

DIRECTIVE 2003/87/EC of 13 October 2003 establishing a system for greenhouse gas emission allowance trading within the Union and amending Council Directive 96/61/EC

Incorporated and adapted by the Ministerial Council Decision 2022/05/MC-EnC of 15 December 2022 amending Annex I to the Treaty establishing the Energy Community and incorporating Implementing Regulation (EU) 2018/2066, Implementing Regulation (EU) 2018/2067 and Directive 2003/87/EC in the Energy Community *acquis communautaire*.

*The adaptations made by Ministerial Council Decision 2022/05/MC-EnC are highlighted in **bold and blue**.*

CHAPTER I GENERAL PROVISIONS

Article 1

Subject Matter

<...>

Article 2

Scope

<...>

Article 3

Definitions

<...> the following definitions shall apply:

- (a) 'allowance' means an allowance to emit one tonne of carbon dioxide equivalent during a specified period <...>;
- (b) 'emissions' means the release of greenhouse gases into the atmosphere from sources in an installation or the release from an aircraft performing an aviation activity listed in Annex I of the gases specified in respect of that activity;
- (c) 'greenhouse gases' means the gases listed in Annex II and other gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation;
- (d) 'greenhouse gas emissions permit' means the permit issued in accordance with Articles 5 and 6;
- (e) 'installation' means a stationary technical unit where one or more activities listed in Annex I are carried out and any other directly associated activities which have a technical connection with the activities carried out on that site and which could have an effect on emissions and pollution;

(f) 'operator' means any person who operates or controls an installation or, where this is provided for in national legislation, to whom decisive economic power over the technical functioning of the installation has been delegated;

(g) 'person' means any natural or legal person;

(h) 'new entrant' means any installation carrying out one or more of the activities listed in Annex I, which has obtained a greenhouse gas emissions permit for the first time <...>;

(i) <...>

(j) <...>

(k) <...>

(l) <...>

(m) <...>

(n) <...>

(o) 'aircraft operator' means the person who operates an aircraft at the time it performs an aviation activity listed in Annex I or, where that person is not known or is not identified by the owner of the aircraft, the owner of the aircraft;

(p) 'commercial air transport operator' means an operator that, for remuneration, provides scheduled or non-scheduled air transport services to the public for the carriage of passengers, freight or mail;

(q) 'administering **Contracting Party**' means the **Contracting Party** responsible for administering the **monitoring, reporting and verification of greenhouse gas emissions for the purpose of carbon pricing and emission allowance trading** in respect of an aircraft operator <...>;

(r) <...>

(s) <...>

(t) 'combustion' means any oxidation of fuels, regardless of the way in which the heat, electrical or mechanical energy produced by this process is used, and any other directly associated activities, including waste gas scrubbing;

(u) <...>

CHAPTER II AVIATION

Article 3a

<...>

Article 3b

<...>

Article 3c

<...>

Article 3d

<...>

Article 3e

<...>

Article 3f

<...>

Article 3g

<...>

**CHAPTER III
STATIONARY INSTALLATIONS**

Article 3h

<...>

Article 4

Greenhouse gas emissions permits

Contracting Parties shall ensure that, from 1 January **2024**, no installation carries out any activity listed in Annex I resulting in emissions specified in relation to that activity unless its operator holds a permit issued by a competent authority in accordance with Articles 5 and 6 <...>

Article 5

Applications for greenhouse gas emissions permits

An application to the competent authority for a greenhouse gas emissions permit shall include a description of:

- (a) the installation and its activities including the technology used;
- (b) the raw and auxiliary materials, the use of which is likely to lead to emissions of gases listed in Annex I;
- (c) the sources of emissions of gases listed in Annex I from the installation and

(d) the measures planned to monitor and report emissions <...>.

The application shall also include a non-technical summary of the details referred to in the first subparagraph.

Article 6

Conditions for and contents of the greenhouse gas emissions permit

1. The competent authority shall issue a greenhouse gas emissions permit granting authorisation to emit greenhouse gases from all or part of an installation if it is satisfied that the operator is capable of monitoring and reporting emissions.

