgency

(1) In cases of urgency due to the risk of serious and irreparable damage to an objective of the Treaty, the Secretariat may, on the basis of a *prima facie* finding of non-compliance, refer a reasoned request directly to the next possible meeting of the Permanent High Level Group.

(2) The Permanent High Level Group may take appropriate and proportionate interim measures upon request by the Secretariat. The Permanent High Level Group shall review the existence of urgency.

(3) For the application of this article, the Permanent High Level Group shall adopt guidelines determining the criteria for urgency, the procedure for adoption as well as the scope and limits of interim measures.

Article 19

Suspension and discontinuance of the procedure

(1) The Secretariat may, at any point of the preliminary procedure, decide to suspend or discontinue the procedure, in particular where the Party brings the state of non-compliance with Energy Community law to an end or where it makes credible commitments as to its intention to amend its legislation, administrative or judicial practice. Such decision may also be taken where the Party concerned successfully refutes factual assumptions or convincingly counters the legal arguments made by the initiator.

(2) To achieve the results described in paragraph 1, the Secretariat may enter into informal bilateral discussions with the Party concerned. A short report on the results achieved shall be submitted by the initiator to the Ministerial Council upon closure of the file and be included to the case file.

(3) The Secretariat may reopen the procedure where there has been a material change in any of the facts on which the decision was based, where the Party concerned acts contrary to its commitments or where the decision was based on incomplete, incorrect or misleading information provided by that Party.

Chapter II - The role of private bodies

Article 20

Right to approach the Secretariat

(1) Private bodies may lodge a complaint with the Secretariat against a Party arising from any measure the complainant considers incompatible with Energy Community law.

(2) The notion of private body encompasses all natural and legal persons as well as companies, firms or associations having no legal personality.

Article 21

Subject matter

(1) A complaint has to relate to a failure to comply with Energy Community law by a Party as defined above in Article 3.

(2) A complaint against an EU Member State will be passed on to the European Commission. The Secretariat will inform the complainant and the Permanent High Level Group of the transfer to the European Commission. Such transfer shall be without prejudice to the obligations arising from Title III and IV of the Treaty.

Article 22

Form of the complaint

(1) A complaint shall be made to the Secretariat in writing, by letter, fax or e-mail.

(2) Complainants should send supporting documentary evidence, if available, and copies of relevant correspondence with the national authorities of the Party.

Article 23

Acknowledgment of receipt

(1) Following registration by the Secretariat and assignment of a case number, an acknowledgement will immediately be sent to the complainant.

(2) The complainant shall be asked to indicate whether he/she wishes their complaint to be treated in a confidential or non-confidential manner. The Secretariat will abide by the choice a complainant has made regarding confidentiality, i.e. disclosure of his/her identity, in its communication with the authorities of the Party concerned, other interested parties or the general public. Where a complainant has not indicated his/her choice, the Secretariat shall presume that the complainant has opted for non-confidential treatment.

(3) The Secretariat will keep the complainant informed of the course of the procedure.

Article 24

Information of the Party concerned

In its opening letter, the Secretariat shall inform the Party concerned that it is acting on the complaint.

Article 25

Request for information

The Secretariat may, by simple request, require the complainant to provide all necessary information at any stage of the preliminary procedure.

Article 26

Reaction by the Secretariat

(1) If the Secretariat takes the view that the subject matter of the complaint gives rise to a breach of Energy Community law, it shall initiate a preliminary procedure by way of an opening letter within six months upon registration of the complaint, with the aim to either resolve the dispute or to submit a reasoned request to the Ministerial Council.

(2) If the Secretariat takes the view that the subject matter of the complaint does not give rise to a breach of Energy Community law, it shall notify the complainant the reasons for not pursuing the case further. The complainant may bring its case to the Permanent High Level Group. The latter may request the Secretariat to initiate a preliminary procedure.

Article 27

Withdrawal of the complaint

Withdrawal of the complaint shall not affect the right of the Secretariat to pursue the procedure further.

Article 28

Notification by a Party or by the Regulatory Board

Articles 22 to 27 shall apply by analogy to cases where the Secretariat initiates a preliminary procedure upon notification by a Party or the Regulatory Board.

Title IV

PROCEDURE BEFORE THE MINISTERIAL COUNCIL

Chapter I - Breaches by a Party of its obligations (Article 91 of the Treaty)

Article 29

Reasoned request

- (1) A reasoned request for a decision of the Ministerial Council pursuant to Article 90 of the Treaty may be submitted by the Secretariat either upon complaint, upon notification by a Party or the Regulatory Board, or on its own initiative. In these cases, the reasoned request shall be preceded by a preliminary procedure in accordance with the provisions laid down in Title III, save as otherwise provided for in these Rules of Procedure.
- (2) A reasoned request may also be submitted by a Party or the Regulatory Board directly. In that case, the Party or the Regulatory Board may ask the Secretariat for factual information and legal advice before submitting the reasoned request.
- (3) The reasoned request shall be based on concrete factual findings and backed up by sufficient legal analysis. The reasoned request including annexes shall be sent to the Party concerned, to the Presidency and the Vice-Presidency as well as to the President of the Advisory Committee. A copy of the reasoned request shall be sent to the Secretariat in case the latter is not the initiator.
- (4) The reasoned request shall contain a proposal for the decision to be taken by the Ministerial Council pursuant to Article 91 of the Treaty.
- (5) The reasoned request shall be published on the Energy Community's website providing for confidentiality of the complainant, where applicable.

Article 30

Scope of the decision

- (1) The Ministerial Council decides on the proposal made in the submitted reasoned request. It applies Energy Community law including these Rules.
- (2) In its decision, the Ministerial Council shall either establish the existence of a breach by a Party of its obligations arising from Energy Community law according to the proposal or dismiss the request entirely or partially.

Article 31

Reply by the Party concerned

- (1) Within two months following receipt of a copy of the reasoned request, the Party concerned may reply in writing to the Secretariat.
- (2) The Secretariat shall notify all Parties and Participants, the Regulatory Board, the Advisory Committee

as well as persons and bodies participating in the preliminary procedure of the reasoned request as well as any reply to it. Within two months of this notification, they shall be entitled to submit written observations to the Secretariat. The Regulatory Board and the Secretariat may submit written observations where they are not the initiator of the case.

Article 32

Advisory Committee

(1) Before taking the decision pursuant to Article 91 of the Treaty, the Presidency and the Vice-Presidency shall ask an Advisory Committee for its opinion on the reasoned request, taking into account any reply by the Party concerned. The Ministerial Council shall not be bound by the opinion of the Advisory Committee.

(2) The Advisory Committee shall be independent from the authorities of the Parties and the institutions established under the Treaty. It shall be bound by Energy Community law, including these Rules, and in particular Article 94 of the Treaty.

(3) The Advisory Committee shall be composed of five members appointed by the Ministerial Council by unanimity for a renewable term of four years, including one member representing the European Union. Members shall be chosen from persons whose independence is beyond doubt and who possess the qualifications required for appointment to the highest judicial offices in the respective Party.

(4) The procedure before the Advisory Committee shall not last longer than five months upon being tasked in accordance with paragraph 1 of this Article. Based on the reasoned request and taking into account a reply by the Party concerned as well as the written observations received and after having conducted a public hearing, the Advisory Committee of the Energy Community shall adopt an opinion on the reasoned request.

(5) The Advisory Committee shall adopt its opinion by majority of its members. The opinion shall propose to uphold or dismiss the reasoned requests entirely or partially. The President of the Advisory Committee shall forward it to the President of the Permanent High Level Group the Party concerned and the Secretariat within five working days upon its adoption.

(6) The Advisory Committee shall adopt its internal rules of procedure. The members of the Advisory Committee shall elect among themselves a President for the period of two years.

Article 33

Proceedings of the Permanent High Level Group

(1) The President of the Permanent High Level Group shall circulate the opinion of the Advisory Committee to the members of the Permanent High Level Group. The opinion of the Advisory Committee shall be made publicly available on the Energy Community website not later than three days upon its adoption.

(2) At the next meeting after the adoption of the Advisory Committee's opinion, the Permanent High Level Group shall hear both parties to the dispute as well as the President of the Advisory Committee. The Permanent High Level Group shall include the reasoned request on the agenda of the next meeting of the Ministerial Council. If it agrees with the reasoned request, it may include it as an "A" item on the agenda of the Ministerial Council in line with its Rules of Procedure.

Article 34

Decision by the Ministerial Council

(1) At its meeting, or, as the case may be, by correspondence, the Ministerial Council takes its decision in accordance with Article 30(2).

(2) The decision by the Ministerial Council shall be taken in accordance with the rules laid down in Article 91(1) of the Treaty.

(3) The decision shall be signed by the Presidency. It shall be sent to the Party concerned, the submitted of the reasoned request and the Secretariat. The Advisory Committee's opinion shall be appended to the Ministerial Council's decision.

Article 35

Decision in the absence of a reply

Where the Party concerned, after having been duly informed, fails to reply in its defence on time, a decision shall be taken based on the facts submitted in the reasoned request alone.

Article 36

Publication of the decision

The decision taken by the Ministerial Council shall be made publicly available on the website of the Secretariat.

Article 37

Binding nature of the decision

The decision by the Ministerial Council shall be binding on the Parties concerned from the date of its adoption.

Article 38

Consequences of a decision establishing failure to comply

(1) Where the Ministerial Council establishes the existence of a breach of a Party's obligation pursuant to Article 91 of the Treaty the Party concerned shall take all appropriate measures to rectify the breach and ensure compliance with Energy Community law.

(2) The Secretariat, in accordance with Article 67(b) of the Treaty, shall review the proper implementation by the Party concerned of the decision, and may bring the matter directly before the Ministerial Council on the grounds of a failure to take the necessary measures to comply with the decision.

Chapter II - Serious and persistent breaches (Article 92 of the Treaty)

Article 39

Serious and persistent breach

The Ministerial Council shall establish the existence of a serious and persistent breach by a Party of its obligations under the Treaty taking into account the particularities of each individual case.

Article 40

Request

(1) A Party, the Secretariat or the Regulatory Board may request the Ministerial Council to determine the existence of a serious and persistent breach without a preliminary procedure.

(2) The request may follow up on a prior decision taken by the Ministerial Council under Article 91 of the Treaty or raise a new issue.

(3) The request shall set out the allegations against the Party concerned in factual and legal terms. It shall also contain a proposal as to concrete sanctions to be taken in accordance with Article 92(1) of the Treaty.

