

Law of Ukraine

On the promotion of the use of energy from renewable sources

This Law establishes a framework for the promotion of energy from renewable sources and sets national targets for the overall share of energy from renewable sources in gross final consumption of energy and for the share of energy from renewable sources in transport. The Law defines the rules on support schemes, guarantees of origin, administrative procedures, and access to the networks for energy from renewable sources. It defines the legal, social, economic, ecological and organizational principles for use of renewable energy sources and contribution to expansion of their use in energy sector.

CHAPTER I. GENERAL PROVISIONS

Article 1. Definitions

In the present Law the following terms are used in the meaning prescribed herein:

- 1) '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 biogas;
- 2) 'aerothermal energy' means energy stored in the form of heat in the ambient air;
- 3) 'geothermal energy' means energy stored in the form of heat beneath the surface of solid earth;
- 4) 'hydrothermal energy' means energy stored in the form of heat in surface water;
- 5) '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;
- 6) 'biofuel' means liquid or gaseous fuel for transport produced from biomass;
- 7) 'biogas' means gas received from biomass, which is used as a fuel;
- 8) 'bioliquids' means liquid fuel for energy purposes other than for transport, including electricity and heating and cooling, produced from biomass;

- 9) 'gross final consumption of energy' means energy commodities delivered for energy purposes to industry, transport, households, services including public services, agriculture, forestry and fisheries, including the consumption of electricity and heat by the energy branch for electricity and heat production and including losses of electricity and heat in distribution and transmission;
- 10) 'guarantee of origin' means an electronic document which has the sole function of providing proof to a final customer that a given share or quantity of energy was produced from renewable sources;
- 11) 'heating or cooling' means 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 heating or cooling space or industrial process heating or cooling;
- 12) 'support scheme' any instrument, scheme or mechanism applied to promote 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 through renewable energy obligations or otherwise, the volume of such energy purchased;
- 13) 'renewable energy obligation' means a national support scheme requiring energy producers to include a given proportion of energy from renewable sources in their production, requiring energy suppliers to include a given proportion of energy from renewable sources in their supply, or requiring energy consumers to include a given proportion of energy from renewable sources in their consumption. This includes schemes under which such requirements may be fulfilled by using green certificates;
- 14) 'Guaranteed Buyer (GB)/Renewable Energy Operator (REO)' is the entity responsible for billing and collecting the charge to promote renewable energy applied to all final customers of electricity to remunerate the producers that benefit from the support scheme;
- 15) 'contract for difference' is the contract, of which the model is approved by *[the CMU]*, between the Guaranteed Buyer/Operator of Renewable Energy and producers of energy from renewable sources that is declared successful bidder in a competitive bidding process to receive support, as envisaged in Article 13 of this Law;
- 16) 'competitive bidding process' means a non-discriminatory bidding process that provides for the participation of a sufficient number of undertakings and where the aid is granted on the basis of either the initial bid submitted by the bidder or a clearing price. In addition, the budget or volume related to the bidding process is a binding constraint leading to a situation where not all bidders can receive aid;
- 17) 'priority producer' is any producer generating electricity from renewable sources, and in the case of new hydro power with an installed capacity of up to 10 MW per generating unit, which benefits from the support scheme according to the provisions of this law;

- 18) 'strike price' is the final price that the priority producer of electricity from renewable sources will benefit, as the result of being declared successful bidder in a competitive bidding process to receive support;
- 19) 'reference price' is the price which is based on hourly day-ahead market price, or up until its creation, a comparable electricity market;
- 20) 'demonstration project' means a project demonstrating a technology as a first of its kind in the country and representing a significant innovation that does well beyond the state of the art;
- 21) 'net metering energy schemes' is a scheme that enables small and medium-sized enterprises or household customers to self-consumption of electricity generated from renewable sources in on-site installations not larger than 30 kW, to inject in the distribution network the excess electricity facilitated by a bi-directional meter;
- 22) 'self-consumption' is the right of households and small and medium-sized enterprises to produce, consume and inject into the grid electricity produced from an on-site installation on renewable sources;
- 23) 'levelised costs of electricity" is a type of calculation of the net present value of the unit-cost of electricity over the lifetime of a generating asset, used to assist the institutions in the investment decision making process.

Article 2. Legal basis of renewable energy sources

1. In pursuance of Ukraine's obligations under the Treaty establishing the Energy Community and the Ukraine-EU Association Agreement, the present Law is directed at transposition to ensure implementation of the Energy Community acquis on energy, in particular Directive 2009/28/EC on the promotion of the use of energy from renewable sources as amended and adopted by Ministerial Council Decision 2012/04/MC-EnC.
2. The legal basis of the use of renewable sources is constituted by the Constitution of Ukraine and other legal acts, which regulate the activities in the sphere of renewable energy sources.
3. Authorities as well as courts in applying provisions of the present Law shall take into account the law enforcement practice of the Energy Community and the EU, in particular judgments of the Court of Justice of the EU (the European Court of Justice, the General Court), case law of the European Commission and the Energy Community Secretariat regarding application of provisions of the EU acquis mentioned in para 1 of the present Article.
4. Decisions (measures) of authorities adopted in pursuance of the rules of the present Law shall comply with the principles of proportionality, transparency, and non-discrimination.

According to the proportionality principle, decisions (measures) of authorities shall not exceed what is necessary for the achievement of an objective of general public interest.

According to the transparency principle, decisions (measures) of authorities shall be duly substantiated and notified to the subjects to which they shall apply within a reasonable time before their entry force or effect.

According to the non-discrimination principle, decisions, actions, inactions of authorities shall not lead to:

legal or actual scope of rights and obligations of a person which is different than the scope of rights and obligations of other persons in similar circumstances unless such difference can be justified by a legitimate and proportional objective of general public interest;

legal or actual scope of rights and obligations of a person which is the same as the scope of rights and obligations of other persons in different circumstances unless such similarity can be justified by a legitimate and proportional objective of general public interest.

Article 3. The scope of the law

The Law regulates the following fields of renewable energy:

- 1) State regulation and management to implement the policy objectives in renewable energy;
- 2) Method for the calculation of share of energy from renewable sources;
- 3) Requirements of the access, production, transportation, distribution and marketing of electricity from renewable sources, heat from renewable sources and energy from renewable sources used in transport;
- 4) Support schemes for promotion of energy from renewable sources;
- 5) The system of issuing, transferring and cancelling of guarantees of origin of electricity, heating and cooling produced from renewable energy sources;
- 6) Provisions for information and trainings on renewable energy sources;
- 7) Cooperation mechanisms with the Parties to the Energy Community and the European Union Member States to achieve the state policy objectives in renewable energy, and international cooperation in the field of renewable energy sources.

