DIRECTIVE 2012/27/EU of 25 October 2012 on energy efficiency, as amended by Directive (EU) 2018/2002

Incorporated and adapted by the Ministerial Council Decision 2021/14/MC-EnC on amending Article 20 and Annex I to the Treaty establishing the Energy Community and incorporating Directive (EU) 2018/2001, Directive (EU) 2018/2002, Regulation (EU) 2018/1999, Delegated Regulation (EU) 2020/1044, and Implementing Regulation (EU) 2020/1208 in the Energy Community acquis communautaire.

The adaptations made by Ministerial Council Decision 2021/14/MC-EnC are highlighted in **bold and blue**.

CHAPTER I

SUBJECT MATTER, SCOPE, DEFINITIONS AND ENERGY EFFICIENCY TARGETS

Article 1

Subject matter and scope[1]

1. **This Directive establishes a common framework of measures to promote energy efficiency within the Energy Community, in order to ensure that the Energy Community 2020 headline target for energy efficiency and the Energy Community 2030 headline target for energy efficiency, as defined in Articles 2(1bis) and 2(1tris) are met.**

The Directive lays down rules designed to remove barriers in the energy market and overcome market failures that impede efficiency in the supply and use of energy, and provides for the establishment of indicative national energy efficiency targets and contributions for 2020 and 2030.

This Directive contributes to the implementation of the "energy efficiency first principle".

2. The requirements laid down in this Directive are minimum requirements and shall not prevent any **Contracting Party** from maintaining or introducing more stringent measures. Such measures shall be compatible with **Energy Community** law. Where national legislation provides for more stringent measures, the **Contracting Party** shall notify such legislation to the **Energy Community Secretariat.**

Article 2

Definitions

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

(1) 'energy' means all forms of energy products, combustible fuels, heat, renewable energy, electric-

1 The text displayed here corresponds to Article 5(1) of Ministerial Council Decision 2021/14/MC-EnC

ity, or any other form of energy, as defined in Article 2(d) of Regulation (EC) No 1099/2008 of the European Parliament and of the Council of 22 October 2008 on energy statistics, **as adapted and adopted by Ministerial Council Decision 2012/02/MC-EnC;**

(1bis) 'the **Energy Community** 2020 headline target for energy efficiency´ means the target for reduction of primary and/or final energy consumption of the **Contracting Parties** by 2020, in the terms to be adopted by the Ministerial Council, as appropriate, on the basis of the study(ies) carried out to this effect.

(1tris) 'the **Energy Community** 2030 headline target for energy efficiency´ means a target for reduction of primary and/or final energy consumption of the **Contracting Parties** by 2030, in the terms to be adopted by the Ministerial Council, as appropriate, on the basis of the study (ies) carried out to this effect.

(1cis) ´Energy Community's energy consumption´ means the energy consumption of the **Contracting Parties.**

(2) 'primary energy consumption' means gross inland consumption, excluding non-energy uses;

(3) 'final energy consumption' means all energy supplied to industry, transport, households, services and agriculture. It excludes deliveries to the energy transformation sector and the energy industries themselves;

(4) 'energy efficiency' means the ratio of output of performance, service, goods or energy, to input of energy;

(5) 'energy savings' means an amount of saved energy determined by measuring and/or estimating consumption before and after implementation of an energy efficiency improvement measure, whilst ensuring normalisation for external conditions that affect energy consumption;

(6) 'energy efficiency improvement' means an increase in energy efficiency as a result of technological, behavioural and/or economic changes;

(7) 'energy service' means the physical benefit, utility or good derived from a combination of energy with energy-efficient technology or with action, which may include the operations, maintenance and control necessary to deliver the service, which is delivered on the basis of a contract and in normal circumstances has proven to result in verifiable and measurable or estimable energy efficiency improvement or primary energy savings;

(8) 'public bodies' means 'contracting authorities' as defined in Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts;

(9) 'central government' means all administrative departments whose competence extends over the whole territory of a **Contracting Party;**

(10) 'total useful floor area' means the floor area of a building or part of a building, where energy is used to condition the indoor climate;

(11) 'energy management system' means a set of interrelated or interacting elements of a plan which sets an energy efficiency objective and a strategy to achieve that objective;

(12) 'European standard' means a standard adopted by the European Committee for Standardisation, the European Committee for Electrotechnical Standardisation or the European Telecommunications

Standards Institute and made available for public use;

(13) 'international standard' means a standard adopted by the International Standardisation Organisation and made available to the public;

(14) 'obligated party' means an energy distributor or retail energy sales company that is bound by the national energy efficiency obligation schemes referred to in Article 7;

(15) 'entrusted party' means a legal entity with delegated power from a government or other public body to develop, manage or operate a financing scheme on behalf of the government or other public body;

(16) 'participating party' means an enterprise or public body that has committed itself to reaching certain objectives under a voluntary agreement, or is covered by a national regulatory policy instrument;

(17) 'implementing public authority' means a body governed by public law which is responsible for the carrying out or monitoring of energy or carbon taxation, financial schemes and instruments, fiscal incentives, standards and norms, energy labelling schemes, training or education;

(18) 'policy measure' means a regulatory, financial, fiscal, voluntary or information provision instrument formally established and implemented in a **Contracting Party** to create a supportive framework, requirement or incentive for market actors to provide and purchase energy services and to undertake other energy efficiency improvement measures;

(19) 'individual action' means an action that leads to verifiable, and measurable or estimable, energy efficiency improvements and is undertaken as a result of a policy measure;

(20) 'energy distributor' means a natural or legal person, including a distribution system operator, responsible for transporting energy with a view to its delivery to final customers or to distribution stations that sell energy to final customers;

(21) **'distribution system operator' means 'distribution system operator' as defined in Directive (EU) 2019/944, as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC and Directive 2009/73/EC, as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**;

(22) 'retail energy sales company' means a natural or legal person who sells energy to final customers;

(23) 'final customer' means a natural or legal person who purchases energy for own end use;

(24) 'energy service provider' means a natural or legal person who delivers energy services or other energy efficiency improvement measures in a final customer's facility or premises;

(25) 'energy audit' means a systematic procedure with the purpose of obtaining adequate knowledge of the existing energy consumption profile of a building or group of buildings, an industrial or commercial operation or installation or a private or public service, identifying and quantifying cost-effective energy savings opportunities, and reporting the findings;

(26) 'small and medium-sized enterprises' or 'SMEs' means enterprises as defined in Title I of the Annex to Commission Recommendation 2003/361/EC of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises; the category of micro, small and medium-sized enterprises is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million;

(27) 'energy performance contracting' means a contractual arrangement between the beneficiary

and the provider of an energy efficiency improvement measure, verified and monitored during the whole term of the contract, where investments (work, supply or service) in that measure are paid for in relation to a contractually agreed level of energy efficiency improvement or other agreed energy performance criterion, such as financial savings;

(28) 'smart metering system' or 'intelligent metering system' means an electronic system that can measure energy consumption, providing more information than a conventional meter, and can transmit and receive data using a form of electronic communication;

(29) '**transmission system operator' means 'transmission system operator' as defined in Directive (EU) 2019/944, as adapted and adopted by Ministerial Council Decision 2021/13/MC-EnC and Directive 2009/73/EC, as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC;**

(30) 'cogeneration' means the simultaneous generation in one process of thermal energy and electrical or mechanical energy;

(31) 'economically justifiable demand' means demand that does not exceed the needs for heating or cooling and which would otherwise be satisfied at market conditions by energy generation processes other than cogeneration;

(32) 'useful heat' means heat produced in a cogeneration process to satisfy economically justifiable demand for heating or cooling;

(33) 'electricity from cogeneration' means electricity generated in a process linked to the production of useful heat and calculated in accordance with the methodology laid down in Annex I;

(34) 'high-efficiency cogeneration' means cogeneration meeting the criteria laid down in Annex II;

(35) 'overall efficiency' means the annual sum of electricity and mechanical energy production and useful heat output divided by the fuel input used for heat produced in a cogeneration process and gross electricity and mechanical energy production;

(36) 'power-to-heat ratio' means the ratio of electricity from cogeneration to useful heat when operating in full cogeneration mode using operational data of the specific unit;

(37) 'cogeneration unit' means a unit that is able to operate in cogeneration mode;

(38) 'small-scale cogeneration unit' means a cogeneration unit with installed capacity below 1 MW_e;

(39) 'micro-cogeneration unit' means a cogeneration unit with a maximum capacity below 50 kW_e;

(40) 'plot ratio' means the ratio of the building floor area to the land area in a given territory;

(41) 'efficient district heating and cooling' means a district heating or cooling system using at least 50 % renewable energy, 50 % waste heat, 75 % cogenerated heat or 50 % of a combination of such energy and heat;

(42) 'efficient heating and cooling' means a heating and cooling option that, compared to a baseline scenario reflecting a business-as-usual situation, measurably reduces the input of primary energy needed to supply one unit of delivered energy within a relevant system boundary in a cost-effective way, as assessed in the cost-benefit analysis referred to in this Directive, taking into account the energy required for extraction, conversion, transport and distribution;

(43) 'efficient individual heating and cooling' means an individual heating and cooling supply option that, compared to efficient district heating and cooling, measurably reduces the input of non-renew-

able primary energy needed to supply one unit of delivered energy within a relevant system boundary or requires the same input of non-renewable primary energy but at a lower cost, taking into account the energy required for extraction, conversion, transport and distribution;

(44) 'substantial refurbishment' means a refurbishment whose cost exceeds 50 % of the investment cost for a new comparable unit;

(45) 'aggregator' means a demand service provider that combines multiple short-duration consumer loads for sale or auction in organised energy markets.

Article 3

Energy efficiency targets[2]

1. Each **Contracting Party** shall set an indicative national energy efficiency target for 2020, based on **either primary or final energy consumption, primary or final energy savings, or energy intensity. Contracting Parties** shall notify those targets to the **Energy Community Secretariat** in accordance with Article 24(1) and Annex XIV Part 1. When doing so, they shall also express those targets in terms of an absolute level of primary energy consumption and final energy consumption in 2020 and shall explain how, and on the basis of which data, this has been calculated.

When setting those targets, **Contracting Parties** shall take into account:

(a) the **Energy Community's** energy consumption in 2020 ;

(b) the measures provided for in this Directive;

(c) the measures adopted to reach the national energy saving targets adopted pursuant to Article 4(1) of Directive 2006/32/EC, **as adapted and adopted by Ministerial Council Decision 2009/05/MC-EnC;** and

(d) other measures to promote energy efficiency within **Contracting Parties**, and at the **Energy Community** level.

When setting those targets, **Contracting Parties** may also take into account national circumstances affecting primary energy consumption, such as:

(a) remaining cost-effective energy-saving potential;

(b) GDP evolution and forecast;

(c) changes of energy imports and exports;

(d) development of all sources of renewable energies, nuclear energy, carbon capture and storage; and

(e) early action.

2. **By 30 June 2018, the Energy Community Secretariat shall assess progress achieved and whether the Energy Community is likely to achieve the Energy Community´s energy consumption in 2020** as per decision of the Ministerial Council on the basis of the study(ies) carried out to this effect.

3. In carrying out the review referred to in paragraph 2, the **Energy Community Secretariat** shall:

(a) sum the national indicative energy efficiency targets reported by **Contracting Parties;**

2 The text displayed here corresponds to Article 5(2) of Ministerial Council Decision 2021/14/MC-EnC

(b) assess whether the sum of those targets can be considered a reliable guide to whether the **Energy Community** as a whole is on track, taking into account the evaluation of the first annual report in accordance with Article 24(1), and the evaluation of the National Energy Efficiency Action Plans in accordance with Article 24(2);

(c) take into account complementary analysis arising from:

(i) an assessment of progress in energy consumption, and in energy consumption in relation to economic activity, at **Energy Community** level, including progress in the efficiency of energy supply in **Contracting Parties** that have based their national indicative targets on final energy consumption or final energy savings, including progress due to these **Contracting Parties'** compliance with Chapter III of this Directive;

(ii) results from modelling exercises in relation to future trends in energy consumption at **Energy Community** level;

(d) compare the results under points (a) to (c) with the Energy Community´s energy consumption of no more than 187 Mtoe of primary energy and/or no more than 133 Mtoe of final energy in 2020.

4. **By 31 October 2022, the Secretariat shall assess whether the Energy Community has achieved its 2020 headline targets on energy efficiency.**

5. **Each Contracting Party shall set indicative national energy efficiency contributions towards the Energy Community 2030 headline target for energy efficiency set in Article 1(1) of this Directive in accordance with Articles 4 and 6 of Regulation (EU) 2018/1999, as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC. When setting those contributions, Contracting Parties shall take into account the Energy Community's energy consumption in 2030 in primary energy and/or final energy as decided by the Ministerial Council on the basis of the relevant study(ies) to this effect. Those contributions shall not be higher than the national benchmarks included in Annex XX to this Directive following decision by the Ministerial Council on the basis of the relevant study(ies) to this effect. The Contracting Parties shall notify those contributions to the Energy Community Secretariat as part of their integrated national energy and climate plans as referred to in, and in accordance with, Articles 3 and 7 to 12 of Regulation (EU) 2018/1999, as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC.**

6. <…>[3]

3 Not applicable according to Article 5(2) of Ministerial Council Decision 2021/14/MC-EnC

CHAPTER II

EFFICIENCY IN ENERGY USE

Article 4

Building renovation

<...>[4]

Article 5

Exemplary role of public bodies' buildings[5]

1. Without prejudice to Article 7 of Directive 2010/31/EU**, as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC**, each **Contracting Party** shall ensure that, as from 1 December 2017, 1 %, and **from 1 January 2024 on, 3 %** of the total floor area of heated and/or cooled buildings owned and occupied by its central government is renovated each year to meet at least the minimum energy performance requirements that it has set in application of Article 4 of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC.** The 1 % rate shall be calculated on the total floor area of buildings with a total useful floor area over 500 m^2 owned and occupied by the central government of the Contracting Party concerned that, on 1 January of each year, do not meet the national minimum energy performance requirements set in application of Article 4 of Directive 2010/31/EU**, as adapted and adopted by the Ministerial Council Decision 2010/02/MC-EnC.** That threshold shall be lowered to 250 m^2 as of **1 January 2019.**

From 1 January 2024 on, the rate of 3 % shall be calculated on the total floor area of buildings with a total useful floor area over 250 m2 owned and occupied by the central government of the Contracting Party concerned that, on 1 January of each year, do not meet the national minimum energy performance requirements set in application of Article 4 of Directive 2010/31/EU, as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC.

