



THE ENERGY COMMUNITY

LEGAL FRAMEWORK

Special Edition on Energy Efficiency



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PREFACE

Energy efficiency is gaining more and more recognition as the “first fuel” in the European Union.

The International Energy Agency believes that: *“As an energy resource, energy efficiency has the unique potential to simultaneously contribute to long-term energy security, economic growth, and even improved health and well-being; in particular it is a key means to reduce greenhouse gas emissions. By reducing or limiting energy demand, energy efficiency measures can increase resilience against a variety of risks, such as energy price rises and volatility, stress on energy infrastructure, and disruptions to energy supply systems”.*

Having in mind the energy import dependency of the Energy Community Contracting Parties, each megawatt hour saved through energy efficiency measures will bring significantly more benefits than just import reductions. For the Energy Community Contracting Parties, even more than for the European Union Member States, energy efficiency is a perfect example of a win-win solution. When properly supported by a solid legal and institutional framework and backed up by well designed and implemented policy measures and programmes, increased energy efficiency brings about a multitude of positive effects on competitiveness, environment, security of energy supply and economic development in general.

The Contracting Parties face additional barriers to advancing energy efficiency than the European Union Member States. These are to a certain extent linked to the “inherited” energy inefficiency of command economies in most production and consumption sectors. An economic structure with a higher share of intensive industry combined with lower energy consumption and income per capita is rather common to the Contracting Parties. Moreover, the double dip recession in 2009 and 2012, the devastating floods in Serbia and Bosnia Herzegovina, the weak EU recovery and the crisis in Ukraine took the attention away from energy efficiency investments to economic recovery.

The Energy Community legal framework in energy efficiency became on par with the European Union with the adoption of the Energy Efficiency Directive in October 2015 by the Ministerial Council. The buildings and labelling directives and the accompanying regulations were already part of the Energy Community legal framework since 2010.

The transposition and implementation of the *acquis* continues to be a challenge for the Contracting Parties as institutions remain rather weak, public funding is insufficient and the regulated, low electricity prices, especially in the residential sector, do not incentivise efficiency measures. And yet, despite these low prices, it is estimated that in all of the Contracting Parties at least 50% of the population spends more than 10% of their net income on energy – thus falling under the standard definition of fuel poverty, and hence the lack of available income for investments in household retrofit remains also a significant barrier.

Therefore a significant amount of work is ahead of us, and the legal and regulatory framework is crucial for proper energy efficiency development.

In editorial terms, it is important to note that the consolidated versions of the legislation have been compiled in this volume by the editor for the sake of convenience only. In any circumstance, the versions adopted by the legislature of the European Union and the Energy Community and published in the Official Journal or on the Energy Community website respectively shall prevail.



Janez Kopač
Director of Energy Community Secretariat



PART I

ENERGY EFFICIENCY ACQUIS COMMUNAUTAIRE

Directive 2012/27/EU of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC

Incorporated and adapted by Ministerial Council Decision 2015/08/MC-EnC of 16 October 2015 on the implementation of the EU Directive 2012/27/EU on energy efficiency

The adaptations made by Ministerial Council Decision 2015/08/MC-EnC are highlighted in bold and blue.

Whereas¹:

1. **The Ministerial Council of the Energy Community on 18 December 2009 adopted Decision 2009/05/MC-EnC incorporating Directive 2006/32/EC on energy end-use efficiency and energy services, Directive 2002/91/EC on the energy performance of buildings ('Directive 2002/91/EC') and Directive 92/75/EEC on the indication by labeling and standard product information of the consumption of energy and other resources by household appliances ('Directive 92/75/EEC'), as well as eight Implementing Directives, into the Energy Community acquis,**
2. **The Ministerial Council of the Energy Community on 24 September 2010 adopted Decision No 2010/02/MC-EnC amending Decision 2009/05/MC-EnC of 18 December 2009 on the implementation of certain Directives on Energy Efficiency, respectively Directive 2010/31/EU of the European Parliament and of the Council on the energy performance of buildings, recasting and repealing Directive 2002/91/EC, and Directive 2010/30/EU of the European Parliament and of the Council on the indication by labeling and standard product information of the consumption of energy and other resources by energy-related products, recasting and repealing Directive 92/75/EEC,**
3. **The Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC, was published in the Official Journal of the European Union L315/1 on 14.11.2012,**
4. **The Ministerial Council of the Energy Community adopted on 24 October 2013 a Recommendation R/2013/01/MC-EnC on energy efficiency,**
5. **The Energy Community should adapt its acquis to the recent changes in the European Union law, taking into account its own institutional framework and the specific situation of each of its Contracting Parties,**
6. **While the European Council of October 2014 set an indicative target at the EU level of at least 27% for improving energy efficiency in 2030 compared to projections of future energy consumption based on the current criteria, this target will be reviewed by 2020, having in mind an EU level of 30%. Accordingly the Commission will propose an review of the Directive for the Energy Community by 2020,**
7. **Whereas at its meeting on 24 June 2015, the Permanent High Level Group discussed the present proposal and endorsed it on 22 September 2015.**

¹ Recitals from the Ministerial Council Decision 2015/08/MC-EnC

Whereas:

(1) The Union is facing unprecedented challenges resulting from increased dependence on energy imports and scarce energy resources, and the need to limit climate change and to overcome the economic crisis. Energy efficiency is a valuable means to address these challenges. It improves the Union's security of supply by reducing primary energy consumption and decreasing energy imports. It helps to reduce greenhouse gas emissions in a cost-effective way and thereby to mitigate climate change. Shifting to a more energy-efficient economy should also accelerate the spread of innovative technological solutions and improve the competitiveness of industry in the Union, boosting economic growth and creating high quality jobs in several sectors related to energy efficiency.

(2) The Conclusions of the European Council of 8 and 9 March 2007 emphasised the need to increase energy efficiency in the Union to achieve the objective of saving 20 % of the Union's primary energy consumption by 2020 compared to projections. The conclusions of the European Council of 4 February 2011 emphasised that the 2020 20 % energy efficiency target as agreed by the June 2010 European Council, which is presently not on track, must be delivered. Projections made in 2007 showed a primary energy consumption in 2020 of 1 842 Mtoe. A 20 % reduction results in 1 474 Mtoe in 2020, i.e. a reduction of 368 Mtoe as compared to projections.

(3) The Conclusions of the European Council of 17 June 2010 confirmed the energy efficiency target as one of the headline targets of the Union's new strategy for jobs and smart, sustainable and inclusive growth ('Europe 2020 Strategy'). Under this process and in order to implement this objective at national level, Member States are required to set national targets in close dialogue with the Commission and to indicate, in their National Reform Programmes, how they intend to achieve them.

(4) The Commission Communication of 10 November 2010 on Energy 2020 places energy efficiency at the core of the Union energy strategy for 2020 and outlines the need for a new energy efficiency strategy that will enable all Member States to decouple energy use from economic growth.

(5) In its resolution of 15 December 2010 on the Revision of the Energy Efficiency Action Plan, the European Parliament called on the Commission to include in its revised Energy Efficiency Action Plan measures to close the gap to reach the overall Union energy efficiency objective in 2020.

(6) One of the initiatives of the Europe 2020 Strategy is the flagship resource-efficient Europe adopted by the Commission on 26 January 2011. This identifies energy efficiency as a major element in ensuring the sustainability of the use of energy resources.

(7) The Conclusions of the European Council of 4 February 2011 acknowledged that the Union energy efficiency target is not on track and that determined action is required to tap the considerable potential for higher energy savings in buildings, transport, products and processes. Those conclusions also provide that the implementation of the Union energy efficiency target will be reviewed by 2013 and further measures considered if necessary.

(8) On 8 March 2011, the Commission adopted its Communication on an Energy Efficiency Plan 2011. The Communication confirmed that the Union is not on track to achieve its energy efficiency target. This is despite the progress in national energy efficiency policies outlined in the first National Energy Efficiency Action Plans submitted by Member States in fulfilment of the requirements of Directive 2006/32/EC of the European Parliament and of the Council of 5 April 2006 on energy end-use efficiency and energy services. Initial analysis of the second Action Plans confirms that the Union is not on track. To remedy that, the Energy Efficiency Plan 2011 spelled out a series of energy efficiency policies and measures covering the full energy chain, including energy generation, trans-

mission and distribution; the leading role of the public sector in energy efficiency; buildings and appliances; industry; and the need to empower final customers to manage their energy consumption. Energy efficiency in the transport sector was considered in parallel in the White Paper on Transport, adopted on 28 March 2011. In particular, Initiative 26 of the White Paper calls for appropriate standards for CO₂ emissions of vehicles in all modes, where necessary supplemented by requirements on energy efficiency to address all types of propulsion systems.

(9) On 8 March 2011, the Commission also adopted a Roadmap for moving to a competitive low carbon economy in 2050, identifying the need from this perspective for more focus on energy efficiency.

(10) In this context it is necessary to update the Union's legal framework for energy efficiency with a Directive pursuing the overall objective of the energy efficiency target of saving 20 % of the Union's primary energy consumption by 2020, and of making further energy efficiency improvements after 2020. To that end, this Directive should establish a common framework to promote energy efficiency within the Union and lay down specific actions to implement some of the proposals included in the Energy Efficiency Plan 2011 and achieve the significant unrealised energy saving potentials it identifies.

(11) Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020 requires the Commission to assess and report by 2012 on the progress of the Union and its Member States towards the objective of reducing energy consumption by 20 % by 2020 compared to projections. It also states that, to help Member States meet the Union's greenhouse gas emission reduction commitments, the Commission should propose, by 31 December 2012, strengthened or new measures to accelerate energy efficiency improvements. This Directive responds to this requirement. It also contributes to meeting the goals set out in the Roadmap for moving to a competitive low carbon economy in 2050, in particular by reducing greenhouse gas emissions from the energy sector, and to achieving zero emission electricity production by 2050.

(12) An integrated approach has to be taken to tap all the existing energy saving potential, encompassing savings in the energy supply and the end-use sectors. At the same time, the provisions of Directive 2004/8/EC of the European Parliament and of the Council of 11 February 2004 on promotion of cogeneration based on a useful heat demand in the internal energy market and Directive 2006/32/EC should be strengthened.

(13) It would be preferable for the 20 % energy efficiency target to be achieved as a result of the cumulative implementation of specific national and European measures promoting energy efficiency in different fields. Member States should be required to set indicative national energy efficiency targets, schemes and programmes. These targets and the individual efforts of each Member State should be evaluated by the Commission, alongside data on the progress made, to assess the likelihood of achieving the overall Union target and the extent to which the individual efforts are sufficient to meet the common goal. The Commission should therefore closely monitor the implementation of national energy efficiency programmes through its revised legislative framework and within the Europe 2020 process. When setting the indicative national energy efficiency targets, Member States should be able to take into account national circumstances affecting primary energy consumption such as remaining cost-effective energy-saving potential, changes in energy imports and exports, development of all sources of renewable energies, nuclear energy, carbon capture and storage, and

early action. When undertaking modelling exercises, the Commission should consult Member States on model assumptions and draft model results in a timely and transparent manner. Improved modelling of the impact of energy efficiency measures and of the stock and performance of technologies is needed.

(14) Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources states that Cyprus and Malta, due to their insular and peripheral character, rely on aviation as a mode of transport, which is essential for their citizens and their economy. As a result, Cyprus and Malta have a gross final consumption of energy in national air transport which is disproportionately high, i.e. more than three times the Community average in 2005, and are thus disproportionately affected by the current technological and regulatory constraints.

(15) The total volume of public spending is equivalent to 19 % of the Union's gross domestic product. For this reason the public sector constitutes an important driver to stimulate market transformation towards more efficient products, buildings and services, as well as to trigger behavioural changes in energy consumption by citizens and enterprises. Furthermore, decreasing energy consumption through energy efficiency improvement measures can free up public resources for other purposes. Public bodies at national, regional and local level should fulfil an exemplary role as regards energy efficiency.

(16) Bearing in mind that the Council conclusions of 10 June 2011 on the Energy Efficiency Plan 2011 stressed that buildings represent 40 % of the Union's final energy consumption, and in order to capture the growth and employment opportunities in the skilled trades and construction sectors, as well as in the production of construction products and in professional activities such as architecture, consultancy and engineering, Member States should establish a long-term strategy beyond 2020 for mobilising investment in the renovation of residential and commercial buildings with a view to improving the energy performance of the building stock. That strategy should address cost-effective deep renovations which lead to a refurbishment that reduces both the delivered and the final energy consumption of a building by a significant percentage compared with the pre-renovation levels leading to a very high energy performance. Such deep renovations could also be carried out in stages.

(17) The rate of building renovation needs to be increased, as the existing building stock represents the single biggest potential sector for energy savings. Moreover, buildings are crucial to achieving the Union objective of reducing greenhouse gas emissions by 80-95 % by 2050 compared to 1990. Buildings owned by public bodies account for a considerable share of the building stock and have high visibility in public life. It is therefore appropriate to set an annual rate of renovation of buildings owned and occupied by central government on the territory of a Member State to upgrade their energy performance. This renovation rate should be without prejudice to the obligations with regard to nearly-zero energy buildings set in Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings. The obligation to renovate central government buildings in this Directive complements that Directive, which requires Member States to ensure that when existing buildings undergo major renovation their energy performance is upgraded so that they meet minimum energy performance requirements. It should be possible for Member States to take alternative cost-efficient measures to achieve an equivalent improvement of the energy performance of the buildings within their central government estate. The obligation to renovate floor area of central government buildings should apply to the administrative departments whose competence extends over the whole territory of a Member State. When in a given Member State

and for a given competence no such relevant administrative department exists that covers the whole territory, the obligation should apply to those administrative departments whose competences cover collectively the whole territory.

(18) A number of municipalities and other public bodies in the Member States have already put into place integrated approaches to energy saving and energy supply, for example via sustainable energy action plans, such as those developed under the Covenant of Mayors initiative, and integrated urban approaches which go beyond individual interventions in buildings or transport modes. Member States should encourage municipalities and other public bodies to adopt integrated and sustainable energy efficiency plans with clear objectives, to involve citizens in their development and implementation and to adequately inform them about their content and progress in achieving objectives. Such plans can yield considerable energy savings, especially if they are implemented by energy management systems that allow the public bodies concerned to better manage their energy consumption. Exchange of experience between cities, towns and other public bodies should be encouraged with respect to the more innovative experiences.

(19) With regard to the purchase of certain products and services and the purchase and rent of buildings, central governments which conclude public works, supply or service contracts should lead by example and make energy-efficient purchasing decisions. This should apply to the administrative departments whose competence extends over the whole territory of a Member State. When in a given Member State and for a given competence no such relevant administrative department exists that covers the whole territory, the obligation should apply to those administrative departments whose competences cover collectively the whole territory. The provisions of the Union's public procurement directives should not however be affected. For products other than those covered by the energy efficiency requirements for purchasing in this Directive, Member States should encourage public bodies to take into account the energy efficiency of purchase.

(20) An assessment of the possibility of establishing a 'white certificate' scheme at Union level has shown that, in the current situation, such a system would create excessive administrative costs and that there is a risk that energy savings would be concentrated in a number of Member States and not introduced across the Union. The objective of such a Union-level scheme could be better achieved, at least at this stage, by means of national energy efficiency obligation schemes for energy utilities or other alternative policy measures that achieve the same amount of energy savings. It is appropriate for the level of ambition of such schemes to be established in a common framework at Union level while providing significant flexibility to Member States to take fully into account the national organisation of market actors, the specific context of the energy sector and final customers' habits. The common framework should give energy utilities the option of offering energy services to all final customers, not only to those to whom they sell energy. This increases competition in the energy market because energy utilities can differentiate their product by providing complementary energy services. The common framework should allow Member States to include requirements in their national scheme that pursue a social aim, in particular in order to ensure that vulnerable customers have access to the benefits of higher energy efficiency. Member States should determine, on the basis of objective and non-discriminatory criteria, which energy distributors or retail energy sales companies should be obliged to achieve the end-use energy savings target laid down in this Directive.

Member States should in particular be allowed not to impose this obligation on small energy distributors, small retail energy sales companies and small energy sectors to avoid disproportionate administrative burdens. The Commission Communication of 25 June 2008 sets out principles that

should be taken into account by Member States that decide to abstain from applying this possibility. As a means of supporting national energy efficiency initiatives, obligated parties under national energy efficiency obligation schemes could fulfil their obligations by contributing annually to an Energy Efficiency National Fund an amount that is equal to the investments required under the scheme.

(21) Given the over-arching imperative of restoring sustainability to public finances and of fiscal consolidation, in the implementation of particular measures falling within the scope of this Directive, due regard should be accorded to the cost-effectiveness at Member State level of implementing energy efficiency measures on the basis of an appropriate level of analysis and evaluation.

(22) The requirement to achieve savings of the annual energy sales to final customers relative to what energy sales would have been does not constitute a cap on sales or energy consumption. Member States should be able to exclude all or part of the sales of energy, by volume, used in industrial activities listed in Annex I to Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community for the calculation of the energy sales to final customers, as it is recognised that certain sectors or subsectors within these activities may be exposed to a significant risk of carbon leakage. It is appropriate that Member States are aware of the costs of schemes in order to be able to accurately assess the costs of measures.

(23) Without prejudice to the requirements in Article 7 and with a view to limiting the administrative burden, each Member State may group all individual policy measures to implement Article 7 into a comprehensive national energy efficiency programme.

(24) To tap the energy savings potential in certain market segments where energy audits are generally not offered commercially (such as small and medium-sized enterprises (SMEs)), Member States should develop programmes to encourage SMEs to undergo energy audits. Energy audits should be mandatory and regular for large enterprises, as energy savings can be significant. Energy audits should take into account relevant European or International Standards, such as EN ISO 50001 (Energy Management Systems), or EN 16247-1 (Energy Audits), or, if including an energy audit, EN ISO 14000 (Environmental Management Systems) and thus be also in line with the provisions of Annex VI to this Directive as such provisions do not go beyond the requirements of these relevant standards. A specific European standard on energy audits is currently under development.

(25) Where energy audits are carried out by in-house experts, the necessary independence would require these experts not to be directly engaged in the activity audited.

(26) When designing energy efficiency improvement measures, account should be taken of efficiency gains and savings obtained through the widespread application of cost-effective technological innovations such as smart meters. Where smart meters have been installed, they should not be used by companies for unjustified back billing.

(27) In relation to electricity, and in accordance with Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity, where the roll-out of smart meters is assessed positively, at least 80 % of consumers should be equipped with intelligent metering systems by 2020. In relation to gas, and in accordance with Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas, where the roll-out of intelligent metering systems is assessed positively, Member States or any competent authority they designate, should prepare a timetable for the implementation of intelligent metering systems.

(28) Use of individual meters or heat cost allocators for measuring individual consumption of heating in multi-apartment buildings supplied by district heating or common central heating is beneficial when final customers have a means to control their own individual consumption. Therefore, their use makes sense only in buildings where radiators are equipped with thermostatic radiator valves.

(29) In some multi-apartment buildings supplied by district heating or common central heating, the use of accurate individual heat meters would be technically complicated and costly due to the fact that the hot water used for heating enters and leaves the apartments at several points. It can be assumed that individual metering of heat consumption in multi-apartment buildings is, nevertheless, technically possible when the installation of individual meters would not require changing the existing in-house piping for hot water heating in the building. In such buildings, measurements of individual heat consumption can then be carried out by means of individual heat cost allocators installed on each radiator.

(30) Directive 2006/32/EC requires Member States to ensure that final customers are provided with competitively priced individual meters that accurately reflect their actual energy consumption and provide information on actual time of use. In most cases, this requirement is subject to the conditions that it should be technically possible, financially reasonable, and proportionate in relation to the potential energy savings. When a connection is made in a new building or a building undergoes major renovations, as defined in Directive 2010/31/EU, such individual meters should, however, always be provided. Directive 2006/32/EC also requires that clear billing based on actual consumption should be provided frequently enough to enable consumers to regulate their own energy use.

(31) Directives 2009/72/EC and 2009/73/EC require Member States to ensure the implementation of intelligent metering systems to assist the active participation of consumers in the electricity and gas supply markets. As regards electricity, where the roll-out of smart meters is found to be cost-effective, at least 80 % of consumers must be equipped with intelligent metering systems by 2020. As regards natural gas, no deadline is given but the preparation of a timetable is required. Those Directives also state that final customers must be properly informed of actual electricity/gas consumption and costs frequently enough to enable them to regulate their own consumption.

(32) The impact of the provisions on metering and billing in Directives 2006/32/EC, 2009/72/EC and 2009/73/EC on energy saving has been limited. In many parts of the Union, these provisions have not led to customers receiving up-to-date information about their energy consumption, or billing based on actual consumption at a frequency which studies show is needed to enable customers to regulate their energy use. In the sectors of space heating and hot water in multi-apartment buildings the insufficient clarity of these provisions has also led to numerous complaints from citizens.

(33) In order to strengthen the empowerment of final customers as regards access to information from the metering and billing of their individual energy consumption, bearing in mind the opportunities associated with the process of the implementation of intelligent metering systems and the roll out of smart meters in the Member States, it is important that the requirements of Union law in this area be made clearer. This should help reduce the costs of the implementation of intelligent metering systems equipped with functions enhancing energy saving and support the development of markets for energy services and demand management. Implementation of intelligent metering systems enables frequent billing based on actual consumption. However, there is also a need to clarify the requirements for access to information and fair and accurate billing based on actual consumption in cases where smart meters will not be available by 2020, including in relation to metering and billing of individual consumption of heating, cooling and hot water in multi-unit buildings supplied

by district heating/cooling or own common heating system installed in such buildings.

(34) When designing energy efficiency improvement measures, Member States should take due account of the need to ensure the correct functioning of the internal market and the coherent implementation of the acquis, in accordance with the Treaty on the Functioning of the European Union.

(35) High-efficiency cogeneration and district heating and cooling has significant potential for saving primary energy, which is largely untapped in the Union. Member States should carry out a comprehensive assessment of the potential for high-efficiency cogeneration and district heating and cooling. These assessments should be updated, at the request of the Commission, to provide investors with information concerning national development plans and contribute to a stable and supportive investment environment. New electricity generation installations and existing installations which are substantially refurbished or whose permit or licence is updated should, subject to a cost-benefit analysis showing a cost-benefit surplus, be equipped with high-efficiency cogeneration units to recover waste heat stemming from the production of electricity. This waste heat could then be transported where it is needed through district heating networks. The events that trigger a requirement for authorisation criteria to be applied will generally be events that also trigger requirements for permits under Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions and for authorisation under Directive 2009/72/EC.

(36) It may be appropriate for nuclear power installations, or electricity generation installations that are intended to make use of geological storage permitted under Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide, to be located in places where the recovery of waste heat through high-efficiency cogeneration or by supplying a district heating or cooling network is not cost-effective. Member States should therefore be able to exempt those installations from the obligation to carry out a cost-benefit analysis for providing the installation with equipment allowing the recovery of waste heat by means of a high-efficiency cogeneration unit. It should also be possible to exempt peak-load and back-up electricity generation installations which are planned to operate under 1 500 operating hours per year as a rolling average over a period of five years from the requirement to also provide heat.

(37) It is appropriate for Member States to encourage the introduction of measures and procedures to promote cogeneration installations with a total rated thermal input of less than 20 MW in order to encourage distributed energy generation.

(38) High-efficiency cogeneration should be defined by the energy savings obtained by combined production instead of separate production of heat and electricity. The definitions of cogeneration and high-efficiency cogeneration used in Union legislation should be without prejudice to the use of different definitions in national legislation for purposes other than those of the Union legislation in question. To maximise energy savings and avoid energy saving opportunities being missed, the greatest attention should be paid to the operating conditions of cogeneration units.

(39) To increase transparency for the final customer to be able to choose between electricity from cogeneration and electricity produced by other techniques, the origin of high-efficiency cogeneration should be guaranteed on the basis of harmonised efficiency reference values. Guarantee of origin schemes do not by themselves imply a right to benefit from national support mechanisms. It is important that all forms of electricity produced from high-efficiency cogeneration can be covered by guarantees of origin. Guarantees of origin should be distinguished from exchangeable certificates.

(40) The specific structure of the cogeneration and district heating and cooling sectors, which include

many small and medium-sized producers, should be taken into account, especially when reviewing the administrative procedures for obtaining permission to construct cogeneration capacity or associated networks, in application of the 'Think Small First' principle.

(41) Most Union businesses are SMEs. They represent an enormous energy saving potential for the Union. To help them adopt energy efficiency measures, Member States should establish a favourable framework aimed at providing SMEs with technical assistance and targeted information.

(42) Directive 2010/75/EU includes energy efficiency among the criteria for determining the Best Available Techniques that should serve as a reference for setting the permit conditions for installations within its scope, including combustion installations with a total rated thermal input of 50 MW or more. However, that Directive gives Member States the option not to impose requirements relating to energy efficiency on combustion units or other units emitting carbon dioxide on the site, for the activities listed in Annex I to Directive 2003/87/EC. Member States could include information on energy efficiency levels in their reporting under Directive 2010/75/EU.

(43) Member States should establish, on the basis of objective, transparent and non-discriminatory criteria, rules governing the bearing and sharing of costs of grid connections and grid reinforcements and for technical adaptations needed to integrate new producers of electricity produced from high-efficiency cogeneration, taking into account guidelines and codes developed in accordance with Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks. Producers of electricity generated from high-efficiency cogeneration should be allowed to issue a call for tender for the connection work. Access to the grid system for electricity produced from high-efficiency cogeneration, especially for small scale and micro-cogeneration units, should be facilitated. In accordance with Article 3(2) of Directive 2009/72/EC and Article 3(2) of Directive 2009/73/EC, Member States may impose public service obligations, including in relation to energy efficiency, on undertakings operating in the electricity and gas sectors.

(44) Demand response is an important instrument for improving energy efficiency, since it significantly increases the opportunities for consumers or third parties nominated by them to take action on consumption and billing information and thus provides a mechanism to reduce or shift consumption, resulting in energy savings in both final consumption and, through the more optimal use of networks and generation assets, in energy generation, transmission and distribution.

(45) Demand response can be based on final customers' responses to price signals or on building automation. Conditions for, and access to, demand response should be improved, including for small final consumers. Taking into account the continuing deployment of smart grids, Member States should therefore ensure that national energy regulatory authorities are able to ensure that network tariffs and regulations incentivise improvements in energy efficiency and support dynamic pricing for demand response measures by final customers. Market integration and equal market entry opportunities for demand-side resources (supply and consumer loads) alongside generation should be pursued. In addition, Member States should ensure that national energy regulatory authorities take an integrated approach encompassing potential savings in the energy supply and the end-use sectors.

(46) A sufficient number of reliable professionals competent in the field of energy efficiency should be available to ensure the effective and timely implementation of this Directive, for instance as regards compliance with the requirements on energy audits and implementation of energy efficiency

obligation schemes. Member States should therefore put in place certification schemes for the providers of energy services, energy audits and other energy efficiency improvement measures.

(47) It is necessary to continue developing the market for energy services to ensure the availability of both the demand for and the supply of energy services. Transparency, for example by means of lists of energy services providers, can contribute to this. Model contracts, exchange of best practice and guidelines, in particular for energy performance contracting, can also help stimulate demand. As in other forms of third-party financing arrangements, in an energy performance contract the beneficiary of the energy service avoids investment costs by using part of the financial value of energy savings to repay the investment fully or partially carried out by a third party.

(48) There is a need to identify and remove regulatory and non-regulatory barriers to the use of energy performance contracting and other third-party financing arrangements for energy savings. These barriers include accounting rules and practices that prevent capital investments and annual financial savings resulting from energy efficiency improvement measures from being adequately reflected in the accounts for the whole life of the investment. Obstacles to the renovating of the existing building stock based on a split of incentives between the different actors concerned should also be tackled at national level.

(49) Member States and regions should be encouraged to make full use of the Structural Funds and the Cohesion Fund to trigger investments in energy efficiency improvement measures. Investment in energy efficiency has the potential to contribute to economic growth, employment, innovation and a reduction in fuel poverty in households, and therefore makes a positive contribution to economic, social and territorial cohesion. Potential areas for funding include energy efficiency measures in public buildings and housing, and providing new skills to promote employment in the energy efficiency sector.

(50) Member States should encourage the use of financing facilities to further the objectives of this Directive. Such financing facilities could include financial contributions and fines from non-fulfilment of certain provisions of this Directive; resources allocated to energy efficiency under Article 10(3) of Directive 2003/87/EC; resources allocated to energy efficiency in the multiannual financial framework, in particular cohesion, structural and rural development funds, and dedicated European financial instruments, such as the European Energy Efficiency Fund.

(51) Financing facilities could be based, where applicable, on resources allocated to energy efficiency from Union project bonds; resources allocated to energy efficiency from the European Investment Bank and other European financial institutions, in particular the European Bank for Reconstruction and Development and the Council of Europe Development Bank; resources leveraged in financial institutions; national resources, including through the creation of regulatory and fiscal frameworks encouraging the implementation of energy efficiency initiatives and programmes; revenues from annual emission allocations under Decision No 406/2009/EC.

(52) The financing facilities could in particular use those contributions, resources and revenues to enable and encourage private capital investment, in particular drawing on institutional investors, while using criteria ensuring the achievement of both environmental and social objectives for the granting of funds; make use of innovative financing mechanisms (e.g. loan guarantees for private capital, loan guarantees to foster energy performance contracting, grants, subsidised loans and dedicated credit lines, third party financing systems) that reduce the risks of energy efficiency projects and allow for cost-effective renovations even among low and medium revenue households; be linked

to programmes or agencies which will aggregate and assess the quality of energy saving projects, provide technical assistance, promote the energy services market and help to generate consumer demand for energy services.

(53) The financing facilities could also provide appropriate resources to support training and certification programmes which improve and accredit skills for energy efficiency; provide resources for research on and demonstration and acceleration of uptake of small-scale and micro- technologies to generate energy and the optimisation of the connections of those generators to the grid; be linked to programmes undertaking action to promote energy efficiency in all dwellings to prevent energy poverty and stimulate landlords letting dwellings to render their property as energy-efficient as possible; provide appropriate resources to support social dialogue and standard-setting aiming at improving energy efficiency and ensuring good working conditions and health and safety at work.

(54) Available Union financial instruments and innovative financing mechanisms should be used to give practical effect to the objective of improving the energy performance of public bodies' buildings. In that respect, Member States may use their revenues from annual emission allocations under Decision No 406/2009/EC in the development of such mechanisms on a voluntary basis and taking into account national budgetary rules.

(55) In the implementation of the 20 % energy efficiency target, the Commission will have to monitor the impact of new measures on Directive 2003/87/EC establishing the Union's emissions trading scheme (ETS) in order to maintain the incentives in the emissions trading system rewarding low carbon investments and preparing the ETS sectors for the innovations needed in the future. It will need to monitor the impact on those industry sectors which are exposed to a significant risk of carbon leakage as determined in Commission Decision 2010/2/EU of 24 December 2009 determining, pursuant to Directive 2003/87/EC of the European Parliament and of the Council, a list of sectors and subsectors which are deemed to be exposed to a significant risk of carbon leakage, in order to ensure that this Directive promotes and does not impede the development of these sectors.

(56) Directive 2006/32/EC requires Member States to adopt, and aim to achieve, an overall national indicative energy savings target of 9 % by 2016, to be reached by deploying energy services and other energy efficiency improvement measures. That Directive states that the second Energy Efficiency Plan adopted by the Member States shall be followed, as appropriate and where necessary, by Commission proposals for additional measures, including extending the period of application of targets. If a report concludes that insufficient progress has been made towards achieving the indicative national targets laid down by that Directive, these proposals are to address the level and nature of the targets. The impact assessment accompanying this Directive finds that the Member States are on track to achieve the 9 % target, which is substantially less ambitious than the subsequently adopted 20 % energy saving target for 2020, and therefore there is no need to address the level of the targets.

(57) The Intelligent Energy Europe Programme established by Decision No 1639/2006/EC of the European Parliament and of the Council of 24 October 2006 establishing a Competitiveness and Innovation Framework Programme (2007 to 2013) has been instrumental in creating an enabling environment for the proper implementation of the Union's sustainable energy policies, by removing market barriers such as insufficient awareness and capacity of market actors and institutions, national technical or administrative barriers to the proper functioning of the internal energy market or underdeveloped labour markets to match the low-carbon economy challenge. Many of those barriers are still relevant.

(58) In order to tap the considerable energy-saving potential of energy-related products, the implementation of Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products and Directive 2010/30/EU of the European Parliament and of the Council of 19 May 2010 on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products should be accelerated and widened. Priority should be given to products offering the highest energy-saving potential as identified by the Ecodesign Working Plan and the revision, where appropriate, of existing measures.

(59) In order to clarify the conditions under which Member States can set energy performance requirements under Directive 2010/31/EU whilst respecting Directive 2009/125/EC and its implementing measures, Directive 2009/125/EC should be amended accordingly.

(60) Since the objective of this Directive, namely to achieve the Union's energy efficiency target of 20 % by 2020 and pave the way towards further energy efficiency improvements beyond 2020, cannot be sufficiently achieved by the Member States without taking additional energy efficiency measures, and can be better achieved at Union level, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on European Union. In accordance with the principle of proportionality, as set out in that Article, this Directive does not go beyond what is necessary in order to achieve that objective.

(61) In order to permit adaptation to technical progress and changes in the distribution of energy sources, the power to adopt acts in accordance with Article 290 of the Treaty on the Functioning of the European Union should be delegated to the Commission in respect of the review of the harmonised efficiency reference values laid down on the basis of Directive 2004/8/EC and in respect of the values, calculation methods, default primary energy coefficient and requirements in the Annexes to this Directive. It is of particular importance that the Commission carry out appropriate consultations during its preparatory work, including at expert level. The Commission, when preparing and drawing up delegated acts, should ensure a simultaneous, timely and appropriate transmission of relevant documents to the European Parliament and the Council.

(62) In order to ensure uniform conditions for the implementation of this Directive, implementing powers should be conferred on the Commission. Those powers should be exercised in accordance with Regulation (EU) No 182/2011 of the European Parliament and of the Council of 16 February 2011 laying down the rules and general principles concerning mechanisms for control by Member States of the Commission's exercise of implementing powers.

(63) All substantive provisions of Directives 2004/8/EC and 2006/32/EC should be repealed, except Article 4(1) to (4) of, and Annexes I, III and IV to Directive 2006/32/EC. Those latter provisions should continue to apply until the deadline for the achievement of the 9 % target. Article 9(1) and (2) of Directive 2010/30/EU, which provides for an obligation for Member States only to endeavour to procure products having the highest energy efficiency class, should be deleted.

(64) The obligation to transpose this Directive into national law should be limited to those provisions that represent a substantive change as compared with Directives 2004/8/EC and 2006/32/EC. The obligation to transpose the provisions which are unchanged arises under those Directives.

(65) This Directive should be without prejudice to the obligations of the Member States relating to the time limits for transposition into national law and application of Directives 2004/8/EC and 2006/32/EC.

(66) In accordance with the Joint Political Declaration of Member States and the Commission on explanatory documents of 28 September 2011, Member States have undertaken to accompany, in justified cases, the notification of their transposition measures with one or more documents explaining the relationship between the components of a directive and the corresponding parts of national transposition instruments. With regard to this Directive, the legislator considers the transmission of such documents to be justified,

CHAPTER I

SUBJECT MATTER, SCOPE, DEFINITIONS AND ENERGY EFFICIENCY TARGETS

Article 1

Subject matter and scope

1. This Directive establishes a common framework of measures for the promotion of energy efficiency within the Energy Community, to set a 20 % headline target on energy efficiency in the Energy Community in 2020 and to pave the way for further energy efficiency improvements beyond that date.

It 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 for 2020.

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**².

Article 2

Definitions

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

- (1) 'energy' means all forms of energy products, combustible fuels, heat, renewable energy, electricity, or any other form of energy, as defined in Article 2(d) of Regulation (EC) No 1099/2008 of the European Parliament and of the Council of 22 October 2008 on energy statistics³;
- (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

² This corresponds to Article 1(2) of Ministerial Council Decision 2015/08/MC-EnC.

³ Incorporated by Ministerial Council Decision 2012/02/MC-EnC of 18 October 2012 concerning the implementation of the rules of energy statistics in the Energy Community.

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 frame-

work, 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 2009/72/EC and Directive 2009/73/EC respectively, as incorporated and adapted 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 2009/72/EC and Directive 2009/73/EC respectively, as incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC;**

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

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

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

- (33) 'electricity from cogeneration' means electricity generated in a process linked to the production of useful heat and calculated in accordance with the methodology laid down in Annex I;
- (34) 'high-efficiency cogeneration' means cogeneration meeting the criteria laid down in Annex II;
- (35) 'overall efficiency' means the annual sum of electricity and mechanical energy production and useful heat output divided by the fuel input used for heat produced in a cogeneration process and gross electricity and mechanical energy production;
- (36) 'power-to-heat ratio' means the ratio of electricity from cogeneration to useful heat when operating in full cogeneration mode using operational data of the specific unit;
- (37) 'cogeneration unit' means a unit that is able to operate in cogeneration mode;
- (38) 'small-scale cogeneration unit' means a cogeneration unit with installed capacity below 1 MW_e;
- (39) 'micro-cogeneration unit' means a cogeneration unit with a maximum capacity below 50 kW_e;
- (40) 'plot ratio' means the ratio of the building floor area to the land area in a given territory;
- (41) 'efficient district heating and cooling' means a district heating or cooling system using at least 50 % renewable energy, 50 % waste heat, 75 % cogenerated heat or 50 % of a combination of such energy and heat;
- (42) 'efficient heating and cooling' means a heating and cooling option that, compared to a baseline scenario reflecting a business-as-usual situation, measurably reduces the input of primary energy needed to supply one unit of delivered energy within a relevant system boundary in a cost-effective way, as assessed in the cost-benefit analysis referred to in this Directive, taking into account the energy required for extraction, conversion, transport and distribution;
- (43) 'efficient individual heating and cooling' means an individual heating and cooling supply option that, compared to efficient district heating and cooling, measurably reduces the input of non-renewable primary energy needed to supply one unit of delivered energy within a relevant system boundary or requires the same input of non-renewable primary energy but at a lower cost, taking into account the energy required for extraction, conversion, transport and distribution;
- (44) 'substantial refurbishment' means a refurbishment whose cost exceeds 50 % of the investment cost for a new comparable unit;
- (45) 'aggregator' means a demand service provider that combines multiple short-duration consumer loads for sale or auction in organised energy markets.

Article 3

Energy efficiency targets

1. Each **Contracting Party** shall set an indicative national energy efficiency target, 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**⁴ 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:

⁴ In accordance with the Article 1(2) of Ministerial Council Decision 2015/08/MC-EnC

- (a) **that the Energy Community's 2020 energy consumption has to be no more than 187 Mtoe of primary energy or no more than 133 Mtoe of final energy;**
- (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 incorporated and adapted by the 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 energy consumption of no more than 187 Mtoe of primary energy and/or no more than 133 Mtoe of final energy in 2020.

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

- (a) sum the national indicative energy efficiency targets reported by **Contracting Parties**;
- (b) assess whether the sum of those targets can be considered a reliable guide to whether the **Energy Community** as a whole is on track, taking into account the evaluation of the first annual report in accordance with Article 24(1), and the evaluation of the National Energy Efficiency Action Plans in accordance with Article 24(2);
- (c) take into account complementary analysis arising from:
 - (i) an assessment of progress in energy consumption, and in energy consumption in relation to economic activity, at **Energy Community** level, including progress in the efficiency of energy supply in **Contracting Parties** that have based their national indicative targets on final energy consumption or final energy savings, including progress due to these **Contracting Parties'** compliance with Chapter III of this Directive;
 - (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 consumption of no more than 187 Mtoe of primary energy and/or no more than 133 Mtoe of final energy in 2020.**

CHAPTER II EFFICIENCY IN ENERGY USE

Article 4

Building renovation

Contracting Parties shall establish a long-term strategy for mobilising investment in the renovation of the national stock of residential and commercial buildings, both public and private. This strategy shall encompass:

- (a) an overview of the national building stock based, as appropriate, on statistical sampling;
- (b) identification of cost-effective approaches to renovations relevant to the building type and climatic zone;
- (c) policies and measures to stimulate cost-effective deep renovations of buildings, including staged deep renovations;
- (d) a forward-looking perspective to guide investment decisions of individuals, the construction industry and financial institutions;
- (e) an evidence-based estimate of expected energy savings and wider benefits.

A first version of the strategy shall be published by 30 March 2017 and updated every three years thereafter and submitted to the Energy Community Secretariat as part of the National Energy Efficiency Action Plans.

Article 5

Exemplary role of public bodies' buildings

1. Without prejudice to Article 7 of Directive 2010/31/EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC**, each **Contracting Party** shall ensure that, as from **1 December 2017**, **1 %** 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 incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC**.

The **1 %** rate shall be calculated on the total floor area of buildings with a total useful floor area over 500 m² owned and occupied by the central government of the **Contracting Party** concerned that, on 1 January of each year, do not meet the national minimum energy performance requirements set in application of Article 4 of Directive 2010/31/EU, **as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC**. That threshold shall be lowered to 250 m² as of **1 January 2019**.

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 %** rate shall be calculated on the total floor area of buildings with a total useful floor area over 500 m² and, as of **1 January 2019**, over 250 m² owned and occupied by central government and by these administrative departments of the **Contracting Party** concerned that, on

1 January of each year, do not meet the national minimum energy performance requirements set in application of Article 4 of Directive 2010/31/EU, **as incorporated and adapted by the 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.

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 %** of the total floor area of central government buildings in a given year, it may count the excess towards the annual renovation rate of any of the three previous or following years.

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

5. For the purposes of paragraph 1, by **1 January 2017**, **Contracting Parties** shall establish and make publicly available an inventory of heated and/or cooled central government buildings with a total useful floor area over 500 m² and, as of **1 January 2019**, over 250 m², excluding buildings exempted on the basis of paragraph 2. The inventory shall contain the following data:

- (a) the floor area in m²; and
- (b) the energy performance of each building or relevant energy data.

6. Without prejudice to Article 7 of Directive 2010/31/EU, **as incorporated and adapted by the 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, 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 **Energy Community Sec-**

retariat, by **1 January 2017**, 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.

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.

...⁵

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 incorporated and adapted by the 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

⁵ Under Article 3(11) of Ministerial Council Decision 2015/08/MC-EnC, the second sentence in Article 6(2) of the Directive 2012/27/EU shall not be applicable.

package, by purchasing the product package that complies with the criterion of belonging to the highest energy efficiency class.

Article 7

Energy efficiency obligation schemes

1. Each **Contracting Party** shall set up an energy efficiency obligation scheme. That scheme shall ensure that energy distributors and/or retail energy sales companies that are designated as obligated parties under paragraph 4 operating in each **Contracting Party's** territory achieve a cumulative end-use energy savings target by 31 December 2020, without prejudice to paragraph 2.

That target shall be at least equivalent to achieving new savings each year from 1 January 2017 to 31 December 2020 of 0,7 % of the annual energy sales to final customers of all energy distributors or all retail energy sales companies by volume, averaged over the most recent three-year period prior to 1 January 2016. The sales of energy, by volume, used in transport may be partially or fully excluded from this calculation.

Contracting Parties shall decide how the calculated quantity of new savings referred to in the second subparagraph is to be phased over the period.

2. Subject to paragraph 3, each **Contracting Party** may:

- (a) **carry out the calculation required by the second 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, by volume, of energy used in industrial activities listed in Annex I to Directive 2003/87/EC;
- (c) allow energy savings achieved in the energy transformation, distribution and transmission sectors, including efficient district heating and cooling infrastructure, as a result of the implementation of the requirements set out in Article 14(4), point (b) of Article 14(5) and Article 15(1) to (6) and (9) to be counted towards the amount of energy savings required under paragraph 1; and
- (d) count energy savings resulting from individual actions newly implemented since 31 December 2008 that continue to have an impact in 2020 and that can be measured and verified, towards the amount of energy savings referred to in paragraph 1.

3. The application of paragraph 2 shall not lead to a reduction of more than 25 % of the amount of energy savings referred to in paragraph 1. **Contracting Parties** making use of paragraph 2 shall notify that fact to the **Energy Community Secretariat by 15 October 2017**, including the elements listed under paragraph 2 to be applied and a calculation showing their impact on the amount of energy savings referred to in paragraph 1.

4. Without prejudice to the calculation of energy savings for the target in accordance with the second subparagraph of paragraph 1, each **Contracting Party** shall, for the purposes of the first subparagraph of paragraph 1, designate, on the basis of objective and non-discriminatory criteria, obligated parties amongst energy distributors and/or retail energy sales companies operating in its territory and may include transport fuel distributors or transport fuel retailers operating in its territory. The amount of energy savings to fulfil the obligation shall be achieved by the obligated parties among final customers, designated, as appropriate, by the **Contracting Party**, independently of the calculation made pursuant to paragraph 1, or, if **Contracting Parties** so decide, through certified

savings stemming from other parties as described in point (b) of paragraph 7.

5. **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 for expressing the required amount of energy savings shall also be used for calculating the savings claimed by obligated parties. The conversion factors set out in Annex IV shall apply.