(4) The request shall be submitted to the Presidency and the Vice-Presidency at least 60 days before the respective meeting. A copy shall be submitted to the Secretariat for registration. The request shall not be made public.

Article 41

Decision-making procedure

(1) The Presidency shall, within seven days after receiving it, forward the request to the Party concerned and ask it for a reply to the allegations made in the request.

(2) The Presidency and the Vice-Presidency may ask the Advisory Committee for its written opinion.

(3) The decision by the Ministerial Council on the existence of a serious and persistent breach shall be taken in accordance with Articles 92(1) and 93 of the Treaty.

(4) The decision taken by the Ministerial Council shall be made publicly available on the Secretariat's website.

Article 42

Measures under Article 92

(1) In the decision establishing the existence of a serious and persistent breach, the Ministerial Council shall determine measures in accordance with Article 92(1) of the Treaty and specify a time-limit.

(2) The obligations of the Party concerned under the Treaty shall in any case continue to be binding on that Party.

(3) The Ministerial Council shall at each subsequent meeting verify that the grounds continue to apply on which the decision establishing the existence of a serious and persistent breach was made and sanctions were imposed.

Chapter III - Revocation of decisions

Article 43

Procedural aspects

(1) The Ministerial Council, in accordance with Articles 91(2) and 92(2), may decide by simple majority to revoke decisions taken under Articles 91(1) and 92(1) respectively. Revocation of a decision may be proposed by any Party.

(2) Before taking the decision to revoke decisions taken under Articles 91(1) or 92(1) of the Treaty, the Ministerial Council shall ask the Secretariat and the Party concerned for their reports on the factual circumstances, as well as a legal opinion by the Advisory Committee based on the two reports.

(3) The Ministerial Council shall give reasons for its decision to revoke a previous decision and shall make the revocation decision publicly available on the Energy Community website.

(4) A revocation shall not affect decisions taken within the domestic legal orders following up the initial decision by the Ministerial Council.

Title V

FINAL PROVISIONS

Article 44

Amendments to Rules of Procedure of the Ministerial Council

(1) In Item VII.5. of Procedural Act 2006/01 on Internal Rules of Procedure of the Ministerial Council of the Energy Community, the text after the semicolon is deleted. The semicolon is replaced by a full stop.

(2) In Item VII.6. of Procedural Act 2006/01 on Internal Rules of Procedure of the Ministerial Council of the Energy Community, the last sentence is deleted.

Article 45

Addressees

This Procedural Act is addressed to and shall be binding on all Parties to the Treaty and institutions set up under the Treaty.

Article 46

Entry into force

(1) This Procedural Act shall enter into force upon adoption.

(2) Cases initiated already before 16 October 2015 shall be dealt with in accordance with the Procedural Act applicable before the amendments adopted on that date.

Article 47

Review

The Rules of Procedure in this Procedural Act shall be reviewed in the light of experience upon proposal by the Secretariat in 2016. The review shall include the approach towards measures under Article 92 of the Treaty and the institutional set up for dispute resolution.

Article 48

Publication

The Director of the Energy Community Secretariat shall make this Procedural Act available to all Parties and institutions under the Treaty within 7 days of its adoption and to the public on the website of the Energy Community.

Done in Tirana on 16 October 2015



RULES of 16 October 2015 on strengthening the role of civil society

Procedural Act 2015/03/MC-EnC of 16 October 2015 on strengthening the role of civil society.

The Ministerial Council of the Energy Community,

Having regard to the Treaty establishing the Energy Community (hereinafter referred to as the Treaty), and in particular Articles 86, 87, 82 and 83 thereof,

Having regard to the report of the High Level Reflection Group, which concluded that the role of civil society in the Energy Community institutions should be strengthened,

Whereas enhancing the role of civil society organisations will render the Energy Community's institutions and bodies more transparent,

Whereas strengthening the role of civil society organisations will make the Energy Community better equipped to meet its objectives, notably by increasing its transparency, public acceptance as well as providing additional expertise to the implementation of the acquis if necessary,

HAS ADOPTED THIS PROCEDURAL ACT:

Article 1

1. Representatives of Civil Society Organisations may attend the meetings of Working Groups and Task Forces upon invitation of the chairman of a Working Group or a Task Force.

Article 2

1. Representatives of Civil Society Organizations may be invited to attend specific agenda items of meetings of the Ministerial Council or the Permanent High Level Group as observers.

2. Such invitations may be issued in particular to seek information from the Civil Society Organizations, for instance as regards new legislative initiatives planned in the Energy Community.

3. The procedure to issue such an invitation shall be determined in the Rules of Procedure of the Ministerial Council and the Permanent High Level Group respectively.

Article 3

1. A Civil Society Day shall be convened once a year to increase the transparency of the activities of the Ministerial Council and the Permanent High Level Group towards Civil Society Organizations. The meeting shall be prepared by the Secretariat.

Article 4

This Procedural Act enters into force upon the day of its adoption.

Done in Tirana on 16 October 2015.

RULES of 16 October 2015 on establishment of Energy Community parliamentary plenum meetings

Procedural Act 2015/05/MC-EnC of 16 October 2015 on establishment of Energy Community parliamentary plenum meetings.

The Ministerial Council of the Energy Community,

Having regard to the Treaty establishing the Energy Community and in particular Articles 90 to 93 as well as Articles 86, 87, 82 and 83 thereof,

Whereas participation of representatives of parliaments would make the Energy Community better equipped to meet its objectives, notably by increasing political support for the implementation of the Energy Community *acquis* and the sense of ownership of the organisation,

Whereas it is fitting to increase transparency of the organisation and improve knowledge of the parliaments regarding the Energy Community processes,

Whereas it shall improve through dialogue, better acceptance of the Energy Community and its objectives in the Parties to the Treaty,

Whereas bringing together elected representatives of the national parliaments of the Contracting Parties and the European Parliament would help to address shared challenges, and support to build a fully functioning pan-European energy market which works to the benefit of citizens,

HAS ADOPTED THIS PROCEDURAL ACT:

Article 1

1. The Parliamentary Plenum meetings shall be organized up to two times a year.

Parliaments of Contracting Parties may appoint two representatives from each national parliament, preferably from the governing political spectrum and opposition. The European Parliament may send up to 16 representatives.

2. The meetings take place under the chairmanship of the Member of the Parliament of the Contracting Party holding the Presidency of the Ministerial Council.

3. The meetings of the Parliamentary Plenum shall be administered by the Secretariat.

Article 2

1. The participants in the Parliamentary Plenum meetings may express views and opinions on all matters falling within the scope of the Treaty in the form of reports or resolutions, as appropriate, with the exception of dispute settlement under Articles 90-93 of the Treaty. They are invited to prepare a report on the annual progress report prepared by the Secretariat in accordance with Article 67(b) of the Treaty, to be

submitted to the Ministerial Council.

2. The participants in the Parliamentary Plenum meetings may pose questions to the institutions of the Energy Community.
3. The chairperson of the Parliamentary Plenum meetings is invited before the Ministerial Council.
4. Representative of the Contracting Party holding the Presidency of the Energy Community or the Director of the Energy Community Secretariat may be invited to take part in the meetings of the Parliamentary Plenum.
5. The Secretariat is invited to propose organizational rules and procedures of the Parliamentary Plenum meetings for adoption by the Ministerial Council upon the consultation with the Parliamentary Plenum meeting.

Article 3

This Procedural Act enters into force upon the day of its adoption.

Done in Tirana on 16 October 2015.

RULES of 25 October 2018 on the establishment of the Energy Community Secretariat's dispute resolution and negotiation centre

Procedural Act 2018/05/ECS of 25 October 2018 on the establishment of the Energy Community Secretariat's Dispute Resolution and Negotiation Centre

THE ENERGY COMMUNITY SECRETARIAT,

Having regard to the Treaty establishing the Energy Community, and in particular Article 67(e) thereof;

Given that the challenges of energy reform in many countries entail disputes between various actors in that process, and that such disputes involve in particular the states, their public authorities, market participants, civil society and investors;

Considering that the Energy Community's objective of creating stable regulatory and market frameworks capable of attracting investment requires structures suitable for rational, neutral, quick, efficient and sustainable resolution of such disputes;

Taking into account experience showing that most jurisdictions lack such structures and that the prevailing international mechanisms, be it investor-state arbitration or commercial arbitration, are expensive, sometimes politicized, time-consuming and often too adversarial to resolve energy disputes in a sustainable and cost-effective manner, and in particular they do not suit the needs of consumers and the interests of small and medium enterprises, and therefore may not be the appropriate forum to resolve energy disputes in general and smaller-scale disputes in particular;

Convinced that institutional negotiation and mediation can play an important role not only in the resolution of commercial and investments disputes, but also in the framework of dispute settlement under the Treaty, in particular during the preliminary procedure established under the Dispute Settlement Rules of Procedure which aims at resolving disputes at an early stage before they reach the Ministerial Council;

Noting that alternative dispute settlement methods such as mediation and conciliation are gaining importance as alternatives to litigation and arbitration, especially due to their focus on preserving the relationship between the parties, their flexible approach and their minimal costs;

Building on the expertise gained by the Secretariat not only in the understanding of energy markets in transition, but also in negotiating and mediating mutually beneficial solutions in several high-profile investor-state disputes to date;

Considering that in order to avoid energy disputes in the first place, the capacity of national authorities to negotiate agreements as diverse as international agreements, finance agreements, project agreements, supply agreements, investment contracts etc. needs to be improved;

Intending to establish a forum for dispute resolution and negotiation, as well as to offer dispute resolution and negotiation facilitation services for the benefits of national authorities, market participants, civil society and investors;

ADOPTS THE FOLLOWING PROCEDURAL ACT:

Title I

Scope of application and definitions

Article 1

Establishment of the Energy Community Secretariat's Dispute Resolution and Negotiation Centre

1. A Dispute Resolution and Negotiation Centre is hereby established within the Energy Community Secretariat (hereinafter "the Centre").
2. The purpose of the Centre shall be to promote and provide facilities for the resolution of disputes within the Energy Community between states and national authorities on the one hand, and private parties on the other; commercial disputes between private parties; disputes between states and national authorities; or disputes between the Parties to the Energy Community Treaty and the Secretariat.
3. The Centre shall offer facilities for the settlement of disputes in the following constellations:
 - a. Facilitation of negotiations or mediation between private parties, between private parties and states and/or their national authorities, and between states and/or their national authorities ("third-party disputes");
 - b. Facilitation of negotiations or mediation in the context of Article 19(2) of Procedural Act 2015/04/MC-EnC of 16 October 2015 on amending Procedural Act of the Ministerial Council 2008/01/MC-EnC of 27 June 2008 on Rules of Procedure for Dispute Settlement under the Treaty (hereinafter "the Dispute Settlement Procedures"), ("facilitated negotiations/mediation during the dispute settlement procedure ");
 - c. Assisting negotiations by Parties, Participants or Observers to the Treaty and/or their authorities and public companies with other states and international organizations, their authorities, public companies or private parties ("negotiation support").
4. Article 1(3) does not exclude any other form of dispute settlement which may, in the future, be offered by the Centre, such as, but not limited to, arbitration of disputes between private parties, between private parties and states and/or national authorities, and between states and/or national authorities of other states.
5. Upon a reasoned request by a Party or Observer to the Treaty to the Chair of the Centre, a certain dispute class or classes of disputes may be excluded from the range of activities covered by paragraphs 3 and 4, to the extent any support to their resolution by the Centre is prohibited under national or international law.