Article 4. Principles of state policy in the field of renewable energy

1. State policy in the field of renewable sources is based on the following principles:

- 1) State regulation of the activities in the field of renewable energy sources shall ensure a cost-effective development of renewable energy;

- 2) Competition in the promotion of renewable energy through the introduction of market based process in granting the support to renewable energy producers in accordance with this Law;
 - 3) Non – discriminatory access to networks;
 - 4) Non-discriminatory participation in the competitive bidding process for support in compliance with the State aid legislation of Ukraine;
 - 5) Promotion and encouragement of energy efficiency, energy saving and environmental protection;
 - 6) Creation of conditions of safe production of energy from renewable sources;
 - 7) Providing individuals and business with information on the benefits for the production and use of energy from renewable sources;
 - 8) Provision of information to the public and trainings about the production and use of renewable energy;
 - 9) Close cooperation and assistance between the respective authorities involved into the activities in the field of renewable energy;
 - 10) Cooperation at regional and general European levels on the promotion and effective use of renewable energy.
2. The Cabinet of Ministers of Ukraine, the main authority in the system of the central executive authorities, which is responsible for development and implementation of the national policy in the renewable energy sector, the central executive authority responsible for the effective use of the renewable energy sources, and other public authorities shall be responsible for development and implementation of the national policy in the renewable energy sector according to the applicable laws of Ukraine.

Chapter II.
National Targets for the use of energy from renewable sources

Article 5. The National Targets of state policy in the field of renewable energy

1. The objectives of state policy in the field of renewable energy are:
 - 1) Implement *acquis communautaire* in the field of renewable energy into the national legislation of Ukraine;
 - 2) Promote the increase of use of energy from renewable sources to ensure a sustainable development of Ukraine and to comply with its commitments under the Energy Community Treaty;
 - 3) Ensure the transparency to activities in the field of renewable sources;
 - 4) Increase the diversification of the energy resources and the security of energy supply in Ukraine;
 - 5) Achieve a renewable energy target of at least 11% in gross final consumption of energy in 2020, calculated in accordance with this law and a 10% renewable energy target in transport;
 - 6) Introduce measures effectively designed to ensure that the share of energy from renewable sources equals or exceeds the indicative trajectory set out in Annex I;
 - 7) Reduce the import of fossil fuels, greenhouse gas emissions and protect the environment in compliance with the international commitments of Ukraine in line with the relevant international treaties or agreements;
 - 8) Promote the development of the renewable electricity market and cooperation with members of the Energy Community and European Union Member States for an increased use of energy from renewable energy sources;
 - 9) Promote the sustainable development of rural and isolated areas by improving the access to energy from renewable sources, allow self-consumption of electricity from installations on-site;
 - 10) Inform the stakeholders and public on net benefits, cost and energy efficiency of equipment and systems for heating, cooling and electricity from renewable sources;
 - 11) Promote research and technical cooperation at scientific level national and international and implementation of best practices to promote the use of scientific results and technical development in the field of renewable energy.

Article 6. State regulation in the field of renewable

1. State regulation in the field of renewable energy shall be performed by the central executive authority responsible for the effective use of the renewable energy sources [State Agency on Energy Efficiency and Energy Saving of Ukraine (hereinafter – SAEE)] within the competence stipulated by this Law and other legislative acts.
2. The [SAEE] shall have the following main duties:
 - 1) Introducing measures to the Ministry of Regional Development necessary to ensure that the share of energy for renewable sources equals or exceeds 11% by 2020;
 - 2) Drafting of a National Renewable Energy Action Plan to meet the policy objectives and submission for approval to the Ministry of Regional Development;
 - 3) Monitoring of implementation of the National Renewable Energy Action Plan and submission of annual progress reports to the Energy Community Secretariat;
 - 4) Creation and submission to the Ministry of Regional Development by 30 June each year an evaluation of the share of energy generated from renewable sources compared to the gross final consumption of energy of the previous year based on energy statistics compiled by Statistical Office of Ukraine and ensure regular reporting on evaluation to the Energy Community Secretariat;
 - 5) Making use of the cooperation mechanisms described in Articles 26-27 to achieve the renewable energy targets;
 - 6) Provide advisory assistance and information on support measures to consumers, builders, installers, architects and suppliers of equipment and systems for heating, cooling and electricity and vehicles compatible with the use of energy from renewable sources;
 - 7) Provide information to the public on the availability and environmental benefits of different energy sources in transport;
 - 8) Promoting the installation of equipment and systems for the use of electricity, heating and cooling from renewable sources energy in the planning, building, designing and renovations of industrial or residential areas;
 - 9) Development and management of a system for issuance, transfer and cancelation of guarantees of origin for electricity and heat from renewable sources in accordance with the provisions of this Law;
 - 10) Improving the standardization in the field of renewable energy by implementing the standards equivalent to the EU standards;
 - 11) Creation, recording and update the registry of priority producers;

12) Confirmation the status of priority producers.

3. The state regulation in the sphere of application of the support scheme for electricity from renewable energy sources shall be performed by Renewable Energy Operator/Guaranteed Buyer (hereinafter – the REO/GB). The REO/GB shall be established by the decision of the Cabinet of Ministers of Ukraine and shall be coordinated by SAE.

4. The REO/GB is responsible for:

1) billing and the collection of renewable energy obligation from every electricity supplier applied to all final consumers according to the relevant electric energy measured and delivered to final customers, used to support the priority producers;

2) signing and managing the Contracts for Difference with the priority producers or the power purchase agreements with priority producers benefiting from a feed-in tariff support. This involves management of the contracts throughout their life, as well as forecasting CFD payments to priority producers, according to the renewable energy obligation. The REO/GB is also responsible for settlement of amounts payable to priority producers;

3) publishing each year details of calculations and payments under the Contract for Difference.

On an yearly basis, 24 months after each round of auctions, the REO/GB will perform an evaluation of the achieved results of the competitive bidding process related to the completed percentage of projects of renewable energies declared winner in the competitive process,

4) drafting the Rules and Procedures for the introduction of auctions to grant the support and its further submission to [SAE/MRD].