6. **Contracting Parties** shall ensure that the savings stemming from paragraphs 1, 2 and 9 of this Article and Article 20(6) are calculated in accordance with points (1) and (2) of Annex V. They shall put in place measurement, control and verification systems under which at least a statistically significant proportion and representative sample of the energy efficiency improvement measures put in place by the obligated parties is verified. That measurement, control and verification shall be conducted independently of the obligated parties.

7. Within the energy efficiency obligation scheme, **Contracting Parties** may:

(a) include requirements with a social aim in the saving obligations they impose, including by requiring a share of energy efficiency measures to be implemented as a priority in households affected by energy poverty or in social housing;

(b) 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 or may not involve formal partnerships and may be in combination with other sources of finance. Where **Contracting Parties** so permit, they shall ensure that an approval process is in place which is clear, transparent and open to all market actors, and which aims at minimising the costs of certification;

(c) 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. 8. Once a year, **Contracting Parties** shall publish the energy savings achieved by each obligated party, or each sub-category of obligated party, and in total under the scheme.

Contracting Parties shall ensure that obligated parties provide on request:

(a) aggregated statistical information on their final customers (identifying significant changes to previously submitted information); and

(b) current information on final customers' consumption, including, where applicable, load profiles, customer segmentation and geographical location of customers, while preserving the integrity and confidentiality of private or commercially sensitive information in compliance with applicable **Energy Community** law.

Such a request shall be made not more than once a year.

9. As an alternative to setting up an energy efficiency obligation scheme under paragraph 1, **Contracting Parties** may opt to take other policy measures to achieve energy savings among final customers, provided those policy measures meet the criteria set out in paragraphs 10 and 11. The annual amount of new energy savings achieved through this approach shall be equivalent to the amount of new energy savings required by paragraphs 1, 2 and 3. Provided that equivalence is maintained, **Contracting Parties** may combine obligation schemes with alternative policy measures, including national energy efficiency programmes.

The policy measures referred to in the first subparagraph may include, but are not restricted to, the

following policy measures or combinations thereof:

- (a) energy or CO₂ taxes that have the effect of reducing end-use energy consumption;
- (b) financing schemes and instruments or fiscal incentives that lead to the application of energy-efficient technology or techniques and have the effect of reducing end-use energy consumption;
- (c) regulations or voluntary agreements that lead to the application of energy-efficient technology or techniques and have the effect of reducing end-use energy consumption;
- (d) standards and norms that aim at improving the energy efficiency of products and services, including buildings and vehicles, except where these are mandatory and applicable in **Contracting Parties** under **Energy Community** law;
- (e) energy labelling schemes, with the exception of those that are mandatory and applicable in the **Contracting Parties** under **Energy Community** law;
- (f) training and education, including energy advisory programmes, that lead to the application of energy-efficient technology or techniques and have the effect of reducing end-use energy consumption.

Contracting Parties shall notify to the **Energy Community Secretariat**, by **15 March 2017**, the policy measures that they plan to adopt for the purposes of the first subparagraph and Article 20(6), following the framework provided in point 4 of Annex V, and showing how they would achieve the required amount of savings. In the case of the policy measures referred to in the second subparagraph and in Article 20(6), this notification shall demonstrate how the criteria in paragraph 10 are met. In the case of policy measures other than those referred to in the second subparagraph or in Article 20(6), **Contracting Parties** shall explain how an equivalent level of savings, monitoring and verification is achieved. The Commission may make suggestions for modifications in the three months following notification.

10. Without prejudice to paragraph 11, the criteria for the policy measures taken pursuant to the second subparagraph of paragraph 9 and Article 20(6) shall be as follows:

- (a) ... **(not applicable)**
- (b) the responsibility of each entrusted party, participating party or implementing public authority, whichever is relevant, is defined;
- (c) the energy savings that 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 are expressed in either final or primary energy consumption, using the conversion factors set out in Annex IV;
- (e) energy savings are calculated using the methods and principles provided in points (1) and (2) of Annex V;
- (f) energy savings are calculated using the methods and principles provided in point 3 of Annex V;
- (g) an annual report of the energy savings achieved is provided by participating parties unless not feasible and made publicly available;
- (h) monitoring of the results is ensured and appropriate measures are envisaged if the progress is not satisfactory;
- (i) a control system is put in place that also includes independent verification of a statistically

significant proportion of the energy efficiency improvement measures; and

(j) data on the annual trend of energy savings are published annually.

11. **Contracting Parties** shall ensure that the taxes referred to in point (a) of the second subparagraph of paragraph 9 comply with the criteria listed in points (a), (b), (c), (d), (f), (h) and (j) of paragraph 10.

Contracting Parties shall ensure that the regulations and voluntary agreements referred to in point (c) of the second subparagraph of paragraph 9 comply with the criteria listed in points (a), (b), (c), (d), (e), (g), (h), (i) and (j) of paragraph 10.

Contracting Parties shall ensure that the other policy measures referred to in the second subparagraph of paragraph 9 and the Energy Efficiency National Funds referred to in Article 20(6) comply with the criteria listed in points (a), (b), (c), (d), (e), (h), (i) and (j) of paragraph 10.

12. **Contracting Parties** shall ensure that when the impact of policy measures or individual actions overlaps, no double counting of energy savings is made.

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**⁶ shall assist **Con-**

⁶ Exchange of best practices by the Commission and the Energy Community Secretariat is supported by the Ministerial

tracting Parties by supporting the exchange of best practices in this domain.

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

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

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

5. Energy audits shall be considered as fulfilling the requirements of paragraph 4 when they are carried out in an independent manner, on the basis of minimum criteria based on Annex VI, and implemented under voluntary agreements concluded between organisations of stakeholders and an appointed body and supervised by the **Contracting Party** concerned, or other bodies to which the competent authorities 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

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, final customers for electricity, natural gas, district heating, district cooling and domestic hot water are provided with competitively priced individual meters that accurately reflect the final customer's actual energy consumption and that provide information on 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 incorporated and adapted by the 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 incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC:**

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

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

(c) in the case of electricity and at the request of the final customer, they shall require meter operators to ensure that the meter or meters can account for electricity put into the grid from the final customer's premises;

(d) they shall ensure that if final customers request it, metering data on their electricity input and off-take is 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.

3. Where heating and cooling or hot water are supplied to a building from a district heating network or from a central source servicing multiple buildings, a heat or hot water meter shall be installed at the heating exchanger or point of delivery.

In multi-apartment and multi-purpose buildings with a central heating/cooling source or supplied from a district heating network or from a central source serving multiple buildings, individual consumption meters shall also be installed by **30 November 2019** to measure the consumption of heat or cooling or hot water for each unit where technically feasible and cost-efficient. Where the use of individual meters is not technically feasible or not cost-efficient, to measure heating, individual heat cost allocators shall be used for measuring 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.

Where multi-apartment buildings are supplied from district heating or cooling, or where own common heating or cooling systems for such buildings are prevalent, **Contracting Parties** may introduce transparent rules on the allocation of the cost of thermal or 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 way to allocate costs for heat and/or hot water that is used as follows:

(a) hot water for domestic needs;

(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 apartments.

Article 10

Billing information

1. Where final customers do not have smart meters as referred to in Directives 2009/72/EC and 2009/73/EC **as incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC, Contracting Parties** shall ensure, by **30 November 2017**, that billing information is accurate and based on actual consumption, in accordance with point 1.1 of Annex VII, for all the sectors covered by this Directive, including energy distributors, distribution system operators and retail energy sales companies, where this is technically possible and economically justified.

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

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

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 11

Cost of access to metering and billing information

1. **Contracting Parties** shall ensure that final customers receive all their bills and billing information for energy consumption free of charge and that final customers also have access to their consumption data in an appropriate way and free of charge.
2. Notwithstanding paragraph 1, the distribution of costs of billing information for the individual consumption of heating and cooling in multi-apartment and multi-purpose buildings pursuant to Article 9(3) shall be carried out on a non-profit basis. Costs resulting from the assignment of this 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 customers to the extent that such costs are reasonable.

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 **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**.

...⁷

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

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

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

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

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

5. **Contracting Parties** shall ensure that a cost-benefit analysis in accordance with Part 2 of Annex IX is carried out when, after **15 October 2017**:

⁷ The second paragraph is not applicable

(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 1 500 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 incorporated and adapted 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 incorporated and adapted by the 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/EU⁸ 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

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 incorporated and adapted 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 incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC** and taking into account the costs and benefits of each measure, provide incentives for grid operators to make available system services to network users permitting them to implement energy efficiency improvement measures in the context of the continuing deployment of smart grids.

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

⁸ OJ L 343, 23.12.2011, p. 91.

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 incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC**.

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

(a) an assessment is undertaken of the energy efficiency potentials of their gas and electricity infrastructure, in particular regarding transmission, distribution, load management and interoperability, and connection to energy generating installations, including access possibilities for micro energy generators;

(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 incorporated and adapted 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 incorporated and adapted 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 incorporated and adapted by the 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 incorporated and adapted 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 incorporated and adapted by the 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 incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC**.

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

2. **Contracting Parties** shall establish appropriate conditions for market operators to provide adequate and targeted information and advice to energy consumers on energy efficiency.

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

European social partners in their discussions on energy efficiency.

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

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

Article 18

Energy services

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

- (a) disseminating clear and easily accessible information on:
 - (i) available energy service contracts and clauses that should be included in such contracts to guarantee energy savings and final customers' rights;
 - (ii) financial instruments, incentives, grants and loans to support energy efficiency service projects;
- (b) encouraging the development of quality labels, inter alia, by trade associations;
- (c) making publicly available and regularly updating a list of available energy service providers who are qualified and/or certified and their qualifications and/or certifications in accordance with Article 16, or providing an interface where energy service providers can provide information;
- (d) supporting the public sector in taking up energy service offers, in particular for building refurbishment, by:
 - (i) providing model contracts for energy performance contracting which include at least the items listed in Annex XIII;
 - (ii) providing information on best practices for energy performance contracting, including, if available, cost-benefit analysis using a life-cycle approach;
- (e) providing a qualitative review in the framework of the National Energy Efficiency Action Plan regarding the current and future development of the energy services market.

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

- (a) identifying and publicising point(s) of contact where final customers can obtain the information referred to in paragraph 1;
- (b) taking, if necessary, measures to remove the regulatory and non-regulatory barriers that impede the uptake of energy performance contracting and other energy efficiency service models for the identification and/or implementation of energy saving measures;
- (c) considering putting in place or assigning the role of an independent mechanism, such as an ombudsman, to ensure the efficient handling of complaints and out-of-court settlement of disputes arising from energy service contracts;
- (d) enabling independent market intermediaries to play a role in stimulating market development

on the demand and supply sides.

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

Article 19

Other measures to promote energy efficiency

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

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

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

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

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

Article 20

Energy Efficiency National Fund, Financing and Technical Support

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.⁹

3. The Commission **and the Energy Community Secretariat**¹⁰ 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.

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

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

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

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

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

... (not applicable)

Article 23

Exercise of the delegation

... (not applicable)

⁹ The Ministerial Council also tasked the Secretariat to assist Contracting Parties in finding the best solutions for implementation of Directive and in accordance with Contracting Parties specific circumstances and level of the achievement in the area of energy efficiency so far, to propose adequate support approach to implementing the Directive and linking it to the appropriate financing.

¹⁰ 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

Article 24

Review and monitoring of implementation

1. **By 30 June each year as from 2017, Contracting Parties shall report on the progress achieved towards national energy efficiency targets, in accordance with Part 1 of Annex XIV.**

2. By **30 April 2019**, and every three years thereafter, **Contracting Parties** shall submit National Energy Efficiency Action Plans. The National Energy Efficiency Action Plans shall cover significant energy efficiency improvement measures and expected and/ or achieved energy savings, including those in the supply, transmission and distribution of energy as well as energy end-use, in view of achieving the national energy efficiency targets referred to in Article 3(1). The National Energy Efficiency Action Plans shall be complemented with updated estimates of expected overall primary energy consumption in 2020, as well as estimated levels of primary energy consumption in the sectors indicated in Part 1 of Annex XIV.

The National Energy Efficiency Action Plans shall in any case include the information specified in Annex XIV.

3. The Commission shall evaluate the annual reports and the National Energy Efficiency Action Plans and assess the extent to which **Contracting Parties** have made progress towards the achievement of the national energy efficiency targets required by Article 3(1) and towards the implementation of this Directive. The Commission shall send its assessment to the European Parliament and the Council. Based on its assessment of the reports and the National Energy Efficiency Action Plans, the Commission may issue recommendations to **Contracting Parties**.

4. ... **(not applicable)**

5. 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.

6. **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.

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

8. **The Energy Community Secretariat shall review the effectiveness of the implementation of Article 6 by 5 November 2018 and shall submit a report to the Ministerial Council of**

the Energy Community. That report shall be accompanied, if appropriate, by proposals for further measures.

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

- (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

... (not applicable)

Article 27

Amendments and repeals

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

2. Article 9(1) and (2) of Directive 2010/30/EU, as incorporated and adapted by Ministerial Council Decision 2010/01/MC-EnC shall cease to apply from 15 October 2017.

Article 28

Transposition

1. Contracting Parties shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 15 October 2017.

Notwithstanding the first subparagraph, Contracting Parties shall bring into force the laws, regulations and administrative provisions necessary to comply with Article 4, the first subparagraph of Article 5(1), Article 5(5), Article 5(6), the last subparagraph of Article 7(9), Article 14(6), Article 19(2), Article 24(1) and Article 24(2) and point (4) of Annex V by the dates specified therein.

They shall forthwith communicate to the Energy Community Secretariat¹¹ 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.

2. Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by this Directive.

Article 29

Entry into force

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

¹¹ In accordance with the Article 1(2) of Ministerial Council Decision 2015/08/MC-EnC

Article 30
Addressees

This Decision enters into force upon its adoption and is addressed to the Contracting Parties.

Article 1 of Ministerial Council Decision 2015/08/MC-EnC

Implementation of the acquis

Each Contracting Party shall transpose and implement Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC by 15 October 2017.

They shall forthwith inform the Energy Community Secretariat thereof.

Transposition shall be made without changes to the structure and text of Directive 2012/27/EU other than translation.

ANNEX I

General principles for the calculation of electricity from cogeneration

Part I

General principles

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

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

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

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

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

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

where:

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

C is the power-to-heat ratio;

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

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

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

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

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

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

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

Part II

Cogeneration technologies covered by this Directive

(a) Combined cycle gas turbine with heat recovery

(b) Steam back pressure turbine

(c) Steam condensing extraction turbine

(d) Gas turbine with heat recovery

(e) Internal combustion engine

(f) Microturbines

(g) Stirling engines

(h) Fuel cells

(i) Steam engines

(j) Organic Rankine cycles

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

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

ANNEX II

Methodology for determining the efficiency of the cogeneration process

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

(a) High-efficiency cogeneration

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

- cogeneration production from cogeneration units shall provide primary energy savings calculated according to point (b) of at least 10 % compared with the references for separate production of heat and electricity,
- production from small-scale and micro-cogeneration units providing primary energy savings may qualify as high-efficiency cogeneration.

(b) Calculation of primary energy savings

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

$$PES = \left(1 - \frac{1}{\frac{CHP H_{\eta}}{Ref H_{\eta}} + \frac{CHP E_{\eta}}{Ref E_{\eta}}} \right) \times 100 \%$$

Where:

PES is primary energy savings.

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

Ref H_{η} is the efficiency reference value for separate heat production.

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

Ref E_{η} is the efficiency reference value for separate electricity production.

(c) Calculations of energy savings using alternative calculation

Contracting Parties may calculate primary energy savings from a production of heat and electricity and mechanical energy as indicated below without applying Annex I to exclude the non-cogenerated heat and electricity parts of the same process. Such a production can be regarded as high-efficiency cogeneration provided it fulfils the efficiency criteria in point (a) of this Annex and, for cogeneration units with an electrical capacity larger than 25 MW, the overall efficiency is above 70 %. However, specification of the quantity of electricity from cogeneration produced in such a production, for issuing a guarantee of origin and for statistical purposes, shall be determined in accordance with Annex I.

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

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

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

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

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

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

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

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

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

1. For cogeneration units the comparison with separate electricity production shall be based on the principle that the same fuel categories are compared.
2. Each cogeneration unit shall be compared with the best available and economically justifiable technology for separate production of heat and electricity on the market in the year of construction of the cogeneration unit.
3. The efficiency reference values for cogeneration units older than 10 years of age shall be fixed on the reference values of units of 10 years of age.
4. The efficiency reference values for separate electricity production and heat production shall reflect the climatic differences between **Contracting Parties**.

ANNEX III

Energy efficiency requirements for purchasing products, services and buildings by central government

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

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

(b) ... **(not applicable)**

(c) ... **(not applicable)**

(d) ... **(not applicable)**

(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 table¹²

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 ¹⁰	47 200	1,126	13,10
1 kg liquefied natural gas	45 190	1,079	12,553
1 kg wood (25 % humidity) ¹¹	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 ¹²
Source: Eurostat			

¹² **Contracting Parties** may apply different conversion factors if these can be justified.

¹³ 93 % methane.

¹⁴ **Contracting Parties** may apply other values depending on the type of wood most used in the respective **Contracting Party**.

¹⁵ 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 obligations schemes or other policy measures under Article 7(1), (2) and (9) and Article 20(6)

1. Methods for calculating energy savings for the purposes of Article 7(1) and (2), and points (b), (c), (d), (e) and (f) of the second subparagraph of Article 7(9), and Article 20(6).

Obligated, participating or entrusted parties, or implementing public authorities may use one or more of 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, is 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 only be used 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 than that for which independent information on savings has been measured, or where they 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 only be used for savings resulting from changes in consumer behaviour. It may not be used for savings resulting from the installation of physical measures.

2. In determining the energy saving for an energy efficiency measure for the purposes of Article 7(1) and (2), and points (b), (c), (d), (e) and (f) of the second subparagraph of Article 7(9), and Article 20(6) the following principles shall apply:

(a) ... **(deleted)**

(b) 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 the temperature variations between regions;

(c) the activities of the obligated, participating or entrusted party must be demonstrably material to the achievement of the claimed savings;

(d) savings from an individual action may not be claimed by more than one party;

(e) calculation of energy savings shall take into account the lifetime of savings. This may be done by counting the savings each individual action will achieve between its implementation date and 31 December 2020. Alternatively, **Contracting Parties** may adopt another method that is estimated to achieve at least the same total quantity of savings. When using other methods, **Contracting Parties** shall ensure that the total amount of energy savings calculated with these other methods 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 between its implementation date and 31 December 2020. **Contracting Parties** shall describe in detail in their first National Energy Efficiency Action Plan according to Annex XIV to this Directive, which other methods they have used and which provisions have been made to ensure this binding calculation requirement; and

(f) actions by obligated, participating or entrusted parties, either individually or together, which aim to result in lasting transformation of products, equipment, or markets to a higher level of energy efficiency are permitted; and

(g) in promoting the uptake of energy efficiency measures, **Contracting Parties** shall ensure that quality standards for products, services and installation of measures are maintained. Where such standards do not exist, **Contracting Parties** shall work with obligated, participating or entrusted parties to introduce them.

3. In determining the energy saving from policy measures applied under point (a) of the second subparagraph of Article 7(9), the following principles shall apply:

(a) ... **(not applicable)**

(b) recent and representative official data on price elasticities shall be used for calculation of the impact; and

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

4. Notification of methodology

Contracting Parties shall by **15 November 2017** notify the **Energy Community Secretariat** of their proposed detailed methodology for operation of the energy efficiency obligation schemes and for the purposes of Article 7(9) and Article 20(6). Except in the case of taxes, such notification shall include details of:

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

(b) target sectors;

(c) the level of the energy saving target or expected savings to be achieved over the whole and intermediate periods;

(d) the duration of the obligation period and intermediate periods;

(e) eligible measure categories;

(f) calculation methodology, including how additionality and materiality are to be determined and which methodologies and benchmarks are used for engineering estimates;

(g) lifetimes of measures;

(h) approach taken to address climatic variations within the **Contracting Party**;

(i) quality standards;

(j) monitoring and verification protocols and how the independence of these from the obligated, participating or entrusted parties is ensured;

(k) audit protocols; and

(l) how the need to fulfil the requirement in the second subparagraph of Article 7(1) is taken into account.

In the case of taxes, the notification shall include details of:

- (a) target sectors and segment of taxpayers;
- (b) implementing public authority;
- (c) expected savings to be achieved;
- (d) duration of the taxation measure and intermediate periods; and
- (e) calculation methodology, including which price elasticities are used.

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

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 VIII

Potential for efficiency in heating and cooling

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

- (a) a description of heating and cooling demand;
- (b) a forecast of how this demand will change in the next 10 years, taking into account in particular the evolution of demand in buildings and the different sectors of industry;
- (c) a map of the national territory, identifying, while preserving commercially sensitive information:
 - (i) heating and cooling demand points, including:
 - municipalities and conurbations with a plot ratio of at least 0,3, and
 - industrial zones with a total annual heating and cooling consumption of more than 20 GWh;
 - (ii) existing and planned district heating and cooling infrastructure;
 - (iii) potential heating and cooling supply points, including:
 - electricity generation installations with a total annual electricity production of more than 20 GWh, and
 - waste incineration plants,
 - existing and planned cogeneration installations using technologies referred to in Part II of Annex I, and district heating installations;
- (d) identification of the heating and cooling demand that could be satisfied by high-efficiency cogeneration, including residential micro-cogeneration, and by district heating and cooling;
- (e) identification of the potential for additional high-efficiency cogeneration, including from the refurbishment of existing and the construction of new generation and industrial installations or other facilities generating waste heat;
- (f) identification of energy efficiency potentials of district heating and cooling infrastructure;
- (g) strategies, policies and measures that may be adopted up to 2020 and up to 2030 to realise the potential in point (e) in order to meet the demand in point (d), including, where appropriate, proposals to:
 - (i) increase the share of cogeneration in heating and cooling production and in electricity production;
 - (ii) develop efficient district heating and cooling infrastructure to accommodate the development of high-efficiency cogeneration and the use of heating and cooling from waste heat and renewable energy sources;
 - (iii) encourage new thermal electricity generation installations and industrial plants producing waste heat to be located in sites where a maximum amount of the available waste heat will be recovered to meet existing or forecasted heat and cooling demand;
 - (iv) encourage new residential zones or new industrial plants which consume heat in their production processes to be located where available waste heat, as identified in the comprehensive assessment, can contribute to meeting their heat and cooling demands. This could include pro-

posals that support the clustering of a number of individual installations in the same location with a view to ensuring an optimal matching between demand and supply for heat and cooling;

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

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

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

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

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

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

ANNEX IX

Cost-benefit analysis

Part 1

General principles of the cost-benefit analysis

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

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

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

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

(a) Establishing a system boundary and geographical boundary

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

(b) Integrated approach to demand and supply options

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

(c) Constructing a baseline

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

(d) Identifying alternative scenarios

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

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

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

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

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

(iii) The time horizon shall be chosen such that all relevant costs and benefits of the scenarios are included. For example, for a gas-fired power plant an appropriate time horizon could be 25

years, for a district heating system, 30 years, or for heating equipment such as boilers 20 years.

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

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

(ii) The discount rate used in the economic analysis for the calculation of net present value shall be chosen according to European or national guidelines¹⁶

(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 and health benefits, to the extent possible

(ii) Costs

- Capital costs of plants and equipments
- Capital costs of the associated energy networks
- Variable and fixed operating costs
- Energy costs
- Environmental and health cost, to the extent 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. 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.

¹⁶ The national discount rate chosen for the purpose of economic analysis should take into account data provided by the European Central Bank.

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 and grid reinforcements, improved operation of the grid and rules on the non-discriminatory implementation of the grid codes, which are necessary in order to integrate new producers feeding electricity produced from high-efficiency cogeneration into the interconnected grid;

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

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

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

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

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

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

ANNEX XIII

Minimum items to be included in energy performance contracts with the public sector or in the associated tender specifications

- Clear and transparent list of the efficiency measures to be implemented or the efficiency results to be obtained.
- Guaranteed savings to be achieved by implementing the measures of the contract.
- Duration and milestones of the contract, terms and period of notice.
- Clear and transparent list of the obligations of each contracting party.
- Reference date(s) to establish achieved savings.
- Clear and transparent list of steps to be performed to implement a measure or package of measures and, where relevant, associated costs.
- Obligation to fully implement the measures in the contract and documentation of all changes made during the project.
- Regulations specifying the inclusion of equivalent requirements in any subcontracting with third parties.
- Clear and transparent display of financial implications of the project and distribution of the share of both parties in the monetary savings achieved (i.e. remuneration of the service provider).
- Clear and transparent provisions on measurement and verification of the guaranteed savings achieved, quality checks and guarantees.
- Provisions clarifying the procedure to deal with changing framework conditions that affect the content and the outcome of the contract (i.e. changing energy prices, use intensity of an installation).
- Detailed information on the obligations of each of the contracting party and of the penalties for their breach.

ANNEX XIV

General framework for reporting

Part 1

General framework for annual reports

The annual reports referred to in Article 24(1) provide a basis for the monitoring of the progress towards national 2020 targets. **Contracting Parties** shall ensure that the reports include the following minimum information:

- (a) an estimate of following indicators in the year before last (year X¹⁷ (1) - 2):
- (i) primary energy consumption;
 - (ii) total final energy consumption;
 - (iii) final energy consumption by sector
 - industry
 - transport (split between passenger and freight transport, if available)
 - households
 - services;
 - (iv) gross value added by sector
 - industry
 - services;
 - (v) disposable income of households;
 - (vi) gross domestic product (GDP);
 - (vii) electricity generation from thermal power generation;
 - (viii) electricity generation from combined heat and power;
 - (ix) heat generation from thermal power generation;
 - (x) heat generation from combined heat and power plants, including industrial waste heat;
 - (xi) fuel input for thermal power generation;
 - (xii) passenger kilometres (pkm), if available;
 - (xiii) tonne kilometres (tkm), if available;
 - (xiv) combined transport kilometres (pkm + tkm), in case (xii) and (xiii) are not available;
 - (xv) population.

In sectors where energy consumption remains stable or is growing, Contracting Parties shall analyse the reasons for it and attach their appraisal to the estimates.

The second and subsequent reports shall also include points (b) to (e):

- (b) updates on major legislative and non-legislative measures implemented in the previous year which contribute towards the overall national energy efficiency targets for 2020;
- (c) the total building floor area of the buildings with a total useful floor area over 500 m² and as of **1 January 2019** over 250 m² owned and occupied by the **Contracting Parties** central government

¹⁷ X = current year

that, on 1 January of the year in which the report is due, did not meet the energy performance requirements referred to in Article 5(1);

(d) the total building floor area of heated and/or cooled buildings owned and occupied by the **Contracting Parties** central government that was renovated in the previous year referred to in Article 5(1) or the amount of energy savings in eligible buildings owned and occupied by their central government as referred to in Article 5(6);

(e) energy savings achieved through the national energy efficiency obligation schemes referred to in Article 7(1) or the alternative measures adopted in application of Article 7(9).

The first report shall also include the national target referred to in Article 3(1).

In the annual reports referred to in Article 24(1) **Contracting Parties** may also include additional national targets. These may be related in particular to the statistical indicators enumerated in point (a) of this Part or combinations thereof, such as primary or final energy intensity or sectoral energy intensities.

Part 2

General framework for National Energy Efficiency Action Plans

National Energy Efficiency Action Plans referred to in Article 24(2) shall provide a framework for the development of national energy efficiency strategies.

The National Energy Efficiency Action Plans shall cover significant energy efficiency improvement measures and expected/achieved energy savings, including those in the supply, transmission and distribution of energy as well as energy end-use. Contracting Parties shall ensure that the National Energy Efficiency Action Plans include the following minimum information:

1. Targets and strategies

- the indicative national energy efficiency target for 2020 as required by Article 3(1),
- the national indicative energy savings target set in Article 4(1) of Directive 2006/32/EC, **as incorporated and adapted by the Ministerial Council Decision 2009/05/MC-EnC**,
- other existing energy efficiency targets addressing the whole economy or specific sectors.

2. Measures and energy savings

The National Energy Efficiency Action Plans shall provide information on measures adopted or planned to be adopted in view of implementing the main elements of this Directive and on their related savings.

(a) Primary energy savings

The National Energy Efficiency Action Plans shall list significant measures and actions taken towards primary energy saving in all sectors of the economy. For every measure or package of measures/actions estimations of expected savings for 2020 and savings achieved by the time of the reporting shall be provided.

Where available, information on other impacts/benefits of the measures (greenhouse gas emissions reduction, improved air quality, job creation, etc.) and the budget for the implementation should be provided.

(b) Final energy savings

The first and second National Energy Efficiency Action Plans shall include the results with regard to the fulfilment of the final energy savings target set out in Article 4(1) and (2) of the Directive 2006/32/EC, **as incorporated and adapted by the Ministerial Council Decision 2009/05/MC-EnC**. If calculation/estimation of savings per measure is not available, sector level energy reduction shall be shown due to (the combination) of measures.

The first and second National Energy Efficiency Action Plans shall also include the measurement and/or calculation methodology used for calculating the energy savings. If the 'recommended methodology'¹⁸ is applied, the National Energy Efficiency Action Plan should provide references to this.

3. Specific information related to this Directive

3.1. Public bodies (Article 5)

National Energy Efficiency Action Plans shall include the list of public bodies having developed an energy efficiency plan in accordance with Article 5(7).

3.2. Energy efficiency obligations (Article 7)

National Energy Efficiency Action Plans shall include the national coefficients chosen in accordance with Annex IV.

The first National Energy Efficiency Action Plan shall include a short description of the national scheme referred to in Article 7(1) or the alternative measures adopted in application of Article 7(9).

3.3. Energy audits and management systems (Article 8)

National Energy Efficiency Action Plans shall include:

- (a) the number of energy audits carried out in the previous period;
- (b) the number of energy audits carried out in large enterprises in the previous period;
- (c) the number of large companies in their territory, with an indication of the number of those to which Article 8(5) is applicable.

3.4. Promotion of efficient heating and cooling (Article 14)

National Energy Efficiency Action Plans shall include an assessment of the progress achieved in implementing the comprehensive assessment referred to in Article 14(1).

3.5. Energy transmission and distribution (Article 15)

The first National Energy Efficiency Action Plan and the subsequent reports due every 10 years thereafter shall include the assessment made, the measures and investments identified to utilise the energy efficiency potentials of gas and electricity infrastructure referred to in Article 15(2).

3.6. **Contracting Parties** shall report, as part of their National Energy Efficiency Action Plans, on the measures undertaken to enable and develop demand response as referred to in Article 15.

3.7. Availability of qualification, accreditation and certification schemes (Article 16)

National Energy Efficiency Action Plans shall include information on the available qualification, accreditation and certification schemes or equivalent qualification schemes for the providers of energy services, energy audits and energy efficiency improvement measures.

¹⁸ Recommendations on Measurement and Verification Methods in the framework of the Directive 2006/32/EC on Energy End-Use Efficiency and Energy Services.

3.8. Energy Services (Article 18)

National Energy Efficiency Action Plans shall include an internet link to the website where the list or the interface of energy services providers referred to in point (c) of Article 18(1) can be accessible.

3.9. Other measures to promote energy efficiency (Article 19)

The first National Energy Efficiency Action Plan shall include a list of the measures referred to in Article 19(1).

ANNEX XV

Correlation table

Directive 2004/8/EC	This Directive
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... (not applicable)¹⁹

Directive 2006/32/EC	This Directive
Article 1	Article 1(1)
Article 2	Article 1(1)
Article 3, point (a)	Article 2, point (1)
Article 3, point (b)	Article 2, point (4)
Article 3, point (c)	Article 2, point (6)
Article 3, point (d)	Article 2, point (5)
—	Article 2, points (2) and (3)
Article 3, point (e)	Article 2, point (7)
Article 3, points (f), (g), (h) and (i)	—
—	Article 2, points (8) to (19)
Article 3, point (j)	Article 2, point (27)
—	Article 2, point (28)
Article 3, point (k)	—
Article 3, point (l)	Article 2, point (25)
—	Article 2, point (26)
Article 3, point (m)	—
Article 3, point (n)	Article 2, point (23)
Article 3, point (o)	Article 2, point (20)
Article 3, point (p)	Article 2, point (21)
Article 3, point (q)	Article 2, point (22)
Article 3, points (r) and (s)	—
—	Article 2, points (24), (29), (44) and (45)
—	Article 3
—	Article 4
Article 4	—
Article 5	Articles 5 and 6
Article 6(1)(a)	Article 7(8), points (a) and (b)
Article 6(1)(b)	Article 18(3)
Article 6(2)	Article 7(1), (5), (6), (7), (9), (10), (11) and (12)

¹⁹ In Annex XV in the correlation table rows relating to Directive 2004/8/EC shall not be applicable

—	Article 7(2) and (3)
Article 6(3)	Article 18(2), points (b) and (c)
Article 6(5)	—
Article 7	Article 17
Article 8	Article 16(1)
—	Article 16(2) and (3)
Article 9(1)	Article 19
Article 9(2)	Article 18(1), point (d), subpoint (i)
—	Article 18(1), points (a), (b), (c), (d), subpoint (ii), and (e)
Article 10(1)	Article 15(4)
Article 10(2)	Article 15(3)
—	Article 15(7), (8) and (9)
Article 11	Article 20
Article 12(1)	Article 8(1)
Article 12(2)	—
—	Article 8(2), (3), (4), (5), (6) and (7)
Article 12(3)	—
Article 13(1)	Article 9
Article 13(2)	Article 10 and Annex VII, point 1.1
Article 13(3)	Annex VII, points 1.2 and 1.3
—	Article 11
—	Article 12
—	Article 13
—	Article 15(1) and (2)
—	Article 18(2), points (a) and (d)
—	Article 21
Article 14(1) and (2)	Article 24(1) and (2)
Article 14(3)	—
Article 14(4) and (5)	Article 24(3)
—	Article 24(4) and (7) to (11)
—	Article 22(1)
Article 15(1)	Article 22(2)
Article 15(2), (3) and (4)	—
—	Article 23
—	Article 25
Article 16	Article 26
Article 17	Article 27

Article 18	Article 28
Article 19	Article 29
Article 20	Article 30
Annex I	—
Annex II	Annex IV
Annex III	—
Annex IV	—
Annex V	—
Annex VI	Annex III
—	Annex V
—	Annex VI
—	Annex VII
—	Annex XI
—	Annex XII
—	Annex XIII
—	Annex XIV
—	Annex XV



Directive 2006/32/EC of 5 April 2006 on energy end-use efficiency and energy services

Incorporated and adapted by Ministerial Council Decision 2009/05/MC-EnC of 18 December 2009 on the implementation of certain Directives on Energy Efficiency.

*The adaptations made by Ministerial Council Decision 2009/05/MC-EnC are highlighted in **bold and blue**.*

Whereas:

(1) In the Community there is a need for improved energy end-use efficiency, managed demand for energy and promotion of the production of renewable energy, as there is relatively limited scope for any other influence on energy supply and distribution conditions in the short to medium term, either through the building of new capacity or through the improvement of transmission and distribution. This Directive thus contributes to improved security of supply.

(2) Improved energy end-use efficiency will also contribute to the reduction of primary energy consumption, to the mitigation of CO₂ and other greenhouse gas emissions and thereby to the prevention of dangerous climate change. These emissions continue to increase, making it more and more difficult to meet the Kyoto commitments. Human activities attributed to the energy sector cause as much as 78% of the Community greenhouse gas emissions. The Sixth Community Environment Action Programme, laid down by Decision No 1600/2002/EC of the European Parliament and of the Council, envisages that further reductions are required to achieve the United Nations Framework Convention on Climate Change long-term objective of stabilising greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Therefore, concrete policies and measures are necessary.

(3) Improved energy end-use efficiency will make it possible to exploit potential cost-effective energy savings in an economically efficient way. Energy efficiency improvement measures could realise these energy savings and thus help the Community reduce its dependence on energy imports. Furthermore, a move towards more energy-efficient technologies can boost the Community's innovativeness and competitiveness as underlined in the Lisbon strategy.

(4) The Communication from the Commission on the implementation of the first phase of the European Climate Change Programme listed a directive on energy demand management as one of the priority climate change measures to be taken at Community level.

(5) This Directive is consistent with Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity and with Directive 2003/55/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in natural gas, which provide for the possibility of using energy efficiency and demand-side management as alternatives to new supply and for environmental protection, allowing Member State authorities, inter alia, to tender for new capacity or to opt for energy efficiency and demand-side measures, including systems for white certificates.

(6) This Directive is without prejudice to Article 3 of Directive 2003/54/EC, which requires that Member States ensure that all household customers and, where Member States deem it appropriate, small enterprises, enjoy universal service, that is the right to be supplied with electricity of a specified quality within their territory at reasonable, easily and clearly comparable, and transparent prices.

(7) The aim of this Directive is not only to continue to promote the supply side of energy services, but also to create stronger incentives for the demand side. The public sector in each Member State should thus set a good example regarding investments, maintenance and other expenditure on energy-using equipment, energy services and other energy efficiency improvement measures. Therefore, the public sector should be encouraged to integrate energy efficiency improvement considerations into its investments, depreciation allowances and operating budgets. Furthermore, the public sector should endeavour to use energy efficiency criteria in tendering procedures for public procurement, a practice allowed under Directive 2004/17/EC of the European Parliament and of the Council of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors, and 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, the principle of which was confirmed by the judgment of 17 September 2002 of the Court of Justice in Case C-513/99. In view of the fact that administrative structures vary widely between Member States, the different types of measures which the public sector may take should be taken at the appropriate national, regional and/or local level.

(8) There is a large variety of ways in which the public sector can fulfil its exemplary role: besides the applicable measures listed in Annex III and VI, the public sector may, for example, initiate energy-efficiency pilot projects and stimulate energy-efficient behaviour of employees. In order to achieve the desired multiplier effect, a number of such actions should be communicated in an effective way to individual citizens and/or to companies, whilst emphasising the cost benefits.

(9) The liberalisation of the retail markets for final customers for electricity, natural gas, coal and lignite, heating, and in some cases even district heating and cooling, has almost exclusively led to improved efficiency and lower costs on the energy generation, transformation and distribution side. This liberalisation has not led to significant competition in products and services which could have resulted in improved energy efficiency on the demand side.

(10) In its Resolution of 7 December 1998 on energy efficiency in the European Community [10], the Council endorsed a target for the Community as a whole to improve energy intensity of final consumption by an additional one percentage point per annum up to the year 2010.

(11) Member States should therefore adopt national indicative targets to promote energy end-use efficiency and to ensure the continued growth and viability of the market for energy services, and thus contribute to the implementation of the Lisbon strategy. The adoption of national indicative targets to promote energy end-use efficiency provides effective synergy with other Community legislation that will, when applied, contribute to the achievement of those national targets.

(12) This Directive requires action to be undertaken by the Member States, with the fulfilment of its objectives depending on the effects that such action has on the final consumers of energy. The end result of Member States' action is dependent on many external factors which influence the behaviour of consumers as regards their energy use and their willingness to implement energy saving methods and use energy saving devices. Therefore, even though Member States commit themselves to making efforts to achieve the target figure of 9%, the national energy savings target is indicative in nature and entails no legally enforceable obligation for Member States to achieve it.

(13) In aiming to achieve their national indicative target, Member States may set themselves a target higher than 9%.

(14) The improvement of energy efficiency will benefit from an exchange of information, experience and best practice at all levels, including, in particular, the public sector. Therefore, Member States should list measures undertaken in the context of this Directive, and review their effect as far as possible, in energy efficiency action plans.

(15) When striving for energy efficiency on the basis of technological, behavioural and/or economic changes, substantial negative environmental impact should be avoided, and social priorities should be respected.

(16) The funding of supply and the costs of the demand side have an important role to play in energy services. The creation of funds to subsidise the implementation of energy efficiency programmes and other energy efficiency improvement measures and to promote the development of a market for energy services can constitute an appropriate tool for the provision of non-discriminatory start-up funding in such a market.

(17) Improved energy end-use efficiency can be achieved by increasing the availability of and demand for energy services or by other energy efficiency improvement measures.

(18) In order to realise the energy savings potential in certain market segments where energy audits are generally not sold commercially, such as households, Member States should ensure the availability of energy audits.

(19) The Council Conclusions of 5 December 2000 list the promotion of energy services through the development of a Community strategy as a priority area for action to improve energy efficiency.

(20) Energy distributors, distribution system operators and retail energy sales companies can improve energy efficiency in the Community if the energy services they market include efficient end-use, such as indoor thermal comfort, domestic hot water, refrigeration, product manufacturing, illumination and motive power. Profit maximisation for energy distributors, distribution system operators and retail energy sales companies thus becomes more closely related to selling energy services to as many customers as possible than to selling as much energy as possible to each customer. Member States should endeavour to avoid any distortion of competition in this area, in order to guarantee a level playing field between all energy service providers; they can, however, delegate this task to the national regulator.

(21) Taking full account of the national organisation of market actors in the energy sector and in order to favour the implementation of energy services and of the measures to improve energy efficiency provided for in this Directive, Member States should have the option of making it compulsory for energy distributors, distribution system operators or retail energy sales companies or, where appropriate, for two or all of these market actors, to provide such services and to participate in such measures.

(22) The use of third-party financing arrangements is an innovative practice that should be stimulated. In these, the beneficiary avoids investment costs by using part of the financial value of energy savings that result from the third party's investment to repay the third party's investment and interest costs.

(23) With a view to making tariffs and other regulations for net-bound energy more conducive to efficient energy end-use, unjustifiable volume-driving incentives should be removed.

(24) The promotion of the market for energy services can be achieved by a variety of means, including non-financial ones.

(25) The energy services, energy efficiency improvement programmes and other energy efficiency

improvement measures put into effect to reach the energy savings target may be supported and/or implemented through voluntary agreements between stakeholders and public sector bodies appointed by the Member States.

(26) The voluntary agreements which are covered by this Directive should be transparent and contain, where applicable, information on at least the following issues: quantified and staged objectives, monitoring and reporting.

(27) The motor fuel and transport sectors have an important role to play regarding energy efficiency and energy savings.

(28) In defining energy efficiency improvement measures, account should be taken of efficiency gains obtained through the widespread use of cost-effective technological innovations, for instance electronic metering. In the context of this Directive, competitively priced individual meters include accurate calorimeters.

(29) In order to enable final consumers to make better-informed decisions as regards their individual energy consumption, they should be provided with a reasonable amount of information thereon and with other relevant information, such as information on available energy efficiency improvement measures, comparative final consumer profiles or objective technical specifications for energy-using equipment, which may include "Factor Four" or similar equipment. It is recalled that some such valuable information should already be made available to final customers under Article 3(6) of Directive 2003/54/EC. In addition, consumers should be actively encouraged to check their own meter readings regularly.

(30) All types of information relating to energy-efficiency should be widely disseminated in an appropriate form, including through billing, to relevant target audiences. This can include information on financial and legal frameworks, communication and promotion campaigns, and the widespread exchange of best practice at all levels.

(31) With the adoption of this Directive, all substantive provisions of Council Directive 93/76/EEC of 13 September 1993 to limit carbon dioxide emissions by improving energy efficiency (SAVE) are covered by other Community legislation and therefore Directive 93/76/EEC should be repealed.

(32) Since the objectives of this Directive, namely to promote energy end-use efficiency and to develop a market for energy services, cannot be sufficiently achieved by the Member States and can be better achieved at Community level, the Community may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty. In accordance with the principle of proportionality, as set out in that Article, this Directive does not go beyond what is necessary in order to achieve those objectives.

(33) The measures necessary for the implementation of this Directive should be adopted in accordance with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission.

CHAPTER I

SUBJECT MATTER AND SCOPE

Article 1

Purpose

The purpose of this Directive is to enhance the cost-effective improvement of energy end-use efficiency in the **Contracting Parties** by:

- (a) providing the necessary indicative targets as well as mechanisms, incentives and institutional, financial and legal frameworks to remove existing market barriers and imperfections that impede the efficient end use of energy;
- (b) creating the conditions for the development and promotion of a market for energy services and for the delivery of other energy efficiency improvement measures to final consumers.

Article 2

Scope

This Directive shall apply to:

- (a) providers of energy efficiency improvement measures, energy distributors, distribution system operators and retail energy sales companies. However, **Contracting Parties** may exclude small distributors, small distribution system operators and small retail energy sales companies from the application of Articles 6 and 13;
- (b) final customers. However, this Directive shall not apply to those undertakings involved in categories of activities listed in Annex I to Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community;
- (c) the armed forces, only to the extent that its application does not cause any conflict with the nature and primary aim of the activities of the armed forces and with the exception of material used exclusively for military purposes.