Article 2

Definitions

For the purposes of this Procedural Act,

1. "Arbitration" means the settlement of a dispute by an arbitrator or an arbitration tribunal based on an arbitration agreement between the disputing parties and on procedural arbitration rules to be adopted by the Chair of the Centre;

2. "Dispute" means a conflict between two or more parties related to the production, transportation, distribution, sale and purchase, or consumption of energy (including the associated products, services, capital etc.), as well as consumer protection and environmental issues in the field of energy, arising out of an agreement, an investment, obligations under national or international law etc., regardless of whether they are already subject to litigation or arbitration or other kinds of dispute settlement mechanisms;
3. "Disputing party" means a state, a natural person, a private or a public entity, an association etc. subject to a dispute;
4. "Facilitated negotiations" means the service offered by the Centre to lead and support the process of negotiation of a dispute under terms and conditions agreed with the disputing parties in a Memorandum of Understanding (Article 8), with a view to reach a settlement of their dispute. The purpose of the facilitation is to reach a settlement mutually acceptable by and agreeable to the disputing parties;
5. "Mediation" means a form of facilitation which includes a more active involvement by the mediator, including by making concrete proposals for the settlement of a dispute by the mediator;
6. "Party", "Participant" and "Observer" have the meaning accorded to these terms by the Treaty establishing the Energy Community;
7. "Third party" means a natural person or a legal entity which is not a disputing party under Articles 1(3) (a) and 1(3)(b) of the present act, but which has a connection or has been involved in the facts giving rise to the respective dispute.

Article 3

Management of the Centre

1. The Centre shall be functionally attached to the Legal Unit. It shall be chaired by the Head of the Legal Unit who will also serve as Chair. A staff member of the Legal Unit shall perform the function of registrar.
2. The Centre shall be supported by a group of five distinguished individuals with experience in the areas covered by the Centre. Members of this group shall serve without remuneration.
3. The Centre shall not aim for or make any profit.
4. The Centre shall not charge for the use of its facilities and services. This is without prejudice to fees for mediators, arbitrators, experts, interpreters and translators, and any other persons which are not employees of the Secretariat and whose contribution is required during the facilitated negotiations or mediation. Any such costs can only be incurred as long as envisaged by this Procedural Act and the procedural rules adopted under Article 4.

Article 4

Procedural Rules

1. Upon consultation with the group established according to Article 3(2), the Centre shall develop procedural rules for the activities performed by the Centre in accordance with Article 1(3) and 1(4) of this Procedural Act.

2. The Centre shall also develop templates for a Memorandum of Understanding, settlement agreement, expert determination, standard mediation and arbitration clauses, as well as a code of conduct for facilitators and mediators, on the one hand, and disputing parties, on the other.
3. Such rules shall be adopted by the Chair of the Centre and published on the website of the Centre.

Title II

Facilitated Negotiations or Mediation of Third-Party Disputes (Article 1(3)(a))

Article 5

Request for Facilitated Negotiations or Mediation

1. Any disputing party wishing to submit a dispute to the Centre for facilitated negotiations, mediation or any other type of dispute settlement, may address a request to that effect to the Centre. The request can also be sent by the disputing parties jointly.
2. The request shall contain the following information:
 - a. the name and address of the disputing parties;
 - b. a short summary of the dispute, including claims made by either party and any relief sought and damages claimed;
 - c. a short summary of the course of any pending proceedings, in case the dispute is already subject to litigation, arbitration, or any other form of dispute settlement;
 - d. any other documents deemed necessary for the purpose of the negotiation.
3. The registrar shall register the request. In case the request was submitted by one disputing party, a copy of the request will be sent upon registration to the other disputing party/parties.

Article 6

Post-award Facilitation

1. Disputing parties may also request, and arbitration institutions or tribunals may decide, to involve the Centre in the facilitation of elements of disputes not or not entirely resolved by an arbitral award. Parties to a dispute may also request the Centre to assist them with the implementation of an arbitral award, including with regard to the technical, economic or legal aspects of such implementation.
2. The request for post-award facilitation under Article 6 shall also contain a copy of the award.
3. Post-award facilitation is not meant to be an appeal against a final arbitral award. It will not re-judge a dispute, but it will offer the support of a facilitator for those elements of the dispute, arising after the award had been issued. Post-award facilitation will be without prejudice to any appeal, annulment or any recourse against an arbitral award provided by the applicable legal framework.

Article 7

Appointment of a Facilitator/Mediator

1. Depending on the nature and scope of the dispute, the facilitator/mediator shall be selected by agreement of the disputing parties and the Centre from the experienced staff of the Secretariat or from the Energy Community's Panel of Mediators established according to Article 27 of the present Procedural Act.
2. The registrar of the Centre shall send a list of three potential facilitators/mediators, taking into account their qualifications and experience, as well as the particularities of the dispute. If no agreement is reached by the disputing parties, the Chair of the Centre shall appoint the facilitator/mediator.
3. The facilitator/mediator may be supported by other staff of the Secretariat. In such case, all the duties of the facilitator/mediator (including the duty of confidentiality) shall extend to the supporting staff of the Secretariat.
4. Before commencement of the negotiations, the facilitator/mediator shall disclose any circumstances likely to give rise to justifiable doubts as to his or her impartiality of independence. This obligation remains throughout the facilitated negotiations or mediation.
 - a. The 2014 IBA Guidelines on Conflicts of Interest in International Arbitration will serve as guidance as to what circumstances require disclosure. In any case, Red List and Orange List circumstances shall at all times be disclosed.
 - b. When in doubt whether a circumstance should be disclosed or not, disclosure should always prevail. Following disclosure, the disputing parties may request the Centre to appoint another facilitator/mediator.

Article 8

Memorandum of Understanding

1. Following the appointment of the facilitator/mediator, the Centre shall provide the facilitator/mediator with a draft Memorandum of Understanding to be signed by all disputing parties consenting to the facilitation/mediation of the dispute, the facilitator/mediator and the chair of the Centre.
2. Signing a Memorandum of Understanding is not compulsory, and it is within the discretion of the facilitator/mediator to decide whether the Memorandum of Understanding may be used in the proceedings. At all times, the facilitator/mediator shall give priority to the swift resolution of the dispute, and a Memorandum of Understanding shall not be signed if this would delay the proceedings.
3. For the cases when a Memorandum of Understanding will be concluded, the Centre shall develop and publish a model Memorandum of Understanding. The Memorandum of Understanding shall include provisions regarding the place of negotiations/mediation, the proposed timeframe, confidentiality, effect on pending legal disputes, role and powers of the facilitator/mediator, a draft schedule of the proceedings etc.
4. The disputing parties, the facilitator/mediator and the Chair of the Centre may amend the Memorandum of Understanding, for example by extending the timeframe by mutual consent at any stage of the procedure. Any amendment of the Memorandum of Understanding shall be made in writing.

Article 9

Conduct of the Facilitated Negotiations/Mediation

1. The facilitated negotiations/mediation will be conducted in accordance with the procedural rules adopted as per Article 4 of this Procedural Act. The rules shall not prevent the disputing parties, together with the facilitator/mediator, to agree on an alternative manner in which the negotiations shall be conducted.
2. In all cases, the facilitator/mediator will pay particular consideration to the circumstances of the case, the positions and interests of the disputing parties, to the applicable legal framework and will aim for a swift resolution of the dispute.
3. The facilitator/mediator may also, upon request of the disputing parties or out of own initiative, arrange bilateral meetings with disputing parties separately.
4. All information exchanged during the facilitated negotiations/mediation between the disputing parties and the facilitator/mediator shall remain confidential. The information exchanged during a bilateral meeting shall not be disclosed to the other disputing party/parties, unless the disputing party/parties engaged in the respective meeting expressly agree/s to the disclosure.
5. Unless expressly agreed by the disputing parties, all correspondence and information exchanged during the facilitated negotiations/mediation shall be without prejudice to any litigation or arbitration proceedings on the same subject-matter.
6. Unless the disputing parties and the Centre agree to a longer period, negotiations shall take place within a period of three months. In all cases, the purpose of the facilitated negotiations or mediation is to reach a settlement as soon as possible in order to minimize the costs and adverse effects of a dispute.
7. Unless the disputing parties and the facilitator/mediator agree otherwise, the place of the facilitated negotiations/mediation shall be at the premises of the Energy Community Secretariat in Vienna. Facilitated negotiations/mediation may also take place by videoconference or other means of telecommunication if the disputing parties and the facilitator/mediator so agree.
8. The disputing parties may also, upon written notification to the facilitator/mediator and to the Centre, expand the scope of the facilitated negotiations/mediation in order to cover related disputes or disputes which arose after the commencement of the facilitated negotiations/mediation, or extend the three-months deadline.
9. The facilitator/mediator does not have the authority to impose upon the disputing parties a solution to their dispute.

Article 10

Expert Determination

1. At any time during the facilitated negotiations/mediation, the disputing parties jointly may refer the dispute or a part of it to an expert to make a determination on one or more technical points disputed by the parties. The expert will be part of the Secretariat's staff, or an expert from the Secretariat's Roster of Experts. The determination will be binding for the disputing parties and for the facilitator/mediator. The expert determination report shall be made in writing, it shall include a description of the issue referred

for determination, state the reasons on which the finding of the expert is based, and it shall be signed and dated.

2. If the determination is made by an expert from the Secretariat's staff, it will be free of charge. If an expert from the Roster of Experts will be engaged, the expert's costs will be equally divided between the disputing parties. A cost overview will be provided, free of charge, before commencing the expert determination.