5. Based on the forecast submitted by REO/GB [SAE/NEURC] defines the renewable energy obligation to be paid by the final consumers of electricity, on a yearly basis. [SAE/NEURC] also defines the methodology for the calculation of this obligation and the compensation procedure of the difference for the priority producers.

6. The REO/GB has to ensure that detailed records regarding all measures involving the granting of support are maintained. These records must be kept for the duration of the Contract for Difference plus an additional period of ten years, including all information relevant to demonstrating that the terms of the Contract for Difference have been complied with.

7. The REO/GB may require the information necessary from the NEURC to perform its functions under this law and other legal acts. NEURC shall provide REO/GB with information required.

Article 7. National Action Plan in the field of renewable energy

1. SAEE shall draft a National Renewable Energy Action Plan and submit it for approval to the MRD. If the National Renewable Energy Action Plan is approved by the Minister of MRD, it shall be submitted for its adoption to the [Cabinet of Ministers of Ukraine (hereinafter – the CMU)].
2. The National Renewable Energy Action Plan shall set out the measures to achieve the national targets of 11% of share of energy from renewable source in gross final energy consumption by 2020 taking into account the effects of other policy measures relating to energy efficiency on final consumption of energy, and adequate measures to be taken to achieve those national overall targets, including cooperation between local, regional and national authorities, planned statistical transfers or joint projects, national policies to develop existing biomass resources and mobilise new biomass resources for different uses.
3. The National Renewable Energy Action Plan shall be adopted by the [the CMU] and shall be submitted to the Energy Community Secretariat.
4. The implementation of the National Renewable Energy Action Plan shall be monitored by the central executive authority responsible for the effective use of the renewable energy sources [SAEE]. [SAEE] shall submit a monitoring report to the MRD each year by 30th June, of every year.
5. By September 30 every two years, [the MRD] shall submit to [the CMU] a report on the implementation of the National Renewable Energy Action Plan and the fulfilment according to the national obligatory targets by renewable resources. This report shall be published on the official internet page of MRD.
6. If the report finds that the share of energy from renewable sources fell below than the indicative trajectory in the immediately preceding two-year period set out in Annex I by more than 1 percentage point, the MRD proposes to [the CMU] the amendment of the national renewable energy action plan, setting out adequate and appropriate measures to re-join the indicative trajectory in Annex I within a reasonable timetable. This amended plan is submitted to the Energy Community Secretariat by 30 June of the following year.

Article 8. Calculation of the share of energy from renewable

1. Gross final consumption of energy from renewable sources 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 for heating and cooling; and
 - c) final consumption of energy from renewable sources in transport.
2. In calculating the share of energy from renewable sources in gross final consumption of energy gas, electricity from renewable sources and hydrogen from renewable sources is taken into account only once.

3. Biofuels and bioliquids that do not meet sustainability criteria established in accordance with this law shall not be taken into account when calculating the share renewable energy.
4. If due to force majeure, it is impossible to meet the share of energy from renewable sources in gross final consumption of energy in 2020, the MRD shall inform the Energy Community Secretariat as soon as possible.
5. In calculating gross final consumption of electricity from renewable sources is taken into account electricity produced by hydro accumulation of water previously pumped upwards. If hybrid power plants using renewable and conventional energy, consider only the part of electricity produced from renewable sources. For the purpose of this calculation, the contribution of each energy source shall be calculated on the basis of its energy content.
6. Gross final consumption of energy from renewable sources for heating and cooling is calculated as the sum of the quantity of district heating and district cooling produced from renewable sources and consumption of other energy from renewable sources in industry, in the domestic sector, the services, agriculture, forestry and fisheries, for heating, cooling and processing. In the case of hybrid plants using renewable and conventional energy sources, consider only the part of heating and cooling produced from renewable sources. For the purpose of this calculation, the contribution of each energy source shall be calculated on the basis of its energy content.
7. In calculating gross final consumption of energy from renewable sources for heating and cooling, aerothermal, geothermal and hydrothermal energy produced by heat pumps shall be taken into account provided that the final energy output significantly exceeds the primary energy used for operating the heat pump.
8. Thermal energy generated by passive energy systems, where low power consumption is achieved passively through building design or from heat produced by non-renewable energy use, is not taken into account when calculating the gross final consumption of energy from renewable sources for heating and cooling.
9. The energy content of fuels used in transport specified in Annex II shall be taken into account as set out in that Annex.
10. The final consumption of energy from renewable sources in transport is calculated by the central body of public administration in the field of transport in accordance with regulations approved by the Government and Article 9 of this law.
11. The share of energy from renewable sources is calculated as a ratio of gross final consumption of energy from renewable sources and the gross final consumption of energy from all energy sources, expressed as a percentage.
12. In calculating gross final energy consumption for purposes of measuring compliance with national targets and the indicative trajectory set out under Annex I to this Law, the amount

of energy consumed in aviation as a proportion of gross final consumption of energy, be considered to be no more than 6.18%.

13. The methodology and definitions used in calculating the share of energy from renewable sources according to this law must be energy statistics consistently used in energy statistics with the standards adopted by the Government in compliance with the legislation on statistics of the Energy Community.
14. The Calculation of the share of energy from renewable shall be provided by the [SAEE].
15. The official energy statistics shall be provided by the State Statistics Service of Ukraine.

Article 9. Calculation of the share of renewable in final energy consumption in transport

1. Share of renewable energy in the final energy consumption in transport is calculated as the ratio of gross final consumption of energy from renewables for all types of transport and total final consumption of energy in transport.
2. In calculating the total final consumption of energy in transport are taken into account only petrol, diesel and biofuels consumed for transport by road and rail, and energy consumed by transport electricity.
3. In calculating the final consumption of energy from renewable sources in transport are taken into account all types of energy from renewable sources consumed in all types of transport.
4. In calculating the quantity of electricity from renewable sources consumed by electric road vehicles, that consumption is considered to be 2,5 times the energy content of electricity from renewable energy sources.
5. For the purpose of demonstrating compliance with the national renewable energy obligation placed on operators and the national target in the field of renewable sources, in calculating the quantity of energy from renewable sources consumed in all forms of transport, energy content of biofuels made from wastes, residues, non-food cellulosic and lingo-cellulosic materials shall be considered to be twice that made by other biofuels.
6. To implement the provisions of this Article, the main importers of petroleum products are required to submit quarterly to SAEE on paper and electronically submit information for the previous quarter of the quantities of biofuels used in combination with main petroleum products imported oil market.
7. The calculation of the share of energy from renewable shall be provided by the [SAEE].