Article 3

Definitions

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

- (a) “energy”: all forms of commercially available energy, including electricity, natural gas (including liquefied natural gas), liquefied petroleum gas, any fuel for heating and cooling (including district heating and cooling), coal and lignite, peat, transport fuels (excluding aviation and maritime bunker fuels) and biomass as defined in Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in

the internal electricity market;

(b) “energy efficiency”: a ratio between an output of performance, service, goods or energy, and an input of energy;

(c) “energy efficiency improvement”: an increase in energy end-use efficiency as a result of technological, behavioural and/or economic changes;

(d) “energy savings”: an amount of saved energy determined by measuring and/or estimating consumption before and after implementation of one or more energy efficiency improvement measures, whilst ensuring normalisation for external conditions that affect energy consumption;

(e) “energy service”: the physical benefit, utility or good derived from a combination of energy with energy efficient technology and/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 lead to verifiable and measurable or estimable energy efficiency improvement and/or primary energy savings;

(f) “energy efficiency mechanisms”: general instruments used by governments or government bodies to create a supportive framework or incentives for market actors to provide and purchase energy services and other energy efficiency improvement measures;

(g) “energy efficiency improvement programmes”: activities that focus on groups of final customers and that normally lead to verifiable and measurable or estimable energy efficiency improvement;

(h) “energy efficiency improvement measures”: all actions that normally lead to verifiable and measurable or estimable energy efficiency improvement;

(i) “energy service company” (ESCO): a natural or legal person that delivers energy services and/or other energy efficiency improvement measures in a user’s facility or premises, and accepts some degree of financial risk in so doing. The payment for the services delivered is based (either wholly or in part) on the achievement of energy efficiency improvements and on the meeting of the other agreed performance criteria;

(j) “energy performance contracting”: a contractual arrangement between the beneficiary and the provider (normally an ESCO) of an energy efficiency improvement measure, where investments in that measure are paid for in relation to a contractually agreed level of energy efficiency improvement;

(k) “third-party financing”: a contractual arrangement involving a third party - in addition to the energy supplier and the beneficiary of the energy efficiency improvement measure - that provides the capital for that measure and charges the beneficiary a fee equivalent to a part of the energy savings achieved as a result of the energy efficiency improvement measure. That third party may or may not be an ESCO;

(l) “energy audit”: a systematic procedure to obtain adequate knowledge of the existing energy consumption profile of a building or group of buildings, of an industrial operation and/or installation or of a private or public service, identify and quantify cost effective energy savings opportunities, and report the findings;

(m) “financial instruments for energy savings”: all financial instruments such as funds, subsidies, tax rebates, loans, third-party financing, energy performance contracting, guarantee of energy savings contracts, energy outsourcing and other related contracts that are made available to the market place by public or private bodies in order to cover partly or totally the initial project cost for implementing energy efficiency improvement measures;

- (n) “final customer”: a natural or legal person that purchases energy for his own end use;
- (o) “energy distributor”: a natural or legal person responsible for transporting energy with a view to its delivery to final customers and to distribution stations that sell energy to final customers. This definition excludes electricity and natural gas distribution system operators, covered in point (p);
- (p) “distribution system operator”: a natural or legal person responsible for operating, ensuring the maintenance of and, if necessary, developing the distribution system of electricity or natural gas in a given area and, where applicable, its interconnections with other systems, and for ensuring the long term ability of the system to meet reasonable demands for the distribution of electricity or natural gas;
- (q) “retail energy sales company”: a natural or legal person that sells energy to final customers;
- (r) “small distributor, small distribution system operator and small retail energy sales company”: a natural or legal person that distributes or sells energy to final customers, and that distributes or sells less than the equivalent of 75 GWh energy per year or employs fewer than 10 persons or whose annual turnover and/or annual balance sheet total does not exceed EUR 2000000;
- (s) “white certificates”: certificates issued by independent certifying bodies confirming the energy savings claims of market actors as a consequence of energy efficiency improvement measures.

CHAPTER II

ENERGY SAVINGS TARGETS

Article 4

General target

1. **Contracting Parties** shall adopt and aim to achieve an overall national indicative energy savings target of 9% for the ninth year of application of this Directive, to be reached by way of energy services and other energy efficiency improvement measures. **Contracting Parties** shall take cost-effective, practicable and reasonable measures designed to contribute towards achieving this target.

This national indicative energy savings target shall be set and calculated in accordance with the provisions and methodology set out in Annex I. For purposes of comparison of energy savings and for conversion to a comparable unit, the conversion factors set out in Annex II shall apply unless the use of other conversion factors can be justified. Examples of eligible energy efficiency improvement measures are given in Annex III. A general framework for the measurement and verification of energy savings is given in Annex IV. The national energy savings in relation to the national indicative energy savings target shall be measured as from 1 January 2008.

2. For the purpose of the first Energy Efficiency Action Plan (EEAP) to be submitted in accordance with Article 14, each **Contracting Party** shall establish an intermediate national indicative energy savings target for the third year of application of this Directive, and provide an overview of its strategy for the achievement of the intermediate and overall targets. This intermediate target shall be realistic and consistent with the overall national indicative energy savings target referred to in paragraph 1.

The **Secretariat** shall give an opinion on whether the intermediate national indicative target appears

realistic and consistent with the overall target.

3. Each **Contracting Party** shall draw up programmes and measures to improve energy efficiency.
4. **Contracting Parties** shall assign to one or more new or existing authorities or agencies the overall control and responsibility for overseeing the framework set up in relation to the target mentioned in paragraph 1. These bodies shall thereafter verify the energy savings as a result of energy services and other energy efficiency improvement measures, including existing national energy efficiency improvement measures, and report the results.
5. After having reviewed and reported on the first three years of application of this Directive, the Commission shall examine whether it is appropriate to come forward with a proposal for a directive to further develop the market approach in energy efficiency improvement by means of white certificates.

Article 5

Energy end-use efficiency in the public sector

1. **Contracting Parties** shall ensure that the public sector fulfils an exemplary role in the context of this Directive. To this end, they shall communicate effectively the exemplary role and actions of the public sector to citizens and/or companies, as appropriate.

Contracting Parties shall ensure that energy efficiency improvement measures are taken by the public sector, focusing on cost-effective measures which generate the largest energy savings in the shortest span of time. Such measures shall be taken at the appropriate national, regional and/or local level, and may consist of legislative initiatives and/or voluntary agreements, as referred to in Article 6(2)(b), or other schemes with an equivalent effect. Without prejudice to national and Community public procurement legislation:

- at least two measures shall be used from the list set out in Annex VI;
- **Contracting Parties** shall facilitate this process by publishing guidelines on energy efficiency and energy savings as a possible assessment criterion in competitive tendering for public contracts.

Contracting Parties shall facilitate and enable the exchange of best practices between public sector bodies, for example on energy-efficient public procurement practices, both at the national and international level; to this end, the organisation referred to in paragraph 2 shall cooperate with the **Secretariat** with regard to the exchange of best practice as referred to in Article 7(3).

2. **Contracting Parties** shall assign to a new or existing organisation or organisations the administrative, management and implementing responsibility for the integration of energy efficiency improvement requirements as set out in paragraph 1. These may be the same authorities or agencies as those referred to in Article 4(4).

CHAPTER III

PROMOTION OF ENERGY END-USE EFFICIENCY AND ENERGY SERVICES

Article 6

Energy distributors, distribution system operators and retail energy sales companies

1. **Contracting Parties** shall ensure that energy distributors, distribution system operators and/or retail energy sales companies:

(a) provide on request, but not more than once a year, aggregated statistical information on their final customers to the authorities or agencies referred to in Article 4(4) or to another designated body, provided that the latter in turn transmits to the former the information received. This information must be sufficient to properly design and implement energy efficiency improvement programmes, and to promote and monitor energy services and other energy efficiency improvement measures. It may include historical information and must include current information on end-user consumption, including, where applicable, load profiles, customer segmentation and geographical location of customers, while preserving the integrity and confidentiality of information that is either of private character or commercially sensitive, in compliance with applicable Community legislation;

(b) refrain from any activities that might impede the demand for and delivery of energy services and other energy efficiency improvement measures, or hinder the development of markets for energy services and other energy efficiency improvement measures. The **Contracting Party** concerned shall take the necessary measures to bring such activities to an end where they occur.

2. **Contracting Parties** shall:

(a) choose one or more of the following requirements to be complied with by energy distributors, distribution system operators and/or retail energy sales companies, directly and/or indirectly through other providers of energy services or energy efficiency improvement measures:

(i) ensure the offer to their final customers, and the promotion, of competitively priced energy services; or

(ii) ensure the availability to their final customers, and the promotion, of competitively-priced energy audits conducted in an independent manner and/or energy efficiency improvement measures, in accordance with Article 9(2) and Article 12; or

(iii) contribute to the funds and funding mechanisms referred to in Article 11. The level of such contributions shall as a minimum correspond to the estimated costs of offering any of the activities referred to in this paragraph and shall be agreed with the authorities or agencies referred to in Article 4(4); and/or

(b) ensure that voluntary agreements and/or other market-oriented schemes, such as white certificates, with an effect equivalent to one or more of the requirements referred to in point (a) exist or are set up. Voluntary agreements shall be assessed, supervised and followed up by the **Contracting Party** in order to ensure that they have in practice an effect equivalent to one or more of the requirements referred to in point (a).

To that end, the voluntary agreements shall have clear and unambiguous objectives, and monitoring and reporting requirements linked to procedures that can lead to revised and/or additional meas-

ures when the objectives are not achieved or are not likely to be achieved. With a view to ensuring transparency, the voluntary agreements shall be made available to the public and published prior to application to the extent that applicable confidentiality provisions allow, and contain an invitation for stakeholders to comment.

3. **Contracting Parties** shall ensure that there are sufficient incentives, equal competition and level playing fields for market actors other than energy distributors, distribution system operators and retail energy sales companies, such as ESCOs, installers, energy advisors and energy consultants, to independently offer and implement the energy services, energy audits and energy efficiency improvement measures described in paragraph 2(a)(i) and (ii).

4. Under paragraphs 2 and 3, **Contracting Parties** may place responsibilities on distribution system operators only if this is consistent with the requirements relating to the unbundling of accounts laid down in Article 19(3) of Directive 2003/54/EC and in Article 17(3) of Directive 2003/55/EC.

5. The implementation of this Article shall be without prejudice to derogations or exemptions granted under Directives 2003/54/EC and 2003/55/EC.

Article 7

Availability of information

1. **Contracting Parties** shall ensure that information on energy efficiency mechanisms and financial and legal frameworks adopted with the aim of reaching the national indicative energy savings target is transparent and widely disseminated to the relevant market actors.

2. **Contracting Parties** shall ensure that greater efforts are made to promote energy end-use efficiency. They shall establish appropriate conditions and incentives for market operators to provide more information and advice to final customers on energy end-use efficiency.

3. The **Secretariat** shall ensure that information on best energy-saving practices in **Contracting Parties** is exchanged and widely disseminated.

Article 8

Availability of qualification, accreditation and certification schemes

With a view to achieving a high level of technical competence, objectivity and reliability, **Contracting Parties** shall ensure, where they deem it necessary, the availability of appropriate qualification, accreditation and/or certification schemes for providers of energy services, energy audits and energy efficiency improvement measures as referred to in Article 6(2)(a) (i) and (ii).

Article 9

Financial instruments for energy savings

1. **Contracting Parties** shall repeal or amend national legislation and regulations, other than those of a clearly fiscal nature, that unnecessarily or disproportionately impede or restrict the use of fi-

financial instruments for energy savings in the market for energy services or other energy efficiency improvement measures.

2. **Contracting Parties** shall make model contracts for those financial instruments available to existing and potential purchasers of energy services and other energy efficiency improvement measures in the public and private sectors. These may be issued by the authority or agency referred to in Article 4(4).

Article 10

Energy efficient tariffs and other regulations for net-bound energy

1. **Contracting Parties** shall ensure the removal of those incentives in transmission and distribution tariffs that unnecessarily increase the volume of distributed or transmitted energy. In this respect, in accordance with Article 3(2) of Directive 2003/54/EC and with Article 3(2) of Directive 2003/55/EC, **Contracting Parties** may impose public service obligations relating to energy efficiency on undertakings operating in the electricity and gas sectors respectively.

2. **Contracting Parties** may permit components of schemes and tariff structures with a social aim, 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.

Article 11

Funds and funding mechanisms

1. Without prejudice to Articles 87 and 88 of the Treaty, **Contracting Parties** may establish a fund or funds to subsidise the delivery of energy efficiency improvement programmes and other energy efficiency improvement measures and to promote the development of a market for energy efficiency improvement measures. Such measures shall include the promotion of energy auditing, financial instruments for energy savings and, where appropriate, improved metering and informative billing. The funds shall also target end-use sectors with higher transaction costs and higher risks.

2. If established, the funds may provide for grants, loans, financial guarantees and/or other types of financing that guarantee results.

3. The funds shall be open to all providers of energy efficiency improvement measures, such as ESCOs, independent energy advisors, energy distributors, distribution system operators, retail energy sales companies and installers. **Contracting Parties** may decide to open the funds to all final customers. Tendering or equivalent methods which ensure complete transparency shall be carried out in full compliance with applicable public procurement regulations. **Contracting Parties** shall ensure that such funds complement, and do not compete with, commercially-financed energy efficiency improvement measures.

Article 12

Energy audits

1. **Contracting Parties** shall ensure the availability of efficient, high-quality energy audit schemes which are designed to identify potential energy efficiency improvement measures and which are carried out in an independent manner, to all final consumers, including smaller domestic, commercial and small and medium-sized industrial customers.

2. Market segments that have higher transaction costs and non-complex facilities may be reached by other measures such as questionnaires and computer programmes made available on the Internet and/or sent to customers by mail. **Contracting Parties** shall ensure the availability of energy audits for market segments where they are not sold commercially, taking into account Article 11(1).

3. Certification in accordance with Article 7 of Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings [15] shall be regarded as equivalent to an energy audit meeting the requirements set out in paragraphs 1 and 2 of this Article and as equivalent to an energy audit as referred to in Annex VI(e) to this Directive. Furthermore, audits resulting from schemes based on voluntary agreements between organisations of stakeholders and an appointed body, supervised and followed up by the **Contracting Party** concerned in accordance with Article 6(2)(b) of this Directive, shall likewise be considered as having fulfilled the requirements set out in paragraphs 1 and 2 of this Article.

Article 13

Metering and informative billing of energy consumption

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, final customers for electricity, natural gas, district heating and/or cooling and domestic hot water are provided with competitively priced individual meters that accurately reflect the final customer's actual energy consumption and that provide information on actual time of use.

When an existing meter is replaced, such competitively priced individual meters shall always be provided, unless this is technically impossible or not cost-effective in relation to the estimated potential savings in the long term. When a new connection is made in a new building or a building undergoes major renovations, as set out in Directive 2002/91/EC, such competitively priced individual meters shall always be provided.

2. **Contracting Parties** shall ensure that, where appropriate, billing performed by energy distributors, distribution system operators and retail energy sales companies is based on actual energy consumption, and is presented in clear and understandable terms. Appropriate information shall be made available with the bill to provide final customers with a comprehensive account of current energy costs. Billing on the basis of actual consumption shall be performed frequently enough to enable customers to regulate their own energy consumption.

3. **Contracting Parties** shall ensure that, where appropriate, the following information is made available to final customers in clear and understandable terms by energy distributors, distribution system operators or retail energy sales companies in or with their bills, contracts, transactions, and/or 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) wherever possible and useful, comparisons with an average normalised or benchmarked user of energy in the same user category;

(d) contact information for consumers' 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/or objective technical specifications for energy-using equipment.

CHAPTER IV

FINAL PROVISIONS

Article 14

Reports

1. **Contracting Parties** that already use, for whatever purpose, calculation methods for measuring energy savings similar to those described in Annex IV at the time of the entry into force of this Directive may submit information at the appropriate level of detail to the **Secretariat**. Such submissions shall take place as soon as possible, preferably not later than **30 June 2010**. This information will enable the **Secretariat** to take due account of existing practices.

2. **Contracting Parties** shall submit to the Secretariat the following EEAPs:

- a first EEAP not later than **30 June 2010**;
- a second EEAP not later than **30 June 2013**;
- a third EEAP not later than **30 June 2016**.

All EEAPs shall describe the energy efficiency improvement measures planned to reach the targets set out in Article 4(1) and (2), as well as to comply with the provisions on the exemplary role of the public sector and provision of information and advice to final customers set out in Articles 5(1) and 7(2) respectively.

The second and third EEAPs shall:

- include a thorough analysis and evaluation of the preceding EEAP;
- include the final results with regard to the fulfilment of the energy savings targets set out in Article 4(1) and (2);
- include plans for - and information on the anticipated effects of - additional measures which address any existing or expected shortfall vis-à-vis the target;
- in accordance with Article 15(4), use and gradually increase the use of harmonised efficiency indicators and benchmarks, both for the evaluation of past measures and estimated effects of planned future measures;
- be based on available data, supplemented with estimates.

3. Not later than 17 May 2008, the Commission shall publish a cost/benefit impact assessment examining the linkages between EU standards, regulations, policies and measures on end use energy efficiency.

4. The EEAPs shall be assessed by the **Secretariat**:
- the first EEAPs shall be reviewed before **1 January 2011**;
 - the second EEAPs shall be reviewed before **1 January 2014**;
 - the third EEAPs shall be reviewed before **1 January 2017**.
5. On the basis of the EEAPs, the Secretariat shall assess the extent to which **Contracting Parties** have made progress towards achieving their national indicative energy savings targets. The **Secretariat** shall publish reports with its conclusions:
- on the first EEAPs before **1 January 2011**;
 - on the second EEAPs before **1 January 2014**;
 - on the third EEAPs before **1 January 2017**.

These reports shall include information on related action at Community level, including legislation currently in force and future legislation. The reports shall take into account the benchmarking system referred to in Article 15(4), identify best practices, identify cases where **Contracting Parties** are not making enough progress, and may contain recommendations.

The second report shall be followed, as appropriate and where necessary, by proposals to **the Ministerial Council** for additional measures including a possible extension of the period of application of targets. If the report concludes that insufficient progress has been made towards achieving the national indicative targets, these proposals shall address the level and nature of the targets.

Further to the specific monitoring duties conferred on it by Directive 2006/32/EC as adapted, the Secretariat shall monitor and review the implementation of directive 2006/32/EC in the Contracting Parties and shall submit a progress report to the Permanent High Level Group by 30 June 2012.¹

Article 15

Review and adaptation of the framework

1. The values and calculation methods referred to in Annexes II, III, IV and V shall be adapted to technical progress in accordance with the procedure referred to in Article 16(2).
 2. Before 1 January 2008, the Commission, in accordance with the procedure referred to in Article 16(2), shall further refine and complement as required points 2 to 6 of Annex IV, whilst respecting the general framework set out in Annex IV.
 3. Before 1 January 2012, the Commission, in accordance with the procedure referred to in Article 16(2), shall raise the percentage of harmonised bottom-up calculations used in the harmonised calculation model referred to in point 1 of Annex IV, without prejudice to those **Contracting Party** schemes that already use a higher percentage. The new harmonised calculation model with a significantly higher percentage of bottom-up calculations shall first be used as from 1 January 2012.
- Wherever practicable and possible, the measurement of total savings over the total period of application of the Directive shall use this harmonised calculation model, without prejudice to those **Contracting Party** schemes that use a higher percentage of bottom-up calculations.

¹ Article 1(4) of Decision 2009/05/MC-EnC

4. Not later than 30 June 2008, the Commission, in accordance with the procedure set out in Article 16(2), shall develop a set of harmonised energy efficiency indicators and benchmarks based upon them, taking into account available data or data that can be collected in a cost-effective manner for each **Contracting Party**. For the development of these harmonised energy efficiency indicators and benchmarks the Commission shall use as a reference guide the indicative list set out in Annex V. **Contracting Parties** shall gradually integrate these indicators and benchmarks into the statistical data included in their EEAPs as referred to in Article 14, and use them as one of the tools at their disposal to decide on future priority areas in the EEAPs.

Not later than 17 May 2011, the Commission shall present to the European Parliament and the Council a report on the progress in setting indicators and benchmarks.

Article 16

Committee

1. The Commission shall be assisted by a Committee.
2. Where reference is made to this paragraph, Articles 5 and 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.

The period laid down in Article 5(6) of Decision 1999/468/EC shall be set at three months.

3. The Committee shall adopt its rules of procedure.

Article 17

Repeal

Directive 93/76/EEC is hereby repealed.

Article 18

Transposition

1. **Contracting Parties** shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive not later than **31 December 2011**, with the exception of the provisions of Article 14(1), (2) and (4), for which the date of transposition shall be, at the latest **31 December 2009**. They shall forthwith inform the **Secretariat** thereof.

When **Contracting Parties** adopt these measures, they shall contain a reference to this Directive or shall be accompanied by such reference on the occasion of their official publication. The methods of making such reference shall be laid down by **Contracting Parties**.

2. **Contracting Parties** shall communicate to the **Secretariat** the text of the main provisions of national law which they adopt in the field covered by this Directive.

Articles 19 and 20

Entry into force and Addressees

This Decision enters into force upon its adoption and is addressed to the Contracting Parties²

“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...”³”

² The text displayed here corresponds to Article 4 of Decision 2009/05/MC-EnC.

³ Text corresponds to Article 3(36) of Decision D/2015/08/MC-EnC on the implementation of the Directive 2012/27/EU on Energy Efficiency

ANNEX I

Methodology for calculating the national indicative energy savings target

The methodology used for calculating the national indicative energy savings target set out in Article 4 shall be the following:

1. **Contracting Parties** shall use the annual final inland energy consumption of all energy users within the scope of this Directive for the most recent five-year period previous to the implementation of this Directive for which official data are available, to calculate an annual average amount of consumption. This final energy consumption shall be the amount of energy distributed or sold to final customers during the five-year period, not adjusted for degree days, structural changes or production changes.

On the basis of this annual average amount of consumption, the national indicative energy savings target shall be calculated once and the resulting absolute amount of energy to be saved applied for the total duration of this Directive.

The national indicative energy savings target shall:

- (a) consist of 9% of the annual average amount of consumption referred to above;
- (b) be measured after the ninth year of application of this Directive;
- (c) be the result of cumulative annual energy savings achieved throughout the nine-year application period of this Directive;
- (d) be reached by way of energy services and other energy efficiency improvement measures.

This methodology for measuring energy savings ensures that the total energy savings prescribed by this Directive are a fixed amount, and thus independent of future GDP growth and of any future increase in energy consumption.

2. The national indicative energy savings target shall be expressed in absolute terms in GWh, or equivalent, calculated in accordance with Annex II.

3. Energy savings in a particular year following the entry into force of this Directive that result from energy efficiency improvement measures initiated in a previous year not earlier than 1995 and that have a lasting effect may be taken into account in the calculation of the annual energy savings. In certain cases, where circumstances can justify it, measures initiated before 1995 but not earlier than 1991 may be taken into account. Measures of a technological nature should either have been updated to take account of technological progress, or be assessed in relation to the benchmark for such measures. The Commission shall provide guidelines on how the effect of all such energy efficiency improving measures should be measured or estimated, based, wherever possible, on existing Community legislation, such as Directive 2004/8/EC of the European Parliament and of the Council of 11 February 2004 on the promotion of cogeneration based on a useful heat demand in the internal energy market [1] and Directive 2002/91/EC.

In all cases, the resulting energy savings must still be verifiable and measurable or estimable, in accordance with the general framework in Annex IV.

ANNEX II

Energy content of selected fuels for end use - conversion table⁴

Energy Community	kJ (NCV)	kgoe (NCV)	kWh (NCV)
1 kg coke	28500	0.676	7.917
1 kg hard coal	1720 – 30700	0.411 – 0.733	4.778 – 8.528
1 kg brown coal briquettes	20000	0.478	5.556
1 kg black lignite	10500 – 21000	0.251 – 0.502	2.917 – 5.833
1 kg brown coal	5600 – 10500	0.134 – 0.251	1.556 – 2.917
1 kg oil shale	8000 – 9000	0.191 – 0.215	2.222 – 2.500
1 kg peat	7800 – 13800	0.186 – 0.330	2.167 – 3.833
1 kg peat briquettes	16000 – 16800	0.382 – 0.401	4.444 – 4.667
1 kg residual fuel (heavy oil)	40000	0.955	11.111
1 kg light fuel oil	42300	1.010	11.750
1 kg motor spirit (petrol)	44000	1.051	12.222
1 kg paraffin	40000	0.955	11.111
1 kg liquefied petroleum gas	46000	1.099	12.778
1 kg natural gas (1)	47200	1.126	13.10
1 kg liquefied natural gas	45190	1.079	12.553
1 kg wood (25% humidity) (2)	13800	0.330	3.833
1 kg pellets/wood bricks	16800	0.401	4.667
1 kg waste	7400 – 10700	0.177 – 0.256	2.056 – 2.972
1 kg MJ derived heat	1000	0.024	0.278
1 kWh electrical energy	3600	0.086	1 (3)

Source: Eurostat

[1] 93% methane.

[2] **Contracting Parties** may apply other values depending on the type of wood most used in the respective **Contracting Party**.

[3] For savings in kWh electricity **Contracting Parties** may apply a default co-efficient of 2.5 reflecting the estimated 40% average EU generation efficiency during the target period. **Contracting Parties** may apply a different co-efficient provided they can justify it.

⁴ **Contracting Parties** may apply different conversion factors if these can be justified.

ANNEX III

Indicative list of examples of eligible energy efficiency improvement measures

This Annex provides examples of areas in which energy efficiency improvement programmes and other energy efficiency improvement measures may be developed and implemented in the context of Article 4.

To be taken into account, these energy efficiency improvement measures must result in energy savings that can be clearly measured and verified or estimated in accordance with the guidelines in Annex IV, and their impacts on energy savings must not already be counted in other specific measures. The following lists are not exhaustive but are intended to provide guidance.

Examples of eligible energy efficiency improvement measures:

Residential and tertiary sectors

- (a) heating and cooling (e.g. heat pumps, new efficient boilers, installation/efficient update of district heating/cooling systems);
- (b) insulation and ventilation (e.g. wall cavity and roof insulation, double/triple glazing of windows, passive heating and cooling);
- (c) hot water (e.g. installation of new devices, direct and efficient use in space heating, washing machines);
- (d) lighting (e.g. new efficient bulbs and ballasts, digital control systems, use of motion detectors for lighting systems in commercial buildings);
- (e) cooking and refrigeration (e.g. new efficient devices, heat recovery systems);
- (f) other equipment and appliances (e.g. combined heat and power appliances, new efficient devices, time control for optimised energy use, stand-by loss reduction, installation of capacitors to reduce reactive power, transformers with low losses);
- (g) domestic generation of renewable energy sources, whereby the amount of purchased energy is reduced (e.g. solar thermal applications, domestic hot water, solar-assisted space heating and cooling);

Industry sector

- (h) product manufacturing processes (e.g. more efficient use of compressed air, condensate and switches and valves, use of automatic and integrated systems, efficient stand-by modes);
- (i) motors and drives (e.g. increase in the use of electronic controls, variable speed drives, integrated application programming, frequency conversion, electrical motor with high efficiency);
- (j) fans, variable speed drives and ventilation (e.g. new devices/systems, use of natural ventilation);
- (k) demand response management (e.g. load management, peak shaving control systems);
- (l) high-efficiency cogeneration (e.g. combined heat and power appliances);

Transport sector

- (m) mode of travel used (e.g. promotion of energy-efficient vehicles, energy-efficient use of vehicles including tyre pressure adjustment schemes, energy efficiency devices and add-on devices for vehicles, fuel additives which improve energy efficiency, high-lubricity oils and low-resistance tyres);

(n) modal shifts of travel (e.g. car free home/office transportation arrangements, car sharing, modal shifts from more energy-consuming modes of transport to less energy-consuming ones, per passenger-km or tonne-km);

(o) car-free days;

Cross-sectoral measures

(p) standards and norms that aim primarily at improving the energy efficiency of products and services, including buildings;

(q) energy labelling schemes;

(r) metering, intelligent metering systems such as individual metering instruments managed by remote, and informative billing;

(s) training and education that lead to application of energy-efficient technology and/or techniques;

Horizontal measures

(t) regulations, taxes etc. that have the effect of reducing energy end-use consumption;

(u) focused information campaigns that promote energy efficiency improvement and energy efficiency improvement measures.

ANNEX IV

General framework for measurement and verification of energy savings

1. Energy savings measurements and calculations and their normalisation

1.1. Measuring energy savings

General

In measuring the realised energy savings as set out in Article 4 with a view to capturing the overall improvement in energy efficiency and to ascertaining the impact of individual measures, a harmonised calculation model which uses a combination of top-down and bottom-up calculation methods shall be used to measure the annual improvements in energy efficiency for the EEAPs referred to in Article 14.

In developing the harmonised calculation model in accordance with Article 15(2), the Committee shall aim to use, to the extent possible, data which are already routinely provided by Eurostat and/or the national statistical agencies.

Top-down calculations

A top-down calculation method means that the amount of energy savings is calculated using the national or larger-scale aggregated sectoral levels of energy savings as the starting point. Adjustments of the annual data are then made for extraneous factors such as degree days, structural changes, product mix, etc. to derive a measure that gives a fair indication of total energy efficiency improvement, as described in point 1.2. This method does not provide exact measurements at a detailed level nor does it show cause and effect relationships between measures and their resulting energy savings. However, it is usually simpler and less costly and is often referred to as “energy efficiency indicators” because it gives an indication of developments.

In developing the top-down calculation method used in this harmonised calculation model, the Committee shall base its work, to the extent possible, on existing methodologies such as the ODEX model⁵.

Bottom-up calculations

A bottom-up calculation method means that energy savings obtained through the implementation of a specific energy efficiency improvement measure are measured in kilowatt-hours (kWh), in Joules (J) or in kilogram oil equivalent (kgoe) and added to energy savings results from other specific energy efficiency improvement measures. The authorities or agencies referred to in Article 4(4) will ensure that double counting of energy savings, which results from a combination of energy efficiency improvement measures (including mechanisms), is avoided. For the bottom-up calculation method, data and methods referred to in points 2.1 and 2.2 may be used.

Before 1 January 2008, the Commission shall develop a harmonised bottom-up model. This model shall cover a level between 20 and 30% of the annual final inland energy consumption for sectors falling within the scope of this Directive, subject to due consideration of the factors referred to in points (a), (b) and (c) below.

Until 1 January 2012, the Commission shall continue to develop this harmonised bottom-up model, which shall cover a significantly higher level of the annual final inland energy consumption for sectors falling within the scope of this Directive, subject to due consideration of the factors referred to in points (a), (b) and (c) below.

In the development of the harmonised bottom-up model, the Commission shall take the following factors into account and justify its decision accordingly:

- (a) experience with the harmonised calculation model during its first years of application;
- (b) expected potential increase in accuracy as a result of a larger share of bottom-up calculations;
- (c) estimated potential added cost and/or administrative burden.

In developing this harmonised bottom-up model in accordance with Article 15(2), the Committee shall aim to use standardised methods which entail a minimum of administrative burden and cost, notably by using the measurement methods referred to in points 2.1 and 2.2 and by focusing on those sectors where the harmonised bottom-up model can be most cost efficiently applied.

Contracting Parties that so wish may use further bottom-up measurements in addition to the part prescribed by the harmonised bottom-up model subject to the agreement of the Commission, in accordance with the procedure referred to in Article 16(2), on the basis of a description of the methodology presented by the **Contracting Party** concerned.

If bottom-up calculations are not available for certain sectors, top-down indicators or mixtures of top-down and bottom-up calculations shall be used in the reports to the Commission, subject to the agreement of the Commission, in accordance with the procedure referred to in Article 16(2). In particular, when assessing requests to this effect within the context of the first EEAP described in Article 14(2), the Commission shall demonstrate the appropriate flexibility. Some top-down calculations will be necessary to measure the impact of measures implemented after 1995 (and in certain cases as early as 1991) that continue to have impact.

⁵ ODYSSEE-MURE Project, SAVE Programme. Commission 2005.

1.2. How energy savings measurements should be normalised

Energy savings shall be determined by measuring and/or estimating consumption, before and after the implementation of the measure, while ensuring adjustment and normalisation for external conditions commonly affecting energy use. Conditions commonly affecting energy use may also differ over time. Such conditions may be the likely impact of one or several plausible factors, such as:

- (a) weather conditions, such as degree days;
- (b) occupancy levels;
- (c) opening hours for non-domestic buildings;
- (d) installed equipment intensity (plant throughput); product mix;
- (e) plant throughput, level of production, volume or added value, including changes in GDP level;
- (f) schedules for installation and vehicles;
- (g) relationship with other units.

2. Data and methods that may be used (measurability)

Several methods for collecting data to measure and/or estimate energy savings exist. At the time of the evaluation of an energy service or energy efficiency improvement measure, it will often be impossible to rely only on measurements. A distinction is therefore made between methods measuring energy savings and methods estimating energy savings, where the latter is the more common practice.

2.1. Data and methods based on measurements

Bills from distribution companies or retailers

Metered energy bills may form the basis for measurement for a representative period before the introduction of the energy efficiency improvement measure. These may then be compared to metered bills for the period after the introduction and use of the measure, also for a representative period of time. The findings should be compared to a control group (non-participation group) if possible or, alternatively, normalised as described in point 1.2.

Energy sales data

The consumption of different types of energy (e.g. electricity, gas, heating oil) may be measured by comparing the sales data from the retailer or distributor obtained before the introduction of the energy efficiency improvement measures with the sales data from the time after the measure. A control group may be used or the data normalised.

Equipment and appliance sales data

Performance of equipment and appliances may be calculated on the basis of information obtained directly from the manufacturer. Data on equipment and appliance sales can generally be obtained from the retailers. Special surveys and measurements may also be carried out. The accessible data can be checked against sales figures to determine the size of energy savings. When using this method, adjustment should be made for changes in the use of the equipment or appliance.

End-use load data

Energy use of a building or facility can be fully monitored to record energy demand before and after the introduction of an energy efficiency improvement measure. Important relevant factors (e.g. production process, special equipment, heating installations) may be metered more closely.

2.2. Data and methods based on estimates

Simple engineering estimated data: Non-inspection

Simple engineering estimated data calculation without on-site inspection is the most common method for obtaining data for measuring deemed energy savings. Data may be estimated using engineering principles, without using on-site data, but with assumptions based on equipment specifications, performance characteristics, operation profiles of measures installed and statistics, etc.

Enhanced engineering estimated data: Inspection

Energy data may be calculated on the basis of information obtained by an external expert during an audit of, or other type of visit to, one or several targeted sites. On this basis, more sophisticated algorithms/simulation models could be developed and be applied to a larger population of sites (e.g. buildings, facilities, vehicles). This type of measurement can often be used to complement and calibrate simple engineering estimated data.

3. How to deal with uncertainty

All the methods listed in point 2 may entail some degree of uncertainty. Uncertainty may derive from⁶:

- (a) instrumentation errors: these typically occur because of errors in specifications given by the product manufacturer;
- (b) modelling errors: these typically refer to errors in the model used to estimate parameters for the data collected;
- (c) sampling errors: these typically refer to errors resulting from the fact that a sample of units was observed rather than the entire set of units under study.

Uncertainty may also derive from planned and unplanned assumptions; these are typically associated with estimates, stipulations and/or the use of engineering data. The occurrence of errors is also related to the chosen system of data collection that is outlined in points 2.1 and 2.2. A further specification of uncertainty is advised.

Contracting Parties may choose to use the method of quantified uncertainty when reporting on the targets set out in this Directive. Quantified uncertainty shall then be expressed in a statistically meaningful way, declaring both accuracy and confidence level. For example, “the quantifiable error is found with 90% confidence to be $\pm 20\%$ ”.

If the method of quantified uncertainty is used, **Contracting Parties** are also to take into account that the acceptable level of uncertainty required in energy savings calculations is a function of the level of savings and the cost-effectiveness of decreasing uncertainty.

⁶ A model for establishing a level of quantifiable uncertainty based on these three errors is given in Appendix B in the International Performance Measurement & Verification Protocol (IPMVP).

4. Harmonised lifetimes of energy efficiency improvement measures in bottom-up calculations

Some energy efficiency improvement measures last for decades while other measures last for a shorter period of time. The list below gives some examples of the average lifetime of energy efficiency improvement measures:

Loft insulation of private dwellings	30 years
Cavity wall insulation of private dwellings	40 years
Glazing E to C (in m ²)	20 years
Boilers B to A rated	15 years
Heating controls - upgrade with boiler replacement	15 years
CFLs - retail	16 years

Source: Energy Efficiency Commitment 2005 - 2008, UK

To ensure that all **Contracting Parties** apply the same lifetimes for similar measures, these lifetimes will be harmonised on a European level. The Commission, assisted by the Committee established under Article 16, shall therefore replace the above list with an agreed preliminary list of the average lifetime of different energy efficiency improvement measures not later than 17 November 2006.

5. How to deal with multiplier effects of energy savings and how to avoid double counting in mixed top-down and bottom-up calculation methods

The implementation of one energy efficiency improvement measure, e.g. hot water tank and pipe insulation in a building, or another measure with equivalent effect, may have future multiplier effects in the market, meaning that the market will implement a measure automatically without any further involvement from the authorities or agencies referred to in Article 4(4) or any private-sector energy services provider. A measure with multiplier potential would in most cases be more cost-effective than measures that need to be repeated on a regular basis. **Contracting Parties** shall estimate the energy savings potential of such measures including their multiplier effects and verify the total effects in an ex-post evaluation using indicators when appropriate.

With regard to the evaluation of horizontal measures, energy efficiency indicators may be used, provided that the way in which they would have developed without the horizontal measures can be determined. However, it must be possible to rule out, as far as possible, double counting with savings achieved through targeted energy efficiency programmes, energy services and other policy instruments. This applies particularly to energy or CO₂ taxes and information campaigns.

Corrections shall be made for double counting of energy savings. The use of matrices that enable the summation of impacts of measures is encouraged.

Potential energy savings resulting after the target period shall not be taken into account when **Contracting Parties** report on the overall target set out in Article 4. Measures that promote long-term market effects should in any case be encouraged and measures that have already resulted in multiplier energy savings effects should be taken into account when reporting on the targets set out in Article 4, provided they can be measured and verified using the guidance given in this Annex.

6. How to verify energy savings

If deemed cost-effective and necessary, the energy savings obtained through a specific energy service or other energy efficiency improvement measure shall be verified by a third party. This may be done by independent consultants, ESCOs or other market actors. The appropriate **Contracting Party** authorities or agencies referred to in Article 4(4) may provide further instructions on this matter.

Sources: A European Ex-post Evaluation Guidebook for DSM and EE Service Programmes; IEA, IN-DEEP database; IPMVP, Volume 1 (Version March 2002).

ANNEX V

Indicative list of energy conversion markets and sub-markets for which benchmarks can be worked out:

1. The market for household appliances/information technology and lighting:
 - 1.1. Kitchen appliances (white goods);
 - 1.2. Entertainment/information technology;
 - 1.3. Lighting.
2. The market for domestic heating technology:
 - 2.1. Heating;
 - 2.2. Hot-water provision;
 - 2.3. Air conditioning;
 - 2.4. Ventilation;
 - 2.5. Heat insulation;
 - 2.6. Windows.
3. The market for industrial ovens.
4. The market for motorised power in industry.
5. The market for public-sector institutions:
 - 5.1. Schools/public administration;
 - 5.2. Hospitals;
 - 5.3. Swimming pools;
 - 5.4. Street lighting.
6. The market for transport services.

ANNEX VI

List of eligible energy efficient public procurement measures

Without prejudice to national and Community public procurement legislation, Contracting Parties shall ensure that the public sector applies at least two requirements from the following list in the context of the exemplary role of the public sector as referred to in Article 5:

- (a) requirements concerning the use of financial instruments for energy savings, including energy performance contracting, that stipulate the delivery of measurable and pre-determined energy savings (including whenever public administrations have outsourced responsibilities);
- (b) requirements to purchase equipment and vehicles based on lists of energy-efficient product specifications of different categories of equipment and vehicles to be drawn up by the authorities or agencies referred to in Article 4(4), using, where applicable, minimised life-cycle cost analysis or comparable methods to ensure cost-effectiveness;
- (c) requirements to purchase equipment that has efficient energy consumption in all modes, including in standby mode, using, where applicable, minimised life-cycle cost analysis or comparable methods to ensure cost-effectiveness;
- (d) requirements to replace or retrofit existing equipment and vehicles with the equipment listed in points (b) and (c);
- (e) requirements to use energy audits and implement the resulting cost-effective recommendations;
- (f) requirements to purchase or rent energy-efficient buildings or parts thereof, or requirements to replace or retrofit purchased or rented buildings or parts thereof in order to render them more energy-efficient.



Directive 2010/31/EU of 19 May 2010 on the energy performance of buildings

Incorporated and adapted by Ministerial Council Decision 2010/02/MC-EnC of 24 September 2010 amending Decision 2009/05/MC-EnC of 18 December 2009 on the implementation of certain Directives on Energy Efficiency.

*The adaptations made by Ministerial Council Decision 2010/02/MC-EnC are highlighted in **bold and blue**.*

Whereas:

(1) Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings has been amended. Since further substantive amendments are to be made, it should be recast in the interests of clarity.

(2) An efficient, prudent, rational and sustainable utilisation of energy applies, inter alia, to oil products, natural gas and solid fuels, which are essential sources of energy, but also the leading sources of carbon dioxide emissions.

(3) Buildings account for 40% of total energy consumption in the Union. The sector is expanding, which is bound to increase its energy consumption. Therefore, reduction of energy consumption and the use of energy from renewable sources in the buildings sector constitute important measures needed to reduce the Union's energy dependency and greenhouse gas emissions. Together with an increased use of energy from renewable sources, measures taken to reduce energy consumption in the Union would allow the Union to comply with the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC), and to honour both its long term commitment to maintain the global temperature rise below 2 °C, and its commitment to reduce, by 2020, overall greenhouse gas emissions by at least 20% below 1990 levels, and by 30% in the event of an international agreement being reached. Reduced energy consumption and an increased use of energy from renewable sources also have an important part to play in promoting security of energy supply, technological developments and in creating opportunities for employment and regional development, in particular in rural areas.

(4) Management of energy demand is an important tool enabling the Union to influence the global energy market and hence the security of energy supply in the medium and long term.

(5) The European Council of March 2007 emphasised the need to increase energy efficiency in the Union so as to achieve the objective of reducing by 20% the Union's energy consumption by 2020 and called for a thorough and rapid implementation of the priorities established in the Commission Communication entitled "Action plan for energy efficiency: realising the potential". That action plan identified the significant potential for cost-effective energy savings in the buildings sector. The European Parliament, in its resolution of 31 January 2008, called for the strengthening of the provisions of Directive 2002/91/EC, and has called at various times, on the latest occasion in its resolution of 3 February 2009 on the Second Strategic Energy Review, for the 20% energy efficiency target in 2020 to be made binding. Moreover, Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020, sets national binding targets for CO₂ reduction for which energy efficiency in the building sector will be crucial, and Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the

promotion of the use of energy from renewable sources provides for the promotion of energy efficiency in the context of a binding target for energy from renewable sources accounting for 20% of total Union energy consumption by 2020.

(6) The European Council of March 2007 reaffirmed the Union's commitment to the Union-wide development of energy from renewable sources by endorsing a mandatory target of a 20% share of energy from renewable sources by 2020. Directive 2009/28/EC establishes a common framework for the promotion of energy from renewable sources.

(7) It is necessary to lay down more concrete actions with a view to achieving the great unrealised potential for energy savings in buildings and reducing the large differences between Member States' results in this sector.

(8) Measures to improve further the energy performance of buildings should take into account climatic and local conditions as well as indoor climate environment and cost-effectiveness. These measures should not affect other requirements concerning buildings such as accessibility, safety and the intended use of the building.

(9) The energy performance of buildings should be calculated on the basis of a methodology, which may be differentiated at national and regional level. That includes, in addition to thermal characteristics, other factors that play an increasingly important role such as heating and air-conditioning installations, application of energy from renewable sources, passive heating and cooling elements, shading, indoor air-quality, adequate natural light and design of the building. The methodology for calculating energy performance should be based not only on the season in which heating is required, but should cover the annual energy performance of a building. That methodology should take into account existing European standards.

(10) It is the sole responsibility of Member States to set minimum requirements for the energy performance of buildings and building elements. Those requirements should be set with a view to achieving the cost-optimal balance between the investments involved and the energy costs saved throughout the lifecycle of the building, without prejudice to the right of Member States to set minimum requirements which are more energy efficient than cost-optimal energy efficiency levels. Provision should be made for the possibility for Member States to review regularly their minimum energy performance requirements for buildings in the light of technical progress.

(11) The objective of cost-effective or cost-optimal energy efficiency levels may, in certain circumstances, for example in the light of climatic differences, justify the setting by Member States of cost-effective or cost-optimal requirements for building elements that would in practice limit the installation of building products that comply with standards set by Union legislation, provided that such requirements do not constitute an unjustifiable market barrier.

(12) When setting energy performance requirements for technical building systems, Member States should use, where available and appropriate, harmonised instruments, in particular testing and calculation methods and energy efficiency classes developed under measures implementing Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products [8] and Directive 2010/30/EU of the European Parliament and of the Council of 19 May 2010 on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products [9], with a view to ensuring coherence with related initiatives and minimise, to the extent possible, potential fragmentation of the market.

(13) This Directive is without prejudice to Articles 107 and 108 of the Treaty on the Functioning of the European Union (TFEU). The term “incentive” used in this Directive should not therefore be interpreted as constituting State aid.