Article 11

Termination and Outcome of the Facilitated Negotiation/Mediation

1. The facilitated negotiations/mediation are considered terminated in one of the following circumstances: when a settlement agreement is reached by the disputing parties; when one of the disputing parties, or all the disputing parties jointly, submits a note to the facilitator/mediator, the Centre and the Secretariat, that the facilitated negotiations/mediation are terminated; and upon expiry of the deadline as per Article 9(6) or any other deadline agreed upon, and no extension has been agreed as per Article 9(8) above..

2. Unless the disputing parties agree otherwise, the objective of facilitated negotiations/mediation is to settle a dispute by agreement of the disputing parties. The facilitator/mediator's consent is not a prerequisite for the agreement.

3. At all times, the facilitator/mediator shall work towards compliance of the outcome with Energy Community law during the facilitated negotiations/mediation.

4. Upon request of one or both disputing parties, the Centre will confirm the transparency and correctness/fairness of the negotiations.

Article 12

Follow-up measures

The disputing parties may engage the Secretariat in follow-up measures such as the implementation of any settlement agreement upon consent of the Chair of the Centre.

Title III

Facilitated Negotiations/Mediation during the Dispute Settlement Procedure (Article 1(3)(b))

Article 13

Compliance with Energy Community Law

1. The following rules are meant to implement Article 19(2) of the Dispute Settlement Procedure and facilitate the swift closure of dispute settlement cases during the preliminary procedure established therein.

2. Their application may not compromise the full implementation, applicability and primacy of Energy

Community law in the Party concerned, nor affect any other national or international procedures in which compliance with Energy Community law is relevant.

Article 14

Facilitated Negotiations before Opening a Dispute Settlement Procedure

1. Before the Secretariat opens a dispute settlement procedure against a Party to the Treaty in a case of non-compliance, the Centre shall review whether the case is suitable for a settlement. A case is suitable for a settlement in particular where compliance can be reached within a commonly agreed timeframe, and/or where the Party concerned can reach compliance with the assistance of the Secretariat. The suitability assessment shall be included in the case file.
2. If the case is considered suitable for a negotiated settlement, the Opening Letter sent in accordance with Article 13 of the Consolidated Rules of Procedure for Dispute Settlement under the Treaty shall include an invitation to the Party concerned to request negotiations using the facilities of the Centre and propose a procedural calendar for facilitated negotiations.

Article 15

Mediation after the Reasoned Opinion

1. If the facilitated negotiations carried out in accordance with Article 14 of the present Procedural Act do not lead to a settlement of the case, or if no such negotiations take place and a Reasoned Opinion is issued by the Secretariat, the Centre may offer to the Party concerned, or the Party concerned may request that the dispute be mediated by a neutral third-party mediator.
2. Such mediation shall be agreed upon in writing between the Secretariat, the Party concerned and the mediator within the deadline for reply set in the Reasoned Opinion. The agreement shall specify the scope and timeframe of the mediation as well as the role of the mediator in line with the Procedural Rules to be adopted under Article 4.
3. Unless the agreement between the Secretariat and the Party concerned provide otherwise, the costs of mediation (including the fee of the mediator if applicable, as well as reasonable travel and accommodation costs) shall be shared equally between the disputing parties.
4. The mediator shall actively help find a solution to the dispute settlement case in the broadest possible manner and not limited by the subject-matter of the case. This may include commitments to assistance by the Secretariat, commitments to future regulatory and legislative changes by the Party, and commitments made by the complainant where applicable. The solution may also include commitments for support by third parties such as international organizations, donors or domestic parties.
5. Solutions agreed upon by the Secretariat and the Party concerned in the course of the mediation shall be reflected in an agreement or memorandum which gives credible assurances of the solution being implemented.
6. The mere signature of an agreement or memorandum shall not give any expectations that the case shall be closed by the Secretariat, unless specifically mentioned in the respective agreement or memorandum.

Article 16**Place of Negotiations and Mediation**

1. Negotiations under Title III shall be preferably held at the Centre's premises in Vienna or, if more appropriate, in the Party concerned or at any another place.
2. The costs associated with the participation in the negotiations cannot be reimbursed by the Secretariat.

Article 17**Representation of the Centre**

1. The Centre shall be represented by the Head of Legal Unit or the Senior Energy Lawyer and the rapporteur in the case concerned. The Party concerned shall decide about its representatives.
2. The Centre may request other public or private parties to be present if deemed beneficial for the settlement of the dispute.

Article 18**The Role of the Complainant**

In cases initiated upon complaint, the Centre shall also invite the complainant to be present in negotiations and mediations under Title III, unless the Party concerned objects based on legitimate reasons of overriding interest.

Article 19**Publication**

Regular updates on the status of the facilitated negotiations/mediation shall be published on the webpage of the Centre.

Title IV**Negotiation Support Provided to Parties, Participants or Observers to the Treaty (Article 1(3)(c))****Article 20****The Network of Negotiators**

1. The Centre shall establish a network of negotiators involving energy negotiators representing the governments of Parties, Participants or Observers to the Treaty.

2. The Centre shall organize regular exchanges of experience and best practices (including model clauses), trainings and disseminate relevant information to the network.
3. The members of the network shall be invited to exchange information between them and the Centre with regard to the negotiations for public or private law contracts and agreements as well as non-binding instruments in areas such investments, project financing, supply or transit agreements, international relations etc in the energy sector.

Article 21

Requesting Negotiation Support

1. When a Party, Participant or Observer intends to enter into negotiations for an agreement or non-binding instrument of the kind described in Article 20(3) above, it may inform the Centre and may request advice and support in the negotiations.
2. The request shall be in writing and specify whether the support should be provided by the Centre and/or other members of the network.
3. Unless excluded by the Party, Participant or Observer, the Centre and/or members of the network may participate in the negotiations.
4. Any expenses associated with negotiation support shall be borne by the Party, Participant or Observer requesting the support.

Title V

Final Provisions

Article 22

Compliance and Impact Assessment

1. At any point before the closure of facilitated negotiations or mediation, the Party, Participant or Observer concerned may notify to the Secretariat the draft agreement or non-binding instrument and request an assessment of compliance with Energy Community law and/or its impact on the Energy Community Single Market, the environment and security of supply in the Energy Community.
2. The Secretariat shall provide its assessment within four weeks following the request.

Article 23

Confidentiality

1. The Centre, the staff of the Secretariat, the mediators from the Panel of Mediators and the members of the Network of Negotiators shall respect the confidentiality of all information exchanged under this Procedural Act.

2. If so requested by any of the disputing parties, all the participants to facilitated negotiations/mediation shall sign non-disclosure agreements.
3. The general obligation of confidentiality shall apply without prejudice to the publication, on the Centre's website, of general information regarding the subject-matter of the case, the name of the disputing parties and of the facilitator/mediator, as well as the status of the proceedings.

Article 24

Third parties

At the invitation of the Centre or of the facilitator/mediator, third parties may participate in any meetings or to submit written positions regarding the subject-matter of the dispute. They may also be involved actively in the facilitated negotiations/mediation.

Article 25

Costs

1. The services of the Centre shall be free of charge.
2. If the facilitator/mediator is part of the staff of the Secretariat or the Centre, his/her services shall also be free of charge.
3. With regard to facilitators/mediators from the Panel of Mediators and of the Network of Negotiators, their fees (if the case) and reasonable costs for transport and accommodation shall be agreed upon between the disputing parties and the facilitator/mediator and shall be borne equally between the disputing parties.
4. The fees of the facilitators/mediators), as well as any costs incurred by disputing parties, their agents, counsel, advocates as well as witnesses and experts shall not be recoverable.

Article 26

Legal aid

1. The Centre shall analyze the possibility for the establishment of a legal aid fund for Parties concerned by dispute settlement procedures under Article 90 of the Treaty and for any disputing parties within the meaning of the present Procedural Act. Such legal aid fund shall be established upon decision of the Head of the Legal Unit of the Secretariat.
2. The Head of the Legal Unit of the Secretariat shall also adopt rules of procedure for the legal aid fund.

Article 27

The Energy Community Panel of Mediators

1. The Centre shall establish a Panel of Mediators of high moral character and recognized competence in the fields of energy negotiations from which the Secretariat and the Party concerned may choose a person by consensus.
2. The Panel shall include experienced mediators, members of the Network of Negotiators (see Article 20 above), representatives of companies and investors and civil society organizations in a well-balanced manner. The composition of the Panel shall be published on the website of the Secretariat.

Article 28

Entry into force

This Procedural Act shall enter into force upon adoption.

Article 29

Publicity

The Secretariat shall make this Procedural Act and any amendments available on its website.

Done in Vienna, 25 October 2018

RULES OF PROCEDURE of 29 November 2018 of Energy Community parliamentary plenum

I. Participation

Members of National Parliaments of the Contracting Parties

1. Participants in the Parliamentary Plenum meetings shall be members of their national parliaments.
2. Participants in the Parliamentary Plenum meetings shall be appointed by their national parliaments or its respective body. National parliaments may appoint two representatives. Participants should be appointed so as to ensure a fair representation of the political parties in their parliaments. Preferably one participant should be from the governing political spectrum and one from the opposition.
3. National parliaments may also appoint two alternative participants, who may take the place of a participant who is unable to attend a meeting when the Secretariat has been duly informed.
4. A participant standing for re-election to a national parliament will be considered a member of that parliament until the election is decided and may continue to be a participant in the Parliamentary Plenum meetings until his or her successor has been designated, provided he or she is still a member of the national parliament.

Members of European Parliament

5. The European Parliament may send an equal number of representatives as representatives from the Energy Community Contracting Parties.

II. Chair and Vice-Chairs

1. The chairmanship of the Parliamentary Plenum meetings shall be rotating and shall be held by the member of the National Parliament of the Contracting Party holding the Presidency of the Energy Community Ministerial Council.
2. Out of the two participants in the Parliamentary Plenum meetings of the Contracting Party holding the Presidency,
 - a) The Chair of the Parliamentary Plenum meetings shall be the Chairperson of the principle Committee in charge of energy issues in his or her National Parliament.
 - b) In case neither of the two appointed participants of the Parliamentary Plenum meetings is a Committee Chairperson, then the most senior participant, in terms of mandates served in national parliament, will be Chairperson.
 - c) In case of disagreement, the Chair shall be decided by draw.
3. The Chair calls for, proposes an agenda and chairs the meetings of the Parliamentary Plenum; ensures observance of the Rules of Procedure; ascertains whether a quorum exists, puts questions to vote and announces the results of votes. The chairperson of the Parliamentary Plenum meetings is invited before the Energy Community Ministerial Council.
4. The chairperson shall continue to act as Chair until a new chairperson of the Parliamentary Plenum

meetings has taken up his or her duties.