CHAPTER III. PROMOTING GENERATION FROM RENEWABLE ENERGY SOURCES

Article 10. Support scheme for electricity from renewable energy sources

1. In order to ensure the national target on renewable energy, the Minister of RD adopts the legal acts of the effective use of the renewable sources.
2. The following measures may be applied:
 - 1) Support schemes;
 - 2) Measures of cooperation between Ukraine and other Contracting Parties to the Energy Community and with third countries for achieving its national overall targets.
3. If not provided otherwise in Article 12, the operating support granted to priority producers shall include the following cumulative conditions:
 - (a) the support is granted as a premium in addition to the market price (premium) whereby the generators sell its electricity directly in the market;
 - (b) beneficiaries of the support under contracts for differences are subject to standard balancing responsibilities, unless no liquid intra-day markets exist; and
 - (c) measures are put in place to ensure that generators have no incentive to generate electricity under negative prices.
4. *[SAEE]* adopt the regulation on granting the operating support to priority producers. The conditions and procedures for granting the support measures that involve state aid shall be approved by the Antimonopoly Committee of Ukraine before adoption. Upon the approval of the support measure by *[the MRD]*, *[SAEE]* shall report to the Energy Community Secretariat on such support measures. SAEE may ask for assistance Energy Community Secretariat to create the support measures.
5. The support in the form of contracts for difference to priority producers of electric energy, except for the cases foreseen in this law, shall be granted through a competitive bidding process on the basis of clear, transparent and non-discriminatory criteria. The support shall be granted in the form of premium to reach the strike price, as an additional to the reference price.
6. The application of the support scheme and measures shall be in compliance with the Law of Ukraine “On the State Support to the Commercial Entities”.

Article 11. Contracts for difference

1. The support under the Contract for Difference takes the form of a variable premium calculated as the difference payment between the price with which the renewable energy producer was declared successful in the competitive process for granting the support (the strike price) and the market price for electricity (the reference price).
2. The beneficiaries of the operational support under a Contract for Difference and the maximal level of such support will be determined in a competitive bidding process open to all

interested developers offering renewable energy project on the basis of clear, transparent and non-discriminatory criteria, except the cases in which:

- a) only one or a very limited number of projects could be eligible for a competitive bidding process, or
 - b) a tendering process would lead to demonstrable higher support levels, or
 - c) a tendering process would result in demonstrable low project realisation rates
3. The bidding process may be limited to only a specific technology or specific technologies where a process open to all generators would lead to a suboptimal result, which cannot be addressed in the process design in view of, in particular:
- a) the longer-term potential of a given new and innovative technology; or
 - b) the need to achieve diversification of resources; or
 - c) network constraints and grid stability; or
 - d) system (integration) costs; or
 - e) the need to avoid distortions on the raw material markets from biomass support; No other operating aid may be granted to new installations generating electricity from biomass if excluded from the bidding process.
4. The support may be granted without a competitive bidding process to installations with an installed electricity capacity of less than 1 MW, or demonstration projects, except for electricity wind energy, for installations with an installed electricity capacity of up to 6 MW or 6 generation units. The support to small producers will be granted under Article 12 and in compliance with Article 16.
5. The model of the contract for difference, terms and procedures, as well as the cases defined on paragraph 2 and 3 of this article, shall be developed and proposed by the REO/GB to [SAEE].
6. [The REO/GB/ NEURC], will introduce and use an application form for support according to the contract for difference. The application form includes among others the applicant's name and the type of the undertaking, a description of the project, including its location and start and end dates, the amount of support needed to carry it out and the priority costs. In the application form, beneficiaries must describe the development of the project without the support.
7. Support of the renewable energy producers will in any case only be granted until the plant has been fully depreciated according to normal accounting rules and any investment support previously received must be deducted from the financial support under the contract for difference.
8. Renewable energy producers are obliged to pay the difference between the reference price and the strike price to the [REO] when in practice the reference price exceeds the strike price. If the day-ahead hourly market price is below zero for less than six consecutive hours, the support will be capped at the strike price. If the day-ahead hourly market price remains

negative throughout a six-hour period or longer then the difference amount under the Contract for Difference will be set to zero for the entirety of that period.

9. Any contract for difference may be valid for a maximum period of 15 years.

Article 12. Support measures to renewable energy producers for electricity produced in small installations

1. The support for producers with an installed electricity capacity of less than 500 kW, or demonstration projects, except for electricity wind energy for installations up to 3 MW or 3 generation units shall be in the form of feed-in tariffs in compliance with Article 16.
2. The procedure for granting the support to of a price of electric energy from renewable sources shall be based on the methodology provided by the Law of Ukraine "On Electricity Market".

Article 13. Confirmation of the status of priority producers

1. The procedure of confirmation of the status of priority producer shall apply only to the small producers indicated under Article 12. The winners of the auctions will be granted with the status of priority producer.
2. The procedure for confirmation of the status of priority producers shall be based on objective, transparent, non-discriminatory criteria and on a "first come first served" based until reaching the maximum capacity adopted by SAEE.
3. In the conduct of the confirmation of the status of priority producers will be taken all measures to ensure the confidentiality of information about the applicant and the specific data project.
4. To confirm the status of priority the producer can address all interested persons that meet the conditions and criteria established in accordance with this law. It cannot be confirmed priority producer status for people who will build power plants or new equipment using equipment manufactured more than 36 months before commissioning. If CHP plant based on biomass as fuel are allowed only technologies that yield at least 80% may be confirmed.
5. The status of priority producers is confirmed for potential energy producers from renewable sources whose installed capacity depending on the technology used does not exceed the cumulative limit of capacity and meet all the conditions and criteria established in accordance with this law.
6. SAEE is establishing technical standards, technical or other requirements applicable to the procedure of confirmation of the status of priority producer.