A greenhouse gas emissions permit may cover one or more installations on the same site operated by the same operator.

2. Greenhouse gas emissions permits shall contain the following

(a) the name and address of the operator;

(b) a description of the activities and emissions from the installation;

(c) a monitoring plan that fulfils the requirements **defined in national rules related to the monitoring, reporting and verification of greenhouse gas emissions. Contracting Parties** may allow operators to update monitoring plans without changing the permit. Operators shall submit any updated monitoring plans to the competent authority for approval;

(d) reporting requirements; and

(e) <...>

Article 7

Changes relating to installations

The operator shall inform the competent authority of any planned changes to the nature or functioning of the installation, or any extension or significant reduction of its capacity, which may require updating the greenhouse gas emissions permit. Where appropriate, the

competent authority shall update the permit. Where there is a change in the identity of the installation's operator, the competent authority shall update the permit to include the name and address of the new operator.

Article 8

Coordination with Directive 2010/75/EU as adapted and adopted by Ministerial Council Decision 2013/06/MC-EnC

Contracting Parties shall take the necessary measures to ensure that, where installations carry out activities that are included in Annex I to Directive 2010/75/EU **as adapted and adopted by Ministerial**

Council Decision 2013/06/MC-EnC <...>, the conditions and procedure for the issue of a greenhouse gas emissions permit are coordinated with those for the issue of a permit provided for in that Directive. The requirements laid down in Articles 5, 6 and 7 of this Directive may be integrated into the procedures provided for in Directive 2010/75/EU **as adapted and adopted by Ministerial Council Decision 2013/06/MC-EnC**.

Article 9

<...>

Article 9a

<...>

Article 10

<...>

Article 10a

<...>

Article 10b

<...>

Article 10c

<...>

Article 10d

<...>

Article 11

<...>

**CHAPTER IV
PROVISIONS APPLYING TO AVIATION AND STATIONARY INSTALLATIONS**

Article 11a

<...>

Article 11b

<...>

Article 12

<...>

Article 13

<...>

Article 14

<...>

Article 15

Verification and accreditation

Contracting Parties shall ensure that the reports submitted by operators and aircraft operators <...> are verified in accordance with the criteria set out in Annex V and any detailed provisions adopted by the **European Commission** <...>, and that the competent authority is informed thereof **by the Energy Community Secretariat**.

<...>

<...>

<...>

Article 15a

<...>

Article 16

<...>

Article 17

<...>

Article 18

Competent authority

Contracting Parties shall make the appropriate administrative arrangements, including the designation

of the appropriate competent authority or authorities, for the implementation of the rules of this Directive. Where more than one competent authority is designated, the work of these authorities undertaken pursuant to this Directive must be coordinated.