5. The Parliamentary Plenum meetings may have three Vice- Chairs, one from the incoming and one from the outgoing Presidency of the Energy Community Ministerial Council and one from the European Parliament. Vice-Chairs may take over the responsibilities of the Chair if requested by him or her or in the chairperson's absence.

6. The same procedure will apply for appointment of the Vice-Chairs from the national parliaments of the Contracting Parties as for the Chair of the Parliamentary Plenum meetings. The European Parliament will designate the Vice-Chair according to its own arrangements.

III. Meetings

1. The Parliamentary Plenum meetings shall be organized up to two times a year. The dates, duration and location of the meetings and the draft agenda will be established by the Chair in consultation with the Energy Community Secretariat. The meeting details shall be communicated by the Energy Community Secretariat at least two months prior to the meeting.

2. Reports and resolutions expressing the views and opinions of the participants in the Parliamentary Plenum meetings can only be adopted when at least 11 participants from 6 parliaments are present. The quorum will be determined by the Chair.

3. The meetings of the Parliamentary Plenum are public, unless the participants in the Parliamentary Plenum meetings decide otherwise.

4. The official language of the Parliamentary Plenum meetings is English.

5. Any participant wishing to use a language other than English shall be responsible for arranging translation and simultaneous interpretation from and into English.

6. The meetings of the Parliamentary Plenum shall be administered by the Energy Community Secretariat. Among its duties, the Energy Community Secretariat will write minutes of the meeting, recording attendance and reports and resolutions reached. Upon completion, the minutes will be sent to all participants and subsequently published, subject to point 3 of this Section.

IV. Questions

1. The participants in the Parliamentary Plenum meetings may pose questions to the institutions of the Energy Community, including the Ministerial Council.

2. When a representative of the Contracting Party holding the Presidency of the Energy Community is invited to attend the meetings of the Parliamentary Plenum, there will be a time limited question and answer session the length of which is to be determined by the Chair.

3. Any participant in the Parliamentary Plenum meetings may submit, through the Energy Community Secretariat, one written question a year in total to the institutions of the Energy Community.

V. Resolutions and Reports

1. The participants in the Parliamentary Plenum meetings may adopt reports or resolutions expressing their views and opinions on all matters falling within the scope of the Energy Community Treaty, with the exception of dispute settlement under Articles 90-93 of the Treaty.
2. The participants in the Parliamentary Plenum meetings may elect, by the majority of votes cast, a Rapporteur, who shall be responsible for the preparation of a draft report and its presentation to the participants in the Parliamentary Plenum meetings. A Co-Rapporteur from another parliamentary body may be appointed.
3. The Rapporteur shall make available his or her report at least one month before the Parliamentary Plenum meeting where the report will be put to vote.
4. The theme of the reports should be decided by the Chair in consultation with the Vice-Chairs and the Energy Community Secretariat. Participants may submit proposals for consideration by the Chair.
5. Any participant in the Parliamentary Plenum meetings may table a motion for a resolution providing he or she has the support of two representatives of at least two other parliaments. The participant shall make available his or her resolution at least one month before the meeting where the report will be put to vote.
6. Each participant in the Parliamentary Plenum meeting shall have one vote. A simple majority of the votes cast is required to adopt a report and a resolution.
7. The reports and resolutions adopted in the Parliamentary Plenum meetings shall be transmitted to the Ministerial Council and the parliaments via the Energy Community Secretariat.

VI. Costs

1. The travel expenses of representatives and officially designated alternative representatives of Contracting Party parliaments, in total a maximum of two representatives per Contracting Party, shall be borne by the Energy Community Budget in line with the applicable travel reimbursement rules. This provision does not apply to members of the host Parliament and to members of the European Parliament.
2. Other expenses related to the meetings or other activities of the Parliamentary Plenum meetings will be met by the host Parliament.
3. The costs for interpretation and translation shall be borne by the participant requesting such interpretation and translation in accordance with Section III/5 above.

VII. Amendments to the Rules of Procedure

1. Without prejudice to the rights of proposal under the Treaty establishing the Energy Community, participants in the Parliamentary Plenum meetings may make suggestions for revision of the Rules of Procedures. They may be assisted by the Energy Community Secretariat that may present drafts for such suggestions.
2. Suggestions for a revision shall be put for voting on the agenda of the first Parliamentary Plenum meeting following the presentation of the proposal.

3. Adoption of the suggestions requires a quorum of two thirds of the participants and respective parliaments present. Each participant has one vote.

Done at Skopje, on 29 November 2018

RULES of 29 November 2018 on the establishment of a coordination group of the Energy Community distribution system operators for electricity

Procedural Act 2018/01/MC-EnC on the establishment of a coordination group of the Energy Community distribution system operators for electricity

THE MINISTERIAL COUNCIL OF THE ENERGY COMMUNITY,

Having regard to the Treaty Establishing the Energy Community, and in particular Articles 86 and 87 thereof, Whereas Directive 2009/72/EC of 13 July 2009 concerning common rules for the internal market in electricity, as incorporated in the Energy Community by Ministerial Council Decision 2011/02/MC-EnC of 6 October 2011, and in particular Articles 3, 24-31, and 41 thereof, set out the rules applicable to distribution system operators and retail markets;

Whereas the Treaty Establishing the Energy Community pursues the aims of developing and attracting investments in energy networks, reforms of energy sectors and integration of energy markets as instruments for stable and continuous energy supply and provision of energy to citizens,

Whereas distribution system operation and the development of retail markets plays a key role for achieving these aims,

Whereas distribution system operators develop, maintain and operate the networks, provide network access and services under regulated conditions and tariffs and secure energy supplies and support to consumers, Whereas the evolution of markets in the Energy Community and progressing retail market opening in compliance with the *acquis* requires coherent rules and methodologies as well sharing best practices among distribution system operators,

Whereas the increasing use of renewable energy, digitalisation and smart technologies, deployment of production units within the distribution networks, entry of prosumers but also the continuous challenges of legal and functional unbundling, energy poverty, high level of losses etc. call for intensified and structured efforts to enhance the exchange information and experience between the Energy Community distribution system operators and building of their capacity,

Whereas the Energy Community Distribution System Operators in Electricity (ECDSO-E) coordination group, established informally and supported by the Secretariat, enables such communication and coordination already for several years,

Whereas the work of ECDSO has reached a level of maturity which calls for formalisation within the existing structures of the Energy Community,

Whereas the proposed approach was welcomed by the high-level representatives of the companies represented in ECDSO-E and supported by the Permanent High Level Group,

Upon proposal of the Secretariat,
HAS ADOPTED THIS PROCEDURAL ACT:

Article 1

1. A coordination group of the Energy Community Distribution System Operators for Electricity ("ECD- SO-E") is hereby established.
2. The activities of ECDSO-E shall be governed by Terms of Reference stipulated in the Annex to this Procedural Act.

Article 2

This Procedural Act shall enter into force on the day of its adoption and is addressed to the Parties to the Energy Community.

Done in Skopje, on 29 November 2018

ANNEX:**Terms of Reference of the Energy Community Distribution System Operators in Electricity (ECDSO-E) cooperation group**

This document describes the organizational structure, activities and the responsibilities of all parties concerned within the Coordination Group of distribution system operators in electricity from the Energy Community (ECDSO-E).

1. General

ECDSO-E is established as a group of experts from electricity distribution network operator (DSO) undertakings in the Energy Community Contracting Parties.

It is open for participation of distribution system operators from Observer and Participant countries. Participation of the DSOs from the Energy Community in the ECDSO-E is voluntary.

2. Structure

The operational structure of the ECDSO-E comprises:

- a) The ECDSO-E Coordination Group plenary
- b) ECDSO-E Task Forces
- c) Technical Networks.

This document gives guidance to conveners and members of the ECDSO-E bodies, with the aim of harmonizing their activities, avoiding duplication of work and ensuring that their activities are carried out in the most efficient way in line with the Energy Community Treaty.

3. Format

ECDSO-E shall function in an open format with free access to events and activities by its members.

ECDSO-E shall take part in the meetings Energy Community Security of Supply Coordination Group and in its activities, where appropriate.

ECDSO-E shall organize meetings, and electronically or web based coordination and activities, facilitated by the Secretariat.

Access to specific data and files of ECDSO-E, in particular access to consultation papers and database may be limited where required. Limitations may be requested by reasoned request of a participating DSO.

4. Tasks

ECDSO-E provides the format for discussion of all questions pertinent to DSO operation and functioning related to implementation of provisions of the Energy Community Treaty.

In particular its tasks will be:

- a) to facilitate and harmonize the implementation of the Directive 2009/72/EC and Directive 2005/89/ EC and to elaborate guidance documents where necessary;

- b) to follow up conformity of practices, processes and activities in the field relevant for DSO operation and issue assessments and official positions;
- c) to discuss and, where appropriate, to develop a common view on issues to be discussed and agreed upon in the ECDSO-E and to be presented to other stakeholders;
- d) to support individual DSOs in the implementation of their tasks and obligations agreed upon by ECDSO-E and to coordinate related activities where appropriate;
- e) to follow up development of new rules and regulations and issue recommendations for implementation;
- f) to support DSOs in the management of transition (guidelines, recommendations of best practices, peer to peer consultations);
- g) to establish and maintain liaisons with other European and/or regional cooperation bodies by appointing a dedicated liaison person;
- h) to cooperate with relevant stakeholders of the Energy Community, especially as far as the implementation of the provisions pertinent to DSOs is concerned;
- i) to cooperate with the institutions and bodies of the Energy Community;
- j) to nominate representatives to joint working groups with other stakeholders, and to maintain liaison as required;
- k) to set up, develop and maintain the DSO electronic platform, by:
 - maintaining the annual questionnaire dataset for benchmarking database;
 - developing and making available other datasets in the content and format agreed upon by ECDSO-E, such as quality of service indicators, network costs and tariffs, investment dynamic and structure, connection of small installations.