(14) The Commission should lay down a comparative methodology framework for calculating cost-optimal levels of minimum energy performance requirements. Member States should use this framework to compare the results with the minimum energy performance requirements which they have adopted. Should significant discrepancies, i.e. exceeding 15%, exist between the calculated cost-optimal levels of minimum energy performance requirements and the minimum energy performance requirements in force, Member States should justify the difference or plan appropriate steps to reduce the discrepancy. The estimated economic lifecycle of a building or building element should be determined by Member States, taking into account current practices and experience in defining typical economic lifecycles. The results of this comparison and the data used to reach these results should be regularly reported to the Commission. These reports should enable the Commission to assess and report on the progress of Member States in reaching cost-optimal levels of minimum energy performance requirements.

(15) Buildings have an impact on long-term energy consumption. Given the long renovation cycle for existing buildings, new, and existing buildings that are subject to major renovation, should therefore meet minimum energy performance requirements adapted to the local climate. As the application of alternative energy supply systems is not generally explored to its full potential, alternative energy supply systems should be considered for new buildings, regardless of their size, pursuant to the principle of first ensuring that energy needs for heating and cooling are reduced to cost-optimal levels.

(16) Major renovations of existing buildings, regardless of their size, provide an opportunity to take cost-effective measures to enhance energy performance. For reasons of cost-effectiveness, it should be possible to limit the minimum energy performance requirements to the renovated parts that are most relevant for the energy performance of the building. Member States should be able to choose to define a “major renovation” either in terms of a percentage of the surface of the building envelope or in terms of the value of the building. If a Member State decides to define a major renovation in terms of the value of the building, values such as the actuarial value, or the current value based on the cost of reconstruction, excluding the value of the land upon which the building is situated, could be used.

(17) Measures are needed to increase the number of buildings which not only fulfil current minimum energy performance requirements, but are also more energy efficient, thereby reducing both energy consumption and carbon dioxide emissions. For this purpose Member States should draw up national plans for increasing the number of nearly zero-energy buildings and regularly report such plans to the Commission.

(18) Union financial instruments and other measures are being put into place or adapted with the aim of stimulating energy efficiency-related measures. Such financial instruments at Union level include, inter alia, Regulation (EC) No 1080/2006 of the European Parliament and of the Council of 5 July 2006 on the European Regional Development Fund [10], amended to allow increased investments in energy efficiency in housing; the public-private partnership on a “European energy-efficient buildings” initiative to promote green technologies and the development of energy-efficient systems and materials in new and renovated buildings; the EC-European Investment Bank (EIB) initiative “EU sustainable energy financing initiative” which aims to enable, inter alia, investments for energy efficiency and the EIB-led “Marguerite Fund”: the 2020 European Fund for Energy, Climate Change

and Infrastructure; Council Directive 2009/47/EC of 5 May 2009 amending Directive 2006/112/EC as regards reduced rates of value added tax, structural and cohesion funds instrument Jeremie (Joint European Resources for micro to medium enterprises); the Energy Efficiency Finance Facility; the Competitiveness and Innovation Framework Programme including the Intelligent Energy Europe II Programme focused specifically on removing market barriers related to energy efficiency and energy from renewable sources through for example the technical assistance facility ELENA (European Local Energy Assistance); the Covenant of Mayors; the Entrepreneurship and Innovation programme; the ICT Policy Support Programme 2010, and the Seventh Research Framework Programme. The European Bank for Reconstruction and Development also provides funding with the aim of stimulating energy-efficiency-related measures.

(19) Union financial instruments should be used to give practical effect to the objectives of this Directive, without however substituting national measures. In particular, they should be used for providing appropriate and innovative means of financing to catalyse investment in energy efficiency measures. They could play an important role in the development of national, regional and local energy efficiency funds, instruments, or mechanisms, which deliver such financing possibilities to private property owners, to small and medium-sized enterprises and to energy efficiency service companies.

(20) In order to provide the Commission with adequate information, Member States should draw up lists of existing and proposed measures, including those of a financial nature, other than those required by this Directive, which promote the objectives of this Directive. The existing and proposed measures listed by Member States may include, in particular, measures that aim to reduce existing legal and market barriers and encourage investments and/or other activities to increase the energy efficiency of new and existing buildings, thus potentially contributing to reducing energy poverty. Such measures could include, but should not be limited to, free or subsidised technical assistance and advice, direct subsidies, subsidised loan schemes or low interest loans, grant schemes and loan guarantee schemes. The public authorities and other institutions which provide those measures of a financial nature could link the application of such measures to the indicated energy performance and the recommendations from energy performance certificates.

(21) In order to limit the reporting burden on Member States it should be possible to integrate the reports required by this Directive into the Energy Efficiency Action Plans referred to in Article 14(2) of Directive 2006/32/EC of the European Parliament and of the Council of 5 April 2006 on energy end-use efficiency and energy services. The public sector in each Member State should lead the way in the field of energy performance of buildings, and therefore the national plans should set more ambitious targets for the buildings occupied by public authorities.

(22) The prospective buyer and tenant of a building or building unit should, in the energy performance certificate, be given correct information about the energy performance of the building and practical advice on improving such performance. Information campaigns may serve to further encourage owners and tenants to improve the energy performance of their building or building unit. Owners and tenants of commercial buildings should also be encouraged to exchange information regarding actual energy consumption, in order to ensure that all the data are available to make informed decisions about necessary improvements. The energy performance certificate should also provide information about the actual impact of heating and cooling on the energy needs of the building, on its primary energy consumption and on its carbon dioxide emissions.

(23) Public authorities should lead by example and should endeavour to implement the recommendations included in the energy performance certificate. Member States should include within their

national plans measures to support public authorities to become early adopters of energy efficiency improvements and to implement the recommendations included in the energy performance certificate as soon as feasible.

(24) Buildings occupied by public authorities and buildings frequently visited by the public should set an example by showing that environmental and energy considerations are being taken into account and therefore those buildings should be subject to energy certification on a regular basis. The dissemination to the public of information on energy performance should be enhanced by clearly displaying these energy performance certificates, in particular in buildings of a certain size which are occupied by public authorities or which are frequently visited by the public, such as shops and shopping centres, supermarkets, restaurants, theatres, banks and hotels.

(25) Recent years have seen a rise in the number of air-conditioning systems in European countries. This creates considerable problems at peak load times, increasing the cost of electricity and disrupting the energy balance. Priority should be given to strategies which enhance the thermal performance of buildings during the summer period. To that end, there should be focus on measures which avoid overheating, such as shading and sufficient thermal capacity in the building construction, and further development and application of passive cooling techniques, primarily those that improve indoor climatic conditions and the micro-climate around buildings.

(26) Regular maintenance and inspection of heating and air-conditioning systems by qualified personnel contributes to maintaining their correct adjustment in accordance with the product specification and in that way ensures optimal performance from an environmental, safety and energy point of view. An independent assessment of the entire heating and air-conditioning system should occur at regular intervals during its lifecycle in particular before its replacement or upgrading. In order to minimise the administrative burden on building owners and tenants, Member States should endeavour to combine inspections and certifications as far as possible.

(27) A common approach to the energy performance certification of buildings and to the inspection of heating and air-conditioning systems, carried out by qualified and/or accredited experts, whose independence is to be guaranteed on the basis of objective criteria, will contribute to a level playing field as regards efforts made in Member States to energy saving in the buildings sector and will introduce transparency for prospective owners or users with regard to energy performance in the Union property market. In order to ensure the quality of energy performance certificates and of the inspection of heating and air-conditioning systems throughout the Union, an independent control mechanism should be established in each Member State.

(28) Since local and regional authorities are critical for the successful implementation of this Directive, they should be consulted and involved, as and when appropriate in accordance with applicable national legislation, on planning issues, the development of programmes to provide information, training and awareness-raising, and on the implementation of this Directive at national or regional level. Such consultations may also serve to promote the provision of adequate guidance to local planners and building inspectors to carry out the necessary tasks. Furthermore, Member States should enable and encourage architects and planners to properly consider the optimal combination of improvements in energy efficiency, use of energy from renewable sources and use of district heating and cooling when planning, designing, building and renovating industrial or residential areas.

(29) Installers and builders are critical for the successful implementation of this Directive. Therefore, an adequate number of installers and builders should, through training and other measures, have

the appropriate level of competence for the installation and integration of the energy efficient and renewable energy technology required.

(30) Member States should take account of Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications with regard to the mutual recognition of professional experts which are addressed by this Directive, and the Commission should continue its activities under the Intelligent Energy Europe Programme on guidelines and recommendations for standards for the training of such professional experts.

(31) In order to enhance the transparency of energy performance in the Union's non-residential property market, uniform conditions for a voluntary common certification scheme for the energy performance of non-residential buildings should be established. In accordance with Article 291 TFEU, rules and general principles concerning mechanisms for control by Member States of the Commission's exercise of implementing powers shall be laid down in advance by a regulation adopted in accordance with the ordinary legislative procedure. Pending the adoption of that new regulation, Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission continues to apply, with the exception of the regulatory procedure with scrutiny, which is not applicable.

(32) The Commission should be empowered to adopt delegated acts in accordance with Article 290 TFEU in respect of the adaptation to technical progress of certain parts of the general framework set out in Annex I, and in respect of the establishment of a methodology framework for calculating cost-optimal levels of minimum energy performance requirements. It is of particular importance that the Commission carry out appropriate consultations during its preparatory work, including at expert level.

(33) Since the objective of this Directive, namely of enhancing the energy performance of buildings, cannot be sufficiently achieved by the Member States, due to the complexity of the buildings sector and the inability of the national housing markets to adequately address the challenges of energy efficiency, and can by the reason of the scale and the effects of the action be better achieved at Union level, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on European Union. In accordance with the principles of proportionality, as set out in that Article, this Directive does not go beyond what is necessary in order to achieve that objective.

(34) The obligation to transpose this Directive into national law should be confined to those provisions which represent a substantive change as compared with Directive 2002/91/EC. The obligation to transpose the provisions which are unchanged arises under that Directive.

(35) This Directive should be without prejudice to the obligations of the Member States relating to the time limits for transposition into national law and application of the Directive 2002/91/EC.

(36) In accordance with point 34 of the Interinstitutional Agreement on better law-making, Member States are encouraged to draw up, for themselves and in the interest of the Union, their own tables, illustrating, as far as possible, the correlation between this Directive and the transposition measures, and to make them public.

Article 1

Subject matter

1. This Directive promotes the improvement of the energy performance of buildings within the **Energy Community**, taking into account outdoor climatic and local conditions, as well as indoor climate requirements and cost-effectiveness.
2. This Directive lays down requirements as regards:
 - (a) the common general framework for a methodology for calculating the integrated energy performance of buildings and building units;
 - (b) the application of minimum requirements to the energy performance of new buildings and new building units;
 - (c) the application of minimum requirements to the energy performance of:
 - (i) existing buildings, building units and building elements that are subject to major renovation;
 - (ii) building elements that form part of the building envelope and that have a significant impact on the energy performance of the building envelope when they are retrofitted or replaced; and
 - (iii) technical building systems whenever they are installed, replaced or upgraded;
 - (d) national plans for increasing the number of nearly zero-energy buildings;
 - (e) energy certification of buildings or building units;
 - (f) regular inspection of heating and air-conditioning systems in buildings; and
 - (g) independent control systems for energy performance certificates and inspection reports.
3. The requirements laid down in this Directive are minimum requirements and shall not prevent any **Contracting Party** from maintaining or introducing more stringent measures. Such measures shall be compatible with the Treaty on the Functioning of the European Union. They shall be notified to the **Secretariat**.

Article 2

Definitions

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

1. "building" means a roofed construction having walls, for which energy is used to condition the indoor climate;
2. "nearly zero-energy building" means a building that has a very high energy performance, as determined in accordance with Annex I. The nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby;
3. "technical building system" means technical equipment for the heating, cooling, ventilation, hot water, lighting or for a combination thereof, of a building or building unit;
4. "energy performance of a building" means the calculated or measured amount of energy needed to meet the energy demand associated with a typical use of the building, which includes, inter alia,

energy used for heating, cooling, ventilation, hot water and lighting;

5. "primary energy" means energy from renewable and non-renewable sources which has not undergone any conversion or transformation process;

6. "energy from renewable sources" means energy from renewable non-fossil sources, namely wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases;

7. "building envelope" means the integrated elements of a building which separate its interior from the outdoor environment;

8. "building unit" means a section, floor or apartment within a building which is designed or altered to be used separately;

9. "building element" means a technical building system or an element of the building envelope;

10. "major renovation" means the renovation of a building where:

(a) the total cost of the renovation relating to the building envelope or the technical building systems is higher than 25% of the value of the building, excluding the value of the land upon which the building is situated; or

(b) more than 25% of the surface of the building envelope undergoes renovation;

Contracting Parties may choose to apply option (a) or (b).

11. "European standard" means a standard adopted by the European Committee for Standardisation, the European Committee for Electrotechnical Standardisation or the European Telecommunications Standards Institute and made available for public use;

12. "energy performance certificate" means a certificate recognised by a **Contracting Party** or by a legal person designated by it, which indicates the energy performance of a building or building unit, calculated according to a methodology adopted in accordance with Article 3;

13. "cogeneration" means simultaneous generation in one process of thermal energy and electrical and/or mechanical energy;

14. "cost-optimal level" means the energy performance level which leads to the lowest cost during the estimated economic lifecycle, where:

(a) the lowest cost is determined taking into account energy-related investment costs, maintenance and operating costs (including energy costs and savings, the category of building concerned, earnings from energy produced), where applicable, and disposal costs, where applicable; and

(b) the estimated economic lifecycle is determined by each **Contracting Party**. It refers to the remaining estimated economic lifecycle of a building where energy performance requirements are set for the building as a whole, or to the estimated economic lifecycle of a building element where energy performance requirements are set for building elements.

The cost-optimal level shall lie within the range of performance levels where the cost benefit analysis calculated over the estimated economic lifecycle is positive;

15. "air-conditioning system" means a combination of the components required to provide a form of indoor air treatment, by which temperature is controlled or can be lowered;

16. "boiler" means the combined boiler body-burner unit, designed to transmit to fluids the heat released from burning;

17. “effective rated output” means the maximum calorific output, expressed in kW, specified and guaranteed by the manufacturer as being deliverable during continuous operation while complying with the useful efficiency indicated by the manufacturer;

18. “heat pump” means a machine, a device or installation that transfers heat from natural surroundings such as air, water or ground to buildings or industrial applications by reversing the natural flow of heat such that it flows from a lower to a higher temperature. For reversible heat pumps, it may also move heat from the building to the natural surroundings;

19. “district heating” or “district cooling” means the distribution of thermal energy in the form of steam, hot water or chilled liquids, from a central source of production through a network to multiple buildings or sites, for the use of space or process heating or cooling.

Article 3

Adoption of a methodology for calculating the energy performance of buildings

Contracting Parties shall apply a methodology for calculating the energy performance of buildings in accordance with the common general framework set out in Annex I.

This methodology shall be adopted at national or regional level.

Article 4

Setting of minimum energy performance requirements

1. **Contracting Parties** shall take the necessary measures to ensure that minimum energy performance requirements for buildings or building units are set with a view to achieving cost-optimal levels. The energy performance shall be calculated in accordance with the methodology referred to in Article 3. Cost-optimal levels shall be calculated in accordance with the comparative methodology framework referred to in Article 5 once the framework is in place.

Contracting Parties shall take the necessary measures to ensure that minimum energy performance requirements are set for building elements that form part of the building envelope and that have a significant impact on the energy performance of the building envelope when they are replaced or retrofitted, with a view to achieving cost-optimal levels.

When setting requirements, **Contracting Parties** may differentiate between new and existing buildings and between different categories of buildings.

These requirements shall take account of general indoor climate conditions, in order to avoid possible negative effects such as inadequate ventilation, as well as local conditions and the designated function and the age of the building.

A **Contracting Party** shall not be required to set minimum energy performance requirements which are not cost-effective over the estimated economic lifecycle.

Minimum energy performance requirements shall be reviewed at regular intervals which shall not be longer than five years and, if necessary, shall be updated in order to reflect technical progress in the building sector.

2. **Contracting Parties** may decide not to set or apply the requirements referred to in paragraph 1

to the following categories of buildings:

- (a) buildings officially protected as part of a designated environment or because of their special architectural or historical merit, in so far as compliance with certain minimum energy performance requirements would unacceptably alter their character or appearance;
- (b) buildings used as places of worship and for religious activities;
- (c) temporary buildings with a time of use of two years or less, industrial sites, workshops and non-residential agricultural buildings with low energy demand and non-residential agricultural buildings which are in use by a sector covered by a national sectoral agreement on energy performance;
- (d) residential buildings which are used or intended to be used for either less than four months of the year or, alternatively, for a limited annual time of use and with an expected energy consumption of less than 25% of what would be the result of all-year use;
- (e) stand-alone buildings with a total useful floor area of less than 50 m².

Article 5

Calculation of cost-optimal levels of minimum energy performance requirements

1. The Commission shall establish by means of delegated acts in accordance with Articles 23, 24 and 25 by 30 June 2011 a comparative methodology framework for calculating cost-optimal levels of minimum energy performance requirements for buildings and building elements.

The comparative methodology framework shall be established in accordance with Annex III and shall differentiate between new and existing buildings and between different categories of buildings.

2. **Contracting Parties** shall calculate cost-optimal levels of minimum energy performance requirements using the comparative methodology framework established in accordance with paragraph 1 and relevant parameters, such as climatic conditions and the practical accessibility of energy infrastructure, and compare the results of this calculation with the minimum energy performance requirements in force.

Contracting Parties shall report to the **Secretariat** all input data and assumptions used for those calculations and the results of those calculations. The report may be included in the Energy Efficiency Action Plans referred to in Article 14(2) of Directive 2006/32/EC. **Contracting Parties** shall submit those reports to the **Secretariat** at regular intervals, which shall not be longer than five years. The first report shall be submitted by **30 June 2013**.

3. If the result of the comparison performed in accordance with paragraph 2 shows that the minimum energy performance requirements in force are significantly less energy efficient than cost-optimal levels of minimum energy performance requirements, the **Contracting Party** concerned shall justify this difference in writing to the **Secretariat** in the report referred to in paragraph 2, accompanied, to the extent that the gap cannot be justified, by a plan outlining appropriate steps to significantly reduce the gap by the next review of the energy performance requirements as referred to in Article 4(1).

4. The **Secretariat** shall publish a report on the progress of the **Contracting Parties** in reaching cost-optimal levels of minimum energy performance requirements.

Article 6

New buildings

1. **Contracting Parties** shall take the necessary measures to ensure that new buildings meet the minimum energy performance requirements set in accordance with Article 4.

For new buildings, **Contracting Parties** shall ensure that, before construction starts, the technical, environmental and economic feasibility of high-efficiency alternative systems such as those listed below, if available, is considered and taken into account:

- (a) decentralised energy supply systems based on energy from renewable sources;
- (b) cogeneration;
- (c) district or block heating or cooling, particularly where it is based entirely or partially on energy from renewable sources;
- (d) heat pumps.

2. **Contracting Parties** shall ensure that the analysis of alternative systems referred to in paragraph 1 is documented and available for verification purposes.

3. That analysis of alternative systems may be carried out for individual buildings or for groups of similar buildings or for common typologies of buildings in the same area. As far as collective heating and cooling systems are concerned, the analysis may be carried out for all buildings connected to the system in the same area.

Article 7

Existing buildings

Contracting Parties shall take the necessary measures to ensure that when buildings undergo major renovation, the energy performance of the building or the renovated part thereof is upgraded in order to meet minimum energy performance requirements set in accordance with Article 4 in so far as this is technically, functionally and economically feasible.

Those requirements shall be applied to the renovated building or building unit as a whole. Additionally or alternatively, requirements may be applied to the renovated building elements.

Contracting Parties shall in addition take the necessary measures to ensure that when a building element that forms part of the building envelope and has a significant impact on the energy performance of the building envelope, is retrofitted or replaced, the energy performance of the building element meets minimum energy performance requirements in so far as this is technically, functionally and economically feasible.

Contracting Parties shall determine these minimum energy performance requirements in accordance with Article 4.

Contracting Parties shall encourage, in relation to buildings undergoing major renovation, the consideration and taking into account of high-efficiency alternative systems, as referred to in Article 6(1), in so far as this is technically, functionally and economically feasible.

Article 8

Technical building systems

1. **Contracting Parties** shall, for the purpose of optimising the energy use of technical building systems, set system requirements in respect of the overall energy performance, the proper installation, and the appropriate dimensioning, adjustment and control of the technical building systems which are installed in existing buildings. **Contracting Parties** may also apply these system requirements to new buildings.

System requirements shall be set for new, replacement and upgrading of technical building systems and shall be applied in so far as they are technically, economically and functionally feasible.

The system requirements shall cover at least the following:

- (a) heating systems;
- (b) hot water systems;
- (c) air-conditioning systems;
- (d) large ventilation systems;

or a combination of such systems.

2. **Contracting Parties** shall encourage the introduction of intelligent metering systems whenever a building is constructed or undergoes major renovation, whilst ensuring that this encouragement is in line with point 2 of Annex I to Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity. **Contracting Parties** may furthermore encourage, where appropriate, the installation of active control systems such as automation, control and monitoring systems that aim to save energy.

Article 9

Nearly zero-energy buildings

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

- (a) by **30 June 2021**, all new buildings are nearly zero-energy buildings; and
- (b) after **30 June 2019**, new buildings occupied and owned by public authorities are nearly zero-energy buildings.

Contracting Parties shall draw up national plans for increasing the number of nearly zero-energy buildings. These national plans may include targets differentiated according to the category of building.

2. **Contracting Parties** shall furthermore, following the leading example of the public sector, develop policies and take measures such as the setting of targets in order to stimulate the transformation of buildings that are refurbished into nearly zero-energy buildings, and inform the Secretariat thereof in their national plans referred to in paragraph 1.

3. The national plans shall include, *inter alia*, the following elements:

- (a) the **Contracting Party's** detailed application in practice of the definition of nearly zero-energy buildings, reflecting their national, regional or local conditions, and including a numerical indicator

of primary energy use expressed in kWh/m² per year. Primary energy factors used for the determination of the primary energy use may be based on national or regional yearly average values and may take into account relevant European standards;

(b) intermediate targets for improving the energy performance of new buildings, by 2015, with a view to preparing the implementation of paragraph 1;

(c) information on the policies and financial or other measures adopted in the context of paragraphs 1 and 2 for the promotion of nearly zero-energy buildings, including details of national requirements and measures concerning the use of energy from renewable sources in new buildings and existing buildings undergoing major renovation in the context of Article 13(4) of Directive 2009/28/EC and Articles 6 and 7 of this Directive.

4. The **Secretariat** shall evaluate the national plans referred to in paragraph 1, notably the adequacy of the measures envisaged by the **Contracting Party** in relation to the objectives of this Directive. The **Secretariat**, taking due account of the principle of subsidiarity, may request further specific information regarding the requirements set out in paragraphs 1, 2 and 3. In that case, the **Contracting Party** concerned shall submit the requested information or propose amendments within nine months following the request from the Secretariat. **Following its evaluation, the Secretariat may propose a recommendation to the Ministerial Council.**

5. The **Secretariat** shall by **31 December 2013** and every three years thereafter publish a report on the progress of **Contracting Parties** in increasing the number of nearly zero-energy buildings. On the basis of that report the **Secretariat** shall develop an action plan and, if necessary, propose measures to increase the number of those buildings and encourage best practices as regards the cost-effective transformation of existing buildings into nearly zero-energy buildings.

6. **Contracting Parties** may decide not to apply the requirements set out in points (a) and (b) of paragraph 1 in specific and justifiable cases where the cost-benefit analysis over the economic lifecycle of the building in question is negative. **Contracting Parties** shall inform the **Secretariat** of the principles of the relevant legislative regimes.

Article 10

Financial incentives and market barriers

1. In view of the importance of providing appropriate financing and other instruments to catalyse the energy performance of buildings and the transition to nearly zero-energy buildings, **Contracting Parties** shall take appropriate steps to consider the most relevant such instruments in the light of national circumstances.

2. **Contracting Parties** shall draw up, by **30 June 2013**, a list of existing and, if appropriate, proposed measures and instruments including those of a financial nature, other than those required by this Directive, which promote the objectives of this Directive.

Contracting Parties shall update this list every three years. **Contracting Parties** shall communicate these lists to the **Secretariat**, which they may do by including them in the Energy Efficiency Action Plans referred to in Article 14(2) of Directive 2006/32/EC.

3. The **Secretariat** shall examine the effectiveness of the listed existing and proposed measures referred to in paragraph 2 as well as of relevant Union instruments, in supporting the implementation

of this Directive. On the basis of that examination, and taking due account of the principle of subsidiarity, the **Secretariat** may provide advice ... as regards specific national schemes and coordination with Union and international financial institutions. The **Secretariat** may include its examination and possible advice or recommendations in its report on the National Energy Efficiency Plans referred to in Article 14(5) of Directive 2006/32/EC.

4. The **Secretariat** shall, where appropriate, assist upon request **Contracting Parties** in setting up national or regional financial support programmes with the aim of increasing energy efficiency in buildings, especially of existing buildings, by supporting the exchange of best practice between the responsible national or regional authorities or bodies.

5. In order to improve financing in support of the implementation of this Directive and taking due account of the principle of subsidiarity, the Commission shall, preferably by 2011, present an analysis on, in particular:

(a) the effectiveness, the appropriateness of the level, and the actual amount used, of structural funds and framework programmes that were used for increasing energy efficiency in buildings, especially in housing;

(b) the effectiveness of the use of funds from the EIB and other public finance institutions;

(c) the coordination of Union and national funding and other forms of support that can act as a leverage for stimulating investments in energy efficiency and the adequacy of such funds for achieving Union objectives.

On the basis of that analysis, and in accordance with the multiannual financial framework, the Commission may subsequently submit, if it considers this appropriate, proposals with respect to Union instruments to the European Parliament and the Council.

6. **Contracting Parties** shall take account of the cost-optimal levels of energy performance when providing incentives for the construction or major renovation of buildings.

7. The provisions of this Directive shall not prevent **Contracting Parties** from providing incentives for new buildings, renovations or building elements which go beyond the cost-optimal levels.

Article 11

Energy performance certificates

1. **Contracting Parties** shall lay down the necessary measures to establish a system of certification of the energy performance of buildings. The energy performance certificate shall include the energy performance of a building and reference values such as minimum energy performance requirements in order to make it possible for owners or tenants of the building or building unit to compare and assess its energy performance.

The energy performance certificate may include additional information such as the annual energy consumption for non-residential buildings and the percentage of energy from renewable sources in the total energy consumption.

2. The energy performance certificate shall include recommendations for the cost-optimal or cost-effective improvement of the energy performance of a building or building unit, unless there is no reasonable potential for such improvement compared to the energy performance requirements in force.

The recommendations included in the energy performance certificate shall cover:

(a) measures carried out in connection with a major renovation of the building envelope or technical building system(s); and

(b) measures for individual building elements independent of a major renovation of the building envelope or technical building system(s).

3. The recommendations included in the energy performance certificate shall be technically feasible for the specific building and may provide an estimate for the range of payback periods or cost-benefits over its economic lifecycle.

4. The energy performance certificate shall provide an indication as to where the owner or tenant can receive more detailed information, including as regards the cost-effectiveness of the recommendations made in the energy performance certificate. The evaluation of cost effectiveness shall be based on a set of standard conditions, such as the assessment of energy savings and underlying energy prices and a preliminary cost forecast. In addition, it shall contain information on the steps to be taken to implement the recommendations. Other information on related topics, such as energy audits or incentives of a financial or other nature and financing possibilities may also be provided to the owner or tenant.

5. Subject to national rules, **Contracting Parties** shall encourage public authorities to take into account the leading role which they should play in the field of energy performance of buildings, inter alia, by implementing the recommendations included in the energy performance certificate issued for buildings owned by them within its validity period.

6. Certification for building units may be based:

(a) on a common certification of the whole building; or

(b) on the assessment of another representative building unit with the same energy-relevant characteristics in the same building.

7. Certification for single-family houses may be based on the assessment of another representative building of similar design and size with a similar actual energy performance quality if such correspondence can be guaranteed by the expert issuing the energy performance certificate.

8. The validity of the energy performance certificate shall not exceed 10 years.

9. The Commission shall, by 2011, in consultation with the relevant sectors, adopt a voluntary common European Union certification scheme for the energy performance of non-residential buildings. That measure shall be adopted in accordance with the advisory procedure referred to in Article 26(2). **Contracting Parties** are encouraged to recognise or use the scheme, or use part thereof by adapting it to national circumstances.

Article 12

Issue of energy performance certificates

1. **Contracting Parties** shall ensure that an energy performance certificate is issued for:

(a) buildings or building units which are constructed, sold or rented out to a new tenant; and

(b) buildings where a total useful floor area over 500 m² is occupied by a public authority and frequently visited by the public. On **30 September 2015**, this threshold of 500 m² shall be lowered to

250 m².

The requirement to issue an energy performance certificate does not apply where a certificate, issued in accordance with either Directive 2002/91/EC or this Directive, for the building or building unit concerned is available and valid.

2. **Contracting Parties** shall require that, when buildings or building units are constructed, sold or rented out, the energy performance certificate or a copy thereof is shown to the prospective new tenant or buyer and handed over to the buyer or new tenant.

3. Where a building is sold or rented out in advance of construction, **Contracting Parties** may require the seller to provide an assessment of its future energy performance, as a derogation from paragraphs 1 and 2; in this case, the energy performance certificate shall be issued at the latest once the building has been constructed.

4. **Contracting Parties** shall require that when:

- buildings having an energy performance certificate,
- building units in a building having an energy performance certificate, and
- building units having an energy performance certificate,

are offered for sale or for rent, the energy performance indicator of the energy performance certificate of the building or the building unit, as applicable, is stated in the advertisements in commercial media.

5. The provisions of this Article shall be implemented in accordance with applicable national rules on joint ownership or common property.

6. **Contracting Parties** may exclude the categories of buildings referred to in Article 4(2) from the application of paragraphs 1, 2, 4 and 5 of this Article.

7. The possible effects of energy performance certificates in terms of legal proceedings, if any, shall be decided in accordance with national rules.

Article 13

Display of energy performance certificates

1. **Contracting Parties** shall take measures to ensure that where a total useful floor area over 500 m² of a building for which an energy performance certificate has been issued in accordance with Article 12(1) is occupied by public authorities and frequently visited by the public, the energy performance certificate is displayed in a prominent place clearly visible to the public.

On 30 September 2015, this threshold of 500 m² shall be lowered to 250 m².

2. **Contracting Parties** shall require that where a total useful floor area over 500 m² of a building for which an energy performance certificate has been issued in accordance with Article 12(1) is frequently visited by the public, the energy performance certificate is displayed in a prominent place clearly visible to the public.

3. The provisions of this Article do not include an obligation to display the recommendations included in the energy performance certificate.

Article 14

Inspection of heating systems

1. **Contracting Parties** shall lay down the necessary measures to establish a regular inspection of the accessible parts of systems used for heating buildings, such as the heat generator, control system and circulation pump(s), with boilers of an effective rated output for space heating purposes of more than 20 kW. That inspection shall include an assessment of the boiler efficiency and the boiler sizing compared with the heating requirements of the building. The assessment of the boiler sizing does not have to be repeated as long as no changes were made to the heating system or as regards the heating requirements of the building in the meantime.

Contracting Parties may reduce the frequency of such inspections or lighten them as appropriate, where an electronic monitoring and control system is in place.

2. **Contracting Parties** may set different inspection frequencies depending on the type and effective rated output of the heating system whilst taking into account the costs of the inspection of the heating system and the estimated energy cost savings that may result from the inspection.

3. Heating systems with boilers of an effective rated output of more than 100 kW shall be inspected at least every two years.

For gas boilers, this period may be extended to four years.

4. As an alternative to paragraphs 1, 2 and 3 **Contracting Parties** may opt to take measures to ensure the provision of advice to users concerning the replacement of boilers, other modifications to the heating system and alternative solutions to assess the efficiency and appropriate size of the boiler. The overall impact of this approach shall be equivalent to that arising from the provisions set out in paragraphs 1, 2 and 3.

Where **Contracting Parties** choose to apply the measures referred to in the first subparagraph, they shall submit to the **Secretariat** a report on the equivalence of those measures to measures referred to in paragraphs 1, 2 and 3 of this Article by **30 June 2013** at the latest. **Contracting Parties** shall submit these reports to the **Secretariat** every three years. The reports may be included in the Energy Efficiency Action Plans referred to in Article 14(2) of Directive 2006/32/EC.

5. After receiving the national report from a **Contracting Party** about the application of the option as described in paragraph 4, the **Secretariat** may request further specific information regarding the requirements and equivalence of the measures set out in that paragraph. In that case, the Contracting Party concerned shall present the requested information or propose amendments within nine months.

Article 15

Inspection of air-conditioning systems

1. **Contracting Parties** shall lay down the necessary measures to establish a regular inspection of the accessible parts of air-conditioning systems of an effective rated output of more than 12 kW. The inspection shall include an assessment of the air-conditioning efficiency and the sizing compared to the cooling requirements of the building. The assessment of the sizing does not have to be repeated

as long as no changes were made to this air-conditioning system or as regards the cooling requirements of the building in the meantime.

Contracting Parties may reduce the frequency of such inspections or lighten them, as appropriate, where an electronic monitoring and control system is in place.

2. The **Contracting Parties** may set different inspection frequencies depending on the type and effective rated output of the air-conditioning system, whilst taking into account the costs of the inspection of the air-conditioning system and the estimated energy cost savings that may result from the inspection.

3. In laying down the measures referred to in paragraphs 1 and 2 of this Article, **Contracting Parties** shall, as far as is economically and technically feasible, ensure that inspections are carried out in accordance with the inspection of heating systems and other technical systems referred to in Article 14 of this Directive and the inspection of leakages referred to in Regulation (EC) No 842/2006 of the European Parliament and of the Council of 17 May 2006 on certain fluorinated greenhouse gases.

4. As an alternative to paragraphs 1, 2 and 3 **Contracting Parties** may opt to take measures to ensure the provision of advice to users on the replacement of air-conditioning systems or on other modifications to the air-conditioning system which may include inspections to assess the efficiency and appropriate size of the air-conditioning system. The overall impact of this approach shall be equivalent to that arising from the provisions set out in paragraphs 1, 2 and 3.

Where **Contracting Parties** apply the measures referred to in the first subparagraph, they shall, by **30 June 2013** at the latest, submit to the Secretariat a report on the equivalence of those measures to the measures referred to in paragraphs 1, 2 and 3 of this Article. Contracting Parties shall submit these reports to the Secretariat every three years. The reports may be included in the Energy Efficiency Action Plans referred to in Article 14(2) of Directive 2006/32/EC.

5. After receiving the national report from a **Contracting Party** about the application of the option as described in paragraph 4, the **Secretariat** may request further specific information regarding the requirements and equivalence of the measures set in that paragraph. In this case, the **Contracting Party** concerned shall present the requested information or propose amendments within nine months.

Article 16

Reports on the inspection of heating and air-conditioning systems

1. An inspection report shall be issued after each inspection of a heating or air-conditioning system. The inspection report shall contain the result of the inspection performed in accordance with Article 14 or 15 and include recommendations for the cost-effective improvement of the energy performance of the inspected system.

The recommendations may be based on a comparison of the energy performance of the system inspected with that of the best available feasible system and a system of similar type for which all relevant components achieve the level of energy performance required by the applicable legislation.

2. The inspection report shall be handed over to the owner or tenant of the building.

Article 17**Independent experts**

Contracting Parties shall ensure that the energy performance certification of buildings and the inspection of heating systems and air-conditioning systems are carried out in an independent manner by qualified and/or accredited experts, whether operating in a self-employed capacity or employed by public bodies or private enterprises.

Experts shall be accredited taking into account their competence.

Contracting Parties shall make available to the public information on training and accreditations. **Contracting Parties** shall ensure that either regularly updated lists of qualified and/or accredited experts or regularly updated lists of accredited companies which offer the services of such experts are made available to the public.

Article 18**Independent control system**

1. **Contracting Parties** shall ensure that independent control systems for energy performance certificates and reports on the inspection of heating and air-conditioning systems are established in accordance with Annex II. **Contracting Parties** may establish separate systems for the control of energy performance certificates and for the control of reports on the inspection of heating and air-conditioning systems.

2. The **Contracting Parties** may delegate the responsibilities for implementing the independent control systems.

Where the **Contracting Parties** decide to do so, they shall ensure that the independent control systems are implemented in compliance with Annex II.

3. **Contracting Parties** shall require the energy performance certificates and the inspection reports referred to in paragraph 1 to be made available to the competent authorities or bodies on request.

Article 19**Review**

The Commission, assisted by the Committee established by Article 26, shall evaluate this Directive by 1 January 2017 at the latest, in the light of the experience gained and progress made during its application, and, if necessary, make proposals.

Article 20**Information**

1. **Contracting Parties** shall take the necessary measures to inform the owners or tenants of build-

ings or building units of the different methods and practices that serve to enhance energy performance.

2. **Contracting Parties** shall in particular provide information to the owners or tenants of buildings on energy performance certificates and inspection reports, their purpose and objectives, on cost-effective ways to improve the energy performance of the building and, where appropriate, on financial instruments available to improve the energy performance of the building.

At the request of the **Contracting Parties, the Secretariat** shall assist **Contracting Parties** in staging information campaigns for the purposes of paragraph 1 and the first subparagraph of this paragraph, which may be dealt with in Union programmes.

3. **Contracting Parties** shall ensure that guidance and training are made available for those responsible for implementing this Directive. Such guidance and training shall address the importance of improving energy performance, and shall enable consideration of the optimal combination of improvements in energy efficiency, use of energy from renewable sources and use of district heating and cooling when planning, designing, building and renovating industrial or residential areas.

4. The Commission is invited to continuously improve its information services, in particular the website that has been set up as a European portal for energy efficiency in buildings directed towards citizens, professionals and authorities, in order to assist **Contracting Parties** in their information and awareness-raising efforts. Information displayed on this website might include links to relevant European Union and national, regional and local legislation, links to Europa websites that display the National Energy Efficiency Action Plans, links to available financial instruments, as well as best practice examples at national, regional and local level. In the context of the European Regional Development Fund, the Commission shall continue and further intensify its information services with the aim of facilitating the use of available funds by providing assistance and information to interested stakeholders, including national, regional and local authorities, on funding possibilities, taking into account the latest changes in the regulatory framework.

Article 21

Consultation

In order to facilitate the effective implementation of the Directive, **Contracting Parties** shall consult the stakeholders involved, including local and regional authorities, in accordance with the national legislation applicable and as relevant. Such consultation is of particular importance for the application of Articles 9 and 20.

Article 22

Adaptation of Annex I to technical progress

The Commission shall adapt points 3 and 4 of Annex I to technical progress by means of delegated acts in accordance with Articles 23, 24 and 25.

Article 23**Exercise of delegation**

1. The powers to adopt the delegated acts referred to in Article 22 shall be conferred on the Commission for a period of five years beginning on 8 July 2010. The Commission shall make a report in respect of the delegated powers not later than six months before the end of the five-year period. The delegation of powers shall be automatically extended for periods of an identical duration, unless the European Parliament or the Council revokes it in accordance with Article 24.
2. Without prejudice to the deadline referred to in Article 5(1), the powers to adopt the delegated acts referred to in Article 5 shall be conferred on the Commission until 30 June 2012.
3. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the **Ministerial Council, who shall put it on the agenda of its next meeting.**
4. The powers to adopt delegated acts are conferred on the Commission subject to the conditions laid down in Articles 24 and 25.

Article 24**Revocation of the delegation**

The Ministerial Council may object to the application of a delegated act to the Contracting Parties of the Energy Community at the meeting following notification. If, at that meeting, the Ministerial Council has not objected to the delegated act, it shall become binding on the Contracting Parties, subject to possible adaptation. In the Ministerial Council objects to a delegated act, it shall not be applicable in the Energy Community. The Ministerial Council shall state the reasons for objecting to the delegated act.

Article 25**Objections to delegated acts**

1. The European Parliament or the Council may object to a delegated act within a period of two months from the date of notification.
At the initiative of the European Parliament or the Council that period shall be extended by two months.
2. If, on expiry of that period, neither the European Parliament nor the Council has objected to the delegated act it shall be published in the Official Journal of the European Union and shall enter into force on the date stated therein.
The delegated act may be published in the Official Journal of the European Union and enter into force before the expiry of that period, if the European Parliament and the Council have both informed the Commission of their intention not to raise objections.
3. If the European Parliament or the Council objects to a delegated act, it shall not enter into force. The institution which objects shall state the reasons for objecting to the delegated act.

Article 26

Committee procedure

1. The Commission shall be assisted by a Committee.
2. Where reference is made to this paragraph, Articles 3 and 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.

Article 27

Penalties

Contracting Parties shall lay down the rules on penalties applicable to infringements of the national provisions adopted pursuant to this Directive and shall take all measures necessary to ensure that they are implemented. The penalties provided for must be effective, proportionate and dissuasive. **Contracting Parties** shall communicate those provisions to the **Secretariat** by **31 March 2013** at the latest and shall notify it without delay of any subsequent amendment affecting them.

Article 28

Transposition

1. **Contracting Parties** shall adopt and publish, by **30 September 2012** at the latest, the laws, regulations and administrative provisions necessary to comply with Articles 2 to 18, and with Articles 20 and 27.

They shall apply those provisions as far as Articles 2, 3, 9, 11, 12, 13, 17, 18, 20 and 27 are concerned, from **31 March 2013** at the latest.

They shall apply those provisions as far as Articles 4, 5, 6, 7, 8, 14, 15 and 16 are concerned, to buildings occupied by the public authorities from **31 March 2013** at the latest and to other buildings from **30 September 2013** at the latest.

They may defer the application of Article 12(1) and (2) to single building units that are rented out, until **31 March 2016**. This shall however not result in fewer certificates being issued than would have been the case under the application of the Directive 2002/91/EC in the **Contracting Party** concerned.

When **Contracting Parties** adopt measures, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. They shall also include a statement that references in existing laws, regulations and administrative provisions to Directive 2002/91/EC shall be construed as references to this Directive. **Contracting Parties** shall determine how such reference is to be made and how that statement is to be formulated.

2. **Contracting Parties** shall communicate to the **Secretariat** the text of the main provisions of national law which they adopt in the field covered by this Directive.

Article 29**Repeal**

Directive 2002/91/EC, as amended by the Regulation indicated in Annex IV, Part A, is hereby repealed with effect from 1 February 2012, without prejudice to the obligations of the **Contracting Parties** relating to the time limit for transposition into national law and application of the Directive set out in Annex IV, Part B.

References to Directive 2002/91/EC shall be construed as references to this Directive and shall be read in accordance with the correlation table in Annex V.

Articles 30 and 31**Entry into force and Addressees¹**

This Decision [2010/02/MC-EnC] enters into force upon its adoption and is addressed to the Contracting Parties.

Article 1(4) of Decision 2010/02/MC-EnC

The Secretariat shall monitor and review the implementation of Directive 2010/31/EU in the Contracting Parties and shall submit a progress report to the Permanent High Level Group by 31 March 2013.

¹ The text displayed here corresponds to Article 3 of Decision 2010/02/MC-EnC.

ANNEX I

Common general framework for the calculation of energy performance of buildings (referred to in Article 3)

1. The energy performance of a building shall be determined on the basis of the calculated or actual annual energy that is consumed in order to meet the different needs associated with its typical use and shall reflect the heating energy needs and cooling energy needs (energy needed to avoid overheating) to maintain the envisaged temperature conditions of the building, and domestic hot water needs.

2. The energy performance of a building shall be expressed in a transparent manner and shall include an energy performance indicator and a numeric indicator of primary energy use, based on primary energy factors per energy carrier, which may be based on national or regional annual weighted averages or a specific value for on-site production.

The methodology for calculating the energy performance of buildings should take into account European standards and shall be consistent with relevant Union legislation, including Directive 2009/28/EC.

3. The methodology shall be laid down taking into consideration at least the following aspects:

(a) the following actual thermal characteristics of the building including its internal partitions:

- (i) thermal capacity;
- (ii) insulation;
- (iii) passive heating;
- (iv) cooling elements; and
- (v) thermal bridges;

(b) heating installation and hot water supply, including their insulation characteristics;

(c) air-conditioning installations;

(d) natural and mechanical ventilation which may include air-tightness;

(e) built-in lighting installation (mainly in the non-residential sector);

(f) the design, positioning and orientation of the building, including outdoor climate;

(g) passive solar systems and solar protection;

(h) indoor climatic conditions, including the designed indoor climate;

(i) internal loads.

4. The positive influence of the following aspects shall, where relevant in the calculation, be taken into account:

(a) local solar exposure conditions, active solar systems and other heating and electricity systems based on energy from renewable sources;

(b) electricity produced by cogeneration;

(c) district or block heating and cooling systems;

(d) natural lighting.