Where a **Contracting Party** requires that the obligation to renovate each year 1 % of the total floor area extends to floor area owned and occupied by administrative departments at a level below central government, the 1 %, and **respectively 3 %** rate shall be calculated on the total floor area of buildings with a total useful floor area over 500m^2 and, as of **1 January 2019, respectively as of 1 January 2024**, over 250 m^2 owned and occupied by central government and by these administrative departments of the **Contracting Party** concerned that, on 1 January of each year, do not meet the national minimum energy performance requirements set in application of Article 4 of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC.**

When implementing measures for the comprehensive renovation of central government buildings in accordance with the first subparagraph, **Contracting Parties** may choose to consider the building as a whole, including the building envelope, equipment, operation and maintenance.

4 Not applicable according to Article 6(53) of Ministerial Council Decision 2021/14/MC-EnC
5 The text displayed here corresponds to Article 5(16) of Ministerial Council Decision 2021/14/MC-EnC

Contracting Parties shall require that central government buildings with the poorest energy performance be a priority for energy efficiency measures, where cost-effective and technically feasible.

2. **Contracting Parties** may decide not to set or apply the requirements referred to in paragraph 1 to the following categories of buildings:

(a) buildings officially protected as part of a designated environment, or because of their special architectural or historical merit, in so far as compliance with certain minimum energy performance requirements would unacceptably alter their character or appearance;

(b) buildings owned by the armed forces or central government and serving national defence purposes, apart from single living quarters or office buildings for the armed forces and other staff employed by national defence authorities;

(c) buildings used as places of worship and for religious activities.

3. If a **Contracting Party** renovates more than **1 % from 1 December 2017, and respectively 3 % as of 1 January 2024,** of the total floor area of central government buildings in a given year, it may count the excess towards the annual renovation rate of any of the three previous or following years.

4. **Contracting Parties** may count towards the annual renovation rate of central government buildings new buildings occupied and owned as replacements for specific central government buildings demolished in any of the two previous years, or buildings that have been sold, demolished or taken out of use in any of the two previous years due to more intensive use of other buildings.

5. For the purposes of paragraph 1, by **1 January 2017, Contracting Parties** shall establish and make publicly available an inventory of heated and/or cooled central government buildings with a total useful floor area over 500 m^2 and, as of **1 January 2019**, over 250 m^2, excluding buildings exempted on the basis of paragraph 2. The inventory shall contain the following data:

(a) the floor area in m^2; and

(b) the energy performance of each building or relevant energy data.

6. Without prejudice to Article 7 of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC, Contracting Parties** may opt for an alternative approach to paragraphs 1 to 5 of this Article, whereby they take other cost-effective measures, including deep renovations and measures for behavioural change of occupants, to achieve, by 2020, **respectively by 2030**, an amount of energy savings in eligible buildings owned and occupied by their central government that is at least equivalent to that required in paragraph 1, reported on an annual basis.

For the purpose of the alternative approach, **Contracting Parties** may estimate the energy savings that paragraphs 1 to 4 would generate by using appropriate standard values for the energy consumption of reference central government buildings before and after renovation and according to estimates of the surface of their stock. The categories of reference central government buildings shall be representative of the stock of such buildings.

Contracting Parties opting for the alternative approach shall notify to the **Energy Community Secretariat,** by 1 January 2017, **respectively 1 January 2024** the alternative measures that they plan to adopt, showing how they would achieve an equivalent improvement in the energy performance of the buildings within the central government estate.

7. **Contracting Parties** shall encourage public bodies, including at regional and local level, and social housing bodies governed by public law, with due regard for their respective competences and

administrative set-up, to:

(a) adopt an energy efficiency plan, freestanding or as part of a broader climate or environmental plan, containing specific energy saving and efficiency objectives and actions, with a view to following the exemplary role of central government buildings laid down in paragraphs 1, 5 and 6;

(b) put in place an energy management system, including energy audits, as part of the implementation of their plan;

(c) use, where appropriate, energy service companies, and energy performance contracting to finance renovations and implement plans to maintain or improve energy efficiency in the long term.

Article 6

Purchasing by public bodies

1. **Contracting Parties** shall ensure that central governments purchase only products, services and buildings with high energy-efficiency performance, insofar as that is consistent with cost-effectiveness, economical feasibility, wider sustainability, technical suitability, as well as sufficient competition, as referred to in Annex III.

The obligation set out in the first subparagraph shall apply to contracts for the purchase of products, services and buildings by public bodies in so far as such contracts have a value equal to or greater than the thresholds laid in each Contracting Party's national legislation. Each Contracting Party shall submit its national thresholds to the Energy Community Secretariat, by 15 October 2017.[6]

2. The obligation referred to in paragraph 1 shall apply to the contracts of the armed forces only to the extent that its application does not cause any conflict with the nature and primary aim of the activities of the armed forces.

3. **Contracting Parties** shall encourage public bodies, including at regional and local levels, with due regard to their respective competences and administrative set-up, to follow the exemplary role of their central governments to purchase only products, services and buildings with high energy-efficiency performance. **Contracting Parties** shall encourage public bodies, when tendering service contracts with significant energy content, to assess the possibility of concluding long- term energy performance contracts that provide long-term energy savings.

4. Without prejudice to paragraph 1, when purchasing a product package covered as a whole by a delegated act adopted under Directive 2010/30/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC, Contracting Parties** may require that the aggregate energy efficiency shall take priority over the energy efficiency of individual products within that package, by purchasing the product package that complies with the criterion of belonging to the highest energy efficiency class.

6 The text displayed here corresponds to Article 3(10) of Ministerial Council Decision 2015/08/MC-EnC

Article 7

Energy savings obligation[7]

1. Contracting Parties shall achieve cumulative end-use energy savings at least equivalent to:

(a) new savings each year from 1 January 2014 to 31 December 2020 of 0.7 % of annual energy sales to final customers by volume, averaged over the most recent three-year period prior to 1 January 2016. Sales of energy, by volume, used in transport may be excluded, in whole or in part, from that calculation;

(b) new savings each year from 1 January 2024 to 31 December 2030 of 0.8 % of annual final energy consumption, averaged over the most recent three-year period prior to 1 January 2022.

Contracting Parties may request that this rate for energy savings is evaluated annually for a possible revision by the Energy Community Ministerial Council based on the economic analysis provided by the ongoing studies carried out to this effect.

Contracting Parties may count energy savings that stem from policy measures, whether introduced by 31 December 2020 or after that date, provided that those measures result in new individual actions that are carried out after 31 December 2020.

Contracting Parties shall continue to achieve new annual savings in accordance with point (b) of the first subparagraph for ten-year periods after 2030.

Contracting Parties shall decide how to phase the calculated quantity of new savings over each period referred to in points (a) and (b) of the first subparagraph, provided that the required total cumulative end-use energy savings have been achieved by the end of each obligation period.

2. Provided that Contracting Parties achieve at least their cumulative end-use energy savings obligation referred to in point (b) of the first subparagraph of paragraph 1, they may calculate the required amount of energy savings by one or more of the following means:

(a) applying an annual savings rate on energy sales to final customers or on final energy consumption, averaged over the most recent three-year period prior to 1 January 2022;

(b) excluding, in whole or in part, energy used in transport from the calculation baseline;

(c) making use of any of the options set out in paragraph 4.

3. Where Contracting Parties make use of the possibilities provided for in point (a), (b) or (c) of paragraph 2, they shall establish:

(a) their own annual savings rate that will be applied in the calculation of their cumulative end-use energy savings, which shall ensure that the final amount of their net energy savings is no lower than those required under point (b) of the first subparagraph of paragraph 1; and

(b) Energy savings which can be measured and verified, granted after 2024, resulting from implementation of new policy measures and individual actions after 31 December 2020 and which have effects in 2024 and beyond, can be included in the advised cumulative energy savings for the period referred to in point (6) of the first paragraph for the Contracting

7 The text displayed here corresponds to Article 5(3) of Ministerial Council Decision 2021/14/MC-EnC

Parties.

(c) their own calculation baseline, which may exclude, in whole or in part, energy used in transport.

4. Subject to paragraph 5, each Contracting Party may:

(a) carry out the calculation required under point (a) of the first subparagraph of paragraph 1 using values of 0.5 % in 2017 and 2018; 0.7 % in 2019 and 2020;

(b) exclude from the calculation all or part of the sales of energy used, by volume, with respect to the obligation period referred to in point (a) of the first subparagraph of paragraph 1, or final energy consumed, with respect to the obligation period referred to in point (b) of that subparagraph, by industrial activities listed in Annex I to Directive 2003/87/EC;

(c) count towards the amount of required energy savings, energy savings achieved in the energy transformation, distribution and transmission sectors, including efficient district heating and cooling infrastructure, as a result of implementing the requirements set out in Article 14(4), point (b) of Article 14(5), and Article 15(1) to (6) and (9). Contracting Parties shall inform the Energy Community Secretariat about their intended policy measures under this point for the period from 1 January 2024 to 31 December 2030 as part of their integrated national energy and climate plans. The impact of those measures shall be calculated in accordance with Annex V and included in those plans;

(d) count towards the amount of required energy savings, energy savings resulting from individual actions newly implemented since 31 December 2008 that continue to have an impact in 2020 with respect to the obligation period referred to in point (a) of the first subparagraph of paragraph 1 and beyond 2020 with respect to the period referred to in point (b) of the first subparagraph of paragraph 1, and which can be measured and verified;

(e) count towards the amount of required energy savings, energy savings that stem from policy measures, provided that it can be demonstrated that those measures result in individual actions carried out from 1 January 2018 to 31 December 2020 for the first obligation period referred to in point (a) of the first subparagraph of paragraph 1, and beyond 2020 with repsect to the period referred to in point (b) of the first subparagraph 1, and which can be measured and verified;

(f) count towards the amount of required energy savings, energy savings that stem from policy measures, provided that it can be demonstrated that those measures result in individual actions carried out from 1 January 2018 to 31 December 2020 which deliver savings after 31 December 2020;

(g) exclude from the calculation of the amount of required energy savings, 30 % of the verifiable amount of energy generated on or in buildings for own use as a result of policy measures promoting new installation of renewable energy technologies;

(h) count towards the amount of required energy savings, energy savings that exceed the energy savings required for the obligation period from 1 January 2018 to 31 December 2020, respectively from 2021 to 2030 provided that those savings result from individual actions carried out under policy measures referred to in Articles 7a and 7b, notified by Contracting Parties in their National Energy Efficiency Action Plans and reported in their progress reports

in accordance with Article 24.

5. Contracting Parties shall apply and calculate the effect of the options chosen under paragraph 4 for the periods referred to in points (a) and (b) of the first subparagraph of paragraph 1 separately:

(a) for the calculation of the amount of energy savings required for the obligation period referred to in point (a) of the first subparagraph of paragraph 1, Contracting Parties may make use of points (a) to (d) of paragraph 4. All the options chosen under paragraph 4 taken together shall amount to no more than 25 % of the amount of energy savings referred to in point (a) of the first subparagraph of paragraph 1;

(b) for the calculation of the amount of energy savings required for the obligation period referred to in point (b) of the first subparagraph of paragraph 1, Contracting Parties may make use of points (b) to (g) of paragraph 4, provided individual actions referred to in point (d) of paragraph 4 continue to have a verifiable and measurable impact after 31 December 2020. All the options chosen under paragraph 4 taken together shall not lead to a reduction of more than 35 % of the amount of energy savings calculated in accordance with paragraphs 2 and 3.

Regardless of whether Contracting Parties exclude, in whole or in part, energy used in transport from their calculation baseline or make use of any of the options listed in paragraph 4, they shall ensure that the calculated net amount of new savings to be achieved in final energy consumption during the obligation period from 1 January 2024 to 31 December 2030 is not lower than the amount resulting from applying the annual savings rate referred to in point (b) of the first subparagraph of paragraph 1.

6. Contracting Parties shall describe in their integrated national energy and climate plans in accordance with Annex III to Regulation (EU) 2018/1999, as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC, the calculation of the amount of energy savings to be achieved over the period from 1 January 2024 to 31 December 2030 referred to in point (b) of the first subparagraph of paragraph 1 of this Article and shall, if relevant, explain how the annual savings rate and the calculation baseline were established, and how and to what extent the options referred to in paragraph 4 of this Article were applied.

7. Energy savings achieved after 31 December 2020 shall not count towards the amount of required energy savings for the period from 1 January 2014 to 31 December 2020.

8. <…>[8].

9. Contracting Parties shall ensure that savings resulting from policy measures referred to in Articles 7a and 7b and Article 20(6) are calculated in accordance with Annex V.

10. Contracting Parties shall achieve the amount of energy savings required under paragraph 1 of this Article either by establishing an energy efficiency obligation scheme referred to in Article 7a or by adopting alternative policy measures referred to in Article 7b. Contracting Parties may combine an energy efficiency obligation scheme with alternative policy measures.

11. In designing policy measures to fulfil their obligations to achieve energy savings, Con-

8 Not applicable according to Article 5(3) of Ministerial Council Decision 2021/14/MC-EnC

tracting Parties shall take into account the need to alleviate energy poverty in accordance with criteria established by them, taking into consideration their available practices in the field, by requiring, to the extent appropriate, a share of energy efficiency measures under their national energy efficiency obligation schemes, alternative policy measures, or programmes or measures financed under an Energy Efficiency National Fund, to be implemented as a priority among vulnerable households, including those affected by energy poverty and, where appropriate, in social housing.

12. Contracting Parties shall include information about the outcome of measures to alleviate energy poverty in the context of this Directive in the integrated national energy and climate progress reports in accordance with Regulation (EU) 2018/1999, as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC.

13. Contracting Parties shall demonstrate that where there is an overlap in the impact of policy measures or individual actions, there is no double counting of energy savings.

Article 7a

Energy efficiency obligation schemes[9]

1. Where Contracting Parties decide to fulfil their obligations to achieve the amount of savings required under Article 7(1) by way of an energy efficiency obligation scheme, they shall ensure that obligated parties as referred to in paragraph 2 of this Article operating in each Contracting Party's territory achieve, without prejudice to Article 7(4) and (5), their cumulative end-use energy savings requirement as set out in Article 7(1).

Where applicable, Contracting Parties may decide that obligated parties fulfil those savings, in whole or in part, as a contribution to the Energy Efficiency National Fund in accordance with Article 20(6).

2. Contracting Parties shall designate, on the basis of objective and non-discriminatory criteria, obligated parties among energy distributors, retail energy sales companies and transport fuel distributors or transport fuel retailers operating in their territory. The amount of energy savings needed to fulfil the obligation shall be achieved by the obligated parties among final customers, designated by the Contracting Party, independently of the calculation made pursuant to Article 7(1) or, if Contracting Parties so decide, through certified savings stemming from other parties as described in point (a) of paragraph 6 of this Article.

3. Where retail energy sales companies are designated as obligated parties under paragraph 2, Contracting Parties shall ensure that, in fulfilling their obligation, retail energy sales companies do not create any barriers that impede consumers from switching from one supplier to another.

4. Contracting Parties shall express the amount of energy savings required of each obligated party in terms of either final or primary energy consumption. The method chosen to express the amount of energy savings required shall also be used to calculate the savings claimed by obligated parties. The conversion factors set out in Annex IV shall apply.