5. Composition

5.1. Membership in the ECDSO-E Coordination Group is defined as follows:

- representatives of all interested DSO from the Energy Community, including Observers and Participants to the EnC Treaty, nominated to the Group;
- experts and officials of the Secretariat and the European Commission;
- representatives of other stakeholders nominated to liaise with the ECDSO-E or invited by the Chairperson or by the Secretariat;

5.2. The Secretariat shall provide overall logistic support for ECDSO-E.

5.3. The ECDSO-E Coordination Group may decide to establish special task forces, with an appointed convenor, and to study a precisely defined problem and report back on it. The task forces are automatically disbanded after presenting their final results.

5.4. All conveners of the task forces are nominated by the ECDSO-E for a defined period. Candidates are proposed by the members of ECDSO-E to the Chairperson.

5.5 ECDSO-E shall nominate members for the Joint Working Groups and upon request, to the Technical Networks task forces.

6. Governance

6.1 ECDSO-E shall nominate and appoint a Chairperson and two Vice Chairpersons for a period of two years.

6.2. One expert appointed by the Secretariat shall be the Moderator of ECDSO-E activities.

6.3. The work of ECDSO-E is led by a team consisting of the Chairperson, Co-Chairs and the Moderator. They shall normally communicate by means of telecommunication.

7. Meetings of ECDSO-E

7.1. ECDSO-E will meet when considered necessary upon a motion of the Chairperson of ECDSO-E, the Secretariat, or at least one third of ECDSO-E's members. ECDSO-E will normally meet twice a year.

7.2 The Secretariat will provide logistic support and expert assistance for ECDSO-E meetings.

7.3. A draft agenda will be distributed at least two weeks before each meeting. Draft conclusions will be distributed within two weeks after the meeting for approval by the members.

7.4. The Secretariat will prepare and organize workshops, when considered useful, following the conclusions of ECDSO-E.

8. Task Forces

8.1. Task Forces can be established for well-defined tasks. Terms of Reference will be defined by ECDSO-E. Task Forces will report to ECDSO-E at each meeting. A clear time frame for each task shall be defined.

8.2. Convenors are nominated by ECDSO-E.

8.3. Members of the Working Groups may be representatives of DSOs, representatives from interested parties and other stakeholders, including transmission system operators, generators and regulatory authorities. They are invited by the Convenors.

8.4. The Task Forces will be disbanded as soon as their tasks are carried out.

8.5. The Task Forces will co-ordinate their activities with the activities of other working groups within the Energy Community framework, as well as other regional and European cooperation institutions and initiatives. They will exchange results with these groups whenever possible.

8.6. Task Forces will meet when considered necessary by their convenors or by the Secretariat or by ECDSO-E. Meetings can be web meetings, as considered appropriate by Convenors. Invitations to the meetings will be distributed among the members of the groups and sent to all members of ECDSO-E at least two weeks before each meeting.

8.7. Task Forces will send copies of their minutes to the ECDSO-E Chair for distribution to ECDSO-E members within two weeks after the meeting and report to ECDSO-E at each meeting.

8.8. The ECDSO-E Moderator will keep a list of the active task forces, their tasks and composition.

8.9. Joint Working Groups are expert teams working jointly with other organizations or bodies of the Energy Community under the work plan of the SoS CG. They will follow the same rules as Task Forces, unless otherwise agreed upon by the organizations concerned.

9. Technical networks (TNs)

9.1 The TNs are established to stimulate discussion and harmonisation in selected technical fields. The TNs operate by suitable electronic means and are moderated by the Secretariat.

9.2. The TNs offer to the ECDSO-E members an informal platform for discussion and exchange of experience and of technical expertise and assessors. TNs can hold a physical meeting when necessary, with the logistics support of the Secretariat

9.3. The members of the TNs are the nominated persons actively engaged in the particular field of the TN.

9.4. The ECDSO-E evaluates the work of and the need for TNs biannually. New TNs are established based on the need and interest of the ECDSO-E members following the conclusion of the meetings.

9.5. The Secretariat will keep a list of the active networking groups, their tasks and composition.

RULES of 29 November 2018 on the establishment of an Energy Community coordination group for cyber-security and critical infrastructure

Procedural Act 2018/02/MC-EnC of 29 November 2018 on the establishment of an Energy Community coordination group for cyber-security and critical infrastructure

THE MINISTERIAL COUNCIL OF THE ENERGY COMMUNITY,

Having regard to the Treaty Establishing the Energy Community, and in particular Articles 86 and 87 thereof, Having regard to Articles 2 and 3 of the Treaty Establishing the Energy Community calling for the enhancement of the security of supply of the single regulatory space in the Energy Community, and access for all Contracting Parties to a stable and continuous energy supply that is essential for economic development and social stability;

Whereas due to the proliferation of information and communication technologies in the energy sector, cyber-security matters have become an intrinsic part of a number of existing Energy Community acquis, that deal with the security of supply or safe operation of energy systems,

Whereas the stabilization and association agreements of the European Union and its Member States with Albania, Bosnia and Herzegovina, former Yugoslav Republic of Macedonia, Kosovo*¹, Montenegro, and association agreements with Georgia, Moldova and Ukraine require these Contracting Parties adopt a series of European Union legislation on cybersecurity matters and protection of critical infrastructure, including in the energy sectors,

Whereas there are certain critical infrastructures in the Energy Community, the disruption or destruction of which would have significant cross-border impacts or cross-sectoral effects resulting from interdependencies between interconnected infrastructures and systems, which require the setting-up of a coordination mechanism at Energy Community level,

Whereas timely and effective response to incidents relies on the existence of previously established and, to the extent possible, well-rehearsed cooperation procedures and mechanisms having clearly defined the roles and responsibilities of the key actors at national and Energy Community level,

Whereas an effective organizational framework for a high level of security of information systems and critical infrastructures requires taking an all-hazard approach where man-made, technological threats and natural disasters need all to be taken into account in the protection process,

Whereas a Community approach will encourage private sector involvement in overseeing and managing risks, business continuity planning and post-disaster recovery,

Whereas existing sectoral measures at national level require coordinated regional action through Community mechanisms, with a view to enhancing effectiveness, avoid duplication of, or contradiction between, different acts or measures,

Whereas cyber-security calls for a group of experts to advise the Energy Community, the national institutions as well as to coordinate incident and crisis management measures,

Whereas such a group should be composed of all relevant stakeholders and should cover electricity, gas and oil sectors, encompassing generation, distribution, transmission and supply,

¹ This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo.

Upon proposal of the Secretariat,
HAS ADOPTED THIS PROCEDURAL ACT:

Article 1

1. To promote a high level of security of network and information systems and of critical infrastructures within the Energy Community, a coordination group for cyber-security and critical infrastructure (“CyberCG”) is hereby established.
2. Each Party shall designate and notify to the Energy Community Secretariat one or more national competent authorities as well as a single point of contact for the security of network and information systems and of critical infrastructures (‘competent authority’ and ‘single point of contact’), covering at least the sectors referred to in referred to in point 2. e) of the Annex.
3. Each Party shall designate and notify to the Energy Community Secretariat one or more national computer security incident response teams (‘CSIRTs’).
4. The CyberCG shall
 - (a) perform its tasks as described in the Annex to the present Procedural Act;
 - (b) liaise with a network of CSIRTs as described in the Annex to the present Procedural Act;
 - (c) liaise with security liaison officer for each critical infrastructure in Contracting Parties.
5. The activities of the CyberCG shall be governed by Terms of Reference stipulated in the Annex to this Procedural Act.
6. This article is without prejudice to the actions taken by the Parties to safeguard their essential State functions, in particular to safeguard national security, including actions protecting information the disclosure of which Parties consider contrary to the essential interests of their security, and to maintain law and order, in particular to allow for the investigation, detection and prosecution of criminal offences.

Article 2

This Procedural Act shall enter into force on the day of its adoption and is addressed to the Parties to the Energy Community.

Done in Skopje, on 29 November 2018

ANNEX

Terms of Reference of the Energy Community cyber-security and critical infrastructure cooperation group (CyberCG)

This document describes the organizational structure, activities and the responsibilities of all parties concerned within the coordination group for cyber-security and critical infrastructure (“CyberCG”).

1. General

The CyberCG aims to support and facilitate strategic cooperation and the exchange of information within the Energy Community and to develop trust and confidence, and with a view to achieving a high common level of security of network and information systems and of critical infrastructures in the Energy Community.

2. Definition of Terms

For the purposes of the present Annex, the following definitions apply:

- a) ‘network and information system’ means: (a) an electronic communications network within the meaning of point (a) of Article 2 of Directive 2002/21/EC; (b) any device or group of interconnected or related devices, one or more of which, pursuant to a program, perform automatic processing of digital data; or (c) digital data stored, processed, retrieved or transmitted by elements covered under points (a) and (b) for the purposes of their operation, use, protection and maintenance;
- b) ‘security of network and information systems’ means the ability of network and information systems to resist, at a given level of confidence, any action that compromises the availability, authenticity, integrity or confidentiality of stored or transmitted or processed data or the related services offered by, or accessible via, those network and information systems;
- c) ‘national strategy on the security of network and information systems’ means a framework providing strategic objectives and priorities on the security of network and information systems at national level in accordance with requirements of Article 7 of Directive 2016/1148/EU;
- d) ‘operator of essential services’ means a public or private entity which provides an energy service that (i) is essential for the maintenance of critical societal and/or economic activities, (ii) the provision of that service depends on network and information systems, (iii) and an incident would have significant disruptive effects on the provision of that service, in accordance with the criteria laid down in Article 5(2) of Directive 2016/1148/EU;
- e) ‘energy services’ comprise (i) electricity generation, supply, market operation, distribution, transmission, and storage, (ii) natural gas production, supply, market operation, transmission, distribution, storage and LNG, (iii) oil production, refining and treatment facilities, market operation, storage and transmission, (iv) monitoring and control of pollution and emissions from energy combustion and (v) digital services and electronic communication services, in case and to the extent that the latter provide services to operators of essential services of the energy sectors, and/or that provide services that are essential to the functioning of the energy sector”;
- f) ‘critical infrastructure’ means an asset, system or network or part thereof within the energy sector or interdependent with the energy services referred to in point e), located in Contracting Parties which is es-

essential for the maintenance of vital societal functions, health, safety, security, economic or social well-being of people, the disruption or destruction of which would have a significant impact in a Contracting Party as a result of the failure to maintain those functions;

g) 'Energy Community critical infrastructure' means critical infrastructure located in Contracting Parties the disruption or destruction of which would have a significant impact on at least two Contracting Parties and/or Member States. The significance of the impact shall be assessed in terms of cross-cutting criteria. This includes effects resulting from cross-sector dependencies on other types of infrastructure;

h) 'owners/operators of critical infrastructures' means those entities responsible for investments in, and/or day-to-day operation of, a particular asset, system or part thereof designated as a critical infrastructure in the relevant Contracting Parties. For the avoidance of doubt, the definition of an operator of critical infrastructure encompasses and is broader than that of an operator of essential services, as it covers also critical infrastructures that do not depend on information network and systems;

i) 'incident' means any event having an actual adverse effect on the security of network and information systems within the meaning of Directive 2016/1148/EU or any event causing a disruption or destruction of critical infrastructure installations within the meaning of Directive 2008/114/EC;

j) 'incident handling' means all procedures supporting the detection, analysis and containment of an incident and the response thereto, as provided under Directive 2016/1148/EU and related implementing acts;

k) 'risk' means any reasonably identifiable circumstance or event having a potential adverse effect on the security of network and information systems, as provided under Directive 2016/1148/EU and related implementing acts, or having the potential of causing a disruption or destruction of critical infrastructure installations as provided under Directive 2008/114/EC, including cyber-attacks, natural disasters, terrorist attacks or any other sources of attack.