5. For the purpose of the calculation buildings should be adequately classified into the following categories:

- (a) single-family houses of different types;
- (b) apartment blocks;
- (c) offices;
- (d) educational buildings;
- (e) hospitals;
- (f) hotels and restaurants;
- (g) sports facilities;
- (h) wholesale and retail trade services buildings;
- (i) other types of energy-consuming buildings.

ANNEX II

Independent control systems for energy performance certificates and inspection reports

1. The competent authorities or bodies to which the competent authorities have delegated the responsibility for implementing the independent control system shall make a random selection of at least a statistically significant percentage of all the energy performance certificates issued annually and subject those certificates to verification.

The verification shall be based on the options indicated below or on equivalent measures:

- (a) validity check of the input data of the building used to issue the energy performance certificate and the results stated in the certificate;
- (b) check of the input data and verification of the results of the energy performance certificate, including the recommendations made;
- (c) full check of the input data of the building used to issue the energy performance certificate, full verification of the results stated in the certificate, including the recommendations made, and on-site visit of the building, if possible, to check correspondence between specifications given in the energy performance certificate and the building certified.

2. The competent authorities or bodies to which the competent authorities have delegated the responsibility for implementing the independent control system shall make a random selection of at least a statistically significant percentage of all the inspection reports issued annually and subject those reports to verification.

ANNEX III

Comparative methodology framework to identify cost-optimal levels of energy performance requirements for buildings and building elements

The comparative methodology framework shall enable **Contracting Parties** to determine the energy performance of buildings and building elements and the economic aspects of measures relating to the energy performance, and to link them with a view to identifying the cost-optimal level.

The comparative methodology framework shall be accompanied by guidelines outlining how to apply this framework in the calculation of cost-optimal performance levels.

The comparative methodology framework shall allow for taking into account use patterns, outdoor climate conditions, investment costs, building category, maintenance and operating costs (including energy costs and savings), earnings from energy produced, where applicable, and disposal costs, where applicable. It should be based on relevant European standards relating to this Directive.

The Commission shall also provide:

- guidelines to accompany the comparative methodology framework; these guidelines will serve to enable the **Contracting Parties** to undertake the steps listed below,
- information on estimated long-term energy price developments.

For the application of the comparative methodology framework by **Contracting Parties**, general conditions, expressed by parameters, shall be laid down at **Contracting Party** level.

The comparative methodology framework shall require **Contracting Parties** to:

- define reference buildings that are characterised by and representative of their functionality and geographic location, including indoor and outdoor climate conditions. The reference buildings shall cover residential and non-residential buildings, both new and existing ones,
- define energy efficiency measures to be assessed for the reference buildings. These may be measures for individual buildings as a whole, for individual building elements, or for a combination of building elements,
- assess the final and primary energy need of the reference buildings and the reference buildings with the defined energy efficiency measures applied,
- calculate the costs (i.e. the net present value) of the energy efficiency measures (as referred to in the second indent) during the expected economic lifecycle applied to the reference buildings (as referred to in the first indent) by applying the comparative methodology framework principles.

By calculating the costs of the energy efficiency measures during the expected economic lifecycle, the cost-effectiveness of different levels of minimum energy performance requirements is assessed by the **Contracting Parties**. This will allow the determination of cost-optimal levels of energy performance requirements.



Directive 2010/30/EU of 19 May 2010 on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products

Incorporated and adapted by Ministerial Council Decision 2010/02/MC-EnC of 24 September 2010 amending Decision 2009/05/MC-EnC of 18 December 2009 on the implementation of certain Directives on Energy Efficiency.

*The adaptations made by Ministerial Council Decision 2010/02/MC-EnC are highlighted in **bold and blue**.*

Whereas:

(1) Council Directive 92/75/EEC of 22 September 1992 on the indication by labelling and standard product information of the consumption of energy and other resources by household appliances has been substantially amended. Since further amendments have to be made, it should be recast in the interests of clarity.

(2) The scope of Directive 92/75/EEC is restricted to household appliances. The Commission Communication of 16 July 2008 on the Sustainable Consumption and Production and Sustainable Industrial Policy Action Plan has shown that the extension of the scope of Directive 92/75/EEC to energy-related products which have a significant direct or indirect impact on energy consumption during use could reinforce potential synergies between existing legislative measures, and in particular Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy related products. This Directive should not prejudice the application of Directive 2009/125/EC. Together with that Directive and other Union instruments, this Directive forms part of a broader legal framework and, in the context of a holistic approach, brings about additional energy savings and environmental gains.

(3) The Presidency conclusions of the European Council of 8 and 9 March 2007 emphasised the need to increase energy efficiency in the Union so as to achieve the objective of saving 20% of the Union's energy consumption by 2020, set targets for the EU-wide development of renewable energies and the reduction of greenhouse gas emissions and called for a thorough and rapid implementation of the key areas identified in the Commission Communication of 19 October 2006 entitled "Action Plan for Energy Efficiency: Realising the Potential". The action plan highlighted the enormous energy savings opportunities in the products sector.

(4) Improving the efficiency of energy-related products through informed consumer choice benefits the EU economy overall.

(5) The provision of accurate, relevant and comparable information on the specific energy consumption of energy-related products should influence the end-user's choice in favour of those products which consume or indirectly result in consuming less energy and other essential resources during use, thus prompting manufacturers to take steps to reduce the consumption of energy and other essential resources of the products which they manufacture. It should also, indirectly, encourage the efficient use of these products in order to contribute to the EU's 20% energy efficiency target. In the absence of this information, the operation of market forces alone will fail to promote the rational use of energy and other essential resources for these products.

(6) It should be recalled that Union and national legislation exists which gives certain rights to con-

sumers with respect to purchased products, including compensation or exchange of the product.

(7) The Commission should provide a priority list of energy-related products that could be covered by a delegated act under this Directive. Such a list could be included in the Working Plan referred to in Directive 2009/125/EC.

(8) Information plays a key role in the operation of market forces and it is therefore necessary to introduce a uniform label for all products of the same type, to provide potential purchasers with supplementary standardised information on those products' costs in terms of energy and the consumption of other essential resources and to take measures to ensure that potential end-users who do not see the product displayed, and thus have no opportunity to see the label, are also supplied with this information. In order to be efficient and successful, the label should be easily recognisable to end-users, simple and concise. To this end the existing layout of the label should be retained as the basis to inform end-users about the energy efficiency of products. Energy consumption of and other information concerning the products should be measured in accordance with harmonised standards and methods.

(9) As pointed out in the Commission's Impact Assessment accompanying its proposal for this Directive, the energy labelling scheme has been followed as a model in different countries around the world.

(10) Member States should regularly monitor compliance with this Directive, and include the relevant information in the report that they are obliged to submit every four years to the Commission under this Directive, with special regard to the responsibilities of suppliers and dealers.

(11) Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products contains general provisions on market surveillance relating to the marketing of products. In order to achieve its aims, this Directive provides for more detailed provisions in this respect. Those provisions are consistent with Regulation (EC) No 765/2008.

(12) A completely voluntary scheme would lead to only some products being labelled, or supplied with standard product information, with the risk that this might result in confusion or even misinformation for some end-users. The present scheme should therefore ensure that for all the products concerned, the consumption of energy and other essential resources is indicated by labelling and standard product fiches.

(13) Energy-related products have a direct or indirect impact on the consumption of a wide variety of forms of energy during use, electricity and gas being the most important. This Directive should therefore cover energy-related products having a direct or indirect impact on the consumption of any form of energy during use.

(14) Energy-related products which have a significant direct or indirect impact on consumption of energy or, where relevant, of essential resources during use and which afford adequate scope for increased efficiency should be covered by a delegated act, when provision of information through labelling may stimulate end-users to purchase more efficient products.

(15) In order to meet the Union climate change and energy security objectives, and given that the total energy consumed by products is expected to continue to rise in the longer term, the delegated acts under this Directive could, where relevant, also highlight on the label the high total energy consumption of the product.

(16) A number of Member States have public procurement policies in place which require contracting authorities to procure energy efficient products. A number of Member States also have put in place incentives for energy efficient products. The criteria for products to be eligible for public procurement or incentives can substantially differ from one Member State to another. To refer to performance classes as levels for particular products, as set out in delegated acts under this Directive, may reduce fragmentation of public procurement and incentives and facilitate the uptake of efficient products.

(17) Incentives which Member States may provide for the promotion of efficient products might constitute State aid. This Directive does not prejudice the outcome of any future State aid procedure that may be undertaken in accordance with Articles 107 and 108 of the Treaty on the Functioning of the European Union (TFEU) in respect of such incentives and should not cover taxation and fiscal matters. Member States are free to decide on the nature of such incentives.

(18) The promotion of energy efficient products through labelling, public procurement and incentives should not be to the detriment of the overall environmental performance and the functioning of such products.

(19) The Commission should be empowered to adopt delegated acts in accordance with Article 290 TFEU in respect of labelling and standard product information of the consumption of energy and other essential resources by energy-related products during use. It is of particular importance that the Commission carry out appropriate consultations during its preparatory work, including at expert level.

(20) The Commission should regularly submit to the European Parliament and the Council a synthesis, covering the EU and each Member State separately, of the reports on enforcement activities and the level of compliance submitted by Member States under this Directive.

(21) The Commission should be responsible for adapting the label classifications with the aim of ensuring predictability for the industry and comprehension for consumers.

(22) To a varying extent according to the product concerned, technological development and the potential for additional significant energy savings could make further product differentiation necessary and justify a review of the classification. Such review should include in particular the possibility of rescaling. This review should be carried out as expeditiously as possible in the case of products which, due to their very innovative characteristics, can make a significant contribution to energy efficiency.

(23) When the Commission reviews progress and reports on the implementation of the Sustainable Consumption and Production and Sustainable Industrial Policy Action Plan in 2012, it will in particular analyse whether further action to improve the energy and environmental performance of products is needed, including, inter alia the possibility to provide consumers with information on the carbon footprint of products or the products' environmental impact during their life cycle.

(24) The obligation to transpose this Directive into national law should be confined to those provisions which represent a substantive change as compared with Directive 92/75/EEC. The obligation to transpose the provisions which are unchanged arises under the Directive 92/75/EEC.

(25) When Member States implement the provisions of this Directive, they should endeavour to refrain from adopting measures that could impose unnecessarily bureaucratic and unwieldy obligations on the market participants concerned, in particular small and medium-sized enterprises.

(26) This Directive should be without prejudice to the obligations of the Member States relating to

the time-limits for transposition into national law and application of Directive 92/75/EEC.

(27) In accordance with point 34 of the Interinstitutional Agreement on better law-making, Member States are encouraged to draw up, for themselves and in the interest of the Union, their own tables illustrating, as far as possible, the correlation between this Directive and the transposition measures, and to make them public.

Article 1

Scope

1. This Directive establishes a framework for the harmonisation of national measures on end-user information, particularly by means of labelling and standard product information, on the consumption of energy and where relevant of other essential resources during use, and supplementary information concerning energy-related products, thereby allowing end-users to choose more efficient products.

2. This Directive shall apply to energy-related products which have a significant direct or indirect impact on the consumption of energy and, where relevant, on other essential resources during use.

3. This Directive shall not apply to:

- (a) second-hand products;
- (b) any means of transport for persons or goods;
- (c) the rating plate or its equivalent affixed for safety purposes to products.

Article 2

Definitions

For the purpose of this Directive:

(a) “energy-related product” or “product” means any good having an impact on energy consumption during use, which is placed on the market and/or put into service in the **Energy Community**, including parts intended to be incorporated into energy-related products covered by this Directive which are placed on the market and/or put into service as individual parts for end-users and of which the environmental performance can be assessed independently;

(b) “fiche” means a standard table of information relating to a product;

(c) “other essential resources” means water, chemicals or any other substance consumed by a product in normal use;

(d) “supplementary information” means other information concerning the performance and features of a product which relate to, or are helpful in evaluating, its use of energy or other essential resources based on measurable data;

(e) “direct impact” means the impact of products that actually consume energy during use;

(f) “indirect impact” means the impact of products that do not consume energy, but contribute to energy conservation during use;

(g) “dealer” means a retailer or other person who sells, hires, offers for hire-purchase or displays

products to end-users;

(h) “supplier” means the manufacturer or its authorised representative in the **Energy Community** or the importer who places or puts into service the product on the **Energy Community** market. In their absence, any natural or legal person who places on the market or puts into service products covered by this Directive shall be considered a supplier;

(i) “placing on the market” means making a product available for the first time on the **Energy Community** market with a view to its distribution or use within the **Energy Community**, whether for reward or free of charge and irrespective of the selling technique;

(j) “putting into service” means the first use of a product for its intended purpose in the **Energy Community**;

(k) “unauthorised use of the label” means the use of the label, other than by **Contracting Party** authorities or EU institutions, in a manner not provided for in this Directive or a delegated act.

Article 3

Responsibilities of Contracting Parties

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

(a) all suppliers and dealers established in their territory fulfil the obligations laid down in Articles 5 and 6;

(b) with respect to products covered by this Directive, the display of other labels, marks, symbols or inscriptions which do not comply with the requirements of this Directive and of the relevant delegated acts is prohibited, if such display is likely to mislead or confuse end-users with respect to the consumption of energy or, where relevant, other essential resources during use;

(c) the introduction of the system of labels and fiches concerning energy consumption or conservation is accompanied by educational and promotional information campaigns aimed at promoting energy efficiency and more responsible use of energy by end-users;

(d) appropriate measures are taken in order to encourage the relevant national or regional authorities responsible for implementing this Directive to cooperate and provide each other and the **Secretariat** with information in order to assist the application of this Directive. The administrative cooperation and exchange of information shall take the utmost advantage of electronic means of communication, shall be cost-effective and may be supported by relevant EU programmes. Such cooperation shall guarantee the security and confidentiality of processing and the protection of sensitive information provided during that procedure, where necessary. The **Secretariat** shall take appropriate measures in order to encourage and contribute to the cooperation between **Contracting Parties** referred to in this point.

2. Where a **Contracting Party** ascertains that a product does not comply with all the relevant requirements set out in this Directive and its delegated acts for the label and the fiche, the supplier shall be obliged to make the product compliant with those requirements under effective and proportionate conditions imposed by the **Contracting Party**.

Where there is sufficient evidence that a product may be non-compliant, the **Contracting Party** concerned shall take the necessary preventive measures and measures aimed at ensuring compliance

within a precise time-frame, taking into account the damage caused.

Where non-compliance continues, the **Contracting Party** concerned shall take a decision restricting or prohibiting the placing on the market and/or putting into service of the product in question or ensuring that it is withdrawn from the market. In cases of withdrawal of the product from the market or prohibition on placing the product on the market, the **Secretariat** and the other **Contracting Parties** shall be immediately informed.

3. Every four years, the **Contracting Parties** shall submit a report to the **Secretariat** including details about their enforcement activities and the level of compliance in their territory.

The **Secretariat** may specify the details of the common content of these reports, through the setting of guidelines.

4. The **Secretariat** shall regularly provide a synthesis of those reports to **the Ministerial Council** for information.

Article 4

Information requirements

Contracting Parties shall ensure that:

(a) information relating to the consumption of electric energy, other forms of energy and where relevant other essential resources during use, and supplementary information is, in accordance with delegated acts under this Directive, brought to the attention of end-users by means of a fiche and a label related to products offered for sale, hire, hire-purchase or displayed to end-users directly or indirectly by any means of distance selling, including the Internet;

(b) the information referred to in point (a) is provided in respect of built-in or installed products only where required by the applicable delegated act;

(c) any advertisement for a specific model of energy-related products covered by a delegated act under this Directive includes, where energy-related or price information is disclosed, a reference to the energy efficiency class of the product;

(d) any technical promotional material concerning energy-related products which describes the specific technical parameters of a product, namely, technical manuals and manufacturers' brochures, whether printed or online, is provided to end-users with the necessary information regarding energy consumption or shall include a reference to the energy efficiency class of the product.

Article 5

Responsibilities of suppliers

Contracting Parties shall ensure that:

(a) suppliers placing on the market or putting into service products covered by a delegated act supply a label and a fiche in accordance with this Directive and the delegated act;

(b) suppliers produce technical documentation which is sufficient to enable the accuracy of the information contained in the label and the fiche to be assessed. That technical documentation shall

include:

- (i) a general description of the product;
- (ii) where relevant, the results of design calculations carried out;
- (iii) test reports, where available, including those carried out by relevant notified organisations as defined under other Union legislation;
- (iv) where values are used for similar models, the references allowing identification of those models.

To this end suppliers may use documentation already established in accordance with requirements laid down in relevant Union legislation;

(c) suppliers make the technical documentation available for inspection purposes for a period ending five years after the last product concerned was manufactured.

Suppliers make available an electronic version of the technical documentation on request to the market surveillance authorities of the **Contracting Parties** and to the **Secretariat** within 10 working days on receipt of a request by the competent authority of a **Contracting Party** or the **Secretariat**;

(d) in respect of labelling and product information, suppliers provide the necessary labels free of charge to dealers.

Without prejudice to the suppliers' choice of system for delivery of labels, suppliers promptly deliver labels on request from dealers;

(e) in addition to the labels, suppliers provide a product fiche;

(f) suppliers include a product fiche in all product brochures. Where product brochures are not provided by the supplier, the supplier provides fiches with other literature provided with the product;

(g) suppliers are responsible for the accuracy of the labels and fiches that they supply;

(h) suppliers are considered to have given consent to the publication of the information provided on the label or in the fiche.

Article 6

Responsibilities of dealers

Contracting Parties shall ensure that:

(a) dealers display labels properly, in a visible and legible manner, and make the fiche available in the product brochure or other literature that accompanies products when sold to end-users;

(b) whenever a product covered by a delegated act is displayed, dealers attach an appropriate label, in the clearly visible position specified in the applicable delegated act, and in the relevant language version.

Article 7

Distance selling and other forms of selling

Where products are offered for sale, hire or hire-purchase by mail order, by catalogue, through the Internet, telemarketing or by any other means which imply that the potential end-user cannot be

expected to see the product displayed, delegated acts shall make provision to ensure that potential end-users are provided with the information specified on the label for the product and in the fiche before buying the product. Delegated acts shall, where appropriate, specify the way in which the label or the fiche or the information specified on the label or in the fiche shall be displayed or provided to the potential end-user.

Article 8

Free movement

1. **Contracting Parties** shall not prohibit, restrict or impede the placing on the market or putting into service, within their territories, of products which are covered by and comply with this Directive and the applicable delegated act.
2. Unless they have evidence to the contrary, **Contracting Parties** shall consider labels and fiches as complying with the provisions of this Directive and the delegated acts. **Contracting Parties** shall require suppliers to provide evidence within the meaning of Article 5 concerning the accuracy of the information supplied on their labels or fiches when they have reason to suspect that such information is incorrect.

Article 9

Public procurement and incentives

1. Where a product is covered by a delegated act, contracting authorities which conclude public works, supply or service contracts as referred to 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, which are not excluded by virtue of Articles 12 to 18 thereof, shall endeavour to procure only such products which comply with the criteria of having the highest performance levels and belonging to the highest energy efficiency class. **Contracting Parties** may also require the contracting authorities to procure only products fulfilling those criteria. **Contracting Parties** may make the application of those criteria subject to cost-effectiveness, economical feasibility and technical suitability and sufficient competition.
2. Paragraph 1 shall apply to contracts having a value equal to or greater than the thresholds laid down in Article 7 of Directive 2004/18/EC.
3. Where **Contracting Parties** provide any incentives for a product covered by a delegated act they shall aim at the highest performance levels including the highest class of energy efficiency laid down in the applicable delegated act. Taxation and fiscal measures do not constitute incentives for the purpose of this Directive.
4. Where **Contracting Parties** provide incentives for products, both for end-users using highly efficient products and for industries which promote and produce such products, they shall express the performance levels in terms of classes as defined in the applicable delegated act, except where they impose higher performance levels than the threshold for the highest energy efficiency class in the delegated act. **Contracting Parties** may impose higher performance levels than the threshold for the highest energy efficiency class in the delegated act.

“Article 9(1) and (2) of Directive 2010/30/EU, as incorporated and adapted by Ministerial Council Decision 2010/01/MC-EnC shall cease to apply from 15 October 2017.”¹

Article 10

Delegated acts

1. The Commission shall lay down details relating to the label and the fiche by means of delegated acts in accordance with Articles 11 to 13, relating to each type of product in accordance with this Article.

Where a product meets the criteria listed in paragraph 2, it shall be covered by a delegated act in accordance with paragraph 4.

Provisions in delegated acts regarding information provided on the label and in the fiche on the consumption of energy and other essential resources during use shall enable end-users to make better informed purchasing decisions and shall enable market surveillance authorities to verify whether products comply with the information provided.

Where a delegated act lays down provisions with respect to both energy efficiency and consumption of essential resources of a product, the design and content of the label shall emphasise the energy efficiency of the product.

2. The criteria referred to in paragraph 1 are the following:

- (a) according to most recently available figures and considering the quantities placed on the Union market, the products shall have a significant potential for saving energy and, where relevant, other essential resources;
- (b) products with equivalent functionality available on the market shall have a wide disparity in the relevant performance levels;
- (c) the Commission shall take into account relevant Union legislation and self-regulation, such as voluntary agreements, which are expected to achieve the policy objectives more quickly or at lesser expense than mandatory requirements.

3. In preparing a draft delegated act, the Commission shall:

- (a) take into account those environmental parameters set out in Annex I, Part 1, to Directive 2009/125/EC which are identified as significant in the relevant implementing measure adopted under Directive 2009/125/EC and which are relevant for the end-user during use;
- (b) assess the impact of the act on the environment, end-users and manufacturers, including small and medium-sized enterprises (SMEs), in terms of competitiveness including on markets outside the Union, innovation, market access and costs and benefits;
- (c) carry out appropriate consultation with stakeholders;
- (d) set implementing date(s), any staged or transitional measures or periods, taking into account in particular possible impacts on SMEs or on specific product groups manufactured primarily by SMEs.

¹ Text corresponds to Article 3(36) of Decision D/2015/08/MC-EnC on the implementation of the Directive 2012/27/EU on Energy Efficiency

4. The delegated acts shall specify in particular:

- (a) the exact definition of the type of products to be included;
- (b) the measurement standards and methods to be used in obtaining the information referred to in Article 1(1);
- (c) the details of the technical documentation required pursuant to Article 5;
- (d) the design and content of the label referred to in Article 4, which as far as possible shall have uniform design characteristics across product groups and shall in all cases be clearly visible and legible. The format of the label shall retain as a basis the classification using letters from A to G; the steps of the classification shall correspond to significant energy and cost savings from the end-user perspective.

Three additional classes may be added to the classification if required by technological progress. Those additional classes will be A+, A++, and A+++ for the most efficient class. In principle the total number of classes will be limited to seven, unless more classes are still populated.

The colour scale shall consist of no more than seven different colours from dark green to red. The colour code of only the highest class shall always be dark green. If there are more than seven classes, only the red colour can be duplicated.

The classification shall be reviewed in particular when a significant proportion of products on the internal market achieves the two highest energy efficiency classes and when additional savings may be achieved by further differentiating products.

Detailed criteria for a possible reclassification of products are, where appropriate, to be determined on a case-by-case basis in the relevant delegated act;

- (e) the location where the label shall be fixed to the product displayed and the manner in which the label and/or information are to be provided in the case of offers for sale as covered by Article 7. Where appropriate, the delegated acts may provide for the label to be attached to the product or printed on the packaging, or for the details of the labelling requirements for printing in catalogues, for distance selling and Internet sales;
- (f) the content and, where appropriate, the format and other details concerning the fiche or further information specified in Article 4 and Article 5(c). The information on the label shall also be included on the fiche;
- (g) the specific content of the label for advertising, including, as appropriate, the energy class and other relevant performance level(s) of the given product in a legible and visible form;
- (h) the duration of label classification(s), where appropriate, in accordance with point (d);
- (i) the level of accuracy in the declarations on the label and fiches;
- (j) the date for the evaluation and possible revision of the delegated act, taking into account the speed of technological progress.

Article 11

Exercise of the delegation

1. The powers to adopt the delegated acts referred to in Article 10 shall be conferred on the Commission for a period of five years beginning on 19 June 2010. The Commission shall make a report in respect of the delegated powers not later than six months before the end of the five-year period. The delegation of powers shall be automatically extended for periods of an identical duration, unless the European Parliament or the Council revokes it in accordance with Article 12.
2. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the **Ministerial Council, who shall put it on the agenda of its next meeting.**
3. The powers to adopt delegated acts are conferred on the Commission subject to the conditions laid down in Articles 12 and 13.

Article 12

Revocation of the delegation

1. The delegation of powers referred to in Article 10 may be revoked by the European Parliament or by the Council.
2. The institution which has commenced an internal procedure for deciding whether to revoke the delegation of powers shall endeavour to inform the other institution and the Commission within a reasonable time before the final decision is taken, indicating the delegated powers which could be subject to revocation and possible reasons for a revocation.
3. The decision of revocation shall put an end to the delegation of the powers specified in that decision. It shall take effect immediately or at a later date specified therein. It shall not affect the validity of the delegated acts already in force. It shall be published in the Official Journal of the European Union.

Article 13

Objections to delegated acts

The Ministerial Council may object to the application of a delegated act to the Contracting Parties of the Energy Community at the meeting following notification. If, at that meeting, the Ministerial Council has not objected to the delegated act, it shall become binding on the Contracting Parties, subject to possible adaptation. If the Ministerial Council objects to a delegated act, it shall not be applicable in the Energy Community. The Ministerial Council shall state the reasons for objecting to the delegated act.

Article 14

Evaluation

Not later than 31 December 2014, the Commission shall review the effectiveness of this Directive and of its delegated acts and submit a report to the European Parliament and the Council.

On that occasion, the Commission shall also assess:

- (a) the contribution of Article 4(c) to the aim of this Directive;
- (b) the effectiveness of Article 9(1);
- (c) in the light of technical evolution and the understanding by consumers of the label layout, the need for amending Article 10(4)(d).

Article 15

Penalties

Contracting Parties shall lay down the rules on penalties applicable to infringements of the national provisions adopted pursuant to this Directive and its delegated acts, including unauthorised use of the label, and shall take the necessary measures to ensure that they are implemented. The penalties provided for shall be effective, proportionate and dissuasive. The **Contracting Parties** shall notify these provisions to the **Secretariat** by **31 December 2011** and shall notify the Secretariat without delay of any subsequent amendment affecting those provisions.

Article 16²

Transposition

1. **Contracting Parties** shall bring into force, by **31 December 2011** at the latest, the laws, regulations and administrative provisions necessary to comply with this Directive. They shall forthwith communicate to the **Secretariat** the text of those provisions.

They shall apply those provisions from **31 December 2011**.

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. They shall also include a statement to the effect that references in existing laws, regulations and administrative provisions to Directive 92/75/EEC shall be construed as references to this Directive. **Contracting Parties** shall determine how such reference is to be made and how that statement is to be formulated.

2. **Contracting Parties** shall communicate to the **Secretariat** the text of the main provisions of national law which they adopt in the field covered by this Directive.

² Adapted by Article 2(2)(b), 2(3)(a)(ii) of the Decision D/2010/02/MC-EnC

Article 17**Repeal**

Directive 92/75/EEC, as amended by the Regulation indicated in Annex I, Part A, is repealed with effect from 21 July 2011, without prejudice to the obligations of the **Contracting Parties** relating to the time-limits for transposition into national law and application of that Directive set out in Annex I, Part B.

References to Directive 92/75/EEC shall be construed as references to this Directive and shall be read in accordance with the correlation table in Annex II.

Articles 18 and 19**Entry into force and Addressees**

This Decision [2010/02/MC-EnC] enters into force upon its adoption and is addressed to the Contracting Parties.

Points (d), (g) and (h) of Article 5 shall apply from **31 December 2011**.

Article 2(5) of Decision 2010/02/MC-EnC

The Secretariat shall monitor and review the implementation of [this] Directive ... in the Contracting Parties and shall submit a progress report to the Permanent High Level Group by 30 June 2012.



Delegated Regulation (EU) 65/2014 of 1 October 2013 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to the energy labelling of domestic ovens and range hoods

Incorporated and adapted by Ministerial Council Decision 2014/02/MC-EnC of 23 September 2014 adapting certain Delegated Regulations on energy related products.

*The adaptations made by Ministerial Council Decision 2009/05/MC-EnC are highlighted in **bold and blue**.*

Whereas:

(1) Directive 2010/30/EU requires the Commission to adopt delegated acts as regards the labelling of energy-related products that offer significant potential for energy savings and present a wide disparity in performance levels with equivalent functionality.

(2) The energy used by electric ovens accounts for a significant part of total energy demand in the Union. In addition to the energy efficiency improvements already achieved, the scope for further reducing the energy consumption of these appliances is substantial.

(3) Provisions for the energy labelling of household electric ovens were established by Commission Directive 2002/40/EC of 8 May 2002 implementing Council Directive 92/75/EEC with regard to energy labelling of household electric ovens.

(4) Technological development in the field of domestic cooking appliances has been rapid in recent years. The ecodesign preparatory studies showed that domestic gas ovens and range hoods show significant potential for energy savings. In order to ensure that the energy labels provide dynamic incentives for suppliers to further improve the energy efficiency of these appliances and to accelerate market transformation towards energy-efficient technologies, Directive 2002/40/EC should be repealed and new provisions should be laid down.

(5) The provisions of this Regulation should apply to domestic electric and gas ovens, including when incorporated into cookers, and to domestic electric range hoods.

(6) This Regulation should introduce a revised energy efficiency scale from A+++ to D for all ovens concerned and a new energy efficiency scale from A to G with a '+' added on at the top of the scale every two years until the A+++ class has been reached for domestic range hoods, these further classes should be added to accelerate the market penetration of high-efficiency appliances.

(7) The combined effect of the provisions set out in this Regulation, and in Commission Regulation (EU) No 66/2014 on the ecodesign requirements for domestic ovens, hobs and range hoods is expected to result in annual primary energy savings of 27 PJ/a in 2020, increasing up to 60 PJ/a by 2030.

(8) The sound power level of a domestic range hood can be an important consideration for end-users. Information on sound power levels should be included on the labels of domestic range hoods, to enable end-users to make an informed decision.

(9) The information provided on the respective labels should be obtained through reliable, accurate and reproducible calculation and measurement methods that take into account the recognised state-of-the-art calculation and measurement methods including, where available, harmonised standards adopted by the European standardisation organisations, as listed in Annex I to Regulation (EU) No

1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardisation¹.

(10) This Regulation should specify a uniform design and content for the labelling of domestic ovens, including when incorporated into cookers, and domestic electric range hoods.

(11) This Regulation should specify requirements as to the technical documentation and the fiche for domestic ovens, including when incorporated into cookers, and domestic electric range hoods, also when used for non-domestic purposes.

(12) This Regulation should specify requirements as to the information to be provided for any form of distance selling, advertising and technical promotional material of domestic ovens (including when incorporated into cookers) and domestic electric range hoods, also when used for non-domestic purposes.

(13) It is appropriate to provide for a review of the provisions of this Regulation taking into account technological progress, and in particular the effectiveness and the appropriateness of the approach followed for the determination of the domestic ovens energy efficiency classes,

HAS ADOPTED THIS REGULATION:

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the labelling and the provision of supplementary product information for domestic electric and gas ovens (including when incorporated into cookers) and for domestic electric range hoods, including when sold for non-domestic purposes.

2. This Regulation shall not apply to:

- (a) ovens that use energy sources other than electricity or gas;
- (b) ovens which offer a 'microwave heating' function;
- (c) small ovens;
- (d) portable ovens;
- (e) heat storage ovens;
- (f) ovens which are heated with steam as a primary heating function;
- (g) ovens designed for use only with gases of the 'third family' (propane and butane).

Article 2

Definitions

In addition to the definitions set out in Article 2 of Directive 2010/30/EU, the following definitions shall apply for the purposes of this Regulation:

(1) 'oven' means an appliance or part of an appliance which incorporates one or more cavities using electricity and/or gas in which food is prepared by use of a conventional or fan-forced mode;

¹ OJ L 316, 14.11.2012, p. 12.

- (2) 'cavity' means the enclosed compartment in which the temperature can be controlled for preparation of food;
- (3) 'multi-cavity oven' means an oven with two or more cavities, each of which is heated separately;
- (4) 'small oven' means an oven where all cavities have a width and depth of less than 250 mm or a height less than 120 mm;
- (5) 'portable oven' means an oven with a product mass of less than 18 kilograms, provided it is not designed for built-in installations;
- (6) 'microwave heating' means heating of food using electromagnetic energy;
- (7) 'conventional mode' means the operation mode of an oven only using natural convection for circulation of heated air inside the cavity of the oven;
- (8) 'fan-forced mode' means a mode of an oven when a built-in fan circulates heated air inside the cavity of the oven;
- (9) 'cycle' means the period of heating a standardised load in a cavity of an oven under defined conditions;
- (10) 'cooker' means an appliance consisting of an oven and a hob using gas or electricity;
- (11) 'operation mode' means the status of an oven during use;
- (12) 'heat source' means the main energy form for heating an oven;
- (13) 'range hood' means an appliance, operated by a motor which it controls, intended to collect contaminated air from above a hob, or which includes a downdraft system intended for installation adjacent to cooking ranges, hobs and similar cooking products, that draws vapour down into an internal exhaust duct;
- (14) 'automatic functioning mode during the cooking period' means a condition in which the air flow of the range hood during the cooking period is automatically controlled through sensor(s), including as regards humidity, temperature, etc.;
- (15) 'fully automatic range hood' means a range hood in which the air flow and/or other functions are automatically controlled through sensor(s) during 24 hours including the cooking period;
- (16) 'best efficiency point' (BEP) means the range hood operating point with maximum fluid dynamic efficiency (FDE_{hood});
- (17) 'lighting efficiency' (LE_{hood}) means the ratio between the average illumination of the lighting system of the domestic range hood and the power of the lighting system in lux/W;
- (18) 'grease filtering efficiency' (GFE_{hood}) means the relative share of grease retained within the range hood grease filters;
- (19) 'off mode' means a condition in which the appliance is connected to the mains power source but is not providing any function or only provides an indication of off mode condition, or only provides functionalities intended to ensure electromagnetic compatibility pursuant to Directive 2004/108/EC of the European Parliament and of the Council²;
- (20) 'standby mode' means a condition where the appliance is connected to the mains power source, depends on energy input from the mains power source to work as intended and provides only re-activation function, or reactivation function and only an indication of enabled reactivation function, and/or information or status display which may persist for an indefinite time;

² OJ L 390, 31.12.2004, p. 24

(21) 'reactivation function' means a function facilitating the activation of other modes, including the active mode, by remote switch including remote control, internal sensor, or timer to a condition providing additional functions, including the main function;

(22) 'information or status display' means a continuous function providing information or indicating the status of the equipment on a display, including clocks;

(23) 'end-user' means a consumer buying or expected to buy a product;

(24) 'point of sale' means a location where appliances are displayed and/or offered for sale or hire;

(25) 'equivalent model' means a model placed on the market with the same technical parameters as another model placed on the market under a different commercial code number by the same manufacturer or importer.

Article 3

Responsibilities of suppliers and timetable

Suppliers shall ensure that:

(1) as regards labels, fiches and technical documentation:

(a) for domestic ovens:

(i) each domestic oven is supplied with (a) printed label(s) containing information in the format set out in point 1 of Annex III for each cavity of the oven;

(ii) a product fiche, as set out in point A of Annex IV, is made available for domestic ovens placed on the market;

(iii) the technical documentation, as set out in point A of Annex V, is made available on request to the authorities of the **Contracting Parties**;

(iv) any advertisement for a specific model of domestic oven contains the energy efficiency class, if the advertisement discloses energy-related or price information;

(v) any technical promotional material concerning a specific model of domestic oven which describes its specific technical parameters includes the energy efficiency class of that model;

(vi) an electronic label in the format and containing the information set out in point 1 of Annex III is made available to dealers for each cavity of each domestic oven model;

(vii) an electronic product fiche as set out in point A of Annex IV is made available to dealers for each domestic oven model;

(b) for domestic range hoods:

(i) each domestic range hood is supplied with a printed label containing information in the format set out in point 2 of Annex III;

(ii) a product fiche, as set out in point B of Annex IV, is made available for domestic range hoods placed on the market;

(iii) the technical documentation as set out in point B of Annex V, is made available on request to the authorities of the **Contracting Parties**;

(iv) any advertisement for a specific model of domestic range hood contains the energy effi-

- ciency class, if the advertisement discloses energy-related or price information;
- (v) any technical promotional material concerning a specific model of domestic range hood which describes its specific technical parameters includes the energy efficiency class of that model;
- (vi) an electronic label in the format and containing the information set out in point 2 of Annex III is made available to dealers for each domestic range hood model;
- (vii) an electronic product fiche as set out in point B of Annex IV is made available to dealers for each domestic range hood model;

(2) as regards efficiency classes:

- (a) for domestic ovens, the energy efficiency class of the cavity of the oven shall be determined in accordance with point 1 of Annex I, and point 1 of Annex II;
- (b) for domestic range hoods:
 - (i) the energy efficiency classes shall be determined in accordance with point 2(a) of Annex I and point 2.1 of Annex II;
 - (ii) the fluid dynamic efficiency classes shall be determined in accordance with point 2(b) of Annex I and point 2.2 of Annex II;
 - (iii) the lighting efficiency classes shall be determined in accordance with point 2(c) of Annex I and point 2.3 of Annex II;
 - (iv) the grease filtering efficiency classes shall be determined in accordance with point 2(d) of Annex I and point 2.4 of Annex II;

(3) as regards formats of the labels:

- (a) for domestic ovens, the format of the label for the cavity of the oven shall be as set out in point 1 of Annex III, for appliances placed on the market from **1 January 2016**;
- (b) for domestic range hoods, the format of the label shall be as set out in point 2 of Annex III, according to the following timetable:
 - (i) ...³
 - (ii) for domestic range hoods placed on the market from 1 January 2016 with energy efficiency classes A+, A, B, C, D, E and F, labels shall be in accordance with point 2.1.2 of Annex III (Label 2) or, where suppliers deem appropriate, with point 2.1.3 of that Annex (Label 3);
 - (iii) for domestic range hoods placed on the market from 1 January 2018 with energy efficiency classes A++, A+, A, B, C, D and E, labels shall be in accordance with point 2.1.3 of Annex III (Label 3) or, where suppliers deem appropriate, with point 2.1.4 of that Annex (Label 4);
 - (iv) for domestic range hoods placed on the market from 1 January 2020 with energy efficiency classes A+++, A++, A+, A, B, C and D, labels shall be in accordance with point 2.1.4 of Annex III (Label 4).

³ Not applicable

Article 4

Responsibilities of dealers

Dealers shall ensure that:

(1) for domestic ovens:

(a) each oven presented at the point of sale carries the label for each cavity provided by suppliers in accordance with Article 3(1)(a)(i) displayed on the front or top of the appliance, or in the immediacy of the appliance, so as to be clearly visible and identifiable as the label belonging to the model without having to read the brand name and model number on the label;

(b) ovens offered for sale or hire where the end-user cannot be expected to see the product displayed, as specified in Article 7 of Directive 2010/30/EU, are marketed with the information provided by suppliers in accordance with Part A of Annex VI to this Regulation, except where the offer is made through the internet in which case the provisions of Annex VII shall apply;

(c) any advertisement for any form or medium of distance selling and marketing concerning a specific model of oven contains a reference to the energy efficiency class, if the advertisement discloses energy-related or price information;

(d) any technical promotional material concerning a specific model which describes the technical parameters of an oven includes the energy efficiency class of the model;

(2) for domestic range hoods:

(a) each domestic range hood presented at the point of sale is accompanied by the label provided by suppliers in accordance with Article 3(1)(b)(i) displayed on the front or top of the appliance, or in the immediacy of the appliance, so as to be clearly visible and identifiable as the label belonging to the model without having to read the brand name and model number on the label;

(b) domestic range hoods offered for sale or hire where the end-user cannot be expected to see the product displayed, as specified in Article 7 of Directive 2010/30/EU, are marketed with the information provided by suppliers in accordance with Part B of Annex VI to this Regulation, except where the offer is made through the internet in which case the provisions of Annex VII shall apply;

(c) any advertisement for any form or medium of distance selling and marketing concerning a specific model of domestic range hood contains a reference to the energy efficiency class, if the advertisement discloses energy-related or price information;

(d) any technical promotional material concerning a specific model which describes the technical parameters of a domestic range hood includes the energy efficiency class of the model.

Article 5

Measurement and calculation methods

The information to be provided under Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement procedures, which take into account the recognised state-of-the-art calculation and measurement methods.

Article 6**Verification procedure for market surveillance purposes**

When performing the market surveillance checks for compliance with requirements set out in this Regulation, the **Contracting Parties'** authorities shall apply the verification procedure described in Annex VIII.

Article 7**Review**

...

Article 8**Repeal**

...

Article 9**Transitional provisions**

1. Domestic ovens which comply with the provisions of this Regulation and which are placed on the market or offered for sale, hire or hire-purchase before **1 January 2016** shall be regarded as complying with the requirements of Directive 2002/40/EC.
2. From **1 January 2016 to 1 April 2016**, dealers may apply Article 4(1)(b) to specific ovens that fall under that provision.
3. From **1 January 2016 to 1 April 2016**, dealers may apply Article 4(2)(b) to specific range hoods that fall under that provision.

Article 10**Entry into force and application**

1. **This Decision (2014/02/MC-EnC) enters into force upon its adoption (23 September 2014) and it is addressed to the Contracting Parties⁴.**
2. It shall apply from **1 January 2016**. However, Article 3(1)(a)(iv) and (v), Article 3(1)(b)(iv) and (v), Article 4(1)(b), (c) and (d), and Article 4(2)(b), (c) and (d) shall apply from **1 April 2016**.

This Regulation shall be binding in its entirety and directly applicable in all **Contracting Parties**.

The Secretariat shall monitor and review the implementation of the Delegated Regulations referred to in Article 1 in the Contracting Parties. Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which

⁴ The text displayed here corresponds to Article 3(1) of Decision 2014/02/MC-EnC

they adopt in the field covered by these Delegated Regulations, in the next year of the deadline for the overall implementation⁵.

⁵ The text displayed here corresponds to Article 2(3) of Decision 2014/02/MC-EnC

ANNEX I

Efficiency classes

1. DOMESTIC OVENS

The energy efficiency classes of domestic ovens shall be determined separately for each cavity in accordance with values as set out in Table 1 of this Annex. The energy efficiency of ovens shall be determined in accordance with point 1 of Annex II.

Table 1

Energy efficiency classes of domestic ovens

Energy Efficiency Class	Energy Efficiency Index (EEI_{cavity})
A+++ (most efficient)	$EEI_{\text{cavity}} < 45$
A++	$45 \leq EEI_{\text{cavity}} < 62$
A+	$62 \leq EEI_{\text{cavity}} < 82$
A	$82 \leq EEI_{\text{cavity}} < 107$
B	$107 \leq EEI_{\text{cavity}} < 132$
C	$132 \leq EEI_{\text{cavity}} < 159$
D (least efficient)	$EEI_{\text{cavity}} \geq 159$

2. DOMESTIC RANGE HOODS

(a) The energy efficiency classes of domestic range hoods shall be determined in accordance with values as set out in Table 2 of this Annex. The Energy Efficiency Index (EEI_{hood}) of domestic range hoods shall be calculated in accordance with point 2.1 of Annex II.

Table 2

Energy efficiency classes of domestic range hoods

Energy Efficiency Class	Energy Efficiency Index (EEI_{hood})			
	Label 1	Label 2	Label 3	Label 4
A+++ (most efficient)				$EEI_{\text{hood}} < 30$
A++			$EEI_{\text{hood}} < 37$	$30 \leq EEI_{\text{hood}} < 37$
A+		$EEI_{\text{hood}} < 45$	$37 \leq EEI_{\text{hood}} < 45$	$37 \leq EEI_{\text{hood}} < 45$
A	$EEI_{\text{hood}} < 55$	$45 \leq EEI_{\text{hood}} < 55$	$45 \leq EEI_{\text{hood}} < 55$	$45 \leq EEI_{\text{hood}} < 55$
B	$55 \leq EEI_{\text{hood}} < 70$	$55 \leq EEI_{\text{hood}} < 70$	$55 \leq EEI_{\text{hood}} < 70$	$55 \leq EEI_{\text{hood}} < 70$
C	$70 \leq EEI_{\text{hood}} < 85$	$70 \leq EEI_{\text{hood}} < 85$	$70 \leq EEI_{\text{hood}} < 85$	$70 \leq EEI_{\text{hood}} < 85$
D	$85 \leq EEI_{\text{hood}} < 100$	$85 \leq EEI_{\text{hood}} < 100$	$85 \leq EEI_{\text{hood}} < 100$	$EEI_{\text{hood}} \geq 85$
E	$100 \leq EEI_{\text{hood}} < 110$	$100 \leq EEI_{\text{hood}} < 110$	$EEI_{\text{hood}} \geq 100$	
F	$110 \leq EEI_{\text{hood}} < 120$	$EEI_{\text{hood}} \geq 110$		
G (least efficient)	$EEI_{\text{hood}} \geq 120$			

(b) The fluid dynamic efficiency classes of a domestic range hood shall be determined in accordance with its Fluid Dynamic Efficiency (FDE_{hood}) as in the following Table 3. The Fluid Dynamic Efficiency of domestic range hoods shall be determined in accordance with point 2.2 of Annex II.