9 The text displayed here corresponds to Article 5(4) of Ministerial Council Decision 2021/14/MC-EnC

5. Contracting Parties shall put in place measurement, control and verification systems under which documented verification is carried out on at least a statistically significant proportion and representative sample of the energy efficiency improvement measures put in place by the obligated parties. The measurement, control and verification shall be carried out independently of the obligated parties.

6. Within the energy efficiency obligation scheme, Contracting Parties may do one or both of the following:

(a) permit obligated parties to count towards their obligation certified energy savings achieved by energy service providers or other third parties, including when obligated parties promote measures through other State- approved bodies or through public authorities that may involve formal partnerships and may be in combination with other sources of finance. Where Contracting Parties so permit, they shall ensure that the certification of energy savings follows an approval process that is put in place in the Contracting Parties, that is clear, transparent, and open to all market participants, and that aims to minimise the costs of certification;

(b) allow obligated parties to count savings obtained in a given year as if they had instead been obtained in any of the four previous or three following years as long as this is not beyond the end of the obligation periods set out in Article 7(1).

Contracting Parties shall assess and, if appropriate, take measures to minimise the impact of the direct and indirect costs of energy efficiency obligation schemes on the competitiveness of energy-intensive industries exposed to international competition.

7. Contracting Parties shall, on an annual basis, publish the energy savings achieved by each obligated party, or each sub-category of obligated party, and in total under the scheme.

Article 7b

Alternative policy measures[10]

1. Where Contracting Parties decide to fulfil their obligations to achieve the savings required under Article 7(1) by way of alternative policy measures, they shall ensure, without prejudice to Article 7(4) and (5), that the energy savings required under Article 7(1) are achieved among final customers.

2. For all measures other than those relating to taxation, Contracting Parties shall put in place measurement, control and verification systems under which documented verification is carried out on at least a statistically significant proportion and representative sample of the energy efficiency improvement measures put in place by the participating or entrusted parties. The measurement, control and verification shall be carried out independently of the participating or entrusted parties;

10 The text displayed here corresponds to Article 5(4) of Ministerial Council Decision 2021/14/MC-EnC

Article 8

Energy audits and energy management systems

1. **Contracting Parties** shall promote the availability to all final customers of high quality energy audits which are cost-effective and:

(a) carried out in an independent manner by qualified and/or accredited experts according to qualification criteria; or

(b) implemented and supervised by independent authorities under national legislation.

The energy audits referred to in the first subparagraph may be carried out by in-house experts or energy auditors provided that the **Contracting Party** concerned has put in place a scheme to assure and check their quality, including, if appropriate, an annual random selection of at least a statistically significant percentage of all the energy audits they carry out.

For the purpose of guaranteeing the high quality of the energy audits and energy management systems, **Contracting Parties** shall establish transparent and non-discriminatory minimum criteria for energy audits based on Annex VI.

Energy audits shall not include clauses preventing the findings of the audit from being transferred to any qualified/accredited energy service provider, on condition that the customer does not object.

2. **Contracting Parties** shall develop programmes to encourage SMEs to undergo energy audits and the subsequent implementation of the recommendations from these audits.

On the basis of transparent and non-discriminatory criteria and without prejudice to Union State aid law, **Contracting Parties** may set up support schemes for SMEs, including if they have concluded voluntary agreements, to cover costs of an energy audit and of the implementation of highly cost-effective recommendations from the energy audits, if the proposed measures are implemented.

Contracting Parties shall bring to the attention of SMEs, including through their respective representative intermediary organisations, concrete examples of how energy management systems could help their businesses. The Commission and the **Energy Community Secretariat**[11] shall assist **Contracting Parties** by supporting the exchange of best practices in this domain.

3. **Contracting Parties** shall also develop programmes to raise awareness among households about the benefits of such audits through appropriate advice services.

Contracting Parties shall encourage training programmes for the qualification of energy auditors in order to facilitate sufficient availability of experts.

4. **Contracting Parties** shall ensure that enterprises that are not SMEs are subject to an energy audit carried out in an independent and cost-effective manner by qualified and/or accredited experts or implemented and supervised by independent authorities under national legislation by **5 November 2018** and at least every four years from the date of the previous energy audit.

5. Energy audits shall be considered as fulfilling the requirements of paragraph 4 when they are carried out in an independent manner, on the basis of minimum criteria based on Annex VI, and implemented under voluntary agreements concluded between organisations of stakeholders and an

11 Exchange of best practices by the Commission and the **Energy Community** Secretariat is supported by the Ministerial Council and incorporated in conclusions of the meeting held on 16 October 2015.

appointed body and supervised by the **Contracting Party** concerned, or other bodies to which the competent authorities have delegated the responsibility concerned, or by the Commission.

Access of market participants offering energy services shall be based on transparent and non-discriminatory criteria.

6. Enterprises that are not SMEs and that are implementing an energy or environmental management system - certified by an independent body according to the relevant European or International Standards - shall be exempted from the requirements of paragraph 4, provided that **Contracting Parties** ensure that the management system concerned includes an energy audit on the basis of the minimum criteria based on Annex VI.

7. Energy audits may stand alone or be part of a broader environmental audit. **Contracting Parties** may require that an assessment of the technical and economic feasibility of connection to an existing or planned district heating or cooling network shall be part of the energy audit.

Without prejudice to Union State aid law, **Contracting Parties** may implement incentive and support schemes for the implementation of recommendations from energy audits and similar measures.

Article 9

Metering for gas and electricity[12]

1. **Contracting Parties shall ensure that, in so far as it is technically possible, financially reasonable and proportionate in relation to the potential energy savings, for electricity and natural gas final customers are provided with competitively priced individual meters that accurately reflect their actual energy consumption and that provide information on the actual time of use**.

Such a competitively priced individual meter shall always be provided when:

(a) an existing meter is replaced, unless this is technically impossible or not cost-effective in relation to the estimated potential savings in the long term;

(b) a new connection is made in a new building or a building undergoes major renovations, as set out in Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC.**

2. Where, and to the extent that, **Contracting Parties** implement intelligent metering systems and roll out smart meters for natural gas and/or electricity in accordance with Directives 2009/72/EC and 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**:

(a) they shall ensure that the metering systems provide to final customers information on actual time of use and that the objectives of energy efficiency and benefits for final customers are fully taken into account when establishing the minimum functionalities of the meters and the obligations imposed on market participants;

(b) they shall ensure the security of the smart meters and data communication, and the privacy of final customers, in compliance with relevant Union data protection and privacy legislation;

(c) in the case of electricity and at the request of the final customer, they shall require meter oper-

12 The text displayed here corresponds to Article 5(5) of Ministerial Council Decision 2021/14/MC-EnC

ators to ensure that the meter or meters can account for electricity put into the grid from the final customer's premises;

(d) they shall ensure that if final customers request it, metering data on their electricity input and off-take is made available to them or to a third party acting on behalf of the final customer in an easily understandable format that they can use to compare deals on a like-for-like basis;

(e) they shall require that appropriate advice and information be given to customers at the time of installation of smart meters, in particular about their full potential with regard to meter reading management and the monitoring of energy consumption.

<…>[13]

'Article 9a

Metering for heating, cooling and domestic hot water[14]

1. Contracting Parties shall ensure that, for district heating, district cooling and domestic hot water, final customers are provided with competitively priced meters that accurately reflect their actual energy consumption.

2. Where heating, cooling or domestic hot water is supplied to a building from a central source that services multiple buildings or from a district heating or district cooling system, a meter shall be installed at the heat exchanger or point of delivery.

Article 9b[15]

Sub-metering and cost allocation for heating, cooling and domestic hot water

1. In multi-apartment and multi-purpose buildings with a central heating or central cooling source or supplied from a district heating or district cooling system, individual meters shall be installed to measure the consumption of heating, cooling or domestic hot water for each building unit, where technically feasible and cost effective in terms of being proportionate in relation to the potential energy savings.

Where the use of individual meters is not technically feasible or where it is not cost-efficient to measure heat consumption in each building unit, individual heat cost allocators shall be used to measure heat consumption at each radiator unless it is shown by the Contracting Party in question that the installation of such heat cost allocators would not be cost-efficient. In those cases, alternative cost-efficient methods of heat consumption measurement may be considered. The general criteria, methodologies and/or procedures to determine technical non-feasibility and non-cost effectiveness shall be clearly set out and published by each Contracting Party.

2. In new multi-apartment buildings and in residential parts of new multi-purpose buildings

13 Not applicable according to Article 5(5) of Ministerial Council Decision 2021/14/MC-EnC
14 The text here corresponds to Article 5(6) of Ministerial Council Decision 2021/14/MC-EnC
15 The text displayed here corresponds to Article 5(6) of Ministerial Council Decision 2021/14/MC-EnC

that are equipped with a central heating source for domestic hot water or are supplied from district heating systems, individual meters shall, notwithstanding the first subparagraph of paragraph 1, be provided for domestic hot water.

3. Where multi-apartment or multi-purpose buildings are supplied from district heating or district cooling, or where own common heating or cooling systems for such buildings are prevalent, Contracting Parties shall ensure they have in place transparent, publicly available national rules on the allocation of the cost of heating, cooling and domestic hot water consumption in such buildings to ensure transparency and accuracy of accounting for individual consumption. Where appropriate, such rules shall include guidelines on the manner in which to allocate cost for energy that is used as follows:

(a) domestic hot water;

(b) heat radiated from the building installation and for the purpose of heating the common areas, where staircases and corridors are equipped with radiators;

(c) for the purpose of heating or cooling apartments.

***Article 9c*[16]**

Remote reading requirement

For the purposes of Articles 9a and 9b, meters and heat cost allocators installed after 30 October 2023 shall be remotely readable devices. The conditions of technical feasibility and cost effectiveness set out in Article 9b(1) shall continue to apply.

Meters and heat cost allocators which are not remotely readable but which have already been installed shall be rendered remotely readable or replaced with remotely readable devices by 1 January 2030, save where the Contracting Party in question shows that this is not cost-efficient.'

Article 10

Billing information for gas and electricity[17]

1. **Where final customers do not have smart meters as referred to in Directive (EU) 2019/944/EC and 2009/73/EC, as adapted and adopted by Ministerial Council Decisions 2021/13/MC-EnC and 2011/02/MC-EnC, respectively, Contracting Parties shall ensure, by 30 November 2017, that billing information is reliable, accurate and based on actual consumption, in accordance with point 1.1 of Annex VII, for electricity and gas, where that is technically possible and economically justified;**

This obligation may be fulfilled by a system of regular self-reading by the final customers whereby they communicate readings from their meter to the energy supplier. Only when the final customer has not provided a meter reading for a given billing interval shall billing be based on estimated con-

16 The text displayed here corresponds to Article 5(6) of Ministerial Council Decision 2021/14/MC-EnC
17 The text displayed here corresponds to Article 5(7) of Ministerial Council Decision 2021/14/MC-EnC

sumption or a flat rate.

2. Meters installed in accordance with Directives 2009/72/EC and 2009/73/EC **as incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC**, shall enable accurate billing information based on actual consumption. **Contracting Parties** shall ensure that final customers have the possibility of easy access to complementary information on historical consumption allowing detailed self-checks.

Complementary information on historical consumption shall include:

(a) cumulative data for at least the three previous years or the period since the start of the supply contract if this is shorter. The data shall correspond to the intervals for which frequent billing information has been produced; and

(b) detailed data according to the time of use for any day, week, month and year. These data shall be made available to the final customer via the internet or the meter interface for the period of at least the previous 24 months or the period since the start of the supply contract if this is shorter.

3. Independently of whether smart meters have been installed or not, **Contracting Parties**:

(a) shall require that, to the extent that information on the energy billing and historical consumption of final customers is available, it be made available, at the request of the final customer, to an energy service provider designated by the final customer;

(b) shall ensure that final customers are offered the option of electronic billing information and bills and that they receive, on request, a clear and understandable explanation of how their bill was derived, especially where bills are not based on actual consumption;

(c) shall ensure that appropriate information is made available with the bill to provide final customers with a comprehensive account of current energy costs, in accordance with Annex VII;

(d) may lay down that, at the request of the final customer, the information contained in these bills shall not be considered to constitute a request for payment. In such cases, **Contracting Parties** shall ensure that suppliers of energy sources offer flexible arrangements for actual payments;

(e) shall require that information and estimates for energy costs are provided to consumers on demand in a timely manner and in an easily understandable format enabling consumers to compare deals on a like-for-like basis.

'Article 10a

Billing and consumption information for heating, cooling and domestic hot water[18]

1. Where meters or heat cost allocators are installed, Contracting Parties shall ensure that billing and consumption information is reliable, accurate and based on actual consumption or heat cost allocator readings, in accordance with points 1 and 2 of Annex VII a for all final users, namely for natural or legal persons purchasing heating, cooling or domestic hot water for their own end-use, or natural or legal persons occupying an individual building or a unit in a multi-apartment or multi-purpose building supplied with heating, cooling or domestic hot water from a central source who has no direct or individual contract with the

18 The text displayed here corresponds to Article 5(8) of Ministerial Council Decision 2021/14/MC-EnC

energy supplier.

This obligation may, where a Contracting Party so provides, save in the case of sub-metered consumption based on heat cost allocators under Article 9b, be fulfilled by a system of regular self-reading by the final customer or final user whereby they communicate readings from their meter. Only where the final customer or final user has not provided a meter reading for a given billing interval shall billing be based on estimated consumption or a flat rate.

2. Contracting Parties shall:

(a) require that, if information on the energy billing and historical consumption or heat cost allocator readings of final users is available, it be made available upon request by the final user, to an energy service provider designated by the final user;

(b) ensure that final customers are offered the option of electronic billing information and bills;

(c) ensure that clear and comprehensible information is provided with the bill to all final users in accordance with point 3 of Annex VIIa; and

(d) promote cybersecurity and ensure the privacy and data protection of final users in accordance with applicable Union law.

Contracting Parties may provide that, at the request of the final customer, the provision of billing information shall not be considered to constitute a request for payment. In such cases, Contracting Parties shall ensure that flexible arrangements for actual payment are offered.

3. Contracting Parties shall decide who is to be responsible for providing the information referred to in paragraphs 1 and 2 to final users without a direct or individual contract with an energy supplier.

Article 11

Cost of access to metering and billing information for electricity and gas[19]

Contracting Parties shall ensure that final customers receive all their bills and billing information for energy consumption free of charge and that final customers have access to their consumption data in an appropriate way and free of charge.

Article 11a

Cost of access to metering and billing and consumption information for heating, cooling and domestic hot water[20]

1. Contracting Parties shall ensure that final users receive all their bills and billing information for energy consumption free of charge and that final users have access to their consumption data in an appropriate way and free of charge.