<...>

Article 18a

<...>

Article 18b

<...>

Article 19

<...>

Article 20

<...>

Article 21

<...>

Article 21a

<...>

Article 22

<...>

Article 22a

<...>

Article 23

<...>

Article 24

<...>

Article 24a

<...>

Article 25

<...>

Article 25a

<...>

Article 26

<...>

Article 27

<...>

Article 27a

<...>

Article 28

<...>

Article 28a

<...>

Article 28b

<...>

Article 28c

<...>

Article 29

<...>

Article 29a

<...>

Article 30

<...>

**CHAPTER V
FINAL PROVISIONS**

Article 31

<...>

Article 32

<...>

Article 33

<...>

ANNEX I

CATEGORIES OF ACTIVITIES TO WHICH THIS DIRECTIVE APPLIES

1. Installations or parts of installations used for research, development and testing of new products and processes and installations exclusively using biomass are not covered by this Directive.
2. The thresholds values given below generally refer to production capacities or outputs. Where several activities falling under the same category are carried out in the same installation, the capacities of such activities are added together.
3. When the total rated thermal input of an installation is calculated <...>, the rated thermal inputs of all technical units which are part of it, in which fuels are combusted within the installation, are added together. These units could include all types of boilers, burners, turbines, heaters, furnaces, incinerators, calciners, kilns, ovens, dryers, engines, fuel cells, chemical looping combustion units, flares, and thermal or catalytic post-combustion units. Units with a rated thermal input under 3 MW and units which use exclusively biomass shall not be taken into account for the purposes of this calculation. 'Units using exclusively biomass' includes units which use fossil fuels only during start up or shut-down of the unit.
4. <...>
5. When the capacity threshold of any activity in this Annex is found to be exceeded in an installation, all units in which fuels are combusted, other than units for the incineration of hazardous or municipal waste, shall be included in the greenhouse gas emission permit.
6. From 1 January 2024 all flights which arrive at or depart from an aerodrome situated in the territory of a **Contracting Party** <...> shall be included.

Activities	Greenhouse gases
Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste)	Carbon dioxide
Refining of mineral oil	Carbon dioxide
Production of coke	Carbon dioxide
Metal ore (including sulphide ore) roasting or sintering, including pelletisation	Carbon dioxide
Production of pig iron or steel (primary or secondary fusion) including continuous casting, with a capacity exceeding 2,5 tonnes per hour	Carbon dioxide
Production or processing of ferrous metals (including ferro-alloys) where combustion units with a total rated thermal input exceeding 20 MW are operated. Processing includes, inter alia, rolling mills, re-heaters, annealing furnaces, smitheries, foundries, coating and pickling	Carbon dioxide
Production of primary aluminium	Carbon dioxide and perfluorocarbons
Production of secondary aluminium where combustion units with a total rated thermal input exceeding 20 MW are operated	Carbon dioxide

Production or processing of non-ferrous metals, including production of alloys, refining, foundry casting, etc., where combustion units with a total rated thermal input (including fuels used as reducing agents) exceeding 20 MW are operated	Carbon dioxide
Production of cement clinker in rotary kilns with a production capacity exceeding 500 tonnes per day or in other furnaces with a production capacity exceeding 50 tonnes per day	Carbon dioxide
Production of lime or calcination of dolomite or magnesite in rotary kilns or in other furnaces with a production capacity exceeding 50 tonnes per day	Carbon dioxide
Manufacture of glass including glass fibre with a melting capacity exceeding 20 tonnes per day	Carbon dioxide
Manufacture of ceramic products by firing, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain, with a production capacity exceeding 75 tonnes per day	Carbon dioxide
Manufacture of mineral wool insulation material using glass, rock or slag with a melting capacity exceeding 20 tonnes per day	Carbon dioxide
Drying or calcination of gypsum or production of plaster boards and other gypsum products, where combustion units with a total rated thermal input exceeding 20 MW are operated	Carbon dioxide
Production of pulp from timber or other fibrous materials	Carbon dioxide
Production of paper or cardboard with a production capacity exceeding 20 tonnes per day	Carbon dioxide
Production of carbon black involving the carbonisation of organic substances such as oils, tars, cracker and distillation residues, where combustion units with a total rated thermal input exceeding 20 MW are operated	Carbon dioxide
Production of nitric acid	Carbon dioxide and nitrous oxide
Production of adipic acid	Carbon dioxide and nitrous oxide
Production of glyoxal and glyoxylic acid	Carbon dioxide and nitrous oxide
Production of ammonia	Carbon dioxide
Production of bulk organic chemicals by cracking, reforming, partial or full oxidation or by similar processes, with a production capacity exceeding 100 tonnes per day	Carbon dioxide
Production of hydrogen (H ₂) and synthesis gas by reforming or partial oxidation with a production capacity exceeding 25 tonnes per day	Carbon dioxide
Production of soda ash (Na ₂ CO ₃) and sodium bicarbonate (NaHCO ₃)	Carbon dioxide
Capture of greenhouse gases from installations covered by this Directive for the purpose of transport and geological storage in a storage site permitted under Directive 2009/31/EC	Carbon dioxide
Transport of greenhouse gases by pipelines for geological storage in a storage site permitted under Directive 2009/31/EC	Carbon dioxide