Table 3

Fluid Dynamic Efficiency classes for domestic range hoods

Fluid Dynamic Efficiency Class	Fluid Dynamic Efficiency (FDE_{hood})
A (most efficient)	$FDE_{hood} > 28$
B	$23 < FDE_{hood} \leq 28$
C	$18 < FDE_{hood} \leq 23$
D	$13 < FDE_{hood} \leq 18$
E	$8 < FDE_{hood} \leq 13$
F	$4 < FDE_{hood} \leq 8$
G (least efficient)	$FDE_{hood} \leq 4$

(c) The lighting efficiency classes of a domestic range hood shall be determined in accordance with its Lighting Efficiency (LE_{hood}) as in the following Table 4. The Lighting Efficiency of domestic range hoods shall be determined in accordance with point 2.3 of Annex II.

Table 4

Lighting Efficiency classes for domestic range hoods

Lighting Efficiency Class	Lighting Efficiency (LE_{hood})
A (most efficient)	$LE_{hood} > 28$
B	$20 < LE_{hood} \leq 28$
C	$16 < LE_{hood} \leq 20$
D	$12 < LE_{hood} \leq 16$
E	$8 < LE_{hood} \leq 12$
F	$4 < LE_{hood} \leq 8$
G (least efficient)	$LE_{hood} \leq 4$

(d) The grease filtering efficiency classes of a domestic range hood shall be determined in accordance with its Grease Filtering Efficiency (GFE_{hood}) as in the following Table 5. The Grease Filtering Efficiency of domestic range hoods shall be determined in accordance with point 2.4 of Annex II.

Table 5

Grease Filtering Efficiency (GFE_{hood}) classes for domestic range hoods

Grease Filtering Efficiency Class	Grease Filtering Efficiency (%)
A (most efficient)	$GFE_{hood} > 95$
B	$85 < GFE_{hood} \leq 95$
C	$75 < GFE_{hood} \leq 85$
D	$65 < GFE_{hood} \leq 75$
E	$55 < GFE_{hood} \leq 65$
F	$45 < GFE_{hood} \leq 55$
G (least efficient)	$GFE_{hood} \leq 45$

ANNEX II

Measurements and calculations

For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using a reliable, accurate and reproducible method that take into account the generally recognised state-of-the-art measurement and calculation methods, including harmonised standards the reference numbers of which have been published for the purpose in the *Official Journal of the European Union*. They shall meet the technical definitions, conditions, equations and parameters set out in this Annex.

1. DOMESTIC OVENS

The energy consumption of a cavity of a domestic oven shall be measured for one standardised cycle, in a conventional mode and in a fan-forced mode, if available, by heating a standardised load soaked with water. It shall be verified that the temperature inside the oven cavity reaches the temperature setting of the thermostat and/or the oven control display within the duration of the test cycle. The energy consumption per cycle corresponding to the best performing mode (conventional mode or fan-forced mode) shall be used in the following calculations.

For each cavity of a domestic oven, the Energy Efficiency Index (EEI_{cavity}) shall be calculated according to the following formulas:

for domestic electric ovens:

$$EEI_{\text{cavity}} = \frac{EC_{\text{electric cavity}}}{SEC_{\text{electric cavity}}} \times 100$$

$$SEC_{\text{electric cavity}} = 0,0042 \times V + 0,55 \quad (\text{in kWh})$$

for domestic gas ovens:

$$EEI_{\text{cavity}} = \frac{EC_{\text{gas cavity}}}{SEC_{\text{gas cavity}}} \times 100$$

$$SEC_{\text{gas cavity}} = 0,044 \times V + 3,53 \quad (\text{in MJ})$$

Where:

- EEI_{cavity} = Energy Efficiency Index for each cavity of a domestic oven, in %, rounded to the first decimal place,
- $SEC_{\text{electric cavity}}$ = Standard Energy Consumption (electricity) required to heat a standardised load in a cavity of an electric heated domestic oven during a cycle, expressed in kWh, rounded to the second decimal place,
- $SEC_{\text{gas cavity}}$ = Standard Energy Consumption required to heat a standardised load in a cavity of a domestic gas-fired oven during a cycle, expressed in MJ, rounded to the second decimal place,
- V = Volume of the cavity of the domestic oven in litres (L), rounded to the nearest integer,
- $EC_{\text{electric cavity}}$ = Energy consumption required to heat a standardised load in a cavity of an electric

heated domestic oven during a cycle, expressed in kWh, rounded to the second decimal place,

- $EC_{\text{gas cavity}}$ = Energy consumption required to heat a standardised load in a gas-fired cavity of a domestic oven during a cycle, expressed in MJ, rounded to the second decimal place.

2. DOMESTIC RANGE HOODS

2.1. Calculation of the Energy Efficiency Index (EEI_{hood})

The Energy Efficiency Index (EEI_{hood}) is calculated as:

$$EEI_{\text{hood}} = \frac{AEC_{\text{hood}}}{SAEC_{\text{hood}}} \times 100$$

and is rounded to the first decimal place.

Where:

- $SAEC_{\text{hood}}$ is the Standard Annual Energy consumption of the domestic range hood in kWh/a, rounded to the first decimal place,
- AEC_{hood} is the Annual Energy Consumption of the domestic range hood in kWh/a, rounded to the first decimal place.

The Standard Annual Energy Consumption ($SAEC_{\text{hood}}$) of a domestic range hood shall be calculated as:

$$SAEC_{\text{hood}} = 0,55 \times (W_{\text{BEP}} + W_L) + 15,3$$

Where:

- W_{BEP} is the electric power input of the domestic range hood at the best efficiency point, in Watt and rounded to the first decimal place,
- W_L is the nominal electric power input of the lighting system of the domestic range hood on the cooking surface, in Watt and rounded to the first decimal place.

The Annual Energy Consumption (AEC_{hood}) of a domestic range hood is calculated as:

(i) for the fully automatic domestic range hoods:

$$AEC_{\text{hood}} = \left[\frac{(W_{\text{BEP}} \times t_H \times f) + (W_L \times t_L)}{60 + 1000} + \frac{P_0 \times (1440 - t_H \times f)}{2 \times 60 \times 1000} + \frac{P_3 \times (1440 - t_H \times f)}{2 \times 60 \times 1000} \right] \times 365$$

(b) for all other domestic range hoods:

$$AEC_{\text{hood}} = \frac{W_{\text{BEP}} \times (t_H \times f) + W_L \times t_L}{60 \times 1000} \times 365$$

Where:

- t_L is the average lighting time per day, in minutes ($t_L = 120$),
- t_H is the average running time per day for domestic range hoods, in minutes ($t_H = 60$),

- P_o is the electric power input in off-mode of the domestic range hood, in Watt and rounded to the second decimal place,
- P_s is the electric power input in standby mode of the domestic range hood, in Watt and rounded to the second decimal place,
- f is the time increase factor, calculated and rounded to the first decimal place, as:

$$f = 2 - (FDE_{hood} \times 3,6) / 100$$

2.2. Calculation of the Fluid Dynamic Efficiency (FDE_{hood})

The Fluid Dynamic Efficiency (FDE_{hood}) at the best efficiency point is calculated by the following formula, and is rounded to the first decimal place:

$$FDE_{hood} = \frac{Q_{BEP} \times P_{BEP}}{3600 \times W_{BEP}} \times 100$$

Where:

- Q_{BEP} is the flow rate of the domestic range hood at best efficiency point, expressed in m³/h and rounded to the first decimal place,
- P_{BEP} is the static pressure difference of the domestic range hood at best efficiency point, expressed in Pa and rounded to the nearest integer,
- W_{BEP} is the electric power input of the domestic range hood at the best efficiency point, expressed in Watt and rounded to the first decimal place.

2.3. Calculation of the Lighting Efficiency (LE_{hood})

The Lighting Efficiency (LE_{hood}) of a domestic range hood means the ratio between the average illumination and the nominal electric power input of the lighting system. It shall be calculated in lux per Watt and rounded at the nearest integer, as:

$$LE_{hood} = \frac{E_{middle}}{W_L}$$

Where:

- E_{middle} is the average illumination of the lighting system on the cooking surface measured under standard conditions, in lux and rounded to the nearest integer,
- W_L is the nominal electric power input of the lighting system of the domestic range hood on the cooking surface, in Watt and rounded to the first decimal place.

2.4. Calculation of the Grease Filtering Efficiency (GFE_{hood})

The Grease Filtering Efficiency (GFE_{hood}) of a domestic range hood means the relative amount of grease retained within the range hood grease filters. It shall be calculated and rounded to the first decimal place as:

$$GFE_{hood} = [w_g / (w_r + w_t + w_g)] \times 100 [\%]$$

Where:

- w_g = the mass of oil in the grease filter, including all detachable coverings, in g and rounded to the first decimal place,
- w_r = the mass of oil retained in the airways of the range hood, in g and rounded to the first decimal place,
- w_t = the mass of oil retained in the absolute filter, in g and rounded to the first decimal place.

2.5. Noise

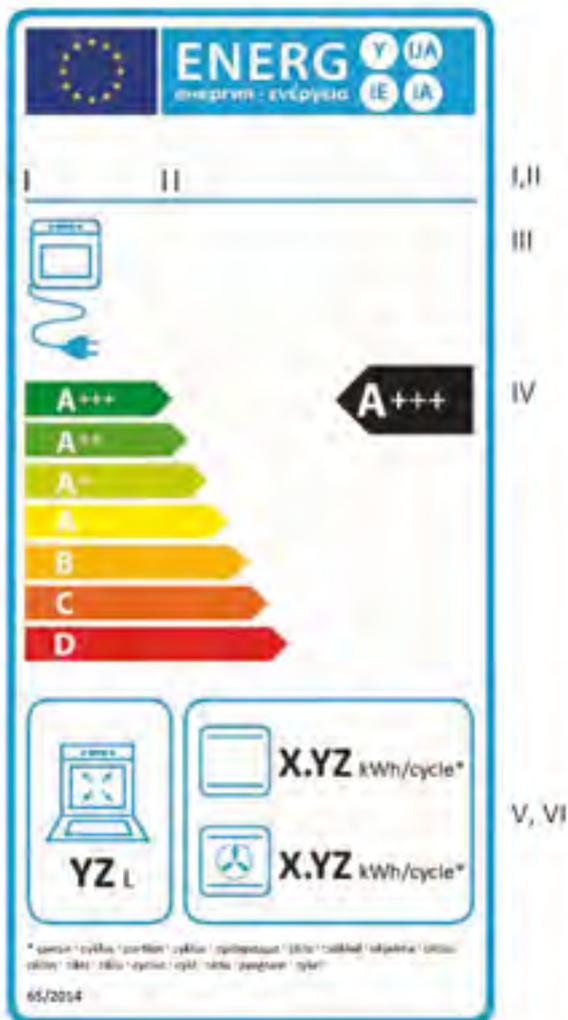
The Noise Value (in dB) is measured as the airborne acoustical A-weighted sound power emissions (weighted average value – L_{WA}) of a domestic range hood at the highest setting for normal use, rounded to the nearest integer.

ANNEX III The label

1. LABEL FOR DOMESTIC OVENS

1.1. Domestic electric ovens

1.1.1. Label presentation — for each cavity of a domestic electric oven



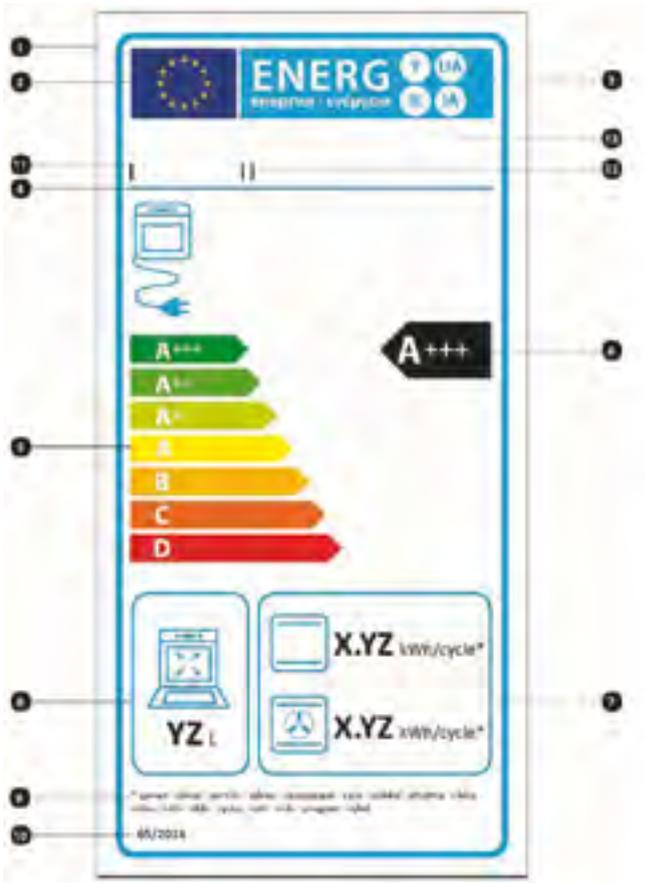
1.1.2. Label information — domestic electric ovens

The following information shall be included in the label:

- I. Supplier's name or trade mark;
- II. Supplier's model identifier, where 'model identifier' means the code, usually alphanumeric, which distinguishes a specific domestic oven model from other models with the same trade mark or supplier's name;
- III. Energy source of the domestic oven;
- IV. The energy efficiency class of the cavity determined in accordance with Annex I. The head of the arrow containing the indicator letter shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;
- V. Usable volume of the cavity in litres, rounded to the nearest integer;
- VI. Energy consumption per cycle expressed in kWh/cycle (electricity consumption) for the heating function(s) (conventional and if available the forced air convection) of the cavity based on standard load determined in accordance with the test procedures, rounded to the second decimal place ($EC_{\text{electric cavity}}$).

1.1.3. Label design — domestic electric ovens

The design of the label for each cavity of a domestic electric oven shall be as in the following figure:



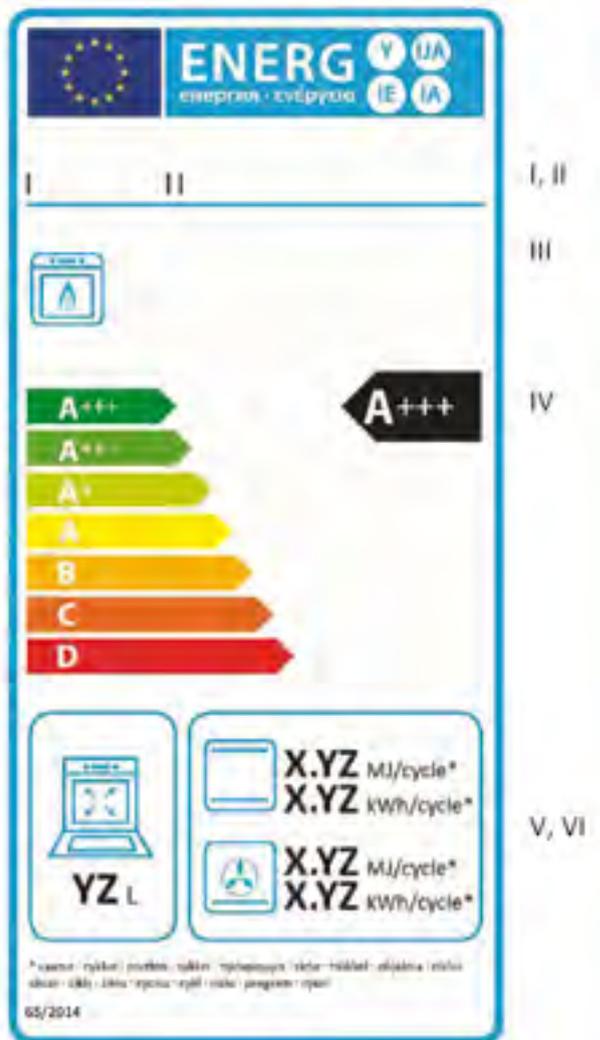
Whereby:

- (i) The label shall be at least 85 mm wide and 170 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (ii) The background shall be white.
- (iii) Colours shall be CMYK — cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- (iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- ❶ Border stroke: 4 pt — colour: cyan 100 % — round corners: 3 mm.
- ❷ EU logo: colours: X-80-00-00 and 00-00-X-00.
- ❸ Energy logo: colour: X-00-00-00; pictogram as depicted: EU logo + energy label: width: 70 mm, height: 14 mm.
- ❹ Sub-logos border: 1,5 pt — colour: cyan 100 % — length: 70 mm.
- ❺ Scale of energy classes
 - Arrow: height: 5,5 mm, gap: 1 mm — colours:
 - Highest class: X-00-X-00
 - Second class: 70-00-X-00
 - Third class: 30-00-X-00
 - Fourth class: 00-00-X-00
 - Fifth class: 00-30-X-00
 - Sixth class: 00-70-X-00
 - Last class: 00-X-X-00
 - Text: Calibri bold 18 pt, capitals and white; '+' symbol: Calibri bold 12 pt, white, aligned on a single row.
- ❻ Energy efficiency class
 - Arrow: width: 20 mm, height: 10 mm, 100 % black;
 - Text: Calibri bold 24 pt, capitals and white; '+' symbol: Calibri bold 18 pt, white, aligned on a single row.
- ❼ Energy consumption per cycle
 - Border: 1,5 pt — colour: cyan 100 % — round corners: 3 mm.
 - Value: Calibri bold 19 pt, 100 % black; and Calibri regular 10 pt, 100 % black.
- ❽ Volume
 - Border: 1,5 pt — colour: cyan 100 % — round corners: 3 mm.
 - Value: Calibri bold 20 pt, 100 % black; and Calibri regular 10 pt, 100 % black.
- ❾ Asterisk: Calibri regular 6 pt, 100 % black.
- ❿ Numbering of the Regulation: Calibri bold 10 pt, 100 % black
- ⓫ Supplier's name or trademark
- ⓬ Supplier's model identifier
- ⓭ The suppliers' name or trade mark and model identifier should fit in a space of 70 × 13 mm.

1.2. Domestic gas ovens

1.2.1. Label presentation — for each cavity of a domestic gas oven



1.2.2. Label information

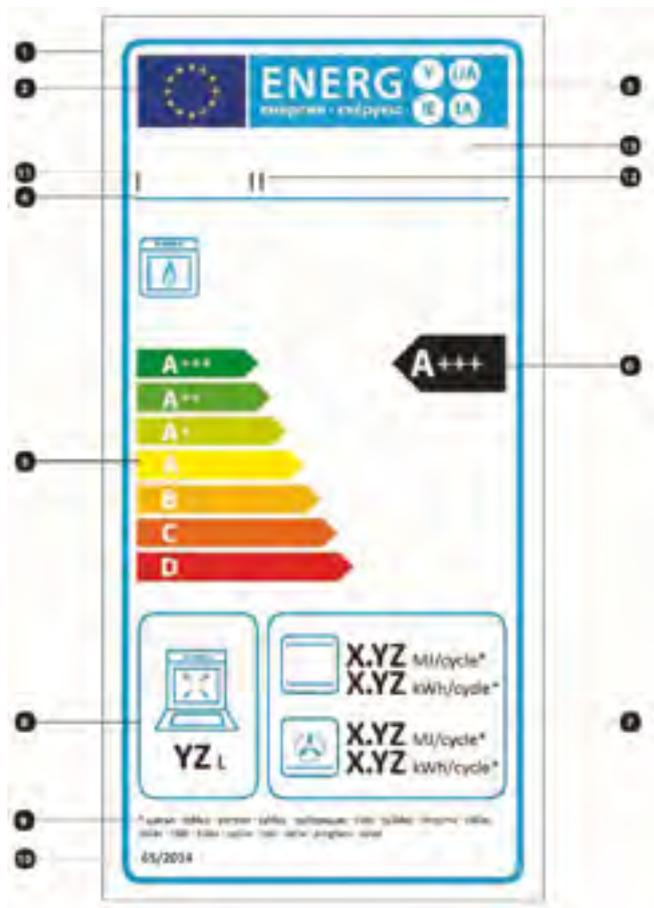
The following information shall be included in the label:

- I. Supplier's name or trade mark;
- II. Supplier's model identifier, where 'model identifier' means the code, usually alphanumeric, which distinguishes a specific domestic oven model from other models with the same trade mark or supplier's name;
- III. Energy source of the domestic oven;
- IV. The energy efficiency class of the cavity determined in accordance with Annex I. The head of the arrow containing the indicator letter shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;
- V. Usable volume of the cavity in litres, rounded to the nearest integer;
- VI. Energy consumption per cycle expressed in MJ/cycle and in kWh/cycle⁶ (gas consumption) for the heating function(s) (conventional and if available the forced air convection) of the cavity based on standard load determined in accordance with the test procedures, rounded to the second decimal place ($EC_{\text{gas cavity}}$).

⁶ 1 kWh/cycle = 3,6 MJ/cycle.

1.2.3. Label design — domestic gas ovens

The design of the label for each cavity of a domestic gas oven shall be as in the following figure:



Whereby:

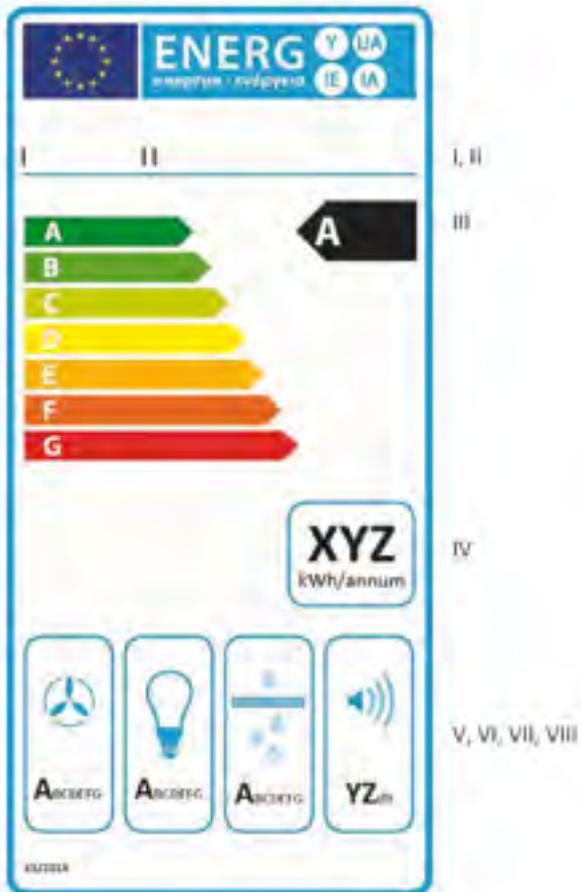
- (i) The label shall be at least 85 mm wide and 170 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (ii) The background shall be white.
- (iii) Colours shall be CMYK — cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- (iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- ❶ Border stroke: 4 pt — colour: cyan 100 % — round corners: 3 mm.
- ❷ EU logo: colours: X-80-00-00 and 00-00-X-00.
- ❸ Energy logo: colour: X-00-00-00; pictogram as depicted: EU logo + energy label: width: 70 mm, height: 14 mm.
- ❹ Sub-logos border: 1,5 pt — colour: cyan 100 % — length: 70 mm.
- ❺ Scale of energy classes
 - Arrow: height: 5,5 mm, gap: 1 mm — colours:
 - Highest class: X-00-X-00
 - Second class: 70-00-X-00
 - Third class: 30-00-X-00
 - Fourth class: 00-00-X-00
 - Fifth class: 00-30-X-00
 - Sixth class: 00-70-X-00
 - Last class: 00-X-X-00
 - Text: Calibri bold 18 pt, capitals and white; '+' symbol: Calibri bold 12 pt, white, aligned on a single row.
- ❻ Energy efficiency class
 - Arrow: width: 20 mm, height: 10 mm, 100 % black;
 - Text: Calibri bold 24 pt, capitals and white; '+' symbol: Calibri bold 18 pt, white, aligned on a single row.
- ❼ Energy consumption per cycle
 - Border: 1,5 pt — colour: cyan 100 % — round corners: 3 mm.
 - Value: Calibri bold 19 pt, 100 % black; and Calibri regular 10 pt, 100 % black.
- ❽ Volume
 - Border: 1,5 pt — colour: cyan 100 % — round corners: 3 mm.
 - Value: Calibri bold 20 pt, 100 % black; and Calibri regular 10 pt, 100 % black.
- ❾ Asterisk: Calibri regular 6 pt, 100 % black.
- ❿ Numbering of the Regulation: Calibri bold 10 pt, 100 % black
- ⓫ Supplier's name or trademark
- ⓬ Supplier's model identifier
- ⓭ The suppliers' name or trade mark and model identifier should fit in a space of 70 × 13 mm.

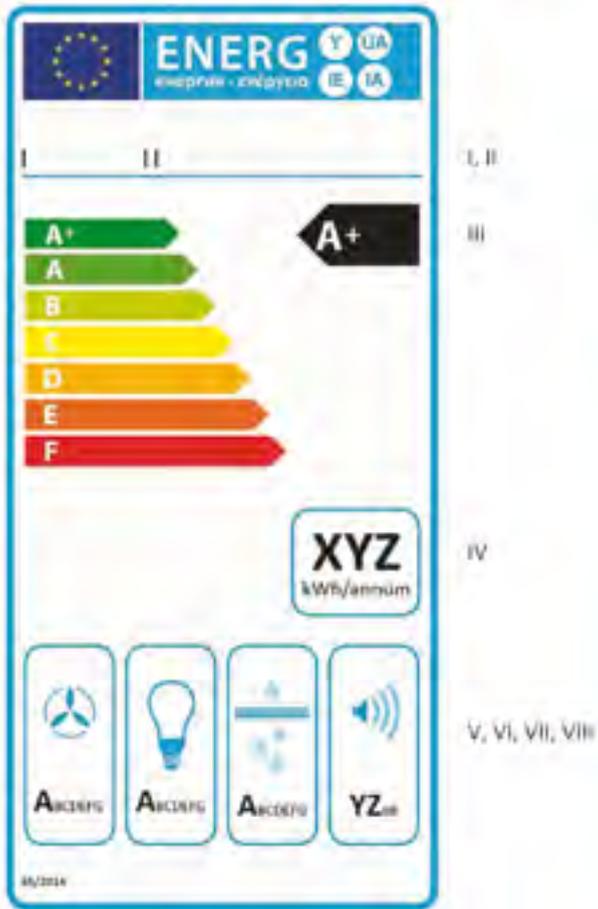
2. LABEL FOR DOMESTIC RANGE HOODS

2.1. Label formats

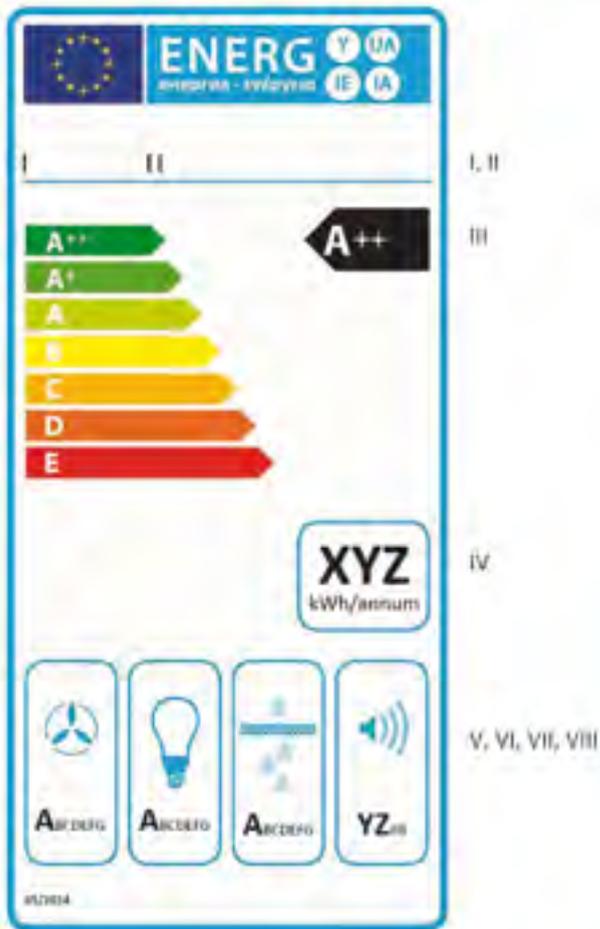
2.1.1. Domestic range hoods in energy efficiency classes A to G (label 1)



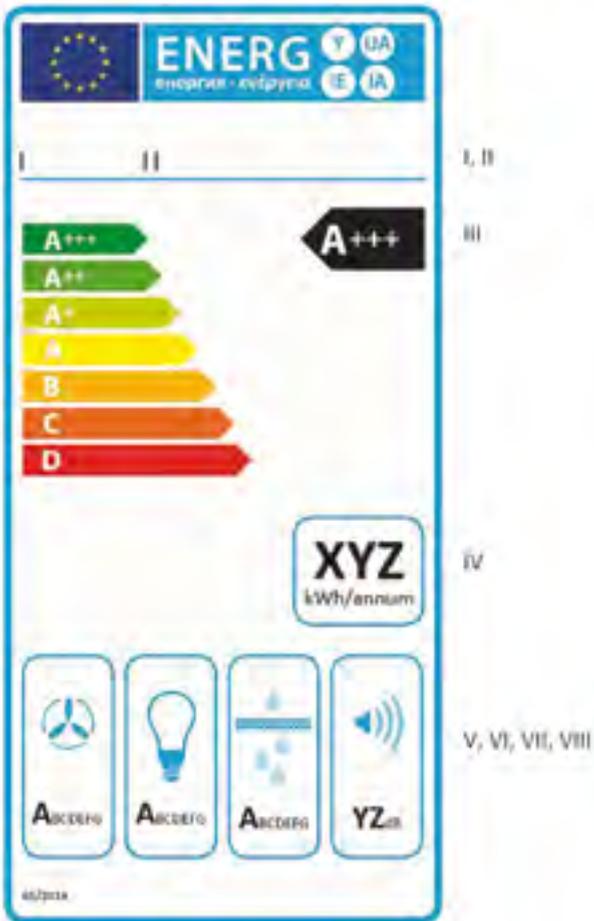
2.1.2. Domestic range hoods in energy efficiency classes A+ to F (label 2)



2.1.3. Domestic range hoods in energy efficiency classes A++ to E (label 3)



2.1.4. Domestic range hoods in energy efficiency classes A+++ to D (label 4)



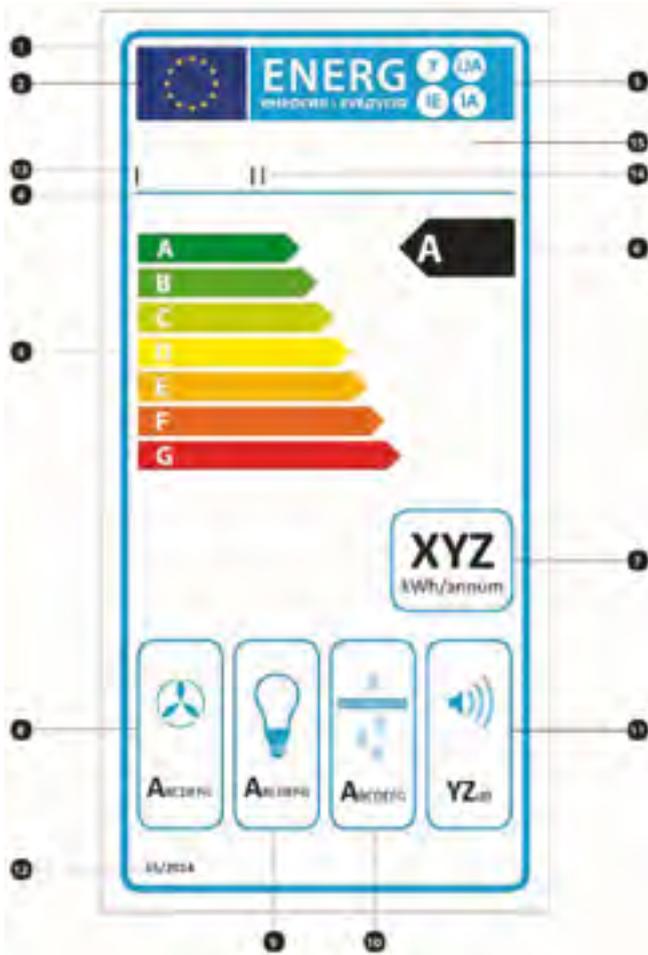
2.2. Label information — domestic range hoods

The following information shall be included in the label:

- I. Supplier's name or trade mark;
- II. Supplier's model identifier, where 'model identifier' means the code, usually alphanumeric, which distinguishes a specific domestic range hood model from other models with the same trade mark or supplier's name;
- III. The energy efficiency class of the domestic range hood, determined in accordance with Annex I. The head of the arrow containing the energy efficiency class of the domestic range hood shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;
- IV. Annual energy consumption (AEC_{hood}) calculated in accordance with Annex II, in kWh rounded to the nearest integer;
- V. The Fluid Dynamic Efficiency class determined in accordance with Annex I;
- VI. The Lighting Efficiency class determined in accordance with Annex I;
- VII. The Grease Filtering Efficiency class determined in accordance with Annex I;
- VIII. The Noise Value, determined in accordance with point 2.5 of Annex II, rounded to the nearest integer.

2.3. Label design — domestic range hoods

The design of the label shall be as in the following figure:



Whereby:

- (i) The label shall be at least 60 mm wide and 120 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (ii) The background shall be white.
- (iii) Colours shall be CMYK — cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- (iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- 1 Border stroke: 3 pt — colour: Cyan 100 % — round corners: 2 mm.
- 2 EU logo: colours: X-80-00-00 and 00-00-X-00.
- 3 Energy logo: colour: X-00-00-00; pictogram as depicted: EU logo + energy label: width: 51 mm, height: 10 mm.
- 4 Sub-logos border: 1 pt — colour: Cyan 100 % — length: 51 mm.
- 5 Scale of energy classes
 - Arrow: height: 4 mm, gap: 0,75 mm — colours:
 - Highest class: X-00-X-00
 - Second class: 70-00-X-00
 - Third class: 30-00-X-00
 - Fourth class: 00-00-X-00
 - Fifth class: 00-30-X-00
 - Sixth class: 00-70-X-00
 - Last class: 00-X-X-00
 - Text: Calibri bold 10 pt, capitals and white; '+' symbol: Calibri bold 7 pt, white, aligned on a single row.
- 6 Energy efficiency class
 - Arrow: width: 15 mm, height: 8 mm, 100 % black;
 - Text: Calibri bold 17 pt, capitals and white; '+' symbol: Calibri bold 12 pt, white, aligned on a single row.
- 7 Annual energy consumption
 - Border: 1 pt — colour: cyan 100 % — round corners: 2,5 mm.
 - Value: Calibri bold 21 pt, 100 % black; and Calibri regular 8 pt, 100 % black.
- 8 Fluid Dynamic Efficiency
 - Pictogram as depicted
 - Border: 1 pt — colour: cyan 100 % — round corners: 2,5 mm.
 - Value: Calibri regular 6 pt, 100 % black; and Calibri bold 11,5 pt, 100 % black.
- 9 Lighting Efficiency
 - Pictogram as depicted
 - Border: 1 pt — colour: cyan 100 % — round corners: 2,5 mm.
 - Value: Calibri regular 6 pt, 100 % black; and Calibri bold 11,5 pt, 100 % black.
- 10 Grease Filtering Efficiency
 - Pictogram as depicted
 - Border: 1 pt — colour: cyan 100 % — round corners: 2,5 mm.
 - Value: Calibri regular 10 pt, 100 % black; and Calibri bold 14 pt, 100 % black.

- 11 Noise level
 - Pictogram as depicted
 - Border: 1 pt — colour: cyan 100 % — round corners: 2,5 mm.
 - Value: Calibri regular 6 pt, 100 % black; and Calibri bold 11,5 pt, 100 % black.
- 12 Numbering of the Regulation: Calibri bold 8 pt, 100 % black
- 13 Supplier's name or trademark
- 14 Supplier's model identifier
- 15 The suppliers' name or trade mark and model identifier should fit in a space of 51 × 9 mm.

ANNEX IV

Fiche

A. FICHE FOR DOMESTIC OVENS

1. The information in the product fiche of the domestic ovens referred to in Article 3(1)(a)(ii) shall be given as defined below and in the order specified below, and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trade mark;
- (b) supplier's model identifier which means the code, usually alphanumeric, which distinguishes a specific domestic oven model from other models with the same trade mark or supplier's name and with different declared values for any of the parameters included in the label for the domestic oven (point 1 of Annex III);
- (c) the energy efficiency index (EEI_{cavity}) for each cavity of the model calculated in accordance with point 1 of Annex II and rounded to the first decimal place; the declared energy efficiency index shall not exceed the index reported in the technical documentation in Annex V;
- (d) the energy efficiency class of the model for each cavity as defined in Table 1 of Annex I; the declared class shall not be more favourable than the class reported in the technical documentation in Annex V;
- (e) the energy consumption per cycle for each cavity if available in conventional mode and in fan-forced convection mode (the measured energy consumption shall be expressed in kWh (electric and gas ovens) and in MJ (gas ovens), rounded to two decimal place); the declared value shall not be lower than the value reported in the technical documentation in Annex V;
- (f) the number of cavities; the heat source(s) per cavity; and the volume of each cavity.

2. Without prejudice to any requirements under the Community eco-label scheme, where a model has been granted a European Union eco-label under Regulation (EC) No 66/2010 of the European Parliament and of the Council of 25 November 2009⁷, a copy of the eco-label may be added.

3. One fiche may cover a number of domestic oven models supplied by the same supplier.

4. The information contained in the fiche may be given in the form of a copy of the label of each cavity (either in colour or in black and white). Where this is the case, the information listed in point 1, not already displayed on the label, shall also be provided.

B. FICHE FOR DOMESTIC RANGE HOODS

1. The information in the product fiche of the domestic range hoods referred to in Article 3(1)(b)(ii) shall be given as defined below and in the order specified below, and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trade mark;
- (b) supplier's model identifier which means the code, usually alphanumeric, which distinguishes a specific domestic range hood model from other models with the same trade mark or supplier's name and with different declared values for any of the parameters included in the label for the domestic range hood (point 2 of Annex III);

⁷ OJ L 27, 30.1.2010, p. 1.

- (c) the Annual Energy Consumption (AEC_{hood}) calculated according to point 2 of Annex II, in kWh/a and rounded to the first decimal place; the declared value shall not be lower than the value reported in the technical documentation in Annex V;
- (d) the Energy Efficiency class, as defined in Table 2 of Annex I; the declared class shall not be more favourable than the class reported in the technical documentation in Annex V;
- (e) the Fluid Dynamic Efficiency (FDE_{hood}) calculated according to point 2 of Annex II, rounded to the first decimal place; the declared value shall not be higher than the value reported in the technical documentation in Annex V;
- (f) the Fluid Dynamic Efficiency class, as defined in Table 3 of Annex I; the declared class shall not be better than the class reported in the technical documentation in Annex V;
- (g) the Lighting Efficiency (LE_{hood}) calculated according to point 2 of Annex II, in lux/Watt and rounded to the first decimal place; the declared value shall not be higher than the value reported in the technical documentation in Annex V;
- (h) the Lighting Efficiency class, as defined in Table 4 of Annex I, the declared class shall not be better than the class reported in the technical documentation in Annex V;
- (i) the Grease Filtering Efficiency calculated according to point 2 of Annex II, in percentage and rounded to the first decimal place; the declared value shall not be higher than the value reported in the technical documentation in Annex V;
- (j) the Grease Filtering Efficiency class, as defined in Table 5 of Annex I; the declared class shall not be better than the class reported in the technical documentation in Annex V;
- (k) the air flow (in m^3/h , and rounded to the nearest integer), at minimum and maximum speed in normal use, intensive or boost excluded; the declared values shall not be higher than the values reported in the technical documentation in Annex V;
- (l) if available, the air flow (in m^3/h and rounded to the nearest integer), at intensive or boost setting; the declared value shall not be higher than the values reported in the technical documentation in Annex V;
- (m) the airborne acoustical A-weighted sound power emissions (in dB rounded to the nearest integer), at minimum and maximum speed available in normal use; the declared value shall not be lower than the value reported in the technical documentation in Annex V;
- (n) if available, the airborne acoustical A-weighted sound power emissions (in dB rounded to the nearest integer), at intensive or boost setting; the declared value shall not be lower than the value reported in the technical documentation in Annex V;
- (o) if applicable, the power consumption in off mode (P_o), in Watt and rounded to the second decimal place; the declared values shall not be lower than the values reported in the technical documentation in Annex V;
- (p) if applicable, the power consumption in standby mode (P_s), in Watt and rounded to the second decimal place; the declared values shall not be lower than the values reported in the technical documentation in Annex V.
2. One fiche may cover a number of domestic range hood models supplied by the same supplier.
3. The information contained in the fiche may be given in the form of a copy of the label (either in colour or in black and white). Where this is the case, the information listed in point 1, not already displayed on the label, shall also be provided.

ANNEX V

Technical documentation

A. TECHNICAL DOCUMENTATION FOR DOMESTIC OVENS

1. The technical documentation referred to in Article 3(1)(a)(iii) shall include at minimum:
 - (a) the name and address of the supplier;
 - (b) a general description of the appliance model, sufficient for it to be unequivocally and easily identified, including the supplier's model identifier (i.e. the code, usually alphanumeric) which distinguishes a specific domestic oven model from other models with the same trade mark or supplier's name and with different declared values for any of the parameters included in the label for the domestic oven (point 1 of Annex III);
 - (c) technical parameters for measurements as follows:
 - (i) the number of cavities; the volume of each cavity; the heat source(s) per cavity; the heating function(s) (conventional and/or the forced air convection) per cavity;
 - (ii) the energy consumption per cycle for each cavity if available in conventional mode and in fan-forced convection mode; the measured energy consumption shall be expressed in kWh (electric and gas ovens) and in MJ (gas ovens), rounded to the second decimal place;
 - (iii) the energy efficiency index (EEl_{cavity}) for each cavity of the domestic oven calculated in accordance with point 1 of Annex II and rounded to the first decimal place;
 - (iv) the energy efficiency class for each cavity of the domestic oven as defined in Table 1 of Annex I;
 - (d) a copy of the calculation and the results of the calculations performed in accordance with Annex II;
 - (e) where appropriate, the references of the harmonised standards applied;
 - (f) where appropriate, the other technical standards and specifications used;
 - (g) identification and signature of the person empowered to bind the supplier.
2. Suppliers may include additional information at the end of the above list.

ANNEX VI

Information to be provided in the cases where end-users cannot be expected to see the product displayed, except on the internet

A. DOMESTIC OVENS

1. The information referred to in Article 4(1)(b) shall be provided in the following order:
 - (a) supplier's name or trade mark;
 - (b) supplier's model identifier, i.e. the model identifier of the specific domestic oven to which the figures quoted below apply;
 - (c) the energy efficiency class of the model for each cavity as defined in Annex I, Table 1; the declared class shall not be more favourable than the class reported in the technical documentation in Annex V;
 - (d) the energy consumption per cycle for each cavity if available in conventional mode and in fan-forced convection mode; the measured energy consumption shall be expressed in kWh (electric and gas ovens) and in MJ (gas ovens), rounded to two decimal places; the declared value shall not be lower than the value reported in the technical documentation in Annex V;
 - (e) the number of cavities; the heat source(s) per cavity; the volume of each cavity.
2. Where other information contained in the product information fiche is also provided, it shall be in the form and order specified in Annex IV.
3. The size and font in which all the information referred to in this Annex is printed or shown, shall be legible.

B. DOMESTIC RANGE HOODS

1. The information referred to in Article 4(2)(b) shall be provided in the following order:
 - (a) supplier's name or trade mark;
 - (b) supplier's model identifier, i.e. the model identifier of the specific range hood to which the figures quoted below apply;
 - (c) the energy efficiency class of the model as defined in Table 2 of Annex I; the declared class shall not be more favourable than the class reported in the technical documentation in Annex V;
 - (d) the annual energy consumption of the model in kWh, as defined in point 2.1 of Annex II; the declared value shall not be lower than the value reported in the technical documentation in Annex V;
 - (e) the fluid dynamic efficiency class of the model as defined in Table 3 of Annex I; the declared class shall not be more favourable than the class reported in the technical documentation in Annex V;
 - (f) the lighting efficiency class of the model as defined in Table 4 of Annex I; the declared class shall not be more favourable than the class reported in the technical documentation in Annex V;
 - (g) the grease filtering efficiency class of the model as defined in Table 5 of Annex I; the declared class shall not be more favourable than the class reported in the technical documentation in Annex V;

(h) the airborne acoustical A-weighted sound power emissions (weighted average value – L_{WA}) of a domestic range hood at minimum and maximum speed available in normal use, in dB rounded to the nearest integer; the declared value shall not be lower than the value reported in the technical documentation in Annex V.