19 The text displayed here corresponds to Article 5(9) of Ministerial Council Decision 2021/14/MC-EnC

20 The text displayed here corresponds to Article 5(10) of Ministerial Council Decision 2021/14/MC-EnC

2. Notwithstanding paragraph 1 of this Article, the distribution of costs of billing information for the individual consumption of heating, cooling and domestic hot water in multi-apartment and multi-purpose buildings pursuant to Article 9b shall be carried out on a non-profit basis. Costs resulting from the assignment of that task to a third party, such as a service provider or the local energy supplier, covering the measuring, allocation and accounting for actual individual consumption in such buildings, may be passed onto the final users to the extent that such costs are reasonable.

3. In order to ensure reasonable costs for sub-metering services as referred to in paragraph 2, Contracting Parties may stimulate competition in that service sector by taking appropriate measures, such as recommending or otherwise promoting the use of tendering and/or the use of interoperable devices and systems facilitating switching between service providers'.

Article 12

Consumer information and empowering programme

1. **Contracting Parties** shall take appropriate measures to promote and facilitate an efficient use of energy by small energy customers, including domestic customers. These measures may be part of a national strategy.

2. For the purposes of paragraph 1, these measures shall include one or more of the elements listed under point (a) or (b):

(a) a range of instruments and policies to promote behavioural change which may include:

(i) fiscal incentives;

(ii) access to finance, grants or subsidies;

(iii) information provision;

(iv) exemplary projects;

(v) workplace activities;

(b) ways and means to engage consumers and consumer organisations during the possible roll-out of smart meters through communication of:

(i) cost-effective and easy-to-achieve changes in energy use;

(ii) information on energy efficiency measures.

Article 13

Penalties

Contracting Parties shall lay down the rules on penalties applicable in case of non-compliance with the national provisions adopted pursuant to Articles 7 to 11 and Article 18(3) and shall take the necessary measures to ensure that they are implemented. The penalties provided for shall be effective, proportionate and dissuasive. **Contracting Parties** shall notify those provisions to the Commission and the **Energy Community Secretariat** by **15 October 2017** and shall notify it without delay of

any subsequent amendment affecting them.

CHAPTER III

EFFICIENCY IN ENERGY SUPPLY

Article 14

Promotion of efficiency in heating and cooling

1. **By 30 November 2018, Contracting Parties** shall carry out and notify to the **Energy Community Secretariat** a comprehensive assessment of the potential for the application of high-efficiency cogeneration and efficient district heating and cooling, containing the information set out in Annex VIII. If they have already carried out an equivalent assessment, they shall notify it to the **Energy Community Secretariat.**

<…> [21]

At the request of the Commission, the assessment shall be updated and notified to the Commission every five years. The Commission shall make any such request at least one year before the due date.

2. **Contracting Parties** shall adopt policies which encourage the due taking into account at local and regional levels of the potential of using efficient heating and cooling systems, in particular those using high-efficiency cogeneration. Account shall be taken of the potential for developing local and regional heat markets.

3. For the purpose of the assessment referred to in paragraph 1, **Contracting Parties** shall carry out a cost-benefit analysis covering their territory based on climate conditions, economic feasibility and technical suitability in accordance with Part 1 of Annex IX. The cost-benefit analysis shall be capable of facilitating the identification of the most resource-and cost-efficient solutions to meeting heating and cooling needs. That cost-benefit analysis may be part of an environmental assessment under Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment.

4. Where the assessment referred to in paragraph 1 and the analysis referred to in paragraph 3 identify a potential for the application of high-efficiency cogeneration and/or efficient district heating and cooling whose benefits exceed the costs, **Contracting Parties** shall take adequate measures for efficient district heating and cooling infrastructure to be developed and/or to accommodate the development of high-efficiency cogeneration and the use of heating and cooling from waste heat and renewable energy sources in accordance with paragraphs 1, 5, and 7.

Where the assessment referred to in paragraph 1 and the analysis referred to in paragraph 3 do not identify a potential whose benefits exceed the costs, including the administrative costs of carrying out the cost-benefit analysis referred to in paragraph 5, the **Contracting Party** concerned may exempt installations from the requirements laid down in that paragraph.

5. **Contracting Parties** shall ensure that a cost-benefit analysis in accordance with Part 2 of Annex

21 Not applicable in accordance with Article 3(11) of Decision 2015/08/MC-EnC.

IX is carried out when, after **15 October 2017:**

(a) a new thermal electricity generation installation with a total thermal input exceeding 20 MW is planned, in order to assess the cost and benefits of providing for the operation of the installation as a high-efficiency cogeneration installation;

(b) an existing thermal electricity generation installation with a total thermal input exceeding 20 MW is substantially refurbished, in order to assess the cost and benefits of converting it to high-efficiency cogeneration;

(c) an industrial installation with a total thermal input exceeding 20 MW generating waste heat at a useful temperature level is planned or substantially refurbished, in order to assess the cost and benefits of utilising the waste heat to satisfy economically justified demand, including through cogeneration, and of the connection of that installation to a district heating and cooling network;

(d) a new district heating and cooling network is planned or in an existing district heating or cooling network a new energy production installation with a total thermal input exceeding 20 MW is planned or an existing such installation is to be substantially refurbished, in order to assess the cost and benefits of utilising the waste heat from nearby industrial installations.

The fitting of equipment to capture carbon dioxide produced by a combustion installation with a view to its being geologically stored as provided for in Directive 2009/31/EC shall not be considered as refurbishment for the purpose of points (b), (c) and (d) of this paragraph.

Contracting Parties may require the cost-benefit analysis referred to in points (c) and (d) to be carried out in cooperation with the companies responsible for the operation of the district heating and cooling networks.

6. **Contracting Parties** may exempt from paragraph 5:

(a) those peak load and back-up electricity generating installations which are planned to operate under 1500 operating hours per year as a rolling average over a period of five years, based on a verification procedure established by the **Contracting Parties** ensuring that this exemption criterion is met;

(b) nuclear power installations;

(c) installations that need to be located close to a geological storage site approved under Directive 2009/31/EC.

Contracting Parties may also lay down thresholds, expressed in terms of the amount of available useful waste heat, the demand for heat or the distances between industrial installations and district heating networks, for exempting individual installations from the provisions of points (c) and (d) of paragraph 5.

Contracting Parties shall notify exemptions adopted under this paragraph to the **Energy Community Secretariat** by **15 October 2017** and any subsequent changes to them thereafter.

7. **Contracting Parties** shall adopt authorisation criteria as referred to in Article 7 of Directive 2009/72/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC,** or equivalent permit criteria, to:

(a) take into account the outcome of the comprehensive assessment referred to in paragraph 1;

(b) ensure that the requirements of paragraph 5 are fulfilled; and

(c) take into account the outcome of cost-benefit analysis referred to in paragraph 5.

8. **Contracting Parties** may exempt individual installations from being required, by the authorisation and permit criteria referred to in paragraph 7, to implement options whose benefits exceed their costs, if there are imperative reasons of law, ownership or finance for so doing. In these cases the **Contracting Party** concerned shall submit a reasoned notification of its decision to the **Energy Community Secretariat** within three months of the date of taking it.

9. Paragraphs 5, 6, 7 and 8 of this Article shall apply to installations covered by Directive 2010/75/EU, **as adapted and adopted by Ministerial Council Decision 2013/06/MC-EnC,** without prejudice to the requirements of that Directive.

10. On the basis of the harmonised efficiency reference values referred to in point (f) of Annex II, **Contracting Parties** shall ensure that the origin of electricity produced from high-efficiency cogeneration can be guaranteed according to objective, transparent and non-discriminatory criteria laid down by each **Contracting Party.** They shall ensure that this guarantee of origin complies with the requirements and contains at least the information specified in Annex X. **Contracting Parties** shall mutually recognise their guarantees of origin, exclusively as proof of the information referred to in this paragraph. Any refusal to recognise a guarantee of origin as such proof, in particular for reasons relating to the prevention of fraud, must be based on objective, transparent and non-discriminatory criteria. **Contracting Parties** shall notify the **Energy Community Secretariat** of such refusal and its justification. In the event of refusal to recognise a guarantee of origin, the Commission may adopt a decision to compel the refusing party to recognise it, in particular with regard to objective, transparent and non-discriminatory criteria on which such recognition is based.

The Commission shall be empowered to review, by means of delegated acts in accordance with Article 23 of this Directive, the harmonised efficiency reference values laid down in Commission Implementing Decision 2011/877/EU on the basis of Directive 2004/8/EC by 31 December 2014.

11. **Contracting Parties** shall ensure that any available support for cogeneration is subject to the electricity produced originating from high-efficiency cogeneration and the waste heat being effectively used to achieve primary energy savings. Public support to cogeneration and district heating generation and networks shall be subject to State aid rules, where applicable.

Article 15

Energy transformation, transmission and distribution[22]

1. **Contracting Parties** shall ensure that national energy regulatory authorities pay due regard to energy efficiency in carrying out the regulatory tasks specified in Directives 2009/72/EC and 2009/73/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC,** regarding their decisions on the operation of the gas and electricity infrastructure.

Contracting Parties shall in particular ensure that national energy regulatory authorities, through the development of network tariffs and regulations, within the framework of Directive 2009/72/EC**, as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC.** and taking into account the costs and benefits of each measure, provide incentives for grid operators to make available system services to network users permitting them to implement energy efficiency improvement measures in

22 The text displayed here corresponds to Article 5(11) of Ministerial Council Decision 2021/14/MC-EnC

the context of the continuing deployment of smart grids.

Such systems services may be determined by the system operator and shall not adversely impact the security of the system.

For electricity, **Contracting Parties** shall ensure that network regulation and network tariffs fulfil the criteria in Annex XI, taking into account guidelines and codes developed pursuant to Regulation (EC) No 714/2009, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC.**

2. **Contracting Parties** shall ensure, by 15 October 2018, that:

(a) concrete measures and investments are identified for the introduction of cost-effective energy efficiency improvements in the network infrastructure, with a timetable for their introduction, following the common methodology prepared by the European Commission in order to encourage network operators to reduce losses, implement a cost – efficient and energy –efficient infrastructure investment programme and properly account for the energy efficiency and flexibility of the grid.

(b) concrete measures and investments are identified for the introduction of cost-effective energy efficiency improvements in the network infrastructure, with a timetable for their introduction.

3. **Contracting Parties** may permit components of schemes and tariff structures with a social aim for net-bound energy transmission and distribution, provided that any disruptive effects on the transmission and distribution system are kept to the minimum necessary and are not disproportionate to the social aim.

4. **Contracting Parties** shall ensure the removal of those incentives in transmission and distribution tariffs that are detrimental to the overall efficiency (including energy efficiency) of the generation, transmission, distribution and supply of electricity or those that might hamper participation of demand response, in balancing markets and ancillary services procurement. **Contracting Parties** shall ensure that network operators are incentivised to improve efficiency in infrastructure design and operation, and, within the framework of Directive 2009/72/EC, **as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC**, that tariffs allow suppliers to improve consumer participation in system efficiency, including demand response, depending on national circumstances.

5. Without prejudice to Article 16(2) of Directive 2009/28/EC and taking into account Article 15 of Directive 2009/72/EC**, as adapted and adopted by Ministerial Council Decision 2011/02/MC-EnC,** and the need to ensure continuity in heat supply, **Contracting Parties** shall ensure that, subject to requirements relating to the maintenance of the reliability and safety of the grid, based on transparent and non-discriminatory criteria set by the competent national authorities, transmission system operators and distribution system operators when they are in charge of dispatching the generating installations in their territory:

(a) guarantee the transmission and distribution of electricity from high-efficiency cogeneration;

(b) provide priority or guaranteed access to the grid of electricity from high-efficiency cogeneration;

(c) when dispatching electricity generating installations, provide priority dispatch of electricity from high-efficiency cogeneration in so far as the secure operation of the national electricity system permits.

Contracting Parties shall ensure that rules relating to the ranking of the different access and dispatch priorities granted in their electricity systems are clearly explained in detail and published. When providing priority access or dispatch for high-efficiency cogeneration, **Contracting Parties** may set

rankings as between, and within different types of, renewable energy and high-efficiency cogeneration and shall in any case ensure that priority access or dispatch for energy from variable renewable energy sources is not hampered.

In addition to the obligations laid down by the first subparagraph, transmission system operators and distribution system operators shall comply with the requirements set out in Annex XII.

Contracting Parties may particularly facilitate the connection to the grid system of electricity produced from high-efficiency cogeneration from small-scale and micro-cogeneration units. **Contracting Parties** shall, where appropriate, take steps to encourage network operators to adopt a simple notification 'install and inform' process for the installation of micro-cogeneration units to simplify and shorten authorisation procedures for individual citizens and installers.

6. Subject to the requirements relating to the maintenance of the reliability and safety of the grid, **Contracting Parties** shall take the appropriate steps to ensure that, where this is technically and economically feasible with the mode of operation of the high-efficiency cogeneration installation, high-efficiency cogeneration operators can offer balancing services and other operational services at the level of transmission system operators or distribution system operators. Transmission system operators and distribution system operators shall ensure that such services are part of a services bidding process which is transparent, non-discriminatory and open to scrutiny.

Where appropriate, **Contracting Parties** may require transmission system operators and distribution system operators to encourage high-efficiency cogeneration to be sited close to areas of demand by reducing the connection and use-of-system charges.

7. **Contracting Parties** may allow producers of electricity from high-efficiency cogeneration wishing to be connected to the grid to issue a call for tender for the connection work.

8. **Contracting Parties** shall ensure that national energy regulatory authorities encourage demand side resources, such as demand response, to participate alongside supply in wholesale and retail markets.

Subject to technical constraints inherent in managing networks, **Contracting Parties** shall ensure that transmission system operators and distribution system operators, in meeting requirements for balancing and ancillary services, treat demand response providers, including aggregators, in a non-discriminatory manner, on the basis of their technical capabilities.

Subject to technical constraints inherent in managing networks, **Contracting Parties** shall promote access to and participation of demand response in balancing, reserve and other system services markets, inter alia by requiring national energy regulatory authorities or, where their national regulatory systems so require, transmission system operators and distribution system operators in close cooperation with demand service providers and consumers, to define technical modalities for participation in these markets on the basis of the technical requirements of these markets and the capabilities of demand response. Such specifications shall include the participation of aggregators.

9. When reporting under Directive 2010/75/EU, **as adapted and adopted by Ministerial Council Decision 2013/06/MC-EnC**, and without prejudice to Article 9(2) of that Directive, **Contracting Parties** shall consider including information on energy efficiency levels of installations undertaking the combustion of fuels with total rated thermal input of 50 MW or more in the light of the relevant best available techniques developed in accordance with Directive 2010/75/EU, **as adapted and adopted by the Ministerial Council Decision 2013/06/MC-EnC**, and Directive 2008/1/EC

of the European Parliament and of the Council of 15 January 2008 concerning integrated pollution prevention and control.