l) 'risk analysis' means consideration of relevant threat scenarios, in order to assess the vulnerability and the potential impact of disruption or destruction of critical infrastructure or network and information systems,;

m) 'protection' means all activities aimed at ensuring the functionality, continuity and integrity of critical infrastructures in order to deter, mitigate and neutralize a threat, risk or vulnerability;

n) 'standard' means a standard within the meaning of point (1) of Article 2 of Regulation No 1025/2012/EU;

o) 'specification' means a technical specification within the meaning of point (4) of Article 2 of Regulation No 1025/2012/EU.

3. Composition

3.1. The CyberCG consists of representatives of the Parties (competent authorities and single point of contacts), the CSIRTs network, security liaison officers, the Secretariat, the European Commission, and the European Union Agency for Network and Information Security ("ENISA").

3.2. Representatives of Observer and Participant countries may participate in the CyberCG.

3.3. Where appropriate, the CyberCG may invite representatives of the relevant stakeholders to participate in its work.

3.4. The Secretariat shall provide assistance and logistical support to the CyberCG.

4. Single points of contact

4.1. The single points of contact exercises a liaison function to ensure cross-border cooperation of Parties' authorities and with the relevant authorities in other Parties, with the CyberCG and the CSIRTs network. Tasks of the single point of contact may be assigned to the competent authority.

4.2. Single points of contact notify and report to the CyberCG, the CSIRTs network and the Secretariat, by 15 January 2019, and every year thereafter, on provisions of national law and measures in the fields covered by point 2. e) of this Annex, including but not limited to:

a) adoption of a national strategy on the security of network and information systems covering at least the sectors point 2. e) of this Annex, in compliance with requirements set forth in Article 7 of Directive 2016/1148/EU, and adoption of security strategies or equivalent instruments on the protection of critical infrastructures from other risks, not covered by national strategy on the security of network and information systems, in compliance with requirements laid down in Directive 2008/114/EC;

b) on the identification of operators of essential services for sectors and services referred to in point 2.e) of this Annex, in compliance with requirements of Articles 5 and 6 of Directive 2016/1148/EU; on security and incident notification requirements that those operators of essential services shall implement, in compliance with requirements laid down in Article 14 of Directive 2016/1148/EU; as well as on enforcement powers and means given to competent authorities in this respect, in compliance with requirements laid down in Article 15 of Directive 2016/1148/EU;

c) on security requirements and incident notification obligations that entities operating organized energy trading and balancing services' platforms as referred to in point 2. e) of this Annex implement, in compliance with requirements laid down in Directive 2016/1148/EU; or in compliance with security requirements equivalent to those laid down in Directive 2014/65/EU on markets in financial instruments, supplemented by any implementing acts, or equivalent to those laid down in Regulation 600/2014/EU, as supplemented by any implementing acts, as well as national provisions on enforcement powers and means given to competent authorities in this respect;

d) on security requirements and incident notification obligations that digital service providers referred to in point 2. e) of this Annex implement, in compliance with requirements laid down in Article 16 of Directive 2016/1148/EU; as well as national provisions on enforcement powers and means given to competent authorities in this respect, in compliance with requirements laid down in Article 17 of Directive 2016/1148/EU;

e) on security requirements and incident notification obligations that electronic communications operators referred to in point 2. e) of this Annex implement, in compliance with requirements laid down in Articles 13a and 13b of Directive 2002/21/EC,; as well as national provisions on enforcement powers and means given to competent authorities in this respect, in compliance with requirements laid down in Articles 13a and 13b of Directive 2002/21/EC;

f) on the identification of critical infrastructures located on the territory of the concerned Contracting Party, on security measures and operational plans that are implemented to ensure a level of security and protection of critical infrastructures for sectors and services referred to in point 2. e) of this Annex, in compliance with requirements equivalent to those laid down in Article 5 and Annex II of Directive 2008/114/EC, for risks and incidents that are not covered by the above-mentioned from b) to e), as well as on enforcement powers and means given to competent authorities in this respect.

5. Tasks

5.1. The CyberCG covers the following tasks:

- a) providing strategic guidance for the activities of the CSIRTs established and the CSIRTs network;
- b) exchanging best practice on the exchange of information related to incident notification within the meaning of or equivalent to provisions in Article 14(3) and (5) and Article 16(3) and (6) of Directive 2016/1148 EU, and/or to the identification of critical infrastructures in the Contracting Parties for at least the sectors referred to in point 2. e) of this Annex;
- c) exchanging best practice between Parties and other stakeholders involved;
- d) assisting Contracting Parties in building capacity to ensure the security of network and information systems, and in securing critical infrastructures;
- e) discussing capabilities and preparedness of the Contracting Parties, and evaluating national strategies on the security of network and information systems and the effectiveness of CSIRTs, and of critical infrastructures protection and identifying best practice;
- f) exchanging information and best practice on awareness-raising and training;
- g) exchanging information and best practice on research and development relating to the security of network and information systems and to the protection of critical infrastructures;
- h) where relevant, exchanging experiences on matters concerning the security of network and information systems and of critical infrastructures, with relevant Energy Community institutions, in particular the Secretariat and the Energy Community Security of Supply Coordination Group;
- i) discussing the standards and specifications with relevant stakeholders and with relevant organizations where appropriate;
- j) collecting best practice information on risks and incidents;
- k) examining, on an annual basis, the reports submitted;
- l) discussing the work undertaken with regard to exercises relating to the security of network and information systems and of critical infrastructures, education programmes and training;
- m) exchanging best practice with regard to the identification of operators of essential services by the Contracting Parties, identification of critical infrastructures, including in relation to cross-border dependencies, and cross-sectoral dependencies regarding risks and incidents, where appropriate with the assistance of the Energy Community Security of Supply Coordination Group, building on the best practice of ENISA;
- n) engaging in discussions with the Contracting Party, or Contracting Parties and Member States on whose territory a potential critical infrastructure is located, and with the other Contracting Parties and Member States which may be significantly affected by the potential critical infrastructure, providing guidance for the identification of critical infrastructures or of operator of essential service and where necessary facilitating agreements between the concerned Contracting Parties and Member States on common security and protection measures;
- o) discussing modalities for reporting notifications of incidents;
- p) developing common methodological guidelines for carrying out risk analyses in respect of Energy Community critical infrastructures. The CyberCG shall support, through the relevant Contracting Party's competent authority/single point of contact, the owners/operators of critical infrastructures by providing access to available best practices and methodologies as well as support training and the exchange of

information on new technical developments related to critical infrastructure protection;

q) promoting convergent implementation of security requirements of network and information systems and of critical infrastructures, without imposing or discriminating in favour of the use of a particular type of technology,

r) encouraging the use of European or internationally accepted standards and specifications relevant to the security of network and information systems.

5.2. The CyberCG shall carry out its tasks on the basis of biennial work programmes. The work programme shall outline actions to be undertaken to implement the CyberCG's objectives and tasks.

5.3. The CyberCG shall take part in the meetings and activities of the SoS CG, where appropriate.

5.4. The CyberCG shall prepare a report assessing the experience gained with the strategic cooperation by October 2019, and every year thereafter, and submit it to the Secretariat, so that the latter uses it for the preparation of its implementation report for the Ministerial Council.

6. Chairs

The Cyber-CG shall nominate and appoint a Chairperson and two Vice Chairpersons for a period of two years.

7. Meetings of the Cyber-CG

7.1. The Cyber-CG will meet when considered necessary upon a motion of the Chairperson, the Chairperson of Energy Community Security of Supply Coordination Group, the Secretariat, or ENISA. The Cyber-CG will normally meet twice a year.

7.2. A draft agenda will be distributed at least two weeks before each meeting. Draft conclusions will be distributed within two weeks after the meeting for approval by the members.

7.3. The Secretariat will prepare and organize workshops, when considered useful, following the conclusions of the Cyber-CG.

8. Computer security incident response teams (CSIRTs)

8.1. CSIRTs designated by Contracting Parties covering at least the sectors referred to in in point 2. e) of this Annex, responsible for risk and incident handling in accordance with a well-defined process. CSIRTs could also be established within the competent authority.

8.2. CSIRTs should have access to an appropriate, secure, and resilient communication and information infrastructure at national level in accordance with requirements of Directive 2016/1148. 8.3. Contracting Parties shall inform the Secretariat and the CyberCG about the remit, as well as the main elements of the incident-handling process, of their CSIRTs.

8.4. Contracting Parties may request the assistance of the CyberCG in developing national CSIRTs.

9. CSIRTs Network

9.1. In order to promote swift and effective operational cooperation in cases of risks or incidents to information and communications networks and systems, a network of the national CSIRTs is established.

9.2. The CSIRTs Network shall be composed of representatives of the Contracting Parties CSIRTs. The Secretariat shall participate in the CSIRTs network.