2. Where other information contained in the product information fiche is also provided, it shall be in the form and order specified in Annex IV.
3. The size and font in which all the information referred to in this Annex is printed or shown, shall be legible.

ANNEX VII

Information to be provided in the case of sale, hire or hire-purchase through the internet

1. For the purpose of points 2 to 5 of this Annex the following definitions shall apply:
 - (a) 'display mechanism' means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
 - (b) 'nested display' means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;
 - (c) 'tactile screen' means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
 - (d) 'alternative text' means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.
2. The appropriate label made available by suppliers in accordance with Article 3(1)(a)(vi) or 3(1)(b)(vi) shall be shown on the display mechanism in proximity to the price of the product in accordance with the timetable set out in Article 3(3). For ovens, the appropriate label shall be shown for each cavity of the oven. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.
3. The image used for accessing the label in the case of nested display shall:
 - (a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;
 - (b) indicate on the arrow the energy efficiency class of the product in white in a font size equivalent to that of the price; and
 - (c) have one of the following two formats:



4. In the case of nested display, the sequence of display of the label shall be as follows:
 - (a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;
 - (b) the image shall link to the label;
 - (c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;
 - (d) the label shall be displayed by pop up, new tab, new page or inset screen display;
 - (e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;
 - (f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.

5. The appropriate product fiche made available by suppliers in accordance with Article 3(1)(a)(vii) or 3(1)(b)(vii) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product fiche is clearly visible and legible. The product fiche may be displayed using a nested display, in which case the link used for accessing the fiche shall clearly and legibly indicate 'Product fiche'. If nested display is used, the product fiche shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

ANNEX VIII

Procedure for product conformity checking by market surveillance authorities

For the purposes of assessing conformity of products with the requirements laid down in this Regulation, the authorities of the **Contracting Parties** shall apply the following procedure:

1. The **Contracting Party** authorities shall test one single unit per model.
2. The model shall be considered to comply with the applicable requirements:
 - (a) if the values and classes on the label and in the product fiche are not more favourable for the supplier than the values in the technical documentation, including test reports; and
 - (b) if testing of the relevant model parameters applying the tolerances listed in Table 6 shows compliance for all of those parameters.
3. If the result referred to in point 2(a) is not achieved, the model and all equivalent models shall be considered not to comply with this Regulation.
4. If the result referred to in point 2(b) is not achieved, the **Contracting Party** authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models which have been listed as equivalent product in the supplier's technical documentation.
5. The model shall be considered to comply with the applicable requirements if testing of the relevant model parameters listed in Table 6 shows compliance for all of those parameters.
6. If the result referred to in point 5 is not achieved, the model and all equivalent models shall be considered not to comply with this Regulation. The **Contracting Party** authorities shall provide the test results and other relevant information to the authorities of the other **Contracting Parties** and to the Commission within one month of the decision being taken on the non-compliance of the model.

Contracting Party authorities shall use the measurement and calculation methods set out in Annex II.

The tolerances set in this Annex shall be applied only to the verification of the measured parameters by **Contracting Party** authorities, representing the allowed variations of the measurement results of the verification tests, and shall not be used by the supplier in establishing the values in the technical documentation or in interpreting these values with a view to achieving a better labelling classification or to communicate better performance by any means.

Table 6

Verification tolerances

Measured parameters	Verification tolerances
Mass of the oven (M)	The determined value shall not exceed the declared value of M by more than 5 %.
Volume of the cavity of the oven (V)	The determined value shall not be lower than the declared value of V by more than 5 %.
$EC_{\text{electric cavity}}, EC_{\text{gas cavity}}$	The determined value shall not exceed the declared value of $EC_{\text{electric cavity}}, EC_{\text{gas cavity}}$ by more than 5 %.
W_{BEP}, W_L	The determined value shall not exceed the declared value of W_{BEP}, W_L by more than 5 %.
$Q_{\text{BEP}}, P_{\text{BEP}}$	The determined value shall not be lower than the declared value of $Q_{\text{BEP}}, P_{\text{BEP}}$ by more than 5 %.
Q_{max}	The determined value shall not exceed the declared value of Q_{max} by more than 8 %.
E_{middle}	The determined value shall not be lower than the declared value of E_{middle} by more than 5 %.
GFE_{hood}	The determined value shall not be lower than the declared value of GFE_{hood} by more than 5 %.
P_o, P_s	The determined value of power consumption P_o and P_s shall not exceed the declared value by more than 10 %. The determined value of power consumption P_o and P_s of less than or equal to 1,00 W shall not exceed the declared value by more than 0,10 W.
Sound power level L_{WA}	The determined value shall not exceed the declared value.



Delegated Regulation (EU) 665/2013 of 3 May 2013 supplementing Directive 2010/30/EU with regard to energy labelling of vacuum cleaners

Incorporated and adapted by Ministerial Council Decision 2014/02/MC-EnC of 23 September 2014 adapting certain Delegated Regulations on energy related products.

*The adaptations made by Ministerial Council Decision 2014/02/MC-EnC are highlighted in **bold and blue**.*

Whereas:

(1) Directive 2010/30/EU requires the Commission to adopt delegated acts as regards the labelling of energy related products representing significant potential for energy savings and presenting a wide disparity in performance levels with equivalent functionality.

(2) The energy used by vacuum cleaners accounts for a significant part of total energy demand in the Union. The scope for reducing the energy consumption of vacuum cleaners is substantial.

(3) Wet, wet and dry, robot, industrial, central and battery operated vacuum cleaners and floor polishers and outdoor vacuums have particular characteristics and should therefore be exempted from the scope of this Regulation.

(4) The information provided on the label should be obtained through reliable, accurate and reproducible measurement procedures, which take into account the recognised state of the art measurement methods including, where available, harmonised standards adopted by the European standardisation organisations, as listed in Annex I to Regulation (EU) 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardisation¹.

(5) This Regulation should specify a uniform design and content for the label for vacuum cleaners.

(6) In addition, this Regulation should specify requirements as to the technical documentation and the fiche for vacuum cleaners.

(7) Moreover, this Regulation should specify requirements as to the information to be provided for any form of distance selling, advertisements and technical promotional materials of vacuum cleaners.

(8) It is appropriate to provide for a review of the provisions of this Regulation taking into account technological progress,

HAS ADOPTED THIS REGULATION:

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the labelling and the provision of supplementary product information for electric mains-operated vacuum cleaners, including hybrid vacuum cleaners.

2. This Regulation shall not apply to:

- (a) wet, wet and dry, battery operated, robot, industrial, or central vacuum cleaners;
- (b) floor polishers;
- (c) outdoor vacuums.

¹ OJ L 316, 14.11.2012, p. 12.

Article 2

Definitions

In addition to the definitions set out in Article 2 of Directive 2010/30/EU, the following definitions shall apply for the purpose of this Regulation:

- (1) 'vacuum cleaner' means an appliance that removes soil from the surface to be cleaned by an airflow created by underpressure developed within the unit;
- (2) 'hybrid vacuum cleaner' means a vacuum cleaner that can be powered by both electric mains and batteries;
- (3) 'wet vacuum cleaner' means a vacuum cleaner that removes dry and/or wet material (soil) from the surface by applying water-based detergent or steam to the surface to be cleaned, and removing it, and the soil by an airflow created by underpressure developed within the unit, including types commonly known as spray-extraction vacuum cleaners;
- (4) 'wet and dry vacuum cleaner' means a vacuum cleaner designed to remove a volume of more than 2,5 litres of liquid, in combination with the functionality of a dry vacuum cleaner;
- (5) 'dry vacuum cleaner' means a vacuum cleaner designed to remove soil that is principally dry (dust, fibre, threads), including types equipped with a battery operated active nozzle;
- (6) 'battery operated active nozzle' means a cleaning head provided with an agitation device powered by batteries to assist dirt removal;
- (7) 'battery operated vacuum cleaner' means a vacuum cleaner powered only by batteries;
- (8) 'robot vacuum cleaner' means a battery operated vacuum cleaner that is capable of operating without human intervention within a defined perimeter, consisting of a mobile part and a docking station and /or other accessories to assist its operation;
- (9) 'industrial vacuum cleaner' means a vacuum cleaner designed to be part of a production process, designed for removing hazardous material, designed for removing heavy dust from building, foundry, mining or food industry, part of an industrial machine or tool and/or a commercial vacuum cleaner with a head width exceeding 0,50 m;
- (10) 'commercial vacuum cleaner' means a vacuum cleaner for professional housekeeping purposes and intended to be used by laymen, cleaning staff or contracting cleaners in office, shop, hospital and hotel environments, declared by the manufacturer as such in its Declaration of Conformity pertaining to Directive 2006/42/EC of the European Parliament and of the Council²;
- (11) 'central vacuum cleaner' means a vacuum cleaner with a fixed (not movable) underpressure source location and the hose connections located at fixed positions in the building;
- (12) 'floor polisher' means an electrical appliance that is designed to protect, smoothen and/or render shiny certain types of floors, usually operated in combination with a polishing means to be rubbed on the floor by the appliance and commonly also equipped with the auxiliary functionality of a vacuum cleaner;
- (13) 'outdoor vacuum' means an appliance that is designed for use outdoors to collect debris such as grass clippings and leaves into a collector by means of an airflow created by underpressure developed within the unit and which may contain a shredding device and may also be able to perform

² OJ L 157, 9.6.2006, p. 24.

as a blower;

(14) 'full size battery operated vacuum cleaner' means a battery operated vacuum cleaner which when fully charged, can clean 15 m² of floor area by applying 2 double strokes to each part of the floor without recharge;

(15) 'water filter vacuum cleaner' means a dry vacuum cleaner that uses more than 0,5 litre of water as the main filter medium, whereby the suction air is forced through the water entrapping the removed dry material as it passes through;

(16) 'household vacuum cleaner' means a vacuum cleaner intended for household or domestic use, declared by the manufacturer as such in its Declaration of Conformity pertaining to Directive 2006/95/EC of the European Parliament and of the Council³;

(17) 'general purpose vacuum cleaner' means a vacuum cleaner supplied with a fixed or at least one detachable nozzle designed for cleaning both carpets and hard floors or supplied with both at least one detachable nozzle designed specifically for cleaning carpets and at least one detachable nozzle for cleaning hard floors;

(18) 'hard floor vacuum cleaner' means a vacuum cleaner supplied with a fixed nozzle designed specifically for cleaning hard floors, or supplied solely with one or more detachable nozzles designed specifically for cleaning hard floors;

(19) 'carpet vacuum cleaner' means a vacuum cleaner supplied with a fixed nozzle designed specifically for cleaning carpets, or supplied solely with one or more detachable nozzles designed specifically for cleaning carpets;

(20) 'equivalent vacuum cleaner' means a model of vacuum cleaner placed on the market with the same input power, annual energy consumption, dust pick up on carpet and hard floor, dust re-emission and sound power level as another model of vacuum cleaner placed on the market under a different commercial code number by the same manufacturer.

Article 3

Responsibilities of suppliers and timetable

1. Suppliers shall ensure that from **1 January 2016**:

- (a) each vacuum cleaner is supplied with a printed label in the format and containing the information set out in Annex II;
- (b) a product fiche, as set out in Annex III, is made available;
- (c) the technical documentation as set out in Annex IV is made available on request to the authorities of the **Contracting Parties** and to the Commission;
- (d) any advertisement for a specific model of vacuum cleaner contains the energy efficiency class, if the advertisement discloses energy-related or price information;
- (e) any technical promotional material concerning a specific model of vacuum cleaner which describes its specific technical parameters includes the energy efficiency class of that model.

2. The format of the label set out in Annex II shall be applied according to the following timetable:

- (a) for vacuum cleaners placed on the market from **1 January 2016** labels shall be in accordance

³ OJ L 374, 27.12.2006, p. 10.

with label 1 of Annex II;

(b) for vacuum cleaners placed on the market from 1 September 2017 labels shall be in accordance with label 2 of Annex II.

Article 4

Responsibilities of dealers

Dealers shall ensure that from **1 January 2016**:

- (a) each model presented at the point of sale bears the label provided by suppliers in accordance with Article 3 displayed on the outside of the appliance or hung on it, in such a way as to be clearly visible;
- (b) vacuum cleaners offered for sale, hire or hire-purchase where the end-user cannot be expected to see the product displayed, as specified in Article 7 of Directive 2010/30/EU, are marketed with the information provided by suppliers in accordance with Annex V to this Regulation;
- (c) any advertisement for a specific model of vacuum cleaner contains a reference to the energy efficiency class, if the advertisement discloses energy-related or price information;
- (d) any technical promotional material concerning a specific model of vacuum cleaner which describes its specific technical parameters includes a reference to the energy efficiency class of the model.

Article 5

Measurement methods

The information to be provided under Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculations methods, which take into account the recognised state-of-the-art measurement and calculation methods, as set out in Annex VI.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure set out in Annex VII when assessing the conformity of the declared energy efficiency class, cleaning performance classes, dust re-emission class, annual energy consumption and sound power level.

Article 7

Revision

...⁴

⁴ Not applicable

Article 8

Transitional provision

This Regulation shall apply to water filter vacuum cleaners from 1 September 2017.

Article 9

Entry into force

This Regulation shall apply from 1 January 2016, except for the case specified in Article 8.⁵

The Secretariat shall monitor and review the implementation of the Delegated Regulations referred to in Article 1 in the Contracting Parties. Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by these Delegated Regulations, in the next year of the deadline for the overall implementation⁶.

This Decision (2014/02/MC-EnC) enters into force upon its adoption (23 September 2014) and it is addressed to the Contracting Parties⁷.

⁵ The text displayed here corresponds to Article 2(2) of Decision 2014/02/MC-EnC

⁶ The text displayed here corresponds to Article 2(3) of Decision 2014/02/MC-EnC

⁷ The text displayed here corresponds to Article 3(1) of Decision 2014/02/MC-EnC

ANNEX I

Energy efficiency, cleaning performance and dust re-emission classes

1. ENERGY EFFICIENCY CLASSES

The energy efficiency class of a vacuum cleaner shall be determined in accordance with its annual energy consumption as set out in Table 1. The annual energy consumption of a vacuum cleaner shall be determined in accordance with Annex VI.

Table 1

Energy efficiency classes

Energy Efficiency Class	Annual energy consumption (AE) [kWh/yr]	
	Label 1	Label 2
A+++	n/a	$AE \leq 10,0$
A++	n/a	$10,0 < AE \leq 16,0$
A+	n/a	$16,0 < AE \leq 22,0$
A	$AE \leq 28,0$	$22,0 < AE \leq 28,0$
B	$28,0 < AE \leq 34,0$	$28,0 < AE \leq 34,0$
C	$34,0 < AE \leq 40,0$	$34,0 < AE \leq 40,0$
D	$40,0 < AE \leq 46,0$	$AE > 40,0$
E	$46,0 < AE \leq 52,0$	n/a
F	$52,0 < AE \leq 58,0$	n/a
G	$AE > 58,0$	n/a

2. CLEANING PERFORMANCE CLASSES

The cleaning performance class of a vacuum cleaner shall be determined in accordance with its dust pick up (dpu) as set out in Table 2. The dust pick up of a vacuum cleaner shall be determined in accordance with Annex VI.

Table 2

Cleaning performance classes

Cleaning performance class	Dust pick up on carpet (dpu_c)	Dust pick up on hard floor (dpu_{hf})
A	$dpu_c \geq 0,91$	$dpu_{hf} \geq 1,11$
B	$0,87 \leq dpu_c < 0,91$	$1,08 \leq dpu_{hf} < 1,11$
C	$0,83 \leq dpu_c < 0,87$	$1,05 \leq dpu_{hf} < 1,08$
D	$0,79 \leq dpu_c < 0,83$	$1,02 \leq dpu_{hf} < 1,05$
E	$0,75 \leq dpu_c < 0,79$	$0,99 \leq dpu_{hf} < 1,02$
F	$0,71 \leq dpu_c < 0,75$	$0,96 \leq dpu_{hf} < 0,99$
G	$dpu_c < 0,71$	$dpu_{hf} < 0,96$

3. DUST RE-EMISSION

The dust re-emission class of a vacuum cleaner shall be determined in accordance with its dust re-emission as set out in Table 3. The dust re-emission of a vacuum cleaner shall be determined in accordance with Annex VI.

Table 3

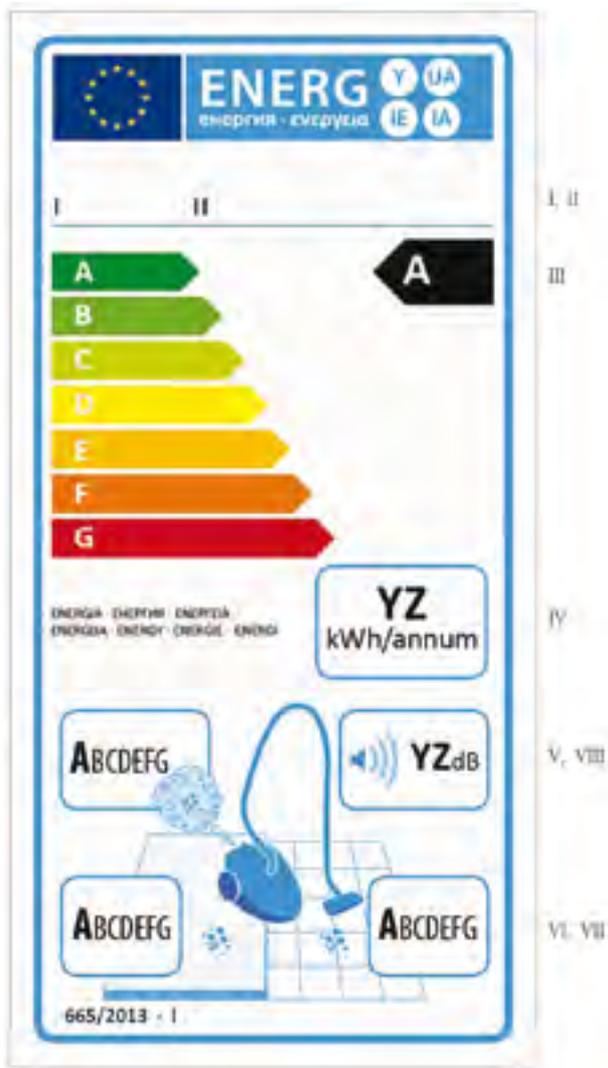
Dust re-emission classes

Dust re-emission class	Dust re-emission (dre)
A	$dre \leq 0,02 \%$
B	$0,02 \% < dre \leq 0,08 \%$
C	$0,08 \% < dre \leq 0,20 \%$
D	$0,20 \% < dre \leq 0,35 \%$
E	$0,35 \% < dre \leq 0,60 \%$
F	$0,60 \% < dre \leq 1,00 \%$
G	$dre > 1,00 \%$

ANNEX II The label

1. LABEL 1

1.1. General purpose vacuum cleaners



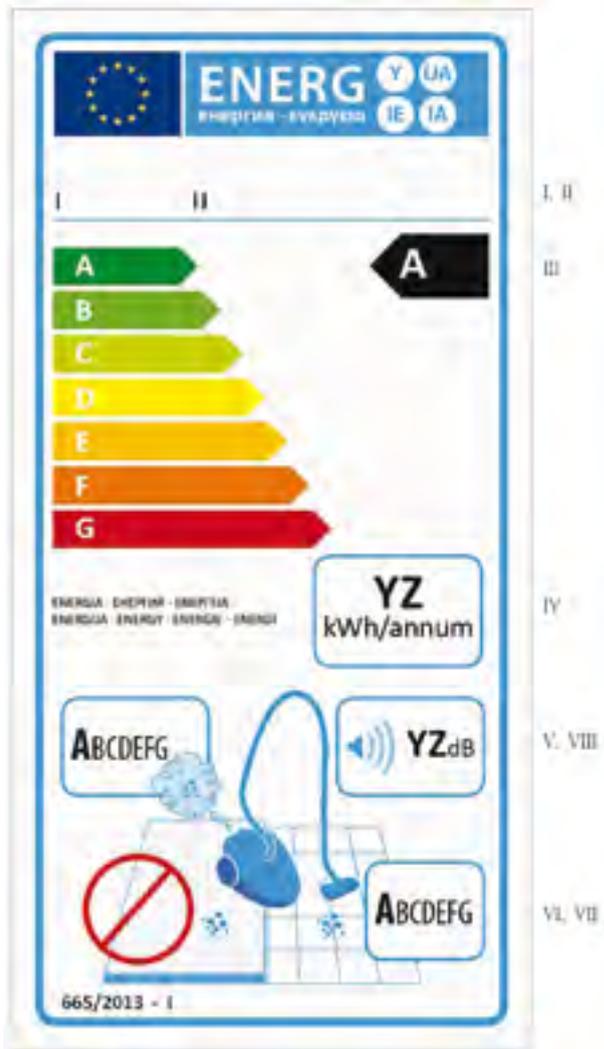
The following information shall be included in the label:

- I. Supplier's name or trade mark;
- II. Supplier's model identifier, where 'model identifier' means the code, usually alphanumeric, which distinguishes a specific vacuum cleaner model from other models with the same trade mark or supplier's name;
- III. The energy efficiency class as defined in Annex I; the head of the arrow containing the energy efficiency class of the vacuum cleaner shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;
- IV. Average annual energy consumption, as defined in Annex VI;
- V. Dust re-emission class, determined in accordance with Annex I;
- VI. Carpet cleaning performance class, determined in accordance with Annex I;
- VII. Hard floor cleaning performance class, determined in accordance with Annex I;
- VIII. Sound power level, as defined in Annex VI.

The design of the labels shall be in accordance with point 4.1 of this Annex. By way of derogation, where a model has been awarded an 'EU eco-label' under Regulation (EC) No 66/2010 of the European Parliament and of the Council⁸, a copy of the EU eco-label may be added.

⁸ OJ L 27, 30.1.2010, p. 1.

1.2. Hard floor vacuum cleaners

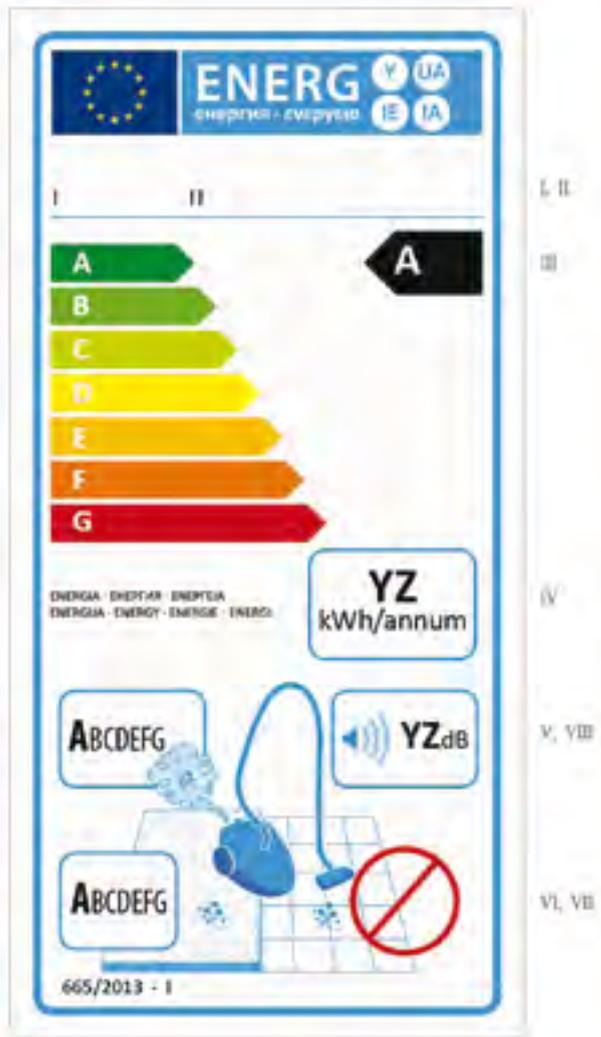


The following information shall be included in the label:

- I. Supplier's name or trade mark;
- II. Supplier's model identifier, where 'model identifier' means the code, usually alphanumeric, which distinguishes a specific vacuum cleaner model from other models with the same trade mark or supplier's name;
- III. The energy efficiency class as defined in Annex I; the head of the arrow containing the energy efficiency class of the vacuum cleaner shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;
- IV. Average annual energy consumption, as defined in Annex VI;
- V. Dust re-emission class, determined in accordance with Annex I;
- VI. Exclusion sign;
- VII. Hard floor cleaning performance class, determined in accordance with Annex I;
- VIII. Sound power level, as defined in Annex VI.

The design of the labels shall be in accordance with point 4.2 of this Annex. By way of derogation, where a model has been awarded an 'EU eco-label' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU eco-label may be added.

1.3. Carpet vacuum cleaners



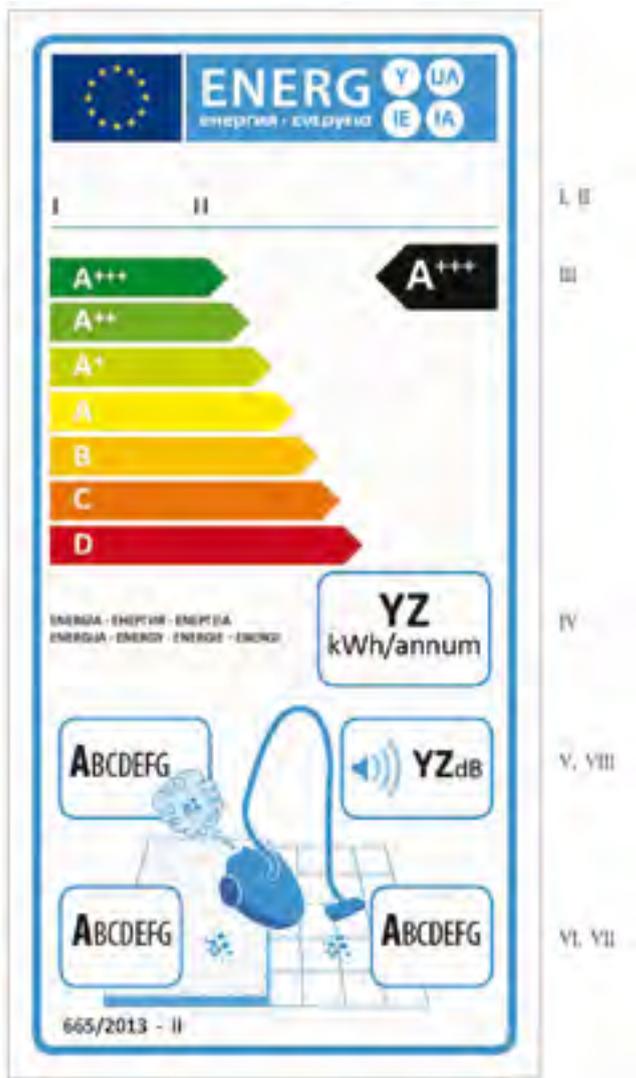
The following information shall be included in the label:

- I. Supplier's name or trade mark;
- II. Supplier's model identifier, where 'model identifier' means the code, usually alphanumeric, which distinguishes a specific vacuum cleaner model from other models with the same trade mark or supplier's name;
- III. The energy efficiency class as defined in Annex I; the head of the arrow containing the energy efficiency class of the vacuum cleaner shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;
- IV. Average annual energy consumption, as defined in Annex VI;
- V. Dust re-emission class, determined in accordance with Annex I;
- VI. Carpet cleaning performance class, determined in accordance with Annex I.
- VII. Exclusion sign;
- VIII. Sound power level, as defined in Annex VI.

The design of the labels shall be in accordance with point 4.3 of this Annex. By way of derogation, where a model has been awarded an 'EU eco-label' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU eco-label may be added.

2. LABEL 2

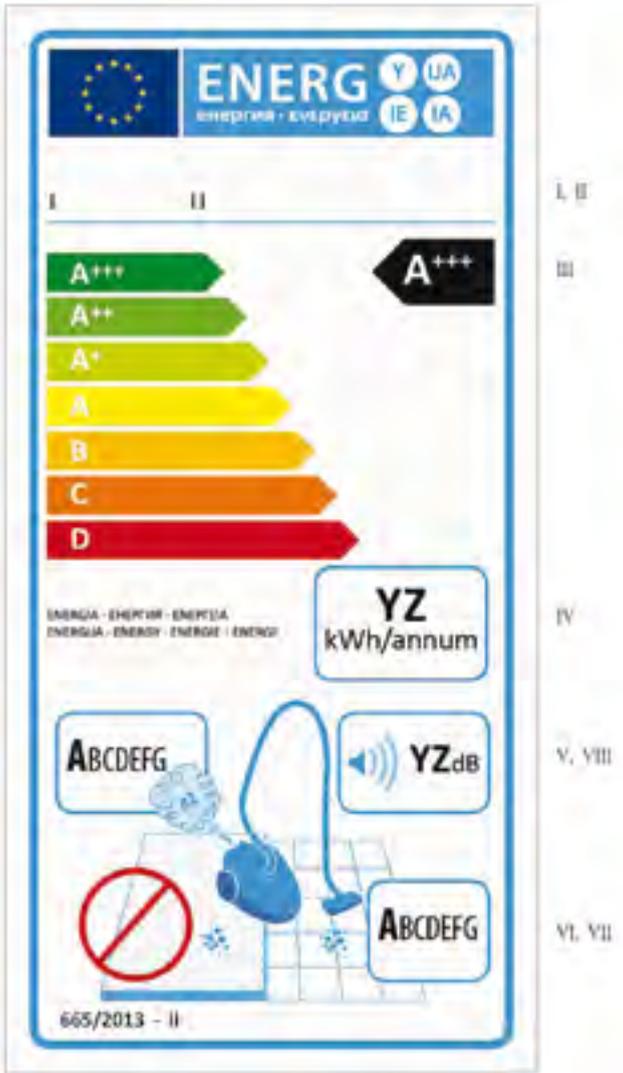
2.1. General purpose vacuum cleaners



The information listed in point 1.1 shall be included in this label.

The design of the labels shall be in accordance with point 4.1 of this Annex. By way of derogation, where a model has been awarded an 'EU eco-label' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU eco-label may be added.

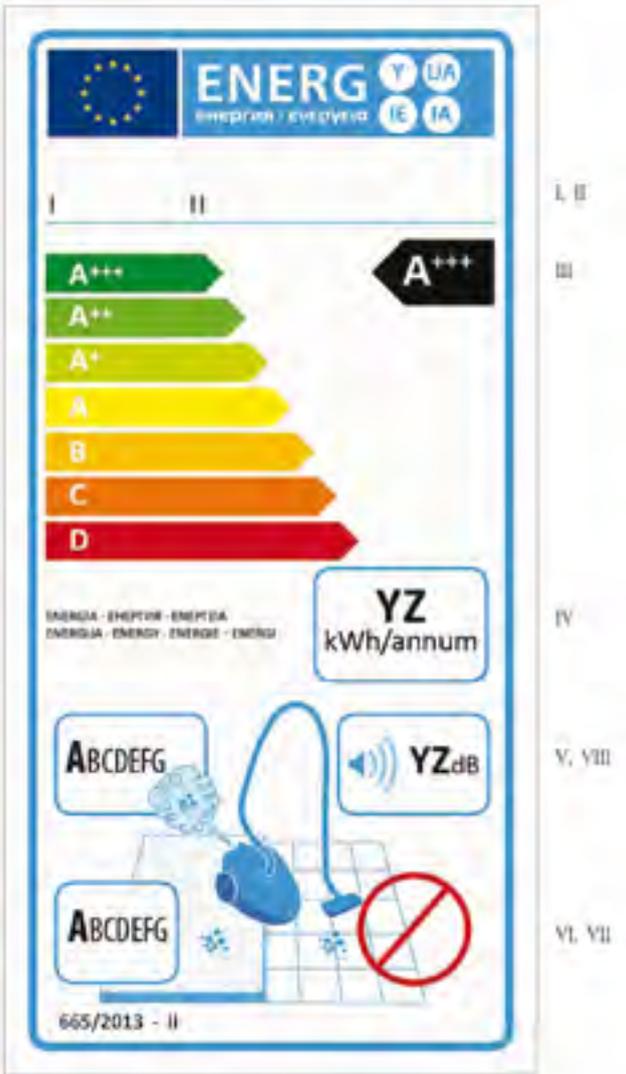
2.2. Hard floor vacuum cleaners



The information listed in point 1.2 shall be included in this label.

The design of the labels shall be in accordance with point 4.2 of this Annex. By way of derogation, where a model has been awarded an 'EU eco-label' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU eco-label may be added.

2.3. Carpet vacuum cleaners

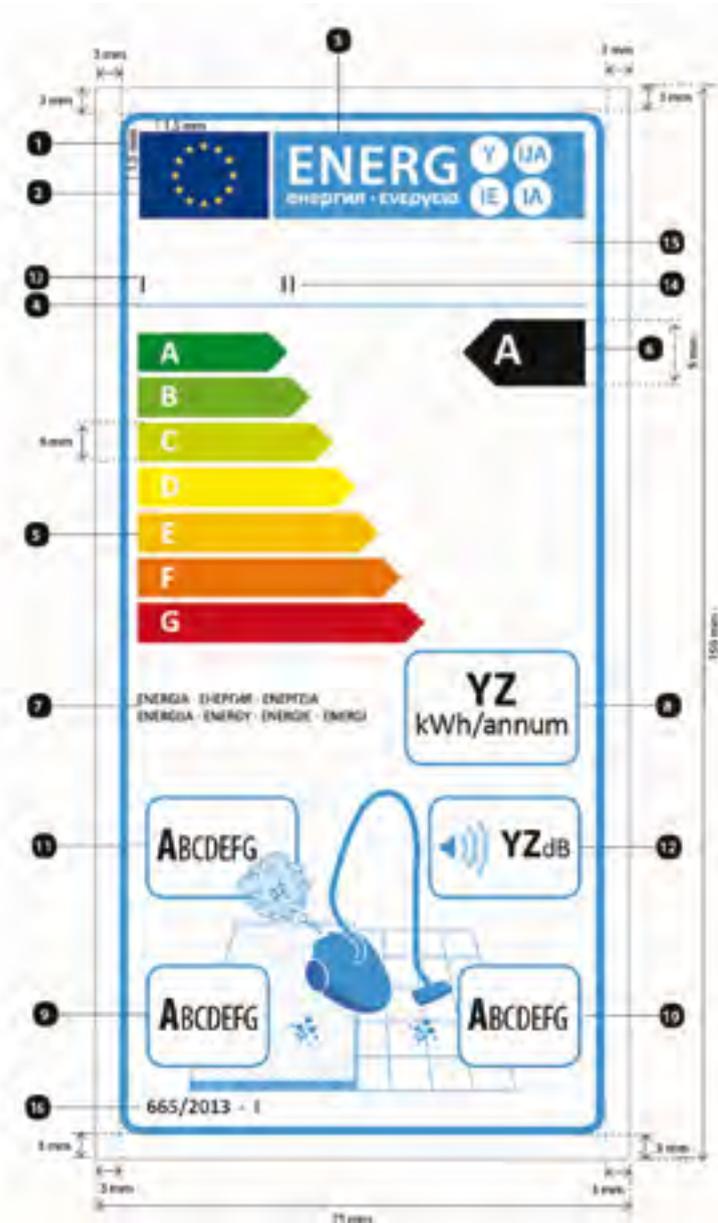


The information listed in point 1.3 shall be included in this label.

The design of the labels shall be in accordance with point 4.3 of this Annex. By way of derogation, where a model has been awarded an 'EU eco-label' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU eco-label may be added.

3. LABEL DESIGN

3.1. The design of the labels for general purpose vacuum cleaners shall be the following:



Whereby:

(a) The label shall be at least 75 mm wide and 150 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

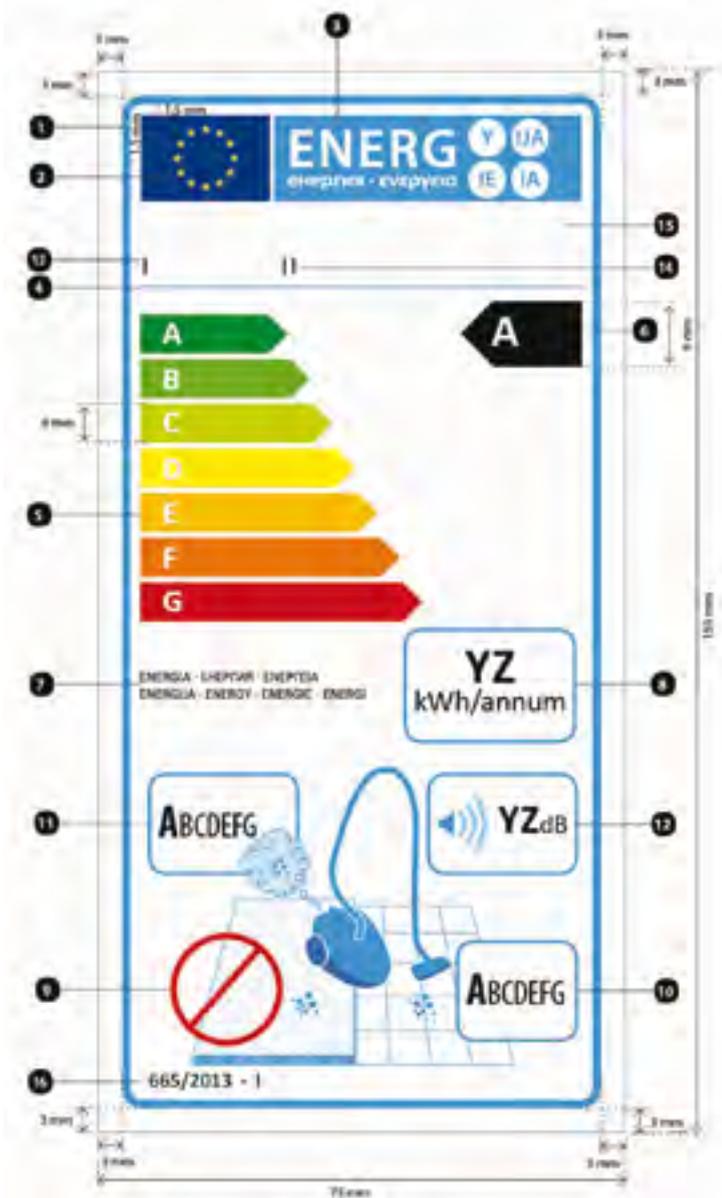
(c) Colours are coded as CMYK — cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- ❶ EU label border stroke: 3,5 pt – colour: Cyan 100 % – round corners: 2,5 mm.
- ❷ EU logo: Colours: X-80-00-00 and 00-00-X-00.
- ❸ Energy logo: Colour: X-00-00-00. Pictogram as depicted: EU logo + energy logo: width: 62 mm, height: 12 mm.
- ❹ Sub-logos border: 1 pt – colour: cyan 100 % – length: 62 mm.
- ❺ A-G and A+++–D scales:
 - Arrow: height: 6 mm, gap: 1 mm – colours:
 - Highest class: X-00-X-00
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00,
 - Text: Calibri bold 13 pt, capitals, white.
- ❻ Energy efficiency class
 - Arrow: width: 17 mm, height: 9 mm, 100% black;
 - Text: Calibri bold 18,5 pt, capitals, white; '+' symbols: Calibri bold 11 pt, white aligned on a single row.
- ❼ Energy
 - Text: Calibri regular 6 pt, capitals, black.
- ❽ Annual energy consumption in kWh/annum:
 - Value 'YZ': Calibri bold 20 pt, 100 % black;
 - 'kWh/annum': Calibri bold 12 pt, 100 % black.
- ❾ Cleaning performance on carpet:
 - Border: 1,5 pt – colour: cyan 100 % – round corners: 2,5 mm;
 - Letters: Calibri regular 13,5 pt, 100 % black; and Calibri bold 18 pt, 100 % black.
- ❿ Cleaning performance on hard floor:
 - Border: 1,5 pt – colour: cyan 100 % – round corners: 2,5 mm;
 - Letters: Calibri regular 13,5 pt, 100 % black; and Calibri bold 18 pt, 100 % black.

- 11 Dust re-emission
 - Border: 1,5 pt – colour: cyan 100 % – round corners: 2,5 mm;
 - Letters: Calibri regular 13,5 pt, 100 % black; and Calibri bold 18 pt, 100 % black.
- 12 Sound power level:
 - Border: 1,5 pt – colour: cyan 100 % – round corners: 2,5 mm;
 - Value: Calibri bold 16 pt, 100 % black;
 - 'dB': Calibri regular 11 pt, 100 % black.
- 13 Supplier's name or trademark
- 14 Supplier's model identifier
- 15 The suppliers' name or trade mark and model identifier shall fit in a space of 62 × 10 mm
- 16 Numbering of the Regulation and label:
 - Text: Calibri bold 8.

3.2. The design of the labels for hard floor vacuum cleaners shall be the following:

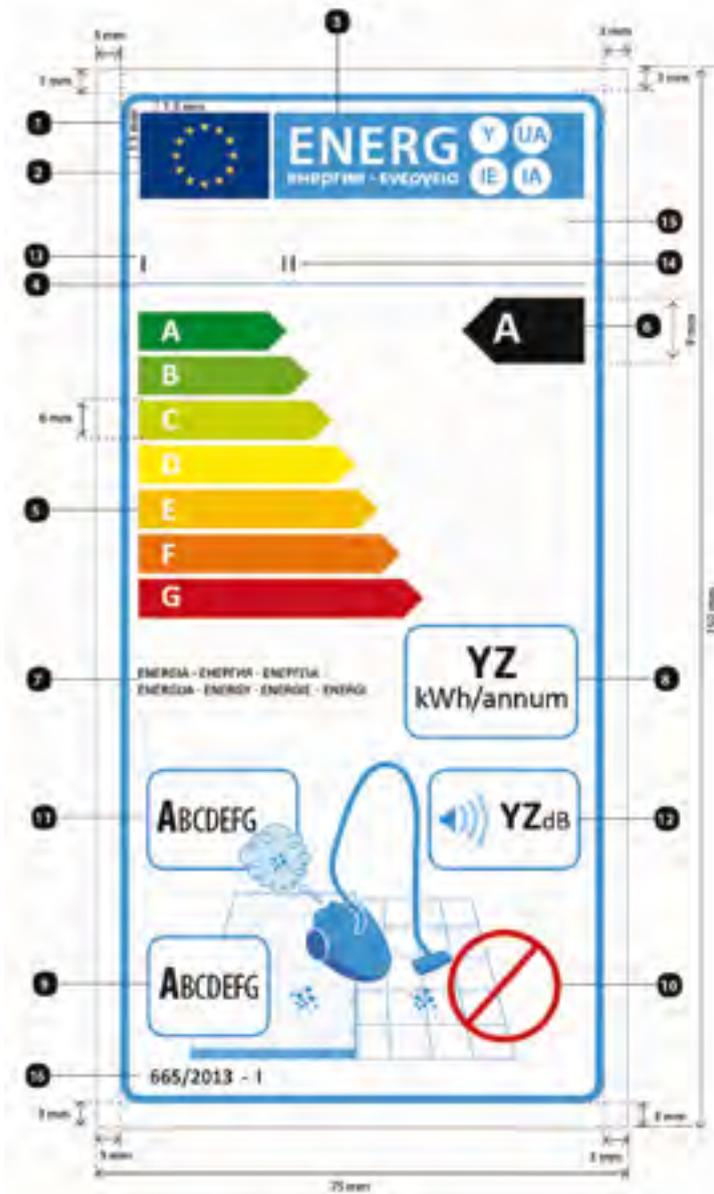


Whereby:

The design description of the label shall be in accordance with point 4.1 of this Annex except for Number 9 where the following applies:

- 9 Cleaning performance on carpet:
 - Exclusion sign: border 3 pt – colour: 00-X-X-00 (100 % red) – diameter 16 mm.

3.3. The design of the labels for carpet floor vacuum cleaners shall be the following:



Whereby:

The design description of the label shall be in accordance with point 4.1 of this Annex except for Number 10 where the following applies:

10 Cleaning performance on hard floor:

- Exclusion sign: border 3 pt – colour: 00-X-X-00 (100 % red) – diameter 16 mm.

ANNEX III

Fiche

1. The information in the product fiche of the vacuum cleaner shall be given in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trade mark;
- (b) supplier's model identifier which means the code, usually alphanumeric, which distinguishes a specific vacuum cleaner model from other models with the same trade mark or supplier's name;
- (c) the energy efficiency class, determined in accordance with Annex I;
- (d) the annual energy consumption in kWh/year, rounded to one decimal place, as defined in Annex VI; it shall be described as: 'Indicative annual energy consumption (kWh per year), based on 50 cleaning tasks. Actual annual energy consumption will depend on how the appliance is used.';
- (e) for general purpose vacuum cleaners and carpet vacuum cleaners, the carpet cleaning performance class determined in accordance with Annex I. For hard floor vacuum cleaners, the declaration 'not suitable for use on carpets with the delivered nozzle';
- (f) for general purpose vacuum cleaners and hard floor vacuum cleaners, the hard floor cleaning performance class determined in accordance with Annex I. For carpet vacuum cleaners, the declaration 'not suitable for use on hard floors with the delivered nozzle';
- (g) the dust re-emission class, determined in accordance with Annex I;
- (h) the sound power level, as defined in Annex VI;
- (i) the rated input power, as defined in Annex VI;
- (j) where the vacuum cleaner has been granted an 'EU Eco-label award' under Regulation (EC) No 66/2010, this information may be included.