Contracting Parties may encourage operators of installations referred to in the first subparagraph to improve their annual average net operational rates.

CHAPTER IV

HORIZONTAL PROVISIONS

Article 16

Availability of qualification, accreditation and certification schemes

1. Where a **Contracting Party** considers that the national level of technical competence, objectivity and reliability is insufficient, it shall ensure that, **by 31 December 2017**, certification and/or accreditation schemes and/or equivalent qualification schemes, including, where necessary, suitable training programmes, become or are available for providers of energy services, energy audits, energy managers and installers of energy-related building elements as defined in Article 2(9) of Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC.**

2. **Contracting Parties** shall ensure that the schemes referred to in paragraph 1 provide transparency to consumers, are reliable and contribute to national energy efficiency objectives.

3. **Contracting Parties** shall make publicly available the certification and/or accreditation schemes or equivalent qualification schemes referred to in paragraph 1 and shall cooperate among themselves and with the Commission and the **Energy Community Secretariat** on comparisons between, and recognition of, the schemes.

Contracting Parties shall take appropriate measures to make consumers aware of the availability of qualification and/or certification schemes in accordance with Article 18(1).

Article 17

Information and training

1. **Contracting Parties** shall ensure that information on available energy efficiency mechanisms and financial and legal frameworks is transparent and widely disseminated to all relevant market actors, such as consumers, builders, architects, engineers, environmental and energy auditors, and installers of building elements as defined in Directive 2010/31/EU, **as adapted and adopted by Ministerial Council Decision 2010/02/MC-EnC.**

Contracting Parties shall encourage the provision of information to banks and other financial institutions on possibilities of participating, including through the creation of public/private partnerships, in the financing of energy efficiency improvement measures.

2. **Contracting Parties** shall establish appropriate conditions for market operators to provide ade-

quate and targeted information and advice to energy consumers on energy efficiency.

3. The Commission shall review the impact of its measures to support the development of platforms, involving, inter alia, the European social dialogue bodies in fostering training programmes for energy efficiency, and shall bring forward further measures if appropriate. The Commission shall encourage European social partners in their discussions on energy efficiency.

4. **Contracting Parties** shall, with the participation of stakeholders, including local and regional authorities, promote suitable information, awareness-raising and training initiatives to inform citizens of the benefits and practicalities of taking energy efficiency improvement measures.

5. The Commission shall encourage the exchange and wide dissemination of information on best energy efficiency practices in **Contracting Parties.**

Article 18

Energy services

1. **Contracting Parties** shall promote the energy services market and access for SMEs to this market by:

(a) disseminating clear and easily accessible information on:

(i) available energy service contracts and clauses that should be included in such contracts to guarantee energy savings and final customers' rights;

(ii) financial instruments, incentives, grants and loans to support energy efficiency service projects;

(b) encouraging the development of quality labels, inter alia, by trade associations;

(c) making publicly available and regularly updating a list of available energy service providers who are qualified and/or certified and their qualifications and/or certifications in accordance with Article 16, or providing an interface where energy service providers can provide information;

(d) supporting the public sector in taking up energy service offers, in particular for building refurbishment, by:

(i) providing model contracts for energy performance contracting which include at least the items listed in Annex XIII;

(ii) providing information on best practices for energy performance contracting, including, if available, cost-benefit analysis using a life-cycle approach;

(e) providing a qualitative review in the framework of the National Energy Efficiency Action Plan regarding the current and future development of the energy services market.

2. **Contracting Parties** shall support the proper functioning of the energy services market, where appropriate, by:

(a) identifying and publicising point(s) of contact where final customers can obtain the information referred to in paragraph 1;

(b) taking, if necessary, measures to remove the regulatory and non-regulatory barriers that impede the uptake of energy performance contracting and other energy efficiency service models for the identification and/or implementation of energy saving measures;

(c) considering putting in place or assigning the role of an independent mechanism, such as an ombudsman, to ensure the efficient handling of complaints and out-of-court settlement of disputes arising from energy service contracts;

(d) enabling independent market intermediaries to play a role in stimulating market development on the demand and supply sides.

3. **Contracting Parties** shall ensure that energy distributors, distribution system operators and retail energy sales companies refrain from any activities that may impede the demand for and delivery of energy services or other energy efficiency improvement measures, or hinder the development of markets for such services or measures, including foreclosing the market for competitors or abusing dominant positions.

Article 19

Other measures to promote energy efficiency

1. **Contracting Parties** shall evaluate and if necessary take appropriate measures to remove regulatory and non-regulatory barriers to energy efficiency, without prejudice to the basic principles of the property and tenancy law of the **Contracting Parties**, in particular as regards:

(a) the split of incentives between the owner and the tenant of a building or among owners, with a view to ensuring that these parties are not deterred from making efficiency-improving investments that they would otherwise have made by the fact that they will not individually obtain the full benefits or by the absence of rules for dividing the costs and benefits between them, including national rules and measures regulating decision- making processes in multi-owner properties;

(b) legal and regulatory provisions, and administrative practices, regarding public purchasing and annual budgeting and accounting, with a view to ensuring that individual public bodies are not deterred from making investments in improving energy efficiency and minimising expected life-cycle costs and from using energy performance contracting and other third-party financing mechanisms on a long-term contractual basis.

Such measures to remove barriers may include providing incentives, repealing or amending legal or regulatory provisions, or adopting guidelines and interpretative communications, or simplifying administrative procedures. The measures may be combined with the provision of education, training and specific information and technical assistance on energy efficiency.

2. The evaluation of barriers and measures referred to in paragraph 1 shall be notified to the Commission **and the Energy Community Secretariat** in the first National Energy Efficiency Action Plan referred to in Article 24(2). The Commission **and the Energy Community Secretariat** shall encourage the sharing of national best practices in this regard.

Article 20

Energy Efficiency National Fund, Financing and Technical Support[23]

1. Without prejudice to Articles 107 and 108 of the Treaty on the Functioning of the European Union, **Contracting Parties** shall facilitate the establishment of financing facilities, or use of existing ones, for energy efficiency improvement measures to maximise the benefits of multiple streams of financing.

2. The Commission shall, where appropriate, directly or via the European financial institutions, assist **Contracting Parties** in setting up financing facilities and technical support schemes with the aim of increasing energy efficiency in different sectors[24].

3. The Commission **and the Energy Community Secretariat**[25] shall facilitate the exchange of best practice between the competent national or regional authorities or bodies, e.g. through annual meetings of the regulatory bodies, public databases with information on the implementation of measures by **Contracting Parties,** and country comparison.

(a) In order to mobilise private financing for energy efficiency measures and energy renovation, in accordance with Directive 2010/31/EU, the Secretariat shall conduct a dialogue with both public and private financial institutions in order to map out possible actions it can take.

(b) The actions referred to in paragraph 3a shall include the following:

(i) mobilising capital investment into energy efficiency by considering the wider impacts of energy savings for financial risk management;

(ii) ensuring better energy and finance performance data by:

(iii) examining further how energy efficiency investments improve underlying asset values;

(iv) supporting studies to assess the monetisation of the non-energy benefits of energy efficiency investments.

(c) For the purpose of mobilising private financing of energy efficiency measures and energy renovation, Contracting Parties shall, when implementing this Directive:

(i) consider ways to make better use of energy audits under Article 8 to influence decision-making;

(ii) make optimal use of the possibilities and tools proposed in the smart finance for smart buildings initiative.

(d) By 1 January 2023, the Energy Community Secretariat shall provide guidance for Contracting Parties on how to unlock private investment.

4. **Contracting Parties** may set up an Energy Efficiency National Fund. The purpose of this fund shall be to support national energy efficiency initiatives.

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23 The text displayed here corresponds to Article 5(12) of Ministerial Council Decision 2021/14/MC-EnC

24 The 19th Ministerial Council tasked the Secretariat to assist Contracting Parties in finding the best suited solutions to implement the Directive, paying due respect to Contracting Parties' specific circumstances and the degree of implementation in the area of energy efficiency so far. The Secretariat is to propose how to best to support the implementation of the Directive, linking it to the appropriate financing.

25 The Ministerial Council's support for exchange of best practices by the Commission and the Energy Community Secretariat was written down in its conclusions at the meeting held on 16 October 2015.

5. **Contracting Parties** may allow for the obligations set out in Article 5(1) to be fulfilled by annual contributions to the Energy Efficiency National Fund of an amount equal to the investments required to achieve those obligations.

6. **Contracting Parties** may provide that obligated parties can fulfil their obligations set out in Article 7(1) by contributing annually to the Energy Efficiency National Fund an amount equal to the investments required to achieve those obligations.

7. **Contracting Parties** may use their revenues from annual emission allocations under Decision No 406/2009/EC for the development of innovative financing mechanisms to give practical effect to the objective in Article 5 of improving the energy performance of buildings.

Article 21

Conversion factors

For the purpose of comparison of energy savings and conversion to a comparable unit, the conversion factors set out in Annex IV shall apply unless the use of other conversion factors can be justified.

CHAPTER V

FINAL PROVISIONS

Article 22

Delegated acts[26]

The Secretariat shall inform the Permanent High Level Group about any delegated acts adopted in accordance with Article 22 of Directive (EU) 2019/2002 within one week upon their adoption. The Permanent High Level Group shall be empowered pursuant to Article 53(d) of the Energy Community Treaty to take measures to incorporate the relevant delegated acts into the Energy Community acquis.

Article 23

Exercise of the delegation

<...>.[27]

26 The text displayed here corresponds to Article 6 of Ministerial Council Decision 2021/14/MC-EnC
27 Not applicable according to Article 3(27) of Ministerial Council Decision 2015/09/MC-EnC

Article 24

Review and monitoring of implementation

1. The Commission shall review the continued need for the possibility of exemptions set out in Article 14(6) for the first time in the assessment of the first National Energy Efficiency Action Plan and every three years thereafter. Where the review shows that any of the criteria for these exemptions can no longer be justified taking into account the availability of heat load and the real operating conditions of the exempted installations, the Commission shall propose appropriate measures.

2. **Contracting Parties** shall submit to the **Energy Community Secretariat** before 30 April each year statistics on national electricity and heat production from high and low efficiency cogeneration, in accordance with the methodology shown in Annex I, in relation to total heat and electricity production. They shall also submit annual statistics on cogeneration heat and electricity capacities and fuels for cogeneration, and on district heating and cooling production and capacities, in relation to total heat and electricity production and capacities. **Contracting Parties** shall submit statistics on primary energy savings achieved by application of cogeneration in accordance with the methodology shown in Annex II.

3. By 30 June 2018 the **Energy Community Secretariat** shall submit the assessment referred to in Article 3(2) to the Ministerial Council of the **Energy Community**, accompanied, if necessary, by proposals for further measures.

4. The **Energy Community Secretariat** shall review the effectiveness of the implementation of Article 6 by 5 November 2018 and shall submit a report to the Ministerial Council of the **Energy Community**. That report shall be accompanied, if appropriate, by proposals for further measures.

5. By 30 May 2019, the **Energy Community Secretariat** shall submit a report to the Ministerial Council of the **Energy Community** on the implementation of Article 7. That report shall be accompanied, if appropriate, by a legislative proposal for one or more of the following purposes:

(a) to change the final date laid down in Article 7(1);

(b) to review the requirements laid down in Article 7(1), (2) and (3);

(c) to establish additional common requirements, in particular as regards the matters referred to in Article 7(7).

6. By 30 September 2020, the Commission shall assess the progress made by **Contracting Parties** in removing the regulatory and non-regulatory barriers referred to in Article 19(1). This assessment shall be followed, if appropriate, by proposals for further measures.

7. By 30 June 2018 the Energy Community Secretariat shall submit the assessment referred to in Article 3(2) to the Ministerial Council of the Energy Community, accompanied, if necessary, by proposals for further measures.

8. The Energy Community Secretariat shall review the effectiveness of the implementation of Article 6 by 5 November 2018 and shall submit a report to the Ministerial Council of the Energy Community. That report shall be accompanied, if appropriate, by proposals for further measures.

9. By 30 May 2019, the Energy Community Secretariat shall submit a report to the Ministe-

rial Council of the Energy Community on the implementation of Article 7. That report shall be accompanied, if appropriate, by a legislative proposal for one or more of the following purposes:[28]

(a) to change the final date laid down in Article 7(1);

(b) to review the requirements laid down in Article 7(1), (2) and (3);

(c) to establish additional common requirements, in particular as regards the matters referred to in Article 7(7).

10. By **30 September 2020,** the Commission shall assess the progress made by **Contracting Parties** in removing the regulatory and non-regulatory barriers referred to in Article 19(1). This assessment shall be followed, if appropriate, by proposals for further measures.

11. The Commission shall make the reports referred to in paragraphs 1 and 2 publicly available.

Article 25

Online platform

The Commission shall establish an online platform in order to foster the practical implementation of this Directive at national, regional and local levels. That platform shall support the exchange of experiences on practices, benchmarking, networking activities, as well as innovative practices.

Article 26

Committee procedure

<...>[29]

Article 27

Amendments and repeals[30]

1. **Article 1 of the Ministerial Council Decision 2009/05/MC-EnC is repealed from 15 October 2017. By way of exception, Article 4(1) to (4) of Directive 2006/32/EC as incorporated and adapted by Ministerial Council Decision 2009/05/MC-EnC thereof and Annexes I, III and IV thereto, shall continue to apply, without prejudice to the obligations of the Contracting Parties relating to the time-limit for its transposition into national law. Article 4(1) to (4) of, and Annexes I, III and IV of Directive 2006/32/EC as incorporated and adapted by Ministerial Council Decision 2009/05/MC-EnC, shall cease to apply with effect from 1 January 2020. References to Directive 2006/32/EC shall be construed as references to this Directive and shall be read in accordance with the correlation table set out in Annex XV.**

2. **Article 9(1) and (2) of Directive 2010/30/EU, as incorporated and adapted by Ministerial**

28 The text displayed here corresponds to Article 3(31) to 3(33) of Ministerial Council Decision 2015/08/MC-EnC
29 Not applicable according to Article 3(35) of Ministerial Council Decision 2015/08/MC-EnC
30 The text displayed here corresponds to Article 3(36) of Ministerial Council Decision 2015/08/MC-EnC.

Council Decision 2010/01/MC-EnC shall cease to apply from 15 October 2017.

Article 28

Transposition

1. **Contracting Parties** shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 31 December 2022.

However, each Contracting Party shall bring into force the laws, regulations and administrative provisions necessary to comply with Articles 9 to 11a, and Annexes VII and VIIa of this Directive by 30 June 2023.[31]

2. Notwithstanding the first paragraph, Article 1(1) and 3(5) shall not be implemented until the Ministerial Council of the Energy Community will adopt the 2030 headline targets on energy efficiency for the Energy Community and Annex XX with the national benchmarks. [32]

Notwithstanding the first subparagraph, **Contracting Parties** shall bring into force the laws, regulations and administrative provisions necessary to comply with the first subparagraph of Article 4(1), Article 4(5), Article 4(6), the last subparagraph of Article 8(9), Article 13(6), Article 18(2), Article 23(1) and Article 23(2) and point (4) of Annex V by the dates specified therein.