Article 14. Rights and responsibilities of priority producers

1. As a result of being declared successful in a competitive bidding process, the priority producer benefits of the strike price for the volume of electricity fed into electricity grids .
2. The tariff for renewable producers subject of Article 12 of this Law is set by the [NEURC] in accordance with the Law of Ukraine “On Electricity Market”, and adjust them in accordance with the approved methodology.
3. If a priority producer build and operate the power plant with equipment used or new equipment manufactured more than 36 months before commissioning or breach other conditions laid down by this law, his right to the strike price or, where appropriate, the tariff established in accordance with this law shall be withdrawn and the performance guarantee of the contract will be transferred to the state budget. Capacity allocated to it will be returned and considered at the next auction or, where applicable, the procedure of confirming the status of priority producers.
4. Where a priority producer does not operate the power plant within 24 months the announcement of tender results or, as applicable, the date of confirmation of the status of priority producers, his right to the strike price or, where appropriate, the tariff established in accordance with this law shall be withdrawn and guarantee performance of the contract will be transferred to the state budget. Capacity allocated to it will be returned and considered at the next auction or, where applicable, the procedure of confirming the status of priority producers.
5. The modernization of production plant, equipment replacement and other components does not imply extension or resumption of period time for which priority producers benefit from the strike price or, where appropriate, the tariff set.
6. If the electricity producer intends to increase the capacity of the existing power plant, it will participate in the auction / confirmation procedure status of priority producer to receive right to the purchase volume of electricity produced by newly installed capacity. If the procedure of confirmation of the status of priority producers, the cumulative capacity of the power plant extended not exceed the capacity for the type of renewable source of energy used and will be within the maximum quota of capacity.
7. The Agency on Energy Efficiency develops and maintain the register of priority producers, containing information on the date on which it was granted the status of priority producers or a confirmed status of priority producers, the installed capacity of power plants, as well as installed capacity accumulated in the country for each type of technology production. That information is published quarterly on the official website of the Agency on Energy Efficiency.

Article 15. Self-consumption of electricity

1. In order to promote self-consumption of electricity from renewable sources, a household customer can install a total capacity up to 30 kW for the production of electricity from wind and solar for its own consumption. The surplus of energy not consumed can be in-fed into the distribution grid and be purchased by the universal service providers at the green tariff adopted by NEURC.

Article 16. Support scheme for energy from renewable sources other than electricity

1. For energy from renewable sources other than electricity, operating support will be considered compatible with the internal market if the following cumulative conditions are met:
 - 1) the support per unit of energy does not exceed the difference between the total levelised costs of producing energy from the particular technology in question and the market price of the form of energy concerned;
 - 2) the levelised costs of producing energy may include a normal return on capital. Investment support is deducted from the total investment amount in calculating the levelised costs of producing energy;
 - 3) the production costs are updated regularly, at least every year; and
 - 4) support is only granted until the plant has been fully depreciated according to normal accounting rules in order to avoid that operating support based on levelised costs of producing energy exceeds the depreciation of the investment.

Article 17. Support scheme for existing biomass plants after plant depreciation

1. The support measures shall be granted for biomass after plant depreciation if the operating costs borne by the producer after plant depreciation are still higher than the market price of the energy concerned and provided that the following cumulative conditions are met:
 - 1) the support is only granted on the basis of the energy produced from renewable sources;
 - 2) the measure is designed such that it compensates the difference in operating costs borne by the beneficiary and the market price; and
 - 3) a monitoring mechanism is in place to verify whether the operating costs borne are still higher than the market price of energy. The monitoring mechanism needs to be based on updated production cost information and take place at least on an annual basis.
2. The support measures shall be granted for biomass after plant depreciation if it could be demonstrated that independent from the market price of the energy concerned, the use of fossil fuels as an input is more economically advantageous than the use of biomass and provided that the following cumulative conditions are met:
 - 1) the support is only granted on the basis of the energy produced from renewable sources;
 - 2) the measure is designed such that it compensates the difference in operating costs borne by the beneficiary from biomass compared to the alternative fossil fuel input;
 - 3) credible evidence is provided that without the support a switch from the use of biomass to fossil fuels would take place within the same plant; and
 - 4) a monitoring mechanism is in place to verify that the use of fossil fuels is more beneficial than the use of biomass. The monitoring mechanism needs to be based on updated cost information and take place at least on an annual basis.

Article 18. Information and training

1. REO shall ensure that information on support measures and schemes are made available to all applicants, such as consumers, builders, installers, architects and suppliers of equipment and systems for heating, cooling and electricity and of vehicles compatible with the use of renewable energy.
2. SAEE shall ensure the information on net benefit, cost and energy efficiency of equipment and systems for the use of heating, cooling and electricity from renewable energy sources is made available. It shall that they are given guidance when planning, designing, building and renovating industrial or residential areas.
3. SAEE shall ensure the public awareness of the benefits and practicalities of developing and using energy from renewable sources through the trainings, suitable information and guidance, and etc.

CHAPTER IV. ADMINISTRATIVE PROCEDURES

Section I. Administrative procedures, regulation and codes in the field of renewable energy

Rules concerning the authorisation, certification and licensing procedures that are applied to plants and associated transmission and distribution network infrastructures for the production of electricity, heating and cooling from renewable energy sources, and to the process of transformation of biomass or other energy products shall be proportionate and necessary.

Article 19. Licensing activities in the field of renewable energy

1. The production of electricity, heating or cooling from renewable energy sources, and the process of transformation of biomass into biofuels or other energy products in power plants with capacities larger than **[5 000] kW** are subject to licensing. *[10 000 KW is the requirement for the electricity production for the renewable sources established by the NEURC. The bottom-line can be decided]*
2. The activity of producing electricity from renewable sources is conducted under the license to produce electricity, issued by NEURC according to the rules and procedures established under the Law of Ukraine “On Electricity Market”, and other applicable laws of Ukraine.
3. The activity of district heating production from renewable sources is conducted under the license issued by the [NEURC] according to Law of Ukraine “On heat supply”, the present Law and the applicable laws of Ukraine.
4. The production of biofuels is carried out under a license issued by [the NEURC] according to a decree adopted by NEURC in this respect.
5. The construction of the power plant facility are subject to the licencing and other permits procedure with a due consideration of the Law of Ukraine “On Architecture Activity”, Law of Ukraine “On Urban Planning”, and other applicable laws of Ukraine, which regulate the field of construction of the power plant facility.

Article 20. Activities, which are subject to certification

1. Certification system in the field of renewable energy shall be based on criteria equivalent to EU standards.

Article 21. Technical requirements to systems, which produce energy from renewable sources.