2. One fiche may cover a number of vacuum cleaner models supplied by the same supplier.

3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1 not already displayed on the label shall also be provided.

ANNEX IV

Technical documentation

1. The technical documentation referred to in Article 3 shall include:
 - (a) the name and address of the supplier;
 - (b) a general description of the vacuum cleaner type and/or model and/or commercial code, sufficient for it to be unequivocally and easily identified;
 - (c) where appropriate, the references of the harmonised standards applied;
 - (d) where appropriate, the other technical standards and specifications used;
 - (e) identification and signature of the person empowered to bind the supplier;
 - (f) technical parameters measured and calculated in accordance with Annex VI:
 - (i) the specific energy consumption during carpet test, where applicable;
 - (ii) the specific energy consumption during hard floor test, where applicable;
 - (iii) the dust pick up on carpet and on hard floor as applicable;
 - (iv) the dust re-emission;
 - (v) the sound power level;
 - (vi) the rated input power;
 - (vii) specific values as indicated in points 3 and 4 of Annex VI as applicable.
 - (g) the results of calculations performed in accordance with Annex VI.
2. Where the information included in the technical documentation file for a particular vacuum cleaner model has been obtained by calculation on the basis of an equivalent vacuum cleaner, the technical documentation shall include details of such calculations and of tests undertaken by suppliers to verify the accuracy of the calculations undertaken. The technical information shall also include a list of all other equivalent vacuum cleaner models where the information was obtained on the same basis.
3. The information contained in this technical documentation may be merged with the technical documentation provided in accordance with measures under Directive 2009/125/EC.

ANNEX V

Information to be provided where end-users cannot be expected to see the product displayed

1. The information referred to in Article 4(b) shall be provided in the following order:
 - (a) the energy efficiency class, determined in accordance with Annex I;
 - (b) the annual energy consumption, as defined in Annex VI;
 - (c) for general purpose vacuum cleaners and carpet vacuum cleaners, the carpet cleaning performance class determined in accordance with Annex I. For hard floor vacuum cleaners, the declaration 'not suitable for use on carpets';
 - (d) for general purpose vacuum cleaners and hard floor vacuum cleaners, the hard floor cleaning performance class determined in accordance with Annex I. For carpet vacuum cleaners, the declaration 'not suitable for use on hard floors';
 - (e) the dust re-emission class, determined in accordance with Annex I;
 - (f) the sound power level, as defined in Annex VI.
2. Where other information contained in the product information fiche is also provided, it shall be in the form and order specified in Annex III.
3. The size and font in which the information referred in this Annex is printed or shown shall be legible.

ANNEX VI

Measurement and calculation methods

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using a reliable, accurate and reproducible methods that take into account the generally recognised state-of-the-art measurement and calculation methods, including harmonised standards the reference numbers of which have been published for the purpose in the *Official Journal of the European Union*. They shall meet the technical definitions, conditions, equations and parameters set out this Annex.

2. Technical definitions

(a) 'hard floor test' means a test of two cleaning cycles where the cleaning head of a vacuum cleaner operating at maximum suction setting passes over a wooden test plate test area with width equal to the cleaning head width and appropriate length, featuring a diagonally (45°) placed test crevice, where the time elapsed, electric power consumption and the relative position of the center of the cleaning head to the test area are continuously measured and recorded at an appropriate sample rate and where at the end of each cleaning cycle the mass decrease of the test crevice is appropriately assessed;

(b) 'test crevice' means a removable U-shaped insert with appropriate dimensions filled at the beginning of a cleaning cycle with appropriate artificial dust;

(c) 'carpet test' means a test with an appropriate number of cleaning cycles on a Wilton carpet test rig where the cleaning head of a vacuum cleaner operating at maximum suction setting passes over the test area with width equal to the cleaning head width and appropriate length, soiled with equally distributed and appropriately embedded test dust of appropriate composition, where the time elapsed, electric power consumption and the relative position of the center of the cleaning head to the test area are continuously measured and recorded at an appropriate sample rate and at the end of each cleaning cycle the mass increase of the appliance dust receptacle is appropriately assessed;

(d) 'cleaning head width' in m, at an accuracy of 3 decimal places, means the external maximum width of the cleaning head;

(e) 'cleaning cycle' means a sequence of 5 double strokes of the vacuum cleaner on a floor-specific test area ('carpet' or 'hard floor');

(f) 'double stroke' means one forward and one backward movement of the cleaning head in a parallel pattern, performed at a uniform test stroke speed and with a specified test stroke length;

(g) 'test stroke speed' in m/h means the appropriate cleaning head speed for testing, preferably realized with an electromechanical operator. Products with self-propelled cleaning heads shall try to come as close as possible to the appropriate speed, but a deviation is permitted when clearly stated in the technical documentation;

(h) 'test stroke length' in m means the length of the test area plus the cleaning head distance covered by the center of the cleaning head when moving over the appropriate acceleration zones before and after the test area;

(i) 'dust pick up' (dpu), at an accuracy of 3 decimal places, means the ratio of the mass of the artificial dust removed, determined for carpet through the mass increase of the appliance dust receptacle and

for hard floor through the mass decrease of the test crevice, after a number of double strokes of the cleaning head, to the mass of artificial dust initially applied to a test area, for carpet corrected for the specific test conditions and for hard floor corrected for the length and positioning of the test crevice;

(j) 'reference vacuum cleaner system' means electrically operated laboratory equipment used to measure the calibrated and reference dust pick-up on carpets with given air related parameters to improve the reproducibility of test results;

(k) 'rated input power' in W means the electric input power declared by the manufacturer, whereby for appliances that are enabled to function also for other purposes than vacuum cleaning only the electric input power relevant to vacuum cleaning applies;

(l) 'dust re-emission' means the ratio, expressed as a percentage at an accuracy of 2 decimal places, of the number of all dust particles of a size from 0.3 to 10 µm emitted by a vacuum cleaner to the number of all dust particles of the same size range entering the suction inlet when fed with a specific amount of dust of that particle size range. The value includes not only dust measured at the vacuum cleaner outlet but also dust emitted elsewhere either from leaks, or generated by the vacuum cleaner;

(m) 'sound power level' means airborne acoustical noise emissions, expressed in dB(A) re 1 pW and rounded to the nearest integer.

3. Annual energy consumption

The annual energy consumption AE is calculated, in kWh/year and rounded to one decimal place, as follows:

for carpet vacuum cleaners:

$$AE_c = 4 \times 87 \times 50 \times 0,001 \times ASE_c \times \left(\frac{1 - 0,20}{dpu_c - 0,20} \right)$$

for hard floor vacuum cleaners:

$$AE_{hf} = 4 \times 87 \times 50 \times 0,001 \times ASE_{hf} \times \left(\frac{1 - 0,20}{dpu_{hf} - 0,20} \right)$$

for general-purpose vacuum cleaners:

$$AE_{gp} = 0,5 \times AE_c + 0,5 \times AE_{hf}$$

Where:

- ASE_c is the average specific energy consumption in Wh/m² during carpet test, calculated as provided below;

- ASE_{hf} is the average specific energy consumption in Wh/m² during hard floor test, calculated as provided below;

- dpu_c is the dust pick-up on carpet, determined in accordance with point 4 of this Annex;

- dp_{hf} is the dust pick-up on hard floor, determined in accordance with point 4 of this Annex;
- 50 is the standard number of cleaning tasks per year;
- 87 is the standard dwelling surface to be cleaned in m²;
- 4 is the standard number of times that a vacuum cleaner passes over each point on the floor (two double strokes);
- 0,001 is the conversion factor from Wh to kWh;
- 1 is the standard dust pick-up;
- 0,20 is the standard difference between dust pick-up after five and after two double strokes.

Average specific energy consumption (ASE)

The average specific energy consumption during carpet test (ASE_c) and during hard floor test (ASE_{hf}) shall be determined as an average of the specific energy consumption (SE) of the number of cleaning cycles that constitute the carpet and hard floor test respectively. The general equation for the specific energy consumption SE in Wh/m² test area, at an accuracy of 3 decimal places, applicable for carpet, hard floor and general purpose vacuum cleaners with the appropriate suffixes, is:

$$SE = \frac{(P + NP) \times t}{A}$$

Where:

- P is the average power in W, at an accuracy of 2 decimal places, during the time in a cleaning cycle that the center of the cleaning head is moving over the test area;
- NP is the average power equivalent in W, at an accuracy of 2 decimal places, of battery operated active nozzle, if any, of the vacuum cleaner, calculated as provided below;
- t is the total time in hours, at an accuracy of 4 decimal places, in a cleaning cycle during which the centre of the cleaning head, i.e. a point halfway between the side, front and back edges of the cleaning head, is moving over the test area;
- A is the surface area in m², at an accuracy of 3 decimal places, passed over by the cleaning head in a cleaning cycle, calculated as 10 times the product of the head width and the appropriate length of test area. If a household vacuum cleaner has a head width of over 0,320 m, then the figure of 0,320 m shall be substituted for head width in this calculation.

For the hard floor tests the suffix h_f and parameter names SE_{hf} , P_{hf} , NP_{hf} , t_{hf} and A_{hf} shall be used in the above equation. For the carpet tests the suffix c and parameter names SE_c , P_c , NP_c , t_c and A_c shall be used in the above equation. For each of the cleaning cycles, values of SE_{hf} , P_{hf} , NP_{hf} , t_{hf} , A_{hf} and/or SE_c , P_c , NP_c , t_c , A_c , as applicable, shall be included in the technical documentation.

Power equivalent of battery operated active nozzles (NP)

The general equation for the average power equivalent of battery operated active nozzles NP in W, applicable for carpet, hard floor and general purpose vacuum cleaners with the appropriate suffixes, is:

$$NP = \frac{E}{t_{bat}}$$

Where:

- E is the electricity consumption in Wh at an accuracy of 3 decimal places of the battery operated active nozzle of the vacuum cleaner necessary to return the initially fully charged battery to its originally fully charged state after a cleaning cycle;
- t_{bat} is the total time in hours, at an accuracy of 4 decimal places, in a cleaning cycle in which the battery operated active nozzle of the vacuum cleaner is activated, in accordance with manufacturer's instructions;

In case the vacuum cleaner is not equipped with a battery operated active nozzle the value of NP equals zero.

For the hard floor tests the suffix hf and parameter names NP_{hf}, E_{hf}, t_{bat, hf} shall be used in the above equation. For the carpet tests the suffix c and parameter names NP_c, E_c, t_{bat, c} shall be used in the above equation. For each of the cleaning cycles, values of E_{hf}, t_{bat, hf} and/or E_c, t_{bat, c}, as applicable, shall be included in the technical documentation.

4. Dust pick-up

The dust pick-up on hard floor (dpu_{hf}) shall be determined as the average of the results of the two cleaning cycles in a hard floor test.

The dust pick-up on carpet (dpu_c) shall be determined as the average of the results of the cleaning cycles in a carpet test. To correct for deviations from a test carpet's original properties, the dust pick-up on carpet (dpu_c) shall be calculated as follows:

$$dpu_c = dpu_m \times \left(\frac{dpu_{cal}}{dpu_{ref}} \right)$$

Where:

- dpu_m is the measured dust pick-up of the vacuum cleaner;
- dpu_{cal} is the dust pick-up of the reference vacuum cleaner system measured when the test carpet was in original condition;
- dpu_{ref} is the measured dust pick-up of the reference vacuum cleaner system.

Values of dpu_m for each of the cleaning cycles, dpu_c, dpu_{cal} and dpu_{ref} shall be included in the technical documentation.

5. Dust re-emission

The dust re-emission shall be determined while the vacuum cleaner is operating at its maximum air flow.

6. Sound power level

Sound power level shall be determined on carpet.

7. Hybrid vacuum cleaners

For hybrid vacuum cleaners all measurements shall be executed with the vacuum cleaner powered by the electric mains and any battery operated active nozzle only.

ANNEX VII

Verification procedure for market surveillance purposes

For the purposes of assessing conformity with the requirements laid down in Articles 3 and 4, the authorities of the **Contracting Parties** shall apply the following verification procedure:

1. The **Contracting Party** authorities shall test one single unit per model.
2. The vacuum cleaner model shall be considered to comply with the applicable requirements if the values and classes on the label and in the product fiche correspond to the values in the technical documentation and if testing of the relevant model parameters listed in Table 4 shows compliance for all of those parameters.
3. If the result referred to in point 2 is not achieved, the **Contracting Parties** authorities shall randomly select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models which have been listed as equivalent vacuum cleaner in the manufacturer's technical documentation.
4. The vacuum cleaner model shall be considered to comply with the applicable requirements if testing of the relevant model parameters listed in Table 4 shows compliance for all of those parameters.
5. If the results referred to in point 4 are not achieved, the model and all equivalent vacuum cleaner models shall be considered not to comply with this Regulation.

Contracting Party authorities shall use the measurement and calculation methods set out in Annex VI.

The verification tolerances defined in this Annex relate only to the verification of the measured parameters by **Contracting Party** authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

Table 4

Parameter	Verification tolerances
Annual energy consumption	The determined value* is not more than 10 % higher than the declared value.
Dust pick up on carpet	The determined value* is not more than 0,03 lower than the declared value.
Dust pick up on hard floor	The determined value* is not more than 0,03 lower than the declared value.
Dust re-emission	The determined value* is not more than 15 % higher than the declared value.
Sound power level	The determined value* is not greater than the declared value.

* the arithmetic average of the values determined in the case of three additional units tested as prescribed in point 3.



Delegated Regulation (EU) 812/2013 of 18 February 2013 supplementing Directive 2010/30/EU with regard to the energy labelling of water heaters, hot water storage tanks and packages of water heater and solar device

Incorporated and adapted by Ministerial Council Decision 2014/02/MC-EnC of 23 September 2014 adapting certain Delegated Regulations on energy related products.

*The adaptations made by Ministerial Council Decision 2014/02/MC-EnC are highlighted in **bold and blue**.*

Whereas:

(1) Directive 2010/30/EU requires the Commission to adopt delegated acts as regards the labelling of energy-related products that have a significant potential for energy savings but exhibit a wide disparity in performance levels with equivalent functionality.

(2) The energy consumed by water heaters and hot water storage tanks accounts for a significant share of the total energy demand in the Union, and water heaters and hot water storage tanks with equivalent functionality exhibit a wide disparity in terms of water heating energy efficiency and standing loss. The scope for reducing their energy consumption is significant and includes combining water heaters with appropriate solar devices. Water heaters, hot water storage tanks and packages of water heaters and solar devices should therefore be covered by energy labelling requirements.

(3) Water heaters that are designed for using gaseous or liquid fuels predominantly (more than 50 %) produced from biomass have specific technical characteristics which require further technical, economic and environmental analyses. Depending on the outcome of the analyses, energy labelling requirements for those water heaters should be set at a later stage, if appropriate.

(4) Harmonised provisions should be laid down on labelling and standard product information regarding the energy efficiency of water heaters and hot water storage tanks in order to provide incentives for manufacturers to improve the energy efficiency of these products, to encourage end-users to purchase energy-efficient products and to contribute to the functioning of the internal market.

(5) As regards significant energy and cost savings for each type of water heater and for hot water storage tanks, this Regulation should introduce a new single labelling scale from A to G for conventional water heaters, solar water heaters and heat pump water heaters and for hot water storage tanks. A dynamic class A+ should be added to the classification after two years to accelerate the market penetration of the most efficient water heaters and hot water storage tanks.

(6) This Regulation should ensure that consumers get more accurate comparative information about the performance of solar water heaters and heat pump water heaters in three European climate zones.

(7) The sound power level of a water heater could be an important consideration for end-users. Information on sound power levels should be included on the labels of water heaters.

(8) The combined effect of this Regulation and Commission Regulation (EU) No 814/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for water heaters and hot water storage tanks¹ is expected to result in estimated annual energy savings of around 450 PJ (11 Mtoe) by 2020, corresponding to

¹ OJ L 153, 18.6.2010, p. 1.

about 26 Mt CO₂ emissions, compared to what would happen if no measures were taken.

(9) The information provided on the labels should be obtained through reliable, accurate and reproducible measurement and calculation procedures that take into account recognised state-of-the-art measurement and calculation methods including, where available, harmonised standards adopted by the European standardisation bodies under a request from the Commission, in accordance with the procedures laid down in the Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations and of rules on Information Society services², for the purpose of establishing ecodesign requirements.

(10) This Regulation should specify a uniform design and content of product labels for water heaters and hot water storage tanks.

(11) In addition, this Regulation should specify requirements for the product fiche and technical documentation for water heaters and hot water storage tanks.

(12) Moreover, this Regulation should specify requirements for the information to be provided for any form of distance selling of water heaters and hot water storage tanks and in any advertisements and technical promotional material for such products.

(13) In addition to the product labels and fiches for water heaters and hot water storage tanks laid down in this Regulation, a package label and fiche based on product fiches from suppliers should ensure that the end-user has easy access to information on the energy performance of water heaters in combination with solar devices. The most efficient class A+++ may be reached by such a package.

(14) It is appropriate to provide for a review of the provisions of this Regulation taking into account technological progress,

HAS ADOPTED THIS REGULATION:

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the energy labelling of, and the provision of supplementary product information on, water heaters with a rated heat output \leq 70 kW, hot water storage tanks with a storage volume \leq 500 litres and packages of water heater \leq 70 kW and solar device.

2. This Regulation shall not apply to:

- (a) water heaters specifically designed for using gaseous or liquid fuels predominantly produced from biomass;
- (b) water heaters using solid fuels;
- (c) water heaters within the scope of Directive 2010/75/EU of the European Parliament and of the Council³;
- (d) combination heaters as defined in Article 2 of Delegated Regulation (EU) No 811/2013⁴;
- (e) water heaters which do not meet at least the load profile with the smallest reference energy,

² OJ L 204, 21.7.1998, p. 37.

³ OJ L 334, 17.12.2010, p. 17.

⁴ Incorporated and adapted by Ministerial Council Decision 2014/02/MC-EnC of 23 September 2014

as specified in Annex VII, Table 3;

(f) water heaters designed for making hot drinks and/or food only.

Article 2

Definitions

In addition to the definitions set out in Article 2 of Directive 2010/30/EU, the following definitions shall apply for the purposes of this Regulation:

(1) 'water heater' means a device that:

- (a) is connected to an external supply of drinking or sanitary water;
- (b) generates and transfers heat to deliver drinking or sanitary hot water at given temperature levels, quantities and flow rates during given intervals; and
- (c) is equipped with one or more heat generators;

(2) 'heat generator' means the part of a water heater that generates the heat using one or more of the following processes:

- (a) combustion of fossil fuels and/or biomass fuels;
- (b) use of the Joule effect in electric resistance heating elements;
- (c) capture of ambient heat from an air source, water source or ground source, and/or waste heat;

(3) 'rated heat output' means the declared heat output of the water heater when providing water heating at standard rating conditions, expressed in kW;

(4) 'storage volume' (V) means the rated volume of a hot water storage tank, expressed in litres;

(5) 'standard rating conditions' means the operating conditions of water heaters for establishing the rated heat output, water heating energy efficiency and sound power level, and of hot water storage tanks for establishing the standing loss;

(6) 'biomass' means the biodegradable fraction of products, waste and residues from biological origin from agriculture (including vegetal and animal substances), forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of industrial and municipal waste;

(7) 'biomass fuel' means a gaseous or liquid fuel produced from biomass;

(8) 'fossil fuel' means a gaseous or liquid fuel of fossil origin;

(9) 'hot water storage tank' means a vessel for storing hot water for water and/or space heating purposes, including any additives, which is not equipped with any heat generator except possibly one or more back-up immersion heaters;

(10) 'back-up immersion heater' means a Joule effect electric resistance heater that is part of a hot water storage tank and generates heat only when the external heat source is disrupted (including during maintenance periods) or out of order, or that is part of a solar hot water storage tank and provides heat when the solar heat source is not sufficient to satisfy required comfort levels;

(11) 'solar device' means a solar-only system, a solar collector, a solar hot water storage tank or a pump in the collector loop, which are placed on the market separately;

(12) 'solar-only system' means a device that is equipped with one or more solar collectors and solar hot water storage tanks and possibly pumps in the collector loop and other parts, which is placed on the market as one unit and is not equipped with any heat generator except possibly one or more back-up immersion heaters;

(13) 'package of water heater and solar device' means a package offered to the end-user containing one or more water heaters and one or more solar devices;

(14) 'water heating energy efficiency' (η_{wh}) means the ratio between the useful energy provided by a water heater or a package of water heater and solar device and the energy required for its generation, expressed in %;

(15) 'sound power level' (L_{WA}) means the A-weighted sound power level, indoors and/or outdoors, expressed in dB;

(16) 'standing loss' (S) means the heating power dissipated from a hot water storage tank at given water and ambient temperatures, expressed in W;

(17) 'heat pump water heater' means a water heater that uses ambient heat from an air source, water source or ground source, and/or waste heat for heat generation. For the purposes of Annexes II to IX, additional definitions are set out in Annex I.

Article 3

Responsibilities of suppliers and timetable

1. From **1 January 2018** suppliers placing water heaters on the market and/or putting them into service, including those integrated in packages of water heater and solar device, shall ensure that:

- (a) ... for water heaters intended for use in packages of water heater and solar device, a second label complying with the format and content of information set out in point 3 of Annex III is provided for each water heater;
- (b) a product fiche, as set out in point 1 of Annex IV, is provided for each water heater, whereby: for heat pump water heaters, the product fiche is provided at least for the heat generator; for water heaters intended for use in packages of water heater and solar device, a second fiche, as set out in point 4 of Annex IV, is provided;
- (c) the technical documentation, as set out in point 1 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;
- (d) any advertisement relating to a specific water heater model and containing energy-related or price information includes a reference to the water heating energy efficiency class under average climate conditions for that model;
- (e) any technical promotional material concerning a specific water heater model and describing its specific technical parameters includes a reference to the water heating energy efficiency class under average climate conditions for that model.

From **1 January 2018** a printed label complying with the format and content of information set out in point 1.2 of Annex III shall be provided for each water heater conforming to the water heating energy efficiency classes set out in point 1 of Annex II, whereby: for heat pump water heaters, the printed label shall be provided at least in the packaging of the heat generator.

2. From **1 January 2018** suppliers placing hot water storage tanks on the market and/or putting them into service shall ensure that:

- (a) ...
- (b) a product fiche, as set out in point 2 of Annex IV, is provided;
- (c) the technical documentation, as set out in point 2 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;
- (d) any advertisement relating to a specific hot water storage tank model and containing energy-related or price information includes a reference to the energy efficiency class for that model;
- (e) any technical promotional material concerning a specific hot water storage tank model and describing its specific technical parameters includes a reference to the energy efficiency class for that model.

From **1 January 2018** a printed label complying with the format and content of information as set out in point 2.2 of Annex III shall be provided for each hot water storage tank conforming to the energy efficiency classes set out in point 2 of Annex II.

3. From **1 January 2018** suppliers placing solar devices on the market and/or putting them into service shall ensure that:

- (a) a product fiche, as set out in point 3 of Annex IV, is provided;
- (b) the technical documentation, as set out in point 3 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission.

4. From **1 January 2018** suppliers placing packages of water heater and solar device on the market and/or putting them into service shall ensure that:

- (a) a printed label complying with the format and content of information set out in point 3 of Annex III is provided for each package of water heater and solar device conforming to the water heating energy efficiency classes set out in point 1 of Annex II;
- (b) a product fiche, as set out in point 4 of Annex IV, is provided for each package of water heater and solar device;
- (c) the technical documentation, as set out in point 4 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;
- (d) any advertisement relating to a specific package of water heater and solar device model and containing energy-related or price information includes a reference to the water heating energy efficiency class under average climate conditions for that model;
- (e) any technical promotional material concerning a specific package of water heater and solar device model and describing its specific technical parameters includes a reference to the water heating energy efficiency class under average climate conditions for that model.

Article 4

Responsibilities of dealers

1. Dealers of water heaters shall ensure that:

- (a) each water heater, at the point of sale, bears the label provided by suppliers in accordance

with Article 3(1), as set out in point 1 of Annex III, on the outside of the front of the appliance, in such a way as to be clearly visible;

(b) water heaters offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the water heater displayed, are marketed with the information provided by the suppliers in accordance with point 1 of Annex VI;

(c) any advertisement relating to a specific water heater model and containing energy-related or price information includes a reference to the water heating energy efficiency class under average climate conditions for that model;

(d) any technical promotional material concerning a specific water heater model and describing its specific technical parameters includes a reference to the water heating energy efficiency class under average climate conditions for that model.

2. Dealers of hot water storage tanks shall ensure that:

(a) each hot water storage tank, at the point of sale, bears the label provided by suppliers in accordance with Article 3(2), as set out in point 2 of Annex III, on the outside of the front of the appliance, in such a way as to be clearly visible;

(b) hot water storage tanks offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the hot water storage tank displayed, are marketed with the information provided by the suppliers in accordance with point 2 of Annex VI;

(c) any advertisement relating to a specific hot water storage tank model and containing energy-related or price information includes a reference to the energy efficiency class for that model;

(d) any technical promotional material concerning a specific hot water storage tank model and describing its specific technical parameters includes a reference to the energy efficiency class for that model.

3. Dealers of packages of water heater and solar device shall ensure, based on the label and fiches provided by suppliers in accordance with Article 3(1), (3) and (4), that:

(a) any offer for a specific package includes the water heating energy efficiency and the water heating energy efficiency class for that package under average, colder or warmer climate conditions, as applicable, by displaying with the package the label set out in point 3 of Annex III and providing the fiche set out in point 4 of Annex IV, duly filled in according to the characteristics of that package;

(b) packages of water heater and solar device offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the package of water heater and solar device displayed, are marketed with the information provided in accordance with point 3 of Annex VI;

(c) any advertisement relating to a specific package of water heater and solar device model and containing energy-related or price information includes a reference to the water heating energy efficiency class under average climate conditions for that model;

(d) any technical promotional material concerning a specific package of water heater and solar device model and describing its specific technical parameters includes a reference to the water heating energy efficiency class under average climate conditions for that model.

Article 5

Measurement and calculation methods

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation methods which take into account the recognised state-of-the-art measurement and calculation methods, as set out in Annex VII and Annex VIII.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure set out in Annex IX when assessing the conformity of the declared water heating energy efficiency class, water heating energy efficiency, annual energy consumption and sound power level of water heaters and the declared energy efficiency class and standing loss of hot water storage tanks.

Article 7

Review

...⁵

Article 8

Entry into force and application

This Regulation shall apply from 1 January 2016⁶.

The Secretariat shall monitor and review the implementation of the Delegated Regulations referred to in Article 1 in the Contracting Parties. Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by these Delegated Regulations, in the next year of the deadline for the overall implementation⁷.

This Decision (2014/02/MC-EnC) enters into force upon its adoption (23 September 2014) and it is addressed to the Contracting Parties⁸.

⁵ Not applicable

⁶ The text displayed here corresponds to Article 2(2) of Decision 2014/02/MC-EnC

⁷ The text displayed here corresponds to Article 2(3) of Decision 2014/02/MC-EnC

⁸ The text displayed here corresponds to Article 3(1) of Decision 2014/02/MC-EnC

ANNEX I

Definitions applicable for Annexes II to IX

For the purposes of Annexes II to IX, the following definitions shall apply:

- (1) 'conventional water heater' means a water heater that generates heat using the combustion of fossil and/or biomass fuels and/or the Joule effect in electric resistance heating elements;
- (2) 'solar water heater' means a water heater equipped with one or more solar collectors, solar hot water storage tanks, heat generators and possibly pumps in the collector loop and other parts, a solar water heater is placed on the market as one unit;
- (3) 'load profile' means a given sequence of water draw-offs, as specified in Annex VII, Table 3; each water heater meets at least one load profile;
- (4) 'water draw-off' means a given combination of useful water flow rate, useful water temperature, useful energy content and peak temperature, as specified in Annex VII, Table 3;
- (5) 'useful water flow rate' (f) means the minimum flow rate, expressed in litres per minute, for which hot water is contributing to the reference energy, as specified in Annex VII, Table 3;
- (6) 'useful water temperature' (T_m) means the water temperature, expressed in degrees Celsius, at which hot water starts contributing to the reference energy, as specified in Annex VII, Table 3;
- (7) 'useful energy content' (Q_{tap}) means the energy content of hot water, expressed in kWh, provided at a temperature equal to, or above, the useful water temperature, and at water flow rates equal to, or above, the useful water flow rate, as specified in Annex VII, Table 3;
- (8) 'energy content of hot water' means the product of the specific heat capacity of water, the average temperature difference between the hot water output and cold water input, and the total mass of the hot water delivered;
- (9) 'peak temperature' (T_p) means the minimum water temperature, expressed in degrees Celsius, to be achieved during water draw-off, as specified in Annex VII, Table 3;
- (10) 'reference energy' (Q_{ref}) means the sum of the useful energy content of water draw-offs, expressed in kWh, in a particular load profile, as specified in Annex VII, Table 3;
- (11) 'maximum load profile' means the load profile with the greatest reference energy that a water heater is able to provide while fulfilling the temperature and flow rate conditions of that load profile;
- (12) 'declared load profile' means the load profile applied when determining water heating energy efficiency;
- (13) 'conversion coefficient' (CC) means a coefficient reflecting the estimated 40 % average EU generation efficiency referred to in Directive 2012/27/EU of the European Parliament and of the Council; the value of the conversion coefficient is $CC = 2,5$;
- (14) 'daily electricity consumption' (Q_{elec}) means the consumption of electricity over 24 consecutive hours under the declared load profile and under given climate conditions, expressed in kWh in terms of final energy;
- (15) 'daily fuel consumption' (Q_{fuel}) means the consumption of fuels over 24 consecutive hours under the declared load profile and under given climate conditions, expressed in kWh in terms of GCV, and for the purposes of point 4 in Annex VIII expressed in GJ in terms of GCV;
- (16) 'gross calorific value' (GCV) means the total amount of heat released by a unit quantity of fuel

- when it is burned completely with oxygen and when the products of combustion are returned to ambient temperature; this quantity includes the condensation heat of any water vapour contained in the fuel and of the water vapour formed by the combustion of any hydrogen contained in the fuel;
- (17) 'smart control' means a device that automatically adapts the water heating process to individual usage conditions with the aim of reducing energy consumption;
- (18) 'smart control compliance' (*smart*) means the measure of whether a water heater equipped with smart controls fulfils the criterion set out in point 5 of Annex VIII;
- (19) 'smart control factor' (*SCF*) means the water heating energy efficiency gain due to smart control under the conditions set out in point 3 of Annex VII;
- (20) 'weekly electricity consumption with smart controls' ($Q_{elec,week,smart}$) means the weekly electricity consumption of a water heater with the smart control function enabled, expressed in kWh in terms of final energy;
- (21) 'weekly fuel consumption with smart controls' ($Q_{fuel,week,smart}$) means the weekly fuel consumption of a water heater with the smart control function enabled, expressed in kWh in terms of GCV;
- (22) 'weekly electricity consumption without smart controls' ($Q_{elec,week}$) means the weekly electricity consumption of a water heater with the smart control function disabled, expressed in kWh in terms of final energy;
- (23) 'weekly fuel consumption without smart controls' ($Q_{fuel,week}$) means the weekly fuel consumption of a water heater with the smart control function disabled, expressed in kWh in terms of GCV;
- (24) 'annual electricity consumption' (*AEC*) means the annual electricity consumption of a water heater under the declared load profile and under given climate conditions, expressed in kWh in terms of final energy;
- (25) 'annual fuel consumption' (*AFC*) means the annual fossil and/or biomass fuel consumption of a water heater under the declared load profile and under given climate conditions, expressed in GJ in terms of GCV;
- (26) 'ambient correction term' (Q_{cor}) means a term which takes into account the fact that the place where the water heater is installed is not an isothermal place, expressed in kWh;
- (27) 'standby heat loss' (P_{stby}) means the heat loss of a heat pump water heater in operating modes without heat demand, expressed in kW;
- (28) 'average climate conditions', 'colder climate conditions' and 'warmer climate conditions' mean the temperatures and global solar irradiance conditions characteristic for the cities of Strasbourg, Helsinki and Athens, respectively;
- (29) 'annual energy consumption' (Q_{total}) means the annual energy consumption of a solar water heater, expressed in kWh in terms of primary energy and/or kWh in terms of GCV;
- (30) 'annual non-solar heat contribution' (Q_{nonsol}), means the annual contribution of electricity (expressed in kWh in terms of primary energy) and/or fuels (expressed in kWh in terms of GCV) to the useful heat output of a solar water heater or a package of water heater and solar device, taking into account the annual amount of heat captured by the solar collector and the heat losses of the solar hot water storage tank;
- (31) 'solar collector' means a device designed to absorb global solar irradiance and to transfer the heat energy so produced to a fluid passing through it; it is characterised by the collector aperture

area, the zero-loss efficiency, the first order coefficient, the second-order coefficient and the incidence angle modifier;

(32) 'global solar irradiance' means the rate of total incoming solar energy, both direct and diffuse, on a collector plane with an inclination of 45 degrees and southward orientation at the Earth's surface, expressed in W/m^2 ;

(33) 'collector aperture area' (A_{sol}) means the maximum projected area through which unconcentrated solar radiation enters the collector, expressed in m^2 ;

(34) 'zero-loss efficiency' (η_0) means the efficiency of the solar collector, when the solar collector mean fluid temperature is equal to the ambient temperature;

(35) 'first-order coefficient' (a_1) means the heat loss coefficient of a solar collector, expressed in $\text{W}/(\text{m}^2 \text{K})$;

(36) 'second-order coefficient' (a_2) means the coefficient measuring the temperature dependence of the first order coefficient, expressed in $\text{W}/(\text{m}^2 \text{K}^2)$;

(37) 'incidence angle modifier' (*IAM*) means the ratio of the useful heat output of the solar collector at a given incidence angle and its useful heat output at an incidence angle of 0 degrees;

(38) 'incidence angle' means the angle between the direction to the sun and the direction perpendicular to the solar collector aperture;

(39) 'solar hot water storage tank' means a hot water storage tank storing heat energy produced by one or more solar collectors;

(40) 'heat generator water heating energy efficiency' ($\eta_{wh,nonsol}$) means the water heating energy efficiency of a heat generator which is part of a solar water heater, expressed in %, established under average climate conditions and without using solar heat input;

(41) 'auxiliary electricity consumption' (Q_{aux}), for the purpose of Figure 1 in Annex IV referred to as 'auxiliary electricity', means the annual electricity consumption of a solar water heater or a solar-only system that is due to the pump power consumption and the standby power consumption, expressed in kWh in terms of final energy;

(42) 'pump power consumption' (*solpump*) means the rated electrical power consumption of the pump in the collector loop of a solar water heater or solar-only system, expressed in W;

(43) 'standby power consumption' (*solstandby*) means the rated electrical power consumption of a solar water heater or solar-only system when the pump and the heat generator are inactive, expressed in W;

(44) 'model identifier' means the code, usually alphanumeric, which distinguishes a specific water heater, hot water storage tank, solar device or package of water heater and solar device model from other models with the same trade mark, supplier's name or dealer's name.

ANNEX II

Energy efficiency classes

1. WATER HEATING ENERGY EFFICIENCY CLASSES OF WATER HEATERS

The water heating energy efficiency class of a water heater shall be determined on the basis of its water heating energy efficiency as set out in Table 1.

The water heating energy efficiency of a water heater shall be calculated in accordance with point 3 of Annex VIII, for solar water heaters and heat pump water heaters under average climate conditions.

Table 1

Water heating energy efficiency classes of water heaters, categorised by declared load profiles, η_{wh} in %

	3XS	XXS	XS	S	M	L	XL	XXL
A+++	$\eta_{wh} \geq 62$	$\eta_{wh} \geq 62$	$\eta_{wh} \geq 69$	$\eta_{wh} \geq 90$	$\eta_{wh} \geq 163$	$\eta_{wh} \geq 188$	$\eta_{wh} \geq 200$	$\eta_{wh} \geq 213$
A++	$53 \leq \eta_{wh} < 62$	$53 \leq \eta_{wh} < 62$	$61 \leq \eta_{wh} < 69$	$72 \leq \eta_{wh} < 90$	$130 \leq \eta_{wh} < 163$	$150 \leq \eta_{wh} < 188$	$160 \leq \eta_{wh} < 200$	$170 \leq \eta_{wh} < 213$
A+	$44 \leq \eta_{wh} < 53$	$44 \leq \eta_{wh} < 53$	$53 \leq \eta_{wh} < 61$	$55 \leq \eta_{wh} < 72$	$100 \leq \eta_{wh} < 130$	$115 \leq \eta_{wh} < 150$	$123 \leq \eta_{wh} < 160$	$131 \leq \eta_{wh} < 170$
A	$35 \leq \eta_{wh} < 44$	$35 \leq \eta_{wh} < 44$	$38 \leq \eta_{wh} < 53$	$38 \leq \eta_{wh} < 55$	$65 \leq \eta_{wh} < 100$	$75 \leq \eta_{wh} < 115$	$80 \leq \eta_{wh} < 123$	$85 \leq \eta_{wh} < 131$
B	$32 \leq \eta_{wh} < 35$	$32 \leq \eta_{wh} < 35$	$35 \leq \eta_{wh} < 38$	$35 \leq \eta_{wh} < 38$	$39 \leq \eta_{wh} < 65$	$50 \leq \eta_{wh} < 75$	$55 \leq \eta_{wh} < 80$	$60 \leq \eta_{wh} < 85$
C	$29 \leq \eta_{wh} < 32$	$29 \leq \eta_{wh} < 32$	$32 \leq \eta_{wh} < 35$	$32 \leq \eta_{wh} < 35$	$36 \leq \eta_{wh} < 39$	$37 \leq \eta_{wh} < 50$	$38 \leq \eta_{wh} < 55$	$40 \leq \eta_{wh} < 60$
D	$26 \leq \eta_{wh} < 29$	$26 \leq \eta_{wh} < 29$	$29 \leq \eta_{wh} < 32$	$29 \leq \eta_{wh} < 32$	$33 \leq \eta_{wh} < 36$	$34 \leq \eta_{wh} < 37$	$35 \leq \eta_{wh} < 38$	$36 \leq \eta_{wh} < 40$
E	$22 \leq \eta_{wh} < 26$	$23 \leq \eta_{wh} < 26$	$26 \leq \eta_{wh} < 29$	$26 \leq \eta_{wh} < 29$	$30 \leq \eta_{wh} < 33$	$30 \leq \eta_{wh} < 34$	$30 \leq \eta_{wh} < 35$	$32 \leq \eta_{wh} < 36$
F	$19 \leq \eta_{wh} < 22$	$20 \leq \eta_{wh} < 23$	$23 \leq \eta_{wh} < 26$	$23 \leq \eta_{wh} < 26$	$27 \leq \eta_{wh} < 30$	$27 \leq \eta_{wh} < 30$	$27 \leq \eta_{wh} < 30$	$28 \leq \eta_{wh} < 32$
G	$\eta_{wh} < 19$	$\eta_{wh} < 20$	$\eta_{wh} < 23$	$\eta_{wh} < 23$	$\eta_{wh} < 27$	$\eta_{wh} < 27$	$\eta_{wh} < 27$	$\eta_{wh} < 28$

2. ENERGY EFFICIENCY CLASSES OF HOT WATER STORAGE TANKS

The energy efficiency class of a hot water storage tank shall be determined on the basis of its standing loss as set out in Table 2.

Table 2

Energy efficiency classes of hot water storage tanks

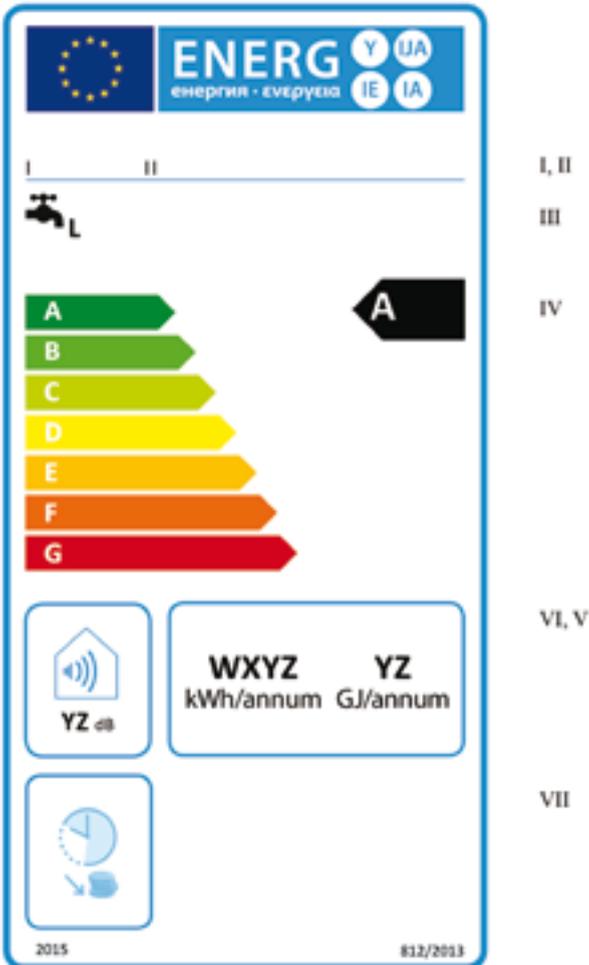
Energy efficiency class	Standing loss S in Watts, with storage volume V in litres
A+	$S < 5,5 + 3,16 \cdot V^{0,4}$
A	$5,5 + 3,16 \cdot V^{0,4} \leq S < 8,5 + 4,25 \cdot V^{0,4}$
B	$8,5 + 4,25 \cdot V^{0,4} \leq S < 12 + 5,93 \cdot V^{0,4}$
C	$12 + 5,93 \cdot V^{0,4} \leq S < 16,66 + 8,33 \cdot V^{0,4}$
D	$16,66 + 8,33 \cdot V^{0,4} \leq S < 21 + 10,33 \cdot V^{0,4}$
E	$21 + 10,33 \cdot V^{0,4} \leq S < 26 + 13,66 \cdot V^{0,4}$
F	$26 + 13,66 \cdot V^{0,4} \leq S < 31 + 16,66 \cdot V^{0,4}$
G	$S > 31 + 16,66 \cdot V^{0,4}$

ANNEX III The labels

1. WATER HEATERS

1.1. Label 1

1.1.1. Conventional water heaters in water heating energy efficiency classes A to G



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII;

IV. the water heating energy efficiency class, determined in accordance with point 1 of Annex II; the head of the arrow containing the water heating energy efficiency class of the water heater shall be placed at the same height as the head of the relevant energy efficiency class;

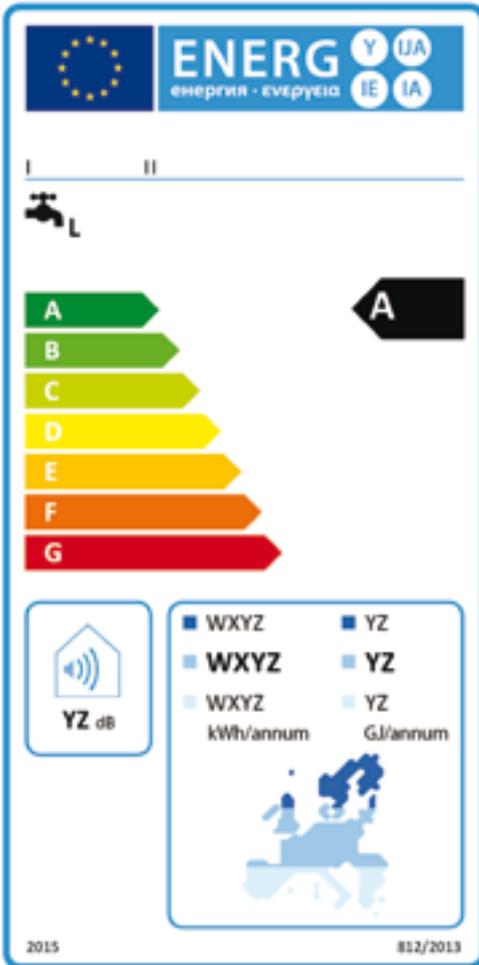
V. the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of *GCV*, rounded to the nearest integer and calculated in accordance with point 4 of Annex VIII;

VI. the sound power level L_{WA} , indoors, in dB, rounded to the nearest integer;

VII. for conventional water heaters able to work only during off-peak hours, the pictogram referred to in point 4(d)(10) of this Annex may be added.

(b) The design aspects of the label for conventional water heaters shall be in accordance with point 4 of this Annex.

1.1.2. Solar water heaters in water heating energy efficiency classes A to G



I, II

III

IV

VII, V

VI

(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII;

IV. the water heating energy efficiency class under average climate conditions, determined in accordance with point 1 of Annex II; the head of the arrow containing the water heating energy efficiency class of the water heater shall be placed at the same height as the head of the relevant energy efficiency class;