<p>Geological storage of greenhouse gases in a storage site permitted under Directive 2009/31/EC</p>	<p>Carbon dioxide</p>
<p>Aviation</p> <p>Flights which depart from or arrive in an aerodrome situated in the territory of a Contracting Party <...>.</p> <p>This activity shall not include:</p> <p>(a) flights performed exclusively for the transport, on official mission, of a reigning Monarch and his immediate family, Heads of State, Heads of Government and Government Ministers, of a country other than a Contracting Party, where this is substantiated by an appropriate status indicator in the flight plan;</p> <p>(b) military flights performed by military aircraft and customs and police flights;</p> <p>(c) flights related to search and rescue, fire-fighting flights, humanitarian flights and emergency medical service flights authorised by the appropriate competent authority;</p> <p>(d) any flights performed exclusively under visual flight rules as defined in Annex 2 to the Chicago Convention;</p> <p>(e) flights terminating at the aerodrome from which the aircraft has taken off and during which no intermediate landing has been made;</p> <p>(f) training flights performed exclusively for the purpose of obtaining a licence, or a rating in the case of cockpit flight crew where this is substantiated by an appropriate remark in the flight plan provided that the flight does not serve for the transport of passengers and/or cargo or for the positioning or ferrying of the aircraft;</p> <p>(g) flights performed exclusively for the purpose of scientific research or for the purpose of checking, testing or certifying aircraft or equipment whether airborne or ground-based;</p> <p>(h) flights performed by aircraft with a certified maximum take-off mass of less than 5 700 kg;</p> <p>(i) <...></p> <p>(j) flights which, but for this point, would fall within this activity, performed by a commercial air transport operator operating either:</p> <ul style="list-style-type: none"> — fewer than 243 flights per period for three consecutive four-month periods, or — flights with total annual emissions lower than 10 000 tonnes per year. <p><...>;</p> <p>(k) from 1 January 2013 to 31 December 2030, flights which, but for this point, would fall within this activity, performed by a non-commercial aircraft operator operating flights with total annual emissions lower than 1 000 tonnes per year <...>;</p> <p>(l) <...></p> <p>(m) <...></p>	<p>Carbon dioxide</p>

ANNEX II
GREENHOUSE GASES REFERRED TO IN ARTICLES 3 AND 30

Carbon dioxide (CO₂)

Methane (CH₄)

Nitrous Oxide (N₂O)

Hydrofluorocarbons (HFCs)

Perfluorocarbons (PFCs)

Sulphur Hexafluoride (SF₆)

ANNEX IIa

<...>

ANNEX IIb

<...>

ANNEX IV

PRINCIPLES FOR MONITORING AND REPORTING <...>

PART A — Monitoring and reporting of emissions from stationary installations

Monitoring of carbon dioxide emissions

Emissions shall be monitored either by calculation or on the basis of measurement.

Calculation

Calculations of emissions shall be performed using the formula:

Activity data × Emission factor × Oxidation factor

Activity data (fuel used, production rate etc.) shall be monitored on the basis of supply data or measurement.

Accepted emission factors shall be used. Activity-specific emission factors are acceptable for all fuels. Default factors are acceptable for all fuels except non commercial ones (waste fuels such as tyres and industrial process gases). Seam specific defaults for coal, and EU-specific or producer country-specific defaults for natural gas shall be further elaborated. IPCC default values are acceptable for refinery products. The emission factor for biomass shall be zero.

If the emission factor does not take account of the fact that some of the carbon is not oxidised, then an additional oxidation factor shall be used. If activity-specific emission factors have been calculated and already take oxidation into account, then an oxidation factor need not be applied.

Default oxidation factors developed pursuant to Directive 96/61/EC shall be used, unless the operator can demonstrate that activity-specific factors are more accurate.

A separate calculation shall be made for each activity, installation and for each fuel.

Measurement

Measurement of emissions shall use standardised or accepted methods, and shall be corroborated by a supporting calculation of emissions.