1. In order to benefit from support schemes, the technical specification shall be met by renewable energy equipment.
2. The Cabinet of Ministers of Ukraine is entitled to adopt the technical regulation for the renewable energy equipment.
3. In developing the technical requirements, the *[Authority in charge]* shall endeavour to implement the EU standards, including eco – labels, energy labels and other references to technical requirement.
4. In the case of biomass, *[the CMU]* shall promote conversion technologies that achieve a conversion efficiency of at least 85% for residential and commercial applications and at least 70 for industrial applications.
5. In the case of heat pumps, *[the CMU]* shall promote those that fulfil the minimum requirements of eco-labelling established in Commission Decision 2007/742/EC of 9 November 2007 establishing the ecological criteria for the award of the Community eco-label to electrically driven, gas driven or gas absorption heat pumps.
6. In the case of solar thermal energy, *[the CMU]* shall promote certified equipment and systems based on European standards where these exist, including eco-labels, energy labels and other technical reference systems established by the European standardisation bodies.

Article 22. Building regulations and codes

1. In case of the constructions of the new buildings and in case of the renovation of the existing building, the use of energy produced from renewable sources shall be minimized to the extent possible.
2. The requirement of para 1 shall apply to the armed force to the extent that its application does not cause any conflict with the nature and primary aim of the activities of the armed force and with the exception of material used exclusively for military purposes.
3. SAEE shall endeavour to use energy or eco-labels or other appropriate certificates or standards developed at national or Energy Community level, where these exist, as the basis for encouraging such systems and equipment.
4. In assessing the conversion efficiency and input/output ratio of systems and equipment for the purposes of this paragraph, Energy Community or, in their absence, international procedures if such procedures exist, shall be used.

Section II.

Energy generated from renewable sources.

Article 23. Access to and operation of the grid

1. The transmission system operators and distribution system operators shall guarantee the transmission and distribution of electricity produced from renewable sources on transparent and non-discriminatory criteria and based on tariffs approved and published by the [NEURC]. The producers generating electricity from renewable sources shall have the guaranteed access to the electrical network. The Transmission System Operators and the Distribution System Operators guarantee the access, transmission and distribution of electricity produced from renewable sources in accordance with this Law and the Law of Ukraine “On Electricity Market”.
2. Transmission and distribution system operators take the appropriate steps to develop the transmission and distribution grid infrastructure, intelligent networks, storage facilities and the electricity system, in order to allow the secure operation of the electricity system as it accommodates the further development of electricity production from renewable energy sources, including interconnections with the neighbouring countries in accordance with the national renewable energy action plan.
3. The transmission and distribution system operators shall provide any new producer of energy from renewable sources wishing to be connected to the system with the comprehensive and necessary information required, including:
 - 1) a comprehensive and detailed estimate of the costs associated with the connection;
 - 2) a reasonable and precise timetable for receiving and processing the request for grid connection;
 - 3) a reasonable indicative timetable for any proposed grid connection.
4. When adopting the methodology for determining the transmission and distribution tariffs, the NEURC shall not discriminate against electricity from renewable energy sources, including in particular electricity from renewable energy sources produced in peripheral regions as in regions of low population density. NEURC shall take measure to not discriminate against the transmission and distribution of gas produced from renewable energy sources.
5. The tariff charged by transmission system operators and distribution system operators for the transmission and distribution of electricity from plants using renewable energy sources reflect realisable cost benefit resulting from the plant’s connection to the network. Such cost benefits could arise from direct use of the low – voltage grid.
6. The assessment shall be provided by the [SAEE and NEURC, the MRD] on the necessity to build new infrastructure for the district heating and cooling produced from renewable energy sources in order to achieve the 2020 national target referred to in Article 5 (d).

Article 24. Use of biofuels and bioliquids

1. Energy from biofuels and bioliquids shall be taken into account for the purposes of :

- 1) measuring compliance with the national target
- 2) measuring compliance with renewable energy obligations undertaken by Ukraine under the international agreements
- 3) eligibility for financial support for the consumption of biofuels and bioliquids

only if it complies with the sustainability criteria.

2. Sustainability criteria for biofuels and bioliquids shall be regulated under the Decree of CMU “On approving the list of sustainability criteria for liquid biofuels and biogas for use in transport”.
3. The verification of compliance with the sustainability criteria for biofuels and bioliquids shall be provided with accordance to the Decree of CMU “On approval of conformity of liquid fuels from biomass and biogas for use in transport, sustainability criteria”.

Article 25. Guarantees of origin

1. For the purpose of proving to final customers the share or quantity of energy from renewable sources in an energy supplier’s mix, the origin of electricity produced from renewable energy sources shall be guaranteed as such in accordance with objective, transparent and non – discriminatory criteria.
2. A guarantee of origin is issued in response to a request from a producer of electricity from renewable sources and a producer of heating and cooling from renewable sources.
3. A guarantee of origin is in the standard size of 1 MWh. No more than one guarantee of origin shall be issued in respect of each unit of energy produced.
4. The issuance, use and cancellation of guarantees guarantee of origin of electricity and heat from renewable energy sources shall be regulated by this law and the applicable laws of Ukraine.
5. A guarantee of origin shall specify at least:
 - 1) the energy source from which the energy was produced and the start and end dates of production;
 - 2) whether it relates to:
 - a) electricity; or
 - b) heating and cooling;
 - 3) the identity, location, type and capacity of the installation where the energy was produced;
 - 4) whether and to what extent the installation has benefited from investment support, whether and to what extent the unit of energy has benefited in any other way from a national support scheme, and type of support scheme;
 - 5) the date on which the installation became operational; and

- 6) the date and country of issue and unique identification number.
- 7) *SAEE* shall put in place a reliable, accurate and fraud-resistant system for the issuance, transfer and cancellation of guarantees of origin, and it shall ensure that the same unit of electricity from renewable energy sources is taken into account only once. Every year *SAEE* shall publish a monitoring report on the utilisation of guarantees of origin.
- 8) The guarantees of origin shall be issued based on comprehensive data and adequate information to certify the origin of electricity supplied by the producer as well as measurement data certified by the transmission or distribution network operator. Guarantees of origin shall only be issued if the producer provides all information required in paragraph (5) of this Article 25.
- 9) No support shall be granted to a producer when that producer receives a guarantee of origin for the same production of energy from renewable sources.
- 10) Transfers of guarantees of origin, separately or together with the physical transfer of energy, shall have no effect on the decision to use statistical transfers, joint projects or joint support schemes for target compliance or on the calculation of the gross final consumption of energy from renewable sources in accordance with Article 9.
- 11) Any use of a guarantee of origin shall take place within 12 months of production of the corresponding energy unit. A guarantee of origin shall be cancelled once it has been used.
- 12) A Guarantee of Origin for electricity generated from renewable energy sources issued by an EU Member State or any country which is a Contracting Party to the Energy Community Treaty, shall also be recognized in Ukraine.
- 13) *SAEE* shall work closely with all authorities that issue guarantees of origin in EU Member States, and with any country, which is a Contracting Party to the Energy Community Treaty, in order to disclose to end consumers the share of energy generated from renewable sources in total energy supplied.
- 14) *SAEE* may refuse to recognise a guarantee of origin only when it has well-founded doubts about its accuracy, reliability or veracity. *SAEE* shall notify the Energy Community Secretariat of such a refusal and its justification.
- 15) 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 *SAEE* to recognise it.