They shall forthwith communicate to the **Energy Community Secretariat**[33] the text of those provisions.

When **Contracting Parties** adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. **Contracting Parties** shall determine how such reference is to be made.

3. Contracting Parties shall communicate to the Secretariat on the text of the main provisions of national law which they adopt in the field covered by this Directive.[34]

31 The text displayed here corresponds to Article 2(1) of Ministerial Council Decision 2021/14/MC-EnC
32 The text displayed here corresponds to Article 5(15) of Ministerial Council Decision 2021/14/MC-EnC
33 In accordance with the Article 1(2) of Ministerial Council Decision 2015/08/MC-EnC
34 The text displayed here corresponds to Article 2(2) of Ministerial Council Decision 2021/14/MC-EnC

Article 29

Transitional provisions[35]

Until adoption by the Ministerial Council of the Energy Community 2030 targets, including the energy efficiency headline target, and/or the targets for energy and climate of each Contracting Party, as appropriate, this Directive shall be applied on the basis of Contracting Parties' National Domestic Contributions or targets or any other more ambitious contributions or targets that they have undertaken under any national or international legal and/or policy text.

Article 29 (bis)

Entry into force

This Directive shall enter into force on the date of its adoption by the Ministerial Council.

35 The text displayed here corresponds to Article 5(15) of Ministerial Council Decision 2021/14/MC-EnC

ANNEX I

GENERAL PRINCIPLES FOR THE CALCULATION OF ELECTRICITY FROM COGENERATION

Part I

General principles

Values used for calculation of electricity from cogeneration shall be determined on the basis of the expected or actual operation of the unit under normal conditions of use. For micro- cogeneration units the calculation may be based on certified values.

(a) Electricity production from cogeneration shall be considered equal to total annual electricity production of the unit measured at the outlet of the main generators;

(i) in cogeneration units of types (b), (d), (e), (f), (g) and (h) referred to in Part II with an annual overall efficiency set by **Contracting Parties** at a level of at least 75 %, and

(ii) in cogeneration units of types (a) and (c) referred to in Part II with an annual overall efficiency set by **Contracting Parties** at a level of at least 80 %.

(b) In cogeneration units with an annual overall efficiency below the value referred to in point (i) of point (a) (cogeneration units of types (b), (d), (e), (f), (g), and (h) referred to in Part II) or with an annual overall efficiency below the value referred to in point (ii) of point (a) (cogeneration units of types (a) and (c) referred to in Part II) cogeneration is calculated according to the following formula:

$$E_{CHP}=H_{CHP}*C$$

where:

E_{CHP} is the amount of electricity from cogeneration;

C is the power-to-heat ratio;

H_{CHP} is the amount of useful heat from cogeneration (calculated for this purpose as total heat production minus any heat produced in separate boilers or by live steam extraction from the steam generator before the turbine).

The calculation of electricity from cogeneration must be based on the actual power-to-heat ratio. If the actual power-to-heat ratio of a cogeneration unit is not known, the following default values may be used, in particular for statistical purposes, for units of types (a), (b), (c), (d) and (e) referred to in Part II provided that the calculated cogeneration electricity is less or equal to total electricity production of the unit:

Type of the unit	Default power to heat ratio, C
Combined cycle gas turbine with heat recovery	0,95
Steam back pressure turbine	0,45
Steam condensing extraction turbine	0,45
Gas turbine with heat recovery	0,55
Internal combustion engine	0,75

If **Contracting Parties** introduce default values for power-to-heat ratios for units of types (f), (g), (h), (i), (j) and (k) referred to in Part II, such default values shall be published and shall be notified to the **Energy Community Secretariat**.

(c) If a share of the energy content of the fuel input to the cogeneration process is recovered in chemicals and recycled this share can be subtracted from the fuel input before calculating the overall efficiency used in points (a) and (b).

(d) **Contracting Parties** may determine the power-to-heat ratio as the ratio of electricity to useful heat when operating in cogeneration mode at a lower capacity using operational data of the specific unit.

(e) **Contracting Parties** may use other reporting periods than one year for the purpose of the calculations according to points (a) and (b).

Part II

Cogeneration technologies covered by this Directive

(a) Combined cycle gas turbine with heat recovery

(b) Steam back pressure turbine

(c) Steam condensing extraction turbine

(d) Gas turbine with heat recovery

(e) Internal combustion engine

(f) Microturbines

(g) Stirling engines

(h) Fuel cells

(i) Steam engines

(j) Organic Rankine cycles

(k) Any other type of technology or combination thereof falling under the definition laid down in Article 2(30).

When implementing and applying the general principles for the calculation of electricity from cogeneration, **Contracting Parties** shall use the detailed Guidelines established by Commission Decision 2008/952/EC of 19 November 2008 establishing detailed guidelines for the implementation and application of Annex II to Directive 2004/8/EC of the European Parliament and of the Council.

ANNEX II

METHODOLOGY FOR DETERMINING THE EFFICIENCY OF THE COGENERATION PROCESS

Values used for calculation of efficiency of cogeneration and primary energy savings shall be determined on the basis of the expected or actual operation of the unit under normal conditions of use.

(a) High-efficiency cogeneration

For the purpose of this Directive high-efficiency cogeneration shall fulfil the following criteria:

— cogeneration production from cogeneration units shall provide primary energy savings calculated according to point (b) of at least 10 % compared with the references for separate production of heat and electricity,

— production from small-scale and micro-cogeneration units providing primary energy savings may qualify as high-efficiency cogeneration.

(b) Calculation of primary energy savings

The amount of primary energy savings provided by cogeneration production defined in accordance with Annex I shall be calculated on the basis of the following formula:

$$\mathrm{PES} = \left(1 - \frac{1}{\frac{\mathrm{CHP\ H}\eta}{\mathrm{Ref\ H}\eta} + \frac{\mathrm{CHP\ E}\eta}{\mathrm{Ref\ E}\eta}}\right) \times 100\,\%$$

where:

PES is primary energy savings.

CHP Hη is the heat efficiency of the cogeneration production defined as annual useful heat output divided by the fuel input used to produce the sum of useful heat output and electricity from cogeneration.

Ref Hη is the efficiency reference value for separate heat production.

CHP Eη is the electrical efficiency of the cogeneration production defined as annual electricity from cogeneration divided by the fuel input used to produce the sum of useful heat output and electricity from cogeneration. Where a cogeneration unit generates mechanical energy, the annual electricity from cogeneration may be increased by an additional element representing the amount of electricity which is equivalent to that of mechanical energy. This additional element does not create a right to issue guarantees of origin in accordance with Article 14(10).

Ref Eη is the efficiency reference value for separate electricity production.

(c) Calculations of energy savings using alternative calculation

Contracting Parties may calculate primary energy savings from a production of heat and electricity and mechanical energy as indicated below without applying Annex I to exclude the non-cogenerated heat and electricity parts of the same process. Such a production can be regarded as high-efficiency

cogeneration provided it fulfils the efficiency criteria in point (a) of this Annex and, for cogeneration units with an electrical capacity larger than 25 MW, the overall efficiency is above 70 %. However, specification of the quantity of electricity from cogeneration produced in such a production, for issuing a guarantee of origin and for statistical purposes, shall be determined in accordance with Annex I.

If primary energy savings for a process are calculated using alternative calculation as indicated above the primary energy savings shall be calculated using the formula in point (b) of this Annex replacing: 'CHP Hη' with 'Hη' and 'CHP Eη' with 'Eη', where:

Hη shall mean the heat efficiency of the process, defined as the annual heat output divided by the fuel input used to produce the sum of heat output and electricity output.

Eη shall mean the electricity efficiency of the process, defined as the annual electricity output divided by the fuel input used to produce the sum of heat output and electricity output. Where a cogeneration unit generates mechanical energy, the annual electricity from cogeneration may be increased by an additional element representing the amount of electricity which is equivalent to that of mechanical energy. This additional element will not create a right to issue guarantees of origin in accordance with Article 14(10).

(d) **Contracting Parties** may use other reporting periods than one year for the purpose of the calculations according to points (b) and (c) of this Annex.

(e) For micro-cogeneration units the calculation of primary energy savings may be based on certified data.

(f) Efficiency reference values for separate production of heat and electricity

The harmonised efficiency reference values shall consist of a matrix of values differentiated by relevant factors, including year of construction and types of fuel, and must be based on a well-documented analysis taking, inter alia, into account data from operational use under realistic conditions, fuel mix and climate conditions as well as applied cogeneration technologies.

The efficiency reference values for separate production of heat and electricity in accordance with the formula set out in point (b) shall establish the operating efficiency of the separate heat and electricity production that cogeneration is intended to substitute.

The efficiency reference values shall be calculated according to the following principles:

1. For cogeneration units the comparison with separate electricity production shall be based on the principle that the same fuel categories are compared.

2. Each cogeneration unit shall be compared with the best available and economically justifiable technology for separate production of heat and electricity on the market in the year of construction of the cogeneration unit.

3. The efficiency reference values for cogeneration units older than 10 years of age shall be fixed on the reference values of units of 10 years of age.

4. The efficiency reference values for separate electricity production and heat production shall reflect the climatic differences between **Contracting Parties**.

ANNEX III

ENERGY EFFICIENCY REQUIREMENTS FOR PURCHASING PRODUCTS, SERVICES AND BUILDINGS BY CENTRAL GOVERNMENT

Central governments that purchase products, services or buildings, insofar as this is consistent with cost-effectiveness, economical feasibility, wider sustainability, technical suitability, as well as sufficient competition, shall:

(a) where a product is covered by a delegated act adopted under Directive 2010/30/EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC** or by a related Commission implementing directive, purchase only the products that comply with the criterion of belonging to the highest energy efficiency class possible in the light of the need to ensure sufficient competition;

(b) **<…>**

(c) **<…>**

(d) **<…>**

(e) require in their tenders for service contracts that service providers use, for the purposes of providing the services in question, only products that comply with the requirements referred to in points (a) to (d), when providing the services in question. This requirement shall apply only to new products purchased by service providers partially or wholly for the purpose of providing the service in question;

(f) purchase, or make new rental agreements for, only buildings that comply at least with the minimum energy performance requirements referred to in Article 5(1) unless the purpose of the purchase is:

(i) to undertake deep renovation or demolition;

(ii) in the case of public bodies, to re-sell the building without using it for public body's own purposes; or

(iii) to preserve it as a building officially protected as part of a designated environment, or because of its special architectural or historical merit.

Compliance with these requirements shall be verified by means of the energy performance certificates referred to in Article 11 of Directive 2010/31/EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC**.

ANNEX IV

ENERGY CONTENT OF SELECTED FUELS FOR END USE – CONVERSION TABLE ([1])

Energy commodity	kJ (NCV)	kgoe (NCV)	kWh (NCV)
1 kg coke	28 500	0,676	7,917
1 kg hard coal	17 200 — 30 700	0,411 — 0,733	4,778 — 8,528
1 kg brown coal briquettes	20 000	0,478	5,556
1 kg black lignite	10 500 — 21 000	0,251 — 0,502	2,917 — 5,833
1 kg brown coal	5 600 — 10 500	0,134 — 0,251	1,556 — 2,917
1 kg oil shale	8 000 — 9 000	0,191 — 0,215	2,222 — 2,500
1 kg peat	7 800 — 13 800	0,186 — 0,330	2,167 — 3,833
1 kg peat briquettes	16 000 — 16 800	0,382 — 0,401	4,444 — 4,667
1 kg residual fuel oil (heavy oil)	40 000	0,955	11,111
1 kg light fuel oil	42 300	1,010	11,750
1 kg motor spirit (petrol)	44 000	1,051	12,222
1 kg paraffin	40 000	0,955	11,111
1 kg liquefied petroleum gas	46 000	1,099	12,778
1 kg natural gas ([2])	47 200	1,126	13,10
1 kg liquefied natural gas	45 190	1,079	12,553
1 kg wood (25 % humidity) ([3])	13 800	0,330	3,833
1 kg pellets/wood bricks	16 800	0,401	4,667
1 kg waste	7 400 — 10 700	0,177 — 0,256	2,056 — 2,972
1 MJ derived heat	1 000	0,024	0,278
1 kWh electrical energy	3 600	0,086	1 ([4])
Source: EUROSTAT			

([1]) **Contracting Parties** may apply different conversion factors if these can be justified.

([2]) 93 % methane.

([3]) **Applicable when energy savings are calculated in primary energy terms using a bottom-up approach based on final energy consumption. For savings in kWh electricity, Contracting Parties shall apply a coefficient established through a transparent methodology on the basis of national circumstances affecting primary energy consumption, in order to ensure a precise calculation of real savings. Those circumstances shall be substantiated, verifiable and based on objective and non-discriminatory criteria. For savings in kWh electricity, Contracting Parties it. When doing so, Contracting Parties shall take into account the energy mix included in their integrated national energy and climate plans to be notified to the Commission in accordance with Regulation (EU) 2018/1999. By 25 December 2022 and every four years thereafter, the Commission shall revise the default coefficient on the basis of observed data. That revision shall be carried out taking into account its effects on other Union law such as Directive 2009/125/EC and Regulation (EU) 2017/1369 of the European Parliament and of the Council of 4 July 2017 setting a framework for energy labelling and repealing Directive 2010/30/EU**

(4) Applicable when energy savings are calculated in primary energy terms using a bottom-up approach based on final energy consumption. For savings in kWh electricity **Contracting Parties** may apply a default coefficient of 2,5. **Contracting Parties** may apply a different coefficient provided they can justify it.

ANNEX V

COMMON METHODS AND PRINCIPLES FOR CALCULATING THE IMPACT OF ENERGY EFFICIENCY OBLIGATION SCHEMES OR OTHER POLICY MEASURES UNDER ARTICLES 7, 7A AND 7B AND ARTICLE 20 (6) METHODS FOR CALCULATING ENERGY SAVINGS OTHER THAN THOSE ARISING FROM TAXATION MEASURES FOR THE PURPOSES OF ARTICLES 7, 7A AND 7B AND ARTICLE 20(6).

1. Methods for calculating energy savings other than those arising from taxation measures for the purposes of Articles 7, 7a and 7b and Article 20(6).