<...>

Reporting of emissions

Each operator shall include the following information in the report for an installation:

A. Data identifying the installation, including:

- Name of the installation;
- Its address, including postcode and country;
- Type and number of Annex I activities carried out in the installation;
- Address, telephone, fax and email details for a contact person; and
- Name of the owner of the installation, and of any parent company.

B. For each Annex I activity carried out on the site for which emissions are calculated:

- Activity data;
- Emission factors;
- Oxidation factors;
- Total emissions; and
- Uncertainty.

C. For each Annex I activity carried out on the site for which emissions are measured:

- Total emissions;
- Information on the reliability of measurement methods; and
- Uncertainty.

D. For emissions from combustion, the report shall also include the oxidation factor, unless oxidation has already been taken into account in the development of an activity-specific emission factor.

Contracting Parties shall take measures to coordinate reporting requirements with any existing reporting requirements in order to minimise the reporting burden on businesses.

PART B — Monitoring and reporting of emissions from aviation activities

Monitoring of carbon dioxide emissions

Emissions shall be monitored by calculation. Emissions shall be calculated using the formula:

Fuel consumption × emission factor

Fuel consumption shall include fuel consumed by the auxiliary power unit.

Actual fuel consumption for each flight shall be used wherever possible and shall be calculated using the formula:

Amount of fuel contained in aircraft tanks once fuel uplift for the flight is complete – amount of fuel contained in aircraft tanks once fuel uplift for subsequent flight is complete + fuel uplift for that subsequent flight.

If actual fuel consumption data are not available, a standardised tiered method shall be used to estimate fuel consumption data based on best available information.

Default IPCC emission factors, taken from the 2006 IPCC Inventory Guidelines or subsequent updates of these Guidelines, shall be used unless activity-specific emission factors identified by independent accredited laboratories using accepted analytical methods are more accurate. The emission factor for biomass shall be zero.

A separate calculation shall be made for each flight and for each fuel.

Reporting of emissions

Each aircraft operator shall include the following information in its report <...>:

A. Data identifying the aircraft operator, including:

- name of the aircraft operator,
- its administering **Contracting Party**,
- its address, including postcode and country and, where different, its contact address in the administering **Contracting Party**,
- the aircraft registration numbers and types of aircraft used in the period covered by the report to perform the aviation activities listed in Annex I for which it is the aircraft operator,
- the number and issuing authority of the air operator certificate and operating licence under which the aviation activities listed in Annex I for which it is the aircraft operator were performed,
- address, telephone, fax and e-mail details for a contact person, and
- name of the aircraft owner.

B. For each type of fuel for which emissions are calculated:

- fuel consumption,
- emission factor,
- total aggregated emissions from all flights performed during the period covered by the report which fall within the aviation activities listed in Annex I for which it is the aircraft operator,
- aggregated emissions from:
 - all flights performed during the period covered by the report which fall within the aviation activities listed in Annex I for which it is the aircraft operator and which departed from an aerodrome situated in the territory of a **Contracting Party** and arrived at an aerodrome situated in the territory of the same **Contracting Party**,
 - all other flights performed during the period covered by the report which fall within the aviation activities listed in Annex I for which it is the aircraft operator,
 - aggregated emissions from all flights performed during the period covered by the report which fall within the aviation activities listed in Annex I for which it is the aircraft operator and which:
 - departed from each **Contracting Party**, and
 - arrived in each **Contracting Party** from a third country,
- uncertainty.

ANNEX V

CRITERIA FOR VERIFICATION <...>

PART A — Verification of emissions from stationary installations

General Principles

1. Emissions from each activity listed in Annex I shall be subject to verification.
2. The verification process shall include consideration of the report <...> and of monitoring during the preceding year. It shall address the reliability, credibility and accuracy of monitoring systems and the reported data and information relating to emissions, in particular:
 - (a) the reported activity data and related measurements and calculations;
 - (b) the choice and the employment of emission factors;
 - (c) the calculations leading to the determination of the overall emissions; and
 - (d) if measurement is used, the appropriateness of the choice and the employment of measuring methods.
3. Reported emissions may only be validated if reliable and credible data and information allow the emissions to be determined with a high degree of certainty. A high degree of certainty requires the operator to show that:
 - (a) the reported data is free of inconsistencies;
 - (b) the collection of the data has been carried out in accordance with the applicable scientific standards; and
 - (c) the relevant records of the installation are complete and consistent.
4. The verifier shall be given access to all sites and information in relation to the subject of the verification.
5. The verifier shall take into account whether the installation is registered under the **Energy Community** eco-management and audit scheme (EMAS).