CHAPER V. INTERNATIONAL COOPERATION

Article 26. Cooperation mechanisms

1. For the purpose of achieving the targets, Ukraine may enter into cooperation with Contracting Parties of the Energy Community. These cooperation mechanisms may take the form of statistical transfer, joint support schemes or joint projects.
2. The SAEE may propose to the CMU arrangements for the statistical transfer of a specified amount of energy from renewable sources to another Contracting Party to the Energy Community or/and to the Member of the European Union.

- 1) In case of a statistical transfer between Ukraine and the Contracting Party the statistical transfer shall:
 - a) not affect the achievement of national target;
 - b) shall have a duration of 1 or more years.

The transferred quantity shall:

- a) be deducted from the amount of energy renewable sources that is taken into account in measuring compliance of Ukraine with the requirements of para 5 and 6 of Article 5 of this Law while making the transfer.
- b) Be added to the amount of energy renewable sources that is taken into account in measuring compliance of Ukraine with the requirements of para 5 and 6 of Article 5 of this Law while accepting the transfer.
- c) The statistical transfer shall be notified to the Energy Community Secretariat no later than three months after the end of each year in which they have effect and shall include quantity and price of the energy involved.

The transfer is considered to be effective only after the notification made to the Energy Community secretariat.

- 2) In case of the statistical transfers between Ukraine and the Member State of the European Union , such transfer shall be subject to the following requirements:
 - a) SAEE shall arrange a motivated request to Ministerial Council of the Energy Community on statistical transfers of a specified amount of energy from renewable sources to the member State of the European Union. The Ministerial Council shall ask the Secretariat for an opinion on the request.
 - b) The transferred quantity shall be deducted from the amount of energy from renewable sources that is taken into account in measuring compliance of Ukraine with the para 5 and 6 Article 5 of this Law.
 - c) A statistical transfer shall not affect the achievement of the national target of Ukraine in making the transfer.
 - d) The statistical transfer shall have the duration of 1 or more years;
 - e) The statistical transfer shall be notified to the Energy Community Secretariat no later than three months after the end of each year in which they have effect and shall include quantity and price of the energy involved.
 - f) The transfer is considered to be effective only after the notification made to the Energy Community secretariat.
3. The statistical transfers from Contracting Parties to Member States of European Union shall be subjects to an external audit on a biennial basis of which the results shall be sent to the

Energy Community Secretariat. Where the result of the audit shows that the conditions laid down in this Article were not met, the involved transfers will be annulled.

4. [Ministry of regional development/ SAEE] shall arrange for the independent audit referred to in para 3. The auditor shall to be accredited by a member of the International Accreditation Body and shall have implemented relevant international standards to ensure its competence.
5. Ukraine may cooperate with other Contracting Parties to the Energy Community on all types of joint projects relating to the production of electricity, heating or cooling from renewable energy sources.
6. Ukraine together with another Contracting Party shall notify the Energy Community Secretariat of the proportion or amount of electricity, heating or cooling from renewable energy sources produced by any joint projects of its territory which is to be regarded as counting towards the national overall target of another Contracting Party for the purposes of measuring compliance with the requirements of this Law.
 - 1) The notification 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 national overall target of another Contracting Party;
 - c) Identify the Contracting Party in whose the notification is being made;
 - d) Specify the period, in whole calendars years, during which the electricity or heating or cooling produced by the installation from renewable sources is to be regarded as counting towards the national overall target of the other Contracting Party.
7. The period specified in para 6 (d) shall not extend beyond 2020. The joint project may extend beyond 2020.
8. A notification under para 6 shall not be varied or withdrawn without the joint agreement of Ukraine and the other Contracting Party.
9. Ukraine with one of the EU Member States may decide , on a voluntary basis, to join or partly coordinate their national support schemes. In such cases, a certain amount of energy from renewable sources produced in the territory of Ukraine may count towards the national overall target of a Member State(s) if the involved Parties concerned:
 - (a) make a statistical transfer of specified amounts of energy from renewable sources from one Party to another Party in accordance with para 2 of this Article; or
 - (b) set up a distribution rule agreed by Ukraine and Member State that allocates amounts of energy from renewable sources between the participating Parties. [SAEE/ Ministry or RD] shall notify on such a rule to the Energy Community Secretariat no later than three months after the end of the first year in which it takes effect.

10. [SAEE, Ministry of DR] shall provide a motivated request, which shall include the information referred in Article 21 para 6 of this Law to the Ministerial Council which may decide that Ukraine may agree on a joint support scheme with a Member State of the European Union. The Ministerial Council shall ask the Secretariat for an opinion on the request.
10. Within three months of the end of each year Ukraine having made a notification under paragraph 9(b) shall issue a letter of notification stating the total amount of electricity or heating or cooling from renewable energy sources produced during the year, which is to be the subject of the distribution rule.
11. For the purposes of measuring compliance with the national overall targets, the amount of electricity or heating or cooling from renewable energy sources notified in accordance with paragraph 10 shall be reallocated between Ukraine and Member State(s) in accordance with the notified distribution rule.
12. The provisions in this Article are without prejudice to more stringent requirement agreed by the parties coordinating their national support schemes.
13. [Ministry of regional development/ SAEE] shall arrange for an external audit on a biennial basis of which the results shall be sent to the Energy Community Secretariat. The auditor shall to be accredited by a member of the International Accreditation Body and shall have implemented relevant international standards to ensure its competence. Where the result of the audit shows that the conditions laid down in this Decision for applying the cooperation mechanisms were not met, the involved transfers will be annulled.