9.3. The CSIRTs network shall have the following tasks:

- a) exchanging information on CSIRTs' services, operations and cooperation capabilities;
- b) at the request of a representative of a CSIRT from a Contracting Party potentially affected by an incident, exchanging and discussing non-commercially sensitive information related to that incident and associated risks; however, any Contracting Party's CSIRT may refuse to contribute to that discussion if there is a risk of prejudice to the investigation of the incident;
- c) exchanging and making available on a voluntary basis non-confidential information concerning individual incidents;
- d) at the request of a representative of a Contracting Party's CSIRT, discussing and, where possible, identifying a coordinated response to an incident that has been identified within the jurisdiction of that same Contracting Party;
- e) providing Contracting Parties with support in addressing cross-border incidents on the basis of mutual assistance, including under Chapter IV, Title IV of the Energy Community Treaty
- f) discussing, exploring and identifying further forms of operational cooperation, including in relation to:
 - (i) categories of risks and incidents;
 - (ii) early warnings;
 - (iii) mutual assistance;
 - (iv) principles and modalities for coordination, when Contracting Parties respond to cross-border risks and incidents;
- g) informing the CyberCG of its activities and of the further forms of operational cooperation discussed pursuant to point (f), and requesting guidance in that regard;
- h) discussing lessons learnt from exercises relating to the security of network and information systems, including from experience shared by ENISA;
- i) at the request of an individual CSIRT, discussing the capabilities and preparedness of that CSIRT;
- j) issuing guidelines in order to facilitate the convergence of operational practices and operational cooperation;
- k) developing a blueprint for cooperation at Energy Community level in case of incidents or crisis affecting one or more Contracting Parties to such an extent that an intervention at Energy Community level is required.

9.4. The CSIRTs network produces an annual report assessing the experience gained with the operational cooperation, including conclusions and recommendations. That report shall be submitted to the CyberCG.

9.5. The CyberCG and the Secretariat shall actively support the cooperation among the CSIRTs. The CSIRTs shall build on best practice of ENISA in performing its tasks and duties, and where appropriate and possible may seek assistance from ENISA.

10. Closed-CSIRT network

10.1. Within the CSIRT network, a closed-CSIRT network is established to treat such a threat and risk landscape and incidents that are considered as classified information by the Contracting Parties concerned. The closed-CSIRT network is composed of a representative from each Contracting Party which shall have an appropriate level of security vetting and clearance equivalent to that of handling classified information at European Union level.

10.2. The closed-CSIRT network shall make use of specific certified communication means that provide a secure way to communicate the classified information. The same applies to non-written information exchanged during meetings of the closed-CSIRT network.

11. Security liaison officer for critical infrastructures

11.1. Contracting Parties should designate one security liaison officer for security issues for each critical infrastructure. The security liaison officer functions as the point of contact between the owner/ operator of the Energy Community critical infrastructure, the relevant Contracting Party's competent authority/single point of contact and the Cyber-CG.

11.2. Contracting Parties shall inform the Energy Community Secretariat and the Cooperation Group about the remit, as well as the main elements of the incidenthandling process, of their security liaison officers.

12. Competent authorities, single point of contacts, CSIRTs and security liaison officers

12.1. Competent authorities, single points of contact, CSIRTs and security liaison officers should have adequate resources to carry out, in an effective and efficient manner, the tasks assigned to them.

12.2. Competent authorities, single points of contact, CSIRTs and security liaison officers, whenever appropriate and in accordance with national law, consult and cooperate with the relevant national law enforcement authorities and national data protection authorities.

13. Cooperation with ENISA (European Union Agency for Network and Information Security)

By 1 July 2019, the CyberCG shall explore possibilities and options for Contracting Parties and the Secretariat to engage as observer with ENISA on issues related to cybersecurity in Network Energy, and participate in the international activities organized by ENISA.



RULES of 21 June 2012 governing the adoption of guidelines and network codes in the Energy Community

Procedural Act 2012/01/PHLG-EnC of 21 June 2012 laying down the rules governing the adoption of guidelines and network codes in the Energy Community.

The Permanent High Level Group of the Energy Community,

Having regard to the Treaty establishing the Energy Community (“the Treaty”), and in particular Articles 87 and 82 thereof,

Having regard to Articles 27 and 28 of Decision 2011/02/MC-EnC on the implementation of Directive 2009/72/EC, Directive 2009/73/EC, Regulation (EC) No 714/2009 and Regulation (EC) No 715/2009 and amending Articles 11 and 59 of the Energy Community Treaty (“Decision 2011/02/ MC-EnC”), providing for the adoption of Guidelines and Network Codes by the Permanent High Level Group upon proposal from the European Commission based on Article 79 of the Treaty,

Following up on the task assigned to the Permanent High Level Group in Articles 27(3) and 28(3) of Decision 2011/02/MC-EnC to prepare a Procedural Act laying down the procedure for the incorporation of Guidelines and Network Codes adopted within the European Union,

Recognizing the importance of a synchronous evolution of the Energy Community *acquis communautaire* for the creation of an interconnected internal market throughout the Energy Community,

Acknowledging the necessity to transpose Guidelines and Network Codes into domestic legal orders as timely and truly to the original as possible, and to implement and enforce them vigorously,

Having regard to the Secretariat’s proposal,

Taking into account the discussions at the meetings of 14 December 2011, 23 March 2012 and 21 June 2012,

HAS ADOPTED THIS PROCEDURAL ACT:

Article 1

Subject-Matter

These rules lay down the procedures for the adoption of Guidelines and Network Codes by Decision of the Permanent High Level Group of the Energy Community upon proposal of the European Commission, as required by Articles 27 and 28 of Decision 2011/02/MC-EnC.

Article 2

Definitions

For the purpose of this Procedural Act

- The term "Guidelines" means Guidelines adopted and/or amended by the European Commission under Directive 2009/72/EC, Directive 2009/73/EC, Regulation 714/2009, and Regulation 715/2009, The term "Network Code" means the codes adopted and/or amended under Regulation 714/2009 or Regulation 715/2009.

Article 3

Procedure

(1) The Presidency and the Vice-Presidencies shall include the European Commission's proposal on the adoption of Guidelines or Network Codes in the agenda of the next possible meeting of the Permanent High Level Group. The text of the proposal shall be circulated by the Secretariat to all members at least 30 days before the relevant meeting.

(2) If the next possible meeting of the Permanent High Level Group is to take place later than two months following the receipt of the above-mentioned proposal of the European Commission by the Secretariat, or later than three months, where it concerns the adoption of Network Codes, the Presidency, after consultation and in agreement with the Vice-Presidencies, may opt for decision-making by correspondence in line with the Rules of Procedure of the Permanent High Level Group.

(3) Where the European Commission's proposal concerns the adoption of Network Codes, the Secretariat shall forward it to the President of the Regulatory Board and request the opinion of this institution within an appropriate timeframe not exceeding 30 days. The President of the Regulatory Board shall transmit its opinion officially to the Secretariat, who shall notify it to the members of the Permanent High Level Group without delay. Where the Regulatory Board fails to submit an opinion within the specified timeframe, the Permanent High Level Group shall proceed without such opinion.

(4) The Permanent High Level Group shall take its Decisions under this Procedural Act in accordance with Articles 78 to 81 of the Treaty.

(5) Decisions of the Permanent High Level Group shall:

a. Specify the period within which the Contracting Parties shall transpose Guidelines and Network Codes, as adopted by the Permanent High Level Group's Decision, into their domestic legislation and require that the Guidelines and Network Codes be transposed without changes to their text or their structure of the Decision, other than translation.

b. Require the Contracting Parties to ensure that the Guidelines and Network Codes, as adopted by the Permanent High Level Group's Decision, are binding on market participants, and task the national regulatory authorities with monitoring and enforcing compliance.

c. Require the Contracting Parties to notify the Secretariat of the measures transposing the Permanent High Level Group's Decision, and of any subsequent changes made to those measures, within two weeks of the adoption of such measures.

(6) The Secretariat shall make Decisions available to all Parties within seven days of their adoption.

Article 4

Addressees and entry into force

This Procedural Act is addressed to the Parties and institutions of the Treaty. It shall enter into force upon adoption.

Article 5

Availability of these rules

The Secretariat shall make this Procedural Act available to all Parties within seven days of its adoption.

Done in Vienna on 21 June 2012.



RECOMMENDATION OF THE MINISTERIAL COUNCIL OF THE ENERGY COMMUNITY of 3 January 2018 on preparing for the implementation of Directive 98/70/EC relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EEC

The Ministerial Council of the Energy Community

Having regard to the Treaty establishing the Energy Community (“the Treaty”), and in particular Articles 2, 25, 76 and 79 thereof,

Having regard to the proposal from the European Commission¹

Whereas:

- (1) Article 2 of the Treaty defines the improvement of the environmental situation related to Network Energy in the Contracting Parties as one of its key objectives;
- (2) In accordance with Article 1(2) of Ministerial Council Decision 2008/03/MC-EnC, “Network Energy” as mentioned in Article 2(2) of the Treaty shall be understood as to include the oil sector, i.e. the supply, trade, processing and transmission of crude oil and petroleum products falling within the scope of Directive 2006/67/EC and the related pipelines, storage, refineries and import/export facilities;
- (3) Petrol and diesel fuels covered by the scope of Directive 98/70/EC are significant contributors to emissions into the air and therefore there are strong links between related regulation and the environmental objective enshrined in Article 2 of the Treaty;
- (4) For their full and legally binding incorporation in the Energy Community, provisions contained in Directive 98/70/EC would need to be adapted in accordance with Article 24 of the Treaty;
- (5) The framework for regional cooperation established by the Energy Community and the assistance offered by its institutions and bodies can be essential in preparing the successful implementation of Directive 98/70/EC;
- (6) The Environmental Task Force, at its meetings of 8 June 2017 and 25 October 2017, discussed and endorsed the present Recommendation;
- (7) The Permanent High Level Group, at its meeting of 30 June 2017, discussed and endorsed the present Recommendation,

¹ C(2017) 7954 final, 23.11.2017.

HEREBY RECOMMENDS:

Article 1

1. Contracting Parties should prepare the legal and institutional preconditions for the implementation of the core elements of Directive 98/70/EC in their jurisdictions.
2. The Secretariat should assist the Contracting Parties' efforts in this respect. It should report to the Ministerial Council on the progress annually.

Article 2

1. In the framework of the Environmental Task Force, the Contracting Parties, the Secretariat and the European Commission should identify the provisions of Directive 98/70/EC suitable for incorporation in the Energy Community, the necessary adaptations as well as appropriate deadlines.
2. The European Commission should regularly inform the Contracting Parties and the Secretariat on possible amendments to Directive 98/70/EC.

Article 3

Subject to a proposal by the European Commission, the Ministerial Council will decide on the adoption of a decision incorporating suitable provisions of Directive 98/70/EC.

Article 4

This Recommendation enters into effect upon its adoption by the Ministerial Council.

Article 5

This Recommendation is addressed to the Contracting Parties and institutions of the Treaty.

Done by written procedure on 3 January 2018