Methodology

Strategic analysis

6. The verification shall be based on a strategic analysis of all the activities carried out in the installation. This requires the verifier to have an overview of all the activities and their significance for emissions.

Process analysis

7. The verification of the information submitted shall, where appropriate, be carried out on the site of the installation. The verifier shall use spot-checks to determine the reliability of the reported data and information.

Risk analysis

8. The verifier shall submit all the sources of emissions in the installation to an evaluation with regard to the reliability of the data of each source contributing to the overall emissions of the installation.
9. On the basis of this analysis the verifier shall explicitly identify those sources with a high risk of error and other aspects of the monitoring and reporting procedure which are likely to contribute to errors in the determination of the overall emissions. This especially involves the choice of the emission factors

and the calculations necessary to determine the level of the emissions from individual sources. Particular attention shall be given to those sources with a high risk of error and the abovementioned aspects of the monitoring procedure.

10. The verifier shall take into consideration any effective risk control methods applied by the operator with a view to minimising the degree of uncertainty.

Report

11. The verifier shall prepare a report on the validation process stating whether the report <...> is satisfactory. This report shall specify all issues relevant to the work carried out. A statement that the report <...> is satisfactory may be made if, in the opinion of the verifier, the total emissions are not materially misstated.

Minimum competency requirements for the verifier

12. The verifier shall be independent of the operator, carry out his activities in a sound and objective professional manner, and understand:

- (a) the provisions of this Directive, as well as relevant standards and guidance adopted by the **Ministerial Council of the Energy Community**;
- (b) the legislative, regulatory, and administrative requirements relevant to the activities being verified; and
- (c) the generation of all information related to each source of emissions in the installation, in particular, relating to the collection, measurement, calculation and reporting of data.

PART B — Verification of emissions from aviation activities

13. The general principles and methodology set out in this Annex shall apply to the verification of reports of emissions from flights falling within an aviation activity listed in Annex I.

For this purpose:

- (a) in paragraph 3, the reference to operator shall be read as if it were a reference to an aircraft operator, and in point (c) of that paragraph the reference to installation shall be read as if it were a reference to the aircraft used to perform the aviation activities covered by the report;
- (b) in paragraph 5, the reference to installation shall be read as if it were a reference to the aircraft operator;
- (c) in paragraph 6 the reference to activities carried out in the installation shall be read as a reference to aviation activities covered by the report carried out by the aircraft operator;
- (d) in paragraph 7 the reference to the site of the installation shall be read as if it were a reference to the sites used by the aircraft operator to perform the aviation activities covered by the report;
- (e) in paragraphs 8 and 9 the references to sources of emissions in the installation shall be read as if they were a reference to the aircraft for which the aircraft operator is responsible; and
- (f) in paragraphs 10 and 12 the references to operator shall be read as if they were a reference to an aircraft operator.

Additional provisions for the verification of aviation emission reports

14. The verifier shall in particular ascertain that:

(a) all flights falling within an aviation activity listed in Annex I have been taken into account. In this task the verifier shall be assisted by timetable data and other data on the aircraft operator's traffic including data from Eurocontrol requested by that operator;

(b) there is overall consistency between aggregated fuel consumption data and data on fuel purchased or otherwise supplied to the aircraft performing the aviation activity.

Additional provisions for the verification of tonne-kilometre <...>

15. The general principles and methodology for verifying emissions reports <...> as set out in this Annex shall, where applicable, also apply correspondingly to the verification of aviation tonne-kilometre data.

16. <...>