Obligated, participating or entrusted parties, or implementing public authorities, may use the following methods for calculating energy savings:

(a) deemed savings, by reference to the results of previous independently monitored energy improvements in similar installations. The generic approach is termed "ex ante";

(b) metered savings, whereby the savings from the installation of a measure, or package of measures, are determined by recording the actual reduction in energy use, taking due account of factors such as additionality, occupancy, production levels and the weather which may affect consumption. The generic approach is termed "ex post";

(c) scaled savings, whereby engineering estimates of savings are used. This approach may be used only where establishing robust measured data for a specific installation is difficult or disproportionately expensive, e.g. replacing a compressor or electric motor with a different kWh rating from that for which independent information about savings has been measured, or where those estimates are carried out on the basis of nationally established methodologies and benchmarks by qualified or accredited experts that are independent of the obligated, participating or entrusted parties involved;

(d) surveyed savings, where consumers' response to advice, information campaigns, labelling or certification schemes or smart metering is determined. This approach may be used only for savings resulting from changes in consumer behaviour. It shall not be used for savings resulting from the installation of physical measures.

2. In determining the energy savings for an energy efficiency measure for the purposes of Articles 7, 7a and 7b and Article 20(6), the following principles apply:

The savings shall be shown to be additional to those that would have occurred in any event without the activity of the obligated, participating or entrusted parties, or implementing public authorities. To determine the savings that can be claimed as additional, Contracting Parties shall have regard to how energy use and demand would evolve in the absence of the policy measure in question by taking into account at least the following factors: energy consumption trends, changes in consumer behaviour, technological progress and changes caused by other measures implemented at Union and national level.

(a) Savings resulting from the implementation of mandatory Union law shall be considered to be savings that would have occurred in any event, and thus shall not be claimed as en-

ergy savings for the purpose of Article 7(1). By way of derogation from that requirement, savings related to the renovation of existing buildings may be claimed as energy savings for the purpose of Article 7(1), provided that the materiality criterion referred to in point 3(h) of this Annex is ensured. Savings resulting from the implementation of national minimum requirements established for new buildings prior to the transposition of Directive 2010/31/EU can be claimed as energy savings for the purpose of point (a) of Article 7(1), provided that the materiality criterion referred to in point 3(h) of this Annex is ensured and those savings have been notified by Contracting Parties in their National Energy Efficiency Action Plans in accordance with Article 24(2).

(b) Credit may be given only for savings exceeding the following levels:

(i) Union emission performance standards for new passenger cars and new light commercial vehicles following the implementation of Regulations (EC) No 443/2009 (*) and (EU) No 510/2011 of the European Parliament and of the Council (**);

(ii) Union requirements relating to the removal from the market of certain energy related products following the implementation of implementing measures under Directive 2009/125/EC.

(c) Policies with the purpose of encouraging higher levels of energy efficiency of products, equipment, transport systems, vehicles and fuels, buildings and building elements, processes or markets shall be permitted.

(d) Measures promoting the installation of small-scale renewable energy technologies on or in buildings may be eligible to be taken into account for the fulfilment of energy savings required under Article 7(1), provided that they result in verifiable, and measurable or estimable, energy savings. The calculation of energy savings shall comply with the requirements of this Annex.

(e) For policies that accelerate the uptake of more efficient products and vehicles, full credit may be claimed, provided that it is shown that such uptake takes place before expiry of the average expected lifetime of the product or vehicle, or before the product or vehicle would usually be replaced, and the savings are claimed only for the period until end of the average expected lifetime of the product or vehicle to be replaced.

(f) In promoting the uptake of energy efficiency measures, Contracting Parties shall, where relevant, ensure that quality standards for products, services and installation of measures are maintained or introduced where such standards do not exist.

(g) To account for climatic variations between regions, Contracting Parties may choose to adjust the savings to a standard value or to accord different energy savings in accordance with temperature variations between regions.

(h) The calculation of energy savings shall take into account the lifetime of the measures and the rate at which the savings decline over time. That calculation shall count the savings each individual action will achieve during the period from its date of implementation to 31 December 2020 or 31 December 2030 as appropriate. Alternatively, Contracting Parties may adopt another method that is estimated to achieve at least the same total quantity of savings. When using another method, Contracting Parties shall ensure that the total amount of energy savings calculated using that method does not exceed the amount of energy savings

that would have been the result of their calculation when counting the savings each individual action will achieve during the period from its date of implementation to 31 December 2020 or 31 December 2030 as appropriate. Contracting Parties shall describe in detail in their integrated national energy and climate plans under Regulation (EU) 2018/1999 the other method and the provisions made to ensure that the binding calculation requirement is met.

3. Contracting Parties shall ensure that the following requirements for policy measures taken pursuant to Article 7b and Article 20(6) are met:

(a) policy measures and individual actions produce verifiable end-use energy savings;

(b) the responsibility of each participating party, entrusted party or implementing public authority, as relevant, is clearly defined;

(c) the energy savings that are achieved or are to be achieved are determined in a transparent manner;

(d) the amount of energy savings required or to be achieved by the policy measure is expressed in either final or primary energy consumption, using the conversion factors set out in Annex IV;

(e) an annual report on the energy savings achieved by entrusted parties, participating parties and implementing public authorities be provided and made publicly available, as well as data on the annual trend of energy savings;

(f) monitoring of the results and taking appropriate measures if progress is not satisfactory;

(g) the energy savings from an individual action are not claimed by more than one party;

(h) the activities of the participating party, entrusted party or implementing public authority are shown to be material to the achievement of the energy savings claimed.

4. In determining the energy saving from taxation related policy measures introduced under Article 7b, the following principles shall apply:

(a) credit shall be given only for energy savings from taxation measures exceeding the minimum levels of taxation applicable to fuels as required in Council Directive 2003/96/EC (***) or 2006/112/EC (****);

(b) price elasticities for the calculation of the impact of the (energy) taxation measures shall represent the responsiveness of energy demand to price changes, and shall be estimated on the basis of recent and representative official data sources;

(c) the energy savings from accompanying taxation policy instruments, including fiscal incentives or payment to a fund, shall be accounted separately.

5. Notification of methodology

Contracting Parties shall in accordance with Regulation (EU) 2018/1999 notify to the Secretariat their proposed detailed methodology for the operation of the energy efficiency obligation schemes and alternative measures referred to in Articles 7a and 7b, and Article 20(6). Except in the case of taxation, such notification shall include details of:

(a) the level of the energy savings required under point (b) of the first subparagraph of Article 7(1) or savings expected to be achieved over the whole period from 1 January 2021 to 31 December 2030;

(b) the obligated, participating or entrusted parties, or implementing public authorities;

(c) target sectors;

(d) policy measures and individual actions, including the expected total amount of cumulative energy savings for each measure;

(e) the duration of the obligation period for the energy efficiency obligation scheme;

(f) the actions provided for by the policy measure;

(g) the calculation methodology, including how additionality and materiality have been determined and which methodologies and benchmarks are used for deemed and scaled savings;

(h) the lifetimes of measures, and how they are calculated or what they are based upon;

(i) the approach taken to address climatic variations within the Member State;

(j) the monitoring and verification systems for measures under Articles 7a and 7b and how their independence from the obligated, participating or entrusted parties is ensured;

(k) in the case of taxation:

(i) the target sectors and segment of taxpayers;

(ii) the implementing public authority;

(iii) the savings expected to be achieved;

(iv) the duration of the taxation measure; and

(*) Regulation (EC) No 443/2009 of 23 April 2009 setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO_2 emissions from light-duty vehicles

(**) Regulation (EU) No 510/2011 of 11 May 2011 setting emission performance standards for new light commercial vehicles as part of the Union's integrated approach to reduce CO_2 emissions from light-duty vehicles

(***) Council Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity

(****) Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax

ANNEX VI

MINIMUM CRITERIA FOR ENERGY AUDITS INCLUDING THOSE CARRIED OUT AS PART OF ENERGY MANAGEMENT SYSTEMS

The energy audits referred to in Article 8 shall be based on the following guidelines:

(a) be based on up-to-date, measured, traceable operational data on energy consumption and (for electricity) load profiles;

(b) comprise a detailed review of the energy consumption profile of buildings or groups of buildings, industrial operations or installations, including transportation;

(c) build, whenever possible, on life-cycle cost analysis (LCCA) instead of Simple Payback Periods (SPP) in order to take account of long-term savings, residual values of long-term investments and discount rates;

(d) be proportionate, and sufficiently representative to permit the drawing of a reliable picture of overall energy performance and the reliable identification of the most significant opportunities for improvement.

Energy audits shall allow detailed and validated calculations for the proposed measures so as to provide clear information on potential savings.

The data used in energy audits shall be storable for historical analysis and tracking performance.

ANNEX VII

MINIMUM REQUIREMENTS FOR BILLING AND BILLING INFORMATION BASED ON ACTUAL CONSUMPTION OF ELECTRICITY AND GAS

1. Minimum requirements for billing

1.1. Billing based on actual consumption

In order to enable final customers to regulate their own energy consumption, billing should take place on the basis of actual consumption at least once a year, and billing information should be made available at least quarterly, on request or where the consumers have opted to receive electronic billing or else twice yearly. Gas used only for cooking purposes may be exempted from this requirement.

1.2. Minimum information contained in the bill

Contracting Parties shall ensure that, where appropriate, the following information is made available to final customers in clear and understandable terms in or with their bills, contracts, transactions, and receipts at distribution stations:

(a) current actual prices and actual consumption of energy;

(b) comparisons of the final customer's current energy consumption with consumption for the same period in the previous year, preferably in graphic form;

(c) contact information for final customers' organisations, energy agencies or similar bodies, including website addresses, from which information may be obtained on available energy efficiency improvement measures, comparative end-user profiles and objective technical specifications for energy-using equipment.

In addition, wherever possible and useful, **Contracting Parties** shall ensure that comparisons with an average normalised or benchmarked final customer in the same user category are made available to final customers in clear and understandable terms, in, with or signposted to within, their bills, contracts, transactions, and receipts at distribution stations.

1.3. Advice on energy efficiency accompanying bills and other feedback to final customers

When sending contracts and contract changes, and in the bills customers receive or through websites addressing individual customers, energy distributors, distribution system operators and retail energy sales companies shall inform their customers in a clear and understandable manner of contact information for independent consumer advice centres, energy agencies or similar institutions, including their internet addresses, where they can obtain advice on available energy efficiency measures, benchmark profiles for their energy consumption and technical specifications of energy using appliances that can serve to reduce the consumption of these appliances.

ANNEX VIIa

MINIMUM REQUIREMENTS FOR BILLING AND CONSUMPTION INFORMATION FOR HEATING, COOLING AND DOMESTIC HOT WATER

1. Billing based on actual consumption or heat cost allocator readings

In order to enable final users to regulate their own energy consumption, billing shall take place on the basis of actual consumption or heat cost allocator readings at least once per year.

2. Minimum frequency of billing or consumption information

From 30 October 2023 where remotely readable meters or heat cost allocators have been installed, billing or consumption information based on actual consumption or heat cost allocator readings shall be provided to final users at least quarterly upon request or where final customers have opted to receive electronic billing, or else twice a year.

From 1 January 2025, where remotely readable meters or heat cost allocators have been installed, billing or consumption information based on actual consumption or heat cost allocator readings shall be provided to final users at least monthly. It may also be made available via the internet and be updated as frequently as allowed by the measurement devices and systems used. Heating and cooling may be exempted from that requirement outside the heating/cooling seasons.

3. Minimum information contained in the bill

Contracting Parties shall ensure that the following information is made available to final users in clear and comprehensible terms in or with their bills where those are based on actual consumption or heat cost allocator readings:

(a) current actual prices and actual consumption of energy or total heat cost and heat cost allocator readings;

(b) information about the fuel mix used and the related annual greenhouse gas emissions, including for final users supplied by district heating or district cooling, and a description of the different taxes, levies and tariffs applied. Contracting Parties may limit the scope of the requirement to provide information about greenhouse gas emissions to include only supplies from district heating systems with a total rated thermal input exceeding 20 MW;

(c) comparisons of the final users current energy consumption with consumption for the same period in the previous year, in graphic form, climate corrected for heating and cooling;

(d) contact information for final customers' organisations, energy agencies or similar bodies, including website addresses, from which information on available energy efficiency improvement measures, comparative end-user profiles and objective technical specifications for energy-using equipment may be obtained;

(e) information about related complaints procedures, ombudsman services or alternative dispute resolution mechanisms, as applicable in the Contracting Parties;

(f) comparisons with an average normalised or benchmarked final user in the same user category. In the case of electronic bills, such comparisons may instead be made available

online and signposted to within the bills.

Bills that are not based on actual consumption or heat cost allocator readings shall contain a clear and comprehensible explanation of how the amount set out in the bill was calculated, and at least the information referred to in points (d) and (e).

ANNEX VIII

POTENTIAL FOR EFFICIENCY IN HEATING AND COOLING

1. The comprehensive assessment of national heating and cooling potentials referred to in Article 14(1) shall include:

(a) a description of heating and cooling demand;

(b) a forecast of how this demand will change in the next 10 years, taking into account in particular the evolution of demand in buildings and the different sectors of industry;

(c) a map of the national territory, identifying, while preserving commercially sensitive information:

(i) heating and cooling demand points, including:

— municipalities and conurbations with a plot ratio of at least 0,3, and

— industrial zones with a total annual heating and cooling consumption of more than 20 GWh;

(ii) existing and planned district heating and cooling infrastructure;

(iii) potential heating and cooling supply points, including:

— electricity generation installations with a total annual electricity production of more than 20 GWh, and

— waste incineration plants,

— existing and planned cogeneration installations using technologies referred to in Part II of Annex I, and district heating installations;

(d) identification of the heating and cooling demand that could be satisfied by high-efficiency cogeneration, including residential micro-cogeneration, and by district heating and cooling;

(e) identification of the potential for additional high-efficiency cogeneration, including from the refurbishment of existing and the construction of new generation and industrial installations or other facilities generating waste heat;

(f) identification of energy efficiency potentials of district heating and cooling infrastructure;

(g) strategies, policies and measures that may be adopted up to 2020 and up to 2030 to realise the potential in point (e) in order to meet the demand in point (d), including, where appropriate, proposals to:

(i) increase the share of cogeneration in heating and cooling production and in electricity production;

(ii) develop efficient district heating and cooling infrastructure to accommodate the development of high-efficiency cogeneration and the use of heating and cooling from waste heat and renewable energy sources;

(iii) encourage new thermal electricity generation installations and industrial plants producing waste heat to be located in sites where a maximum amount of the available waste heat will be recovered to meet existing or forecasted heat and cooling demand;

(iv) encourage new residential zones or new industrial plants which consume heat in their pro-

duction processes to be located where available waste heat, as identified in the comprehensive assessment, can contribute to meeting their heat and cooling demands. This could include proposals that support the clustering of a number of individual installations in the same location with a view to ensuring an optimal matching between demand and supply for heat and cooling;

(v) encourage thermal electricity generating installations, industrial plants producing waste heat, waste incineration plants and other waste-to-energy plants to be connected to the local district heating or cooling network;

(vi) encourage residential zones and industrial plants which consume heat in their production processes to be connected to the local district heating or cooling network;

(h) the share of high-efficiency cogeneration and the potential established and progress achieved under Directive 2004/8/EC;

(i) an estimate of the primary energy to be saved;

(j) an estimate of public support measures to heating and cooling, if any, with the annual budget and identification of the potential aid element. This does not prejudge a separate notification of the public support schemes for a State aid assessment.