Article 27. International cooperation

1. [MRD/SAEE] shall be responsible for the cooperation with responsible authorities of other states parties of the Energy Community with a view to achieving the national targets. Beside the cooperation mechanism indicated under Article 26, the international cooperation may include:
 - 1) Participation in international seminars, symposia and conference in the field;
 - 2) The harmonization of the energy efficiency indicators established national standards with those set out in European standards;
 - 3) The mutual recognition of certification systems and equipment using renewable energy sources in the energy efficient indicators;

Article 28. Reporting to the Energy Community Secretariat

1. [SAEE] shall submit a report to the Secretariat on progress in the promotion and use of energy from renewable sources by 31 December 2018 and every two years afterwards.

The report shall detail, in particular:

- (a) the sectoral (electricity, heating and cooling, and transport) and overall shares of energy from renewable sources in the preceding two calendar years and the measures taken or planned at national level to promote the growth of energy from renewable sources;
- (b) the introduction and functioning of support schemes and other measures to promote energy from renewable sources, and any developments in the measures used with respect to those set out in the national renewable energy action plan, and information on how supported electricity is allocated to final customers;
- (c) how, where applicable, Ukraine has structured its support schemes to take into account renewable energy applications that give additional benefits in relation to other, comparable applications, but may also have higher costs, including biofuels made from wastes, residues, non-food cellulosic material, and lingo – cellulosic material;
- (d) the functioning of the system of guarantees of origin for electricity and heating and cooling from renewable energy sources and the measures taken to ensure the reliability and protection against fraud of the system;
- (e) progress made in evaluating and improving administrative procedures to remove regulatory and non – regulatory barriers to the development of energy from renewable sources;
- (f) measures taken to ensure the transmission and distribution of electricity produced from renewable energy sources, and to improve the framework or rules for bearing and sharing of costs of technical adaptations, such as grid connections and grid reinforcements;
- (g) developments in the availability and use of biomass resources for energy purposes;
- (h) changes in commodity prices and land use associated with its increased use of biomass and other forms of energy from renewable sources;
- (i) the development and share of biofuels made from wastes, residues, non-food cellulosic material, and lingo – cellulosic material;
- (j) the estimated impact of the production of biofuels and bioliquids on biodiversity, water resources, water quality and soil quality;
- (k) the estimated net greenhouse gas emission saving due to the use of energy from renewable sources;
- (l) the estimated excess production of energy from renewable sources compared to the indicative trajectory which could be transferred to other Contracting Parties to the Energy Community, as well as the estimated potential for joint projects until 2020;
- (m) the estimated demand for energy from renewable sources to be satisfied by means other than domestic production until 2020;

- (n) 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.

Section VI FINAL AND TRANSITIONAL PROVISIONS

1. This Law shall be applied to all new energy producers wishing to be granted support to develop generating installation to produce energy from renewable sources which have acquired the status as of 1 January 2019. The existing producers, which received support under the Law of Ukraine “On Electricity Market”, will continue to be governed by the Law “On Electricity Market” until the expiry of the application of the green tariffs but not later than 1 January 2030.
2. The following legislative act shall be repealed:
Law of Ukraine “On Alternative Energy Sources” (The Bulletin of Verkhovna Rada, 2003, N 24, page 155);
3. The following legislative acts of Ukraine shall be amended to read as follows:
 - 1) in the Law of Ukraine “On Alternative Fuels” (The Bulletin of Verkhovna Rada, 2000, N 12, page 94) in Article 1:

to be supplemented with paragraphs 6, 8 – 13, 17 to read as follows:

‘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;

‘biofuel’ means liquid or gaseous fuel for transport produced from biomass (including bio ethanol, bio butanol, bio diesel fuel, synthetic bio fuels, solid bio fuel);

‘biogas’ means gas received from biomass, which is used as a fuel (including bio hydrogen ;

‘bioliquids’ means liquid fuel for energy purposes other than for transport, including electricity and heating and cooling, produced from biomass;

4. Within six months from the date of entry into force of this Law, ensure the adoption of the Draft Decree of the Cabinet of Ministers of Ukraine “On approving the list of sustainability criteria for liquid biofuels and biogas for use in transport” and “On approval of conformity of liquid fuels from biomass and biogas for use in transport, sustainability criteria”.
5. Within six months from the date of entry into force of this Law, institutions in charge shall adopt normative legal acts, rules and regulation envisaged by this Law;

Annex I

1. The overall target of share of energy from renewable energy sources in gross final energy consumption is 11% in 2020.

a) The indicative trajectory described in the Article 5 is below:

Share of renewable energy in Ukraine in 2009	Average for 2011-2012	Average for 2013-2014	Average for 2015-2016	Average for 2017-2018	Renewable energy target of Ukraine in 2020
5,5%	6,6%	7,2%	8,0%	9,1%	11%

2. The overall target of the share of energy from renewable sources in all forms of transport is as least 10 % in 2020.

Annex II

Energy content of transport fuels

Fuel	Energy content by weight (lower calorific value, MJ/kg)	Energy content by volume (lower calorific value, MJ/l)
Bioethanol (ethanol produced from biomass)	27	21
Bio-ETBE (ethyl-tertio-butyl-ether produced on the basis of bioethanol)	36 (of which 37 % from renewable sources)	27 (of which 37 % from renewable sources)
Biomethanol (methanol produced from biomass, to be used as biofuel)	20	16
Bio-MTBE (methyl-tertio-butyl-ether produced on the basis of bio-methanol)	35 (of which 22 % from renewable sources)	26 (of which 22 % from renewable sources)
Bio-DME (dimethylether produced from biomass, to be used as biofuel)	28	19
Bio-TAEE (tertiary-amyl-ethyl-ether produced on the basis of bioethanol)	38 (of which 29 % from renewable sources)	29 (of which 29 % from renewable sources)
Biobutanol (butanol produced from biomass, to be used as biofuel)	33	27
Biodiesel (methyl-ester produced from vegetable or animal oil, of diesel quality, to be used as biofuel)	37	33
Fischer-Tropsch diesel (a synthetic hydrocarbon or mixture of synthetic hydrocarbons produced from biomass)	44	34
Hydrotreated vegetable oil (vegetable oil thermochemically treated with hydrogen)	44	34
Pure vegetable oil (oil produced from oil plants through pressing, extraction or comparable procedures, crude or refined but chemically	37	34

unmodified, when compatible with the type of engines involved and the corresponding emission requirements)		
Biogas (a fuel gas produced from biomass and/or from the biodegradable fraction of waste, that can be purified to natural gas quality, to be used as biofuel, or wood gas)	50	34
Petrol	43	32
Diesel	43	36