2. To the extent appropriate, the comprehensive assessment may be made up of an assembly of regional or local plans and strategies.

ANNEX IX

COST-BENEFIT ANALYSIS

Part 1

General principles of the cost-benefit analysis

The purpose of preparing cost-benefit analyses in relation to measures for promoting efficiency in heating and cooling as referred to in Article 14(3) is to provide a decision base for qualified prioritisation of limited resources at society level.

The cost-benefit analysis may either cover a project assessment or a group of projects for a broader local, regional or national assessment in order to establish the most cost-effective and beneficial heating or cooling option for a given geographical area for the purpose of heat planning.

Cost-benefit analyses for the purposes of Article 14(3) shall include an economic analysis covering socio-economic and environmental factors.

The cost-benefit analyses shall include the following steps and considerations:

(a) Establishing a system boundary and geographical boundary

The scope of the cost-benefit analyses in question determines the relevant energy system. The geographical boundary shall cover a suitable well-defined geographical area, e.g. a given region or metropolitan area, to avoid selecting sub-optimised solutions on a project by project basis.

(b) Integrated approach to demand and supply options

The cost-benefit analysis shall take into account all relevant supply resources available within the system and geographical boundary, using the data available, including waste heat from electricity generation and industrial installations and renewable energy, and the characteristics of, and trends in heat and cooling demand.

(c) Constructing a baseline

The purpose of the baseline is to serve as a reference point, to which the alternative scenarios are evaluated.

(d) Identifying alternative scenarios

All relevant alternatives to the baseline shall be considered. Scenarios that are not feasible due to technical reasons, financial reasons, national regulation or time constraints may be excluded at an early stage of the cost-benefit analysis if justified based on careful, explicit and well-documented considerations.

Only high-efficiency cogeneration, efficient district heating and cooling or efficient individual heating and cooling supply options should be taken into account in the cost-benefit analysis as alternative scenarios compared to the baseline.

(e) Method for the calculation of cost-benefit surplus

(i) The total long-term costs and benefits of heat or cooling supply options shall be assessed and compared.

(ii) The criterion for evaluation shall be the net present value (NPV) criterion.

(iii) The time horizon shall be chosen such that all relevant costs and benefits of the scenarios are included. For example, for a gas-fired power plant an appropriate time horizon could be 25 years, for a district heating system, 30 years, or for heating equipment such as boilers 20 years.

(f) Calculation and forecast of prices and other assumptions for the economic analysis

(i) **Contracting Parties** shall provide assumptions, for the purpose of the cost-benefit analyses, on the prices of major input and output factors and the discount rate.

ii) The discount rate used in the economic analysis for the calculation of net present value shall be chosen according to European or national guidelines ([1]).

(iii) **Contracting Parties** shall use national, European or international energy price development forecasts if appropriate in their national and/or regional/local context.

(iv) The prices used in the economic analysis shall reflect the true socio economic costs and benefits and should include external costs, such as environmental and health effects, to the extent possible, i.e. when a market price exists or when it is already included in European or national regulation.

(g) Economic analysis: Inventory of effects

The economic analyses shall take into account all relevant economic effects.

Contracting Parties may assess and take into account in decision making costs and energy savings from the increased flexibility in energy supply and from a more optimal operation of the electricity networks, including avoided costs and savings from reduced infrastructure investment, in the analysed scenarios.

The costs and benefits taken into account shall include at least the following:

(i) Benefits

— Value of output to the consumer (heat and electricity) — External benefits such as environmental, greenhouse gas emissions and health and safety benefits, to the extent possible

— Labor market effects, energy security and competitiveness, to the extend possible

(ii) Costs

— Capital costs of plants and equipment

— Capital costs of the associated energy networks

— Variable and fixed operating costs

— Energy costs

— Environmental, and health and safety costs, to the extent possible

— Labor market costs, energy security and competitiveness, to the extend possible.

(h) Sensitivity analysis:

A sensitivity analysis shall be included to assess the costs and benefits of a project or group of projects based on different energy prices, discount rates and other variable factors having a significant impact on the outcome of the calculations.

([1]) The national discount rate chosen for the purpose of economic analysis should take into account data provided by the European Central Bank.

The **Contracting Parties** shall designate the competent authorities responsible for carrying out the cost-benefit analyses under Article 14. **Contracting Parties** may require competent local, regional and national authorities or operators of individual installations to carry out the economic and financial analysis. They shall provide the detailed methodologies and assumptions in accordance with this Annex and establish and make public the procedures for the economic analysis.

Part 2

Principles for the purpose of Article 14(5) and (7)

The cost-benefit analyses shall provide information for the purpose of the measures in Article 14(5) and (7):

If an electricity-only installation or an installation without heat recovery is planned, a comparison shall be made between the planned installations or the planned refurbishment and an equivalent installation producing the same amount of electricity or process heat, but recovering the waste heat and supplying heat through high-efficiency cogeneration and/or district heating and cooling networks.

Within a given geographical boundary the assessment shall take into account the planned installation and any appropriate existing or potential heat demand points that could be supplied from it, taking into account rational possibilities (for example, technical feasibility and distance).

The system boundary shall be set to include the planned installation and the heat loads, such as building(s) and industrial process. Within this system boundary the total cost of providing heat and power shall be determined for both cases and compared.

Heat loads shall include existing heat loads, such as an industrial installation or an existing district heating system, and also, in urban areas, the heat load and costs that would exist if a group of buildings or part of a city were provided with and/or connected into a new district heating network.

The cost-benefit analysis shall be based on a description of the planned installation and the comparison installation(s), covering electrical and thermal capacity, as applicable, fuel type, planned usage and the number of planned operating hours annually, location and electricity and thermal demand.

For the purpose of the comparison, the thermal energy demand and the types of heating and cooling used by the nearby heat demand points shall be taken into account. The comparison shall cover infrastructure related costs for the planned and comparison installation.

Cost-benefit analyses for the purposes of Article 14(5) shall include an economic analysis covering a financial analysis reflecting actual cash flow transactions from investing in and operating individual installations.

Projects with positive cost-benefit outcome are those where the sum of discounted benefits in the economic and financial analysis exceeds the sum of discounted costs (cost-benefit surplus).

Contracting Parties shall set guiding principles for the methodology, assumptions and time horizon for the economic analysis.

Contracting Parties may require that the companies responsible for the operation of thermal electric generation installations, industrial companies, district heating and cooling networks, or other parties influenced by the defined system boundary and geographical boundary, contribute data for use in assessing the costs and benefits of an individual installation.

ANNEX X

GUARANTEE OF ORIGIN FOR ELECTRICITY PRODUCED FROM HIGH-EFFICIENCY COGENERATION

(a) **Contracting Parties** shall take measures to ensure that:

(i) the guarantee of origin of the electricity produced from high-efficiency cogeneration:

— enable producers to demonstrate that the electricity they sell is produced from high-efficiency cogeneration and is issued to this effect in response to a request from the producer,

— is accurate, reliable and fraud-resistant,

— is issued, transferred and cancelled electronically;

(ii) the same unit of energy from high-efficiency cogeneration is taken into account only once.

(b) The guarantee of origin referred to in Article 14(10) shall contain at least the following information:

(i) the identity, location, type and capacity (thermal and electrical) of the installation where the energy was produced;

(ii) the dates and places of production;

(iii) the lower calorific value of the fuel source from which the electricity was produced;

(iv) the quantity and the use of the heat generated together with the electricity;

(v) the quantity of electricity from high-efficiency cogeneration in accordance with Annex II that the guarantee represents;

(vi) the primary energy savings calculated in accordance with Annex II based on the harmonised efficiency reference values indicated in point (f) of Annex II;

(vii) the nominal electric and thermal efficiency of the plant;

(viii) whether and to what extent the installation has benefited from investment support;

(ix) whether and to what extent the unit of energy has benefited in any other way from a national support scheme, and the type of support scheme;

(x) the date on which the installation became operational; and

(xi) the date and country of issue and a unique identification number.

The guarantee of origin shall be of the standard size of 1 MWh. It shall relate to the net electricity output measured at the station boundary and exported to the grid.

ANNEX XI

ENERGY EFFICIENCY CRITERIA FOR ENERGY NETWORK REGULATION AND FOR ELECTRICITY NETWORK TARIFFS

1. Network tariffs shall be cost-reflective of cost-savings in networks achieved from demand-side and demand- response measures and distributed generation, including savings from lowering the cost of delivery or of network investment and a more optimal operation of the network.

2. Network regulation and tariffs shall not prevent network operators or energy retailers making available system services for demand response measures, demand management and distributed generation on organised electricity markets, in particular:

(a) the shifting of the load from peak to off-peak times by final customers taking into account the availability of renewable energy, energy from cogeneration and distributed generation;

(b) energy savings from demand response of distributed consumers by energy aggregators;

(c) demand reduction from energy efficiency measures undertaken by energy service providers, including energy service companies;

(d) the connection and dispatch of generation sources at lower voltage levels;

(e) the connection of generation sources from closer location to the consumption; and

(f) the storage of energy.

For the purposes of this provision the term 'organised electricity markets' shall include over-the-counter markets and electricity exchanges for trading energy, capacity, balancing and ancillary services in all timeframes, including forward, day-ahead and intra-day markets.

3. Network or retail tariffs may support dynamic pricing for demand response measures by final customers, such as:

(a) time-of-use tariffs;

(b) critical peak pricing;

(c) real time pricing; and

(d) peak time rebates.

ANNEX XII

ENERGY EFFICIENCY REQUIREMENTS FOR TRANSMISSION SYSTEM OPERATORS AND DISTRIBUTION SYSTEM OPERATORS

Transmission system operators and distribution system operators shall:

(a) **set up and make public their standard rules relating to the bearing and sharing of costs of technical adaptations, such as grid connections, grid reinforcements and the introduction of new grids, improved operation of the grid and rules on the non-discriminatory implementation of the grid codes, which are necessary in order to integrate new producers feeding electricity produced from high-efficiency cogeneration into the interconnected grid;**

(b) provide any new producer of electricity produced from high-efficiency cogeneration wishing to be connected to the system with the comprehensive and necessary information required, including:

(i) a comprehensive and detailed estimate of the costs associated with the connection;

(ii) a reasonable and precise timetable for receiving and processing the request for grid connection;

(iii) a reasonable indicative timetable for any proposed grid connection. The overall process to become connected to the grid should be no longer than 24 months, bearing in mind what is reasonably practicable and non-discriminatory;

(c) provide standardised and simplified procedures for the connection of distributed high-efficiency cogeneration producers to facilitate their connection to the grid.

The standard rules referred to in point (a) shall be based on objective, transparent and non-discriminatory criteria taking particular account of all the costs and benefits associated with the connection of those producers to the grid. They may provide for different types of connection.

ANNEX XIII

MINIMUM ITEMS TO BE INCLUDED IN ENERGY PERFORMANCE CONTRACTS WITH THE PUBLIC SECTOR OR IN THE ASSOCIATED TENDER SPECIFICATIONS

— Clear and transparent list of the efficiency measures to be implemented or the efficiency results to be obtained.

— Guaranteed savings to be achieved by implementing the measures of the contract.

— Duration and milestones of the contract, terms and period of notice.

— Clear and transparent list of the obligations of each **Contracting Party**.

— Reference date(s) to establish achieved savings.

— Clear and transparent list of steps to be performed to implement a measure or package of measures and, where relevant, associated costs.

— Obligation to fully implement the measures in the contract and documentation of all changes made during the project.

— Regulations specifying the inclusion of equivalent requirements in any subcontracting with third parties.

— Clear and transparent display of financial implications of the project and distribution of the share of both parties in the monetary savings achieved (i.e. remuneration of the service provider).

— Clear and transparent provisions on measurement and verification of the guaranteed savings achieved, quality checks and guarantees.

— Provisions clarifying the procedure to deal with changing framework conditions that affect the content and the outcome of the contract (i.e. changing energy prices, use intensity of an installation).

— Detailed information on the obligations of each of the **Contracting Party** and of the penalties for their breach.

ANNEX XIV

<...>

ANNEX XV

CORRELATION TABLE

Directive 2004/8/EC	This Directive

<...>[36]

Directive 2006/32/EC	This Directive
Article 1	Article 1(1)
Article 2	Article 1(1)
Article 3, point (a)	Article 2, point (1)
Article 3, point (b)	Article 2, point (4)
Article 3, point (c)	Article 2, point (6)
Article 3, point (d)	Article 2, point (5)
—	Article 2, points (2) and (3)
Article 3, point (e)	Article 2, point (7)
Article 3, points (f), (g), (h) and (i)	—
—	Article 2, points (8) to (19)
Article 3, point (j)	Article 2, point (27)
—	Article 2, point (28)
Article 3, point (k)	—
Article 3, point (l)	Article 2, point (25)
—	Article 2, point (26)
Article 3, point (m)	—
Article 3, point (n)	Article 2, point (23)
Article 3, point (o)	Article 2, point (20)
Article 3, point (p)	Article 2, point (21)
Article 3, point (q)	Article 2, point (22)
Article 3, points (r) and (s)	—
—	Article 2, points (24), (29), (44) and (45)
—	Article 3
—	Article 4
Article 4	—
Article 5	Articles 5 and 6

36 In Annex XV, the correlation table rows relating to Directive 2004/8/EC shall not be applicable

Article 6(1)(a)	Article 7(8), points (a) and (b)
Article 6(1)(b)	Article 18(3)
Article 6(2)	Article 7(1), (5), (6), (7), (9), (10), (11) and (12)
—	Article 7(2) and (3)
Article 6(3)	Article 18(2), points (b) and (c)
Article 6(5)	—
Article 7	Article 17
Article 8	Article 16(1)
—	Article 16(2) and (3)
Article 9(1)	Article 19
Article 9(2)	Article 18(1), point (d), subpoint (i)
—	Article 18(1), points (a), (b), (c), (d), subpoint (ii), and (e)
Article 10(1)	Article 15(4)
Article 10(2)	Article 15(3)
—	Article 15(7), (8) and (9)
Article 11	Article 20
Article 12(1)	Article 8(1)
Article 12(2)	—
—	Article 8(2), (3), (4), (5), (6) and (7)
Article 12(3)	—
Article 13(1)	Article 9
Article 13(2)	Article 10 and Annex VII, point 1.1
Article 13(3)	Annex VII, points 1.2 and 1.3
—	Article 11
—	Article 12
—	Article 13
—	Article 15(1) and (2)
—	Article 18(2), points (a) and (d)
—	Article 21
Article 14(1) and (2)	Article 24(1) and (2)
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Article 14(4) and (5)	Article 24(3)
—	Article 24(4) and (7) to (11)
—	Article 22(1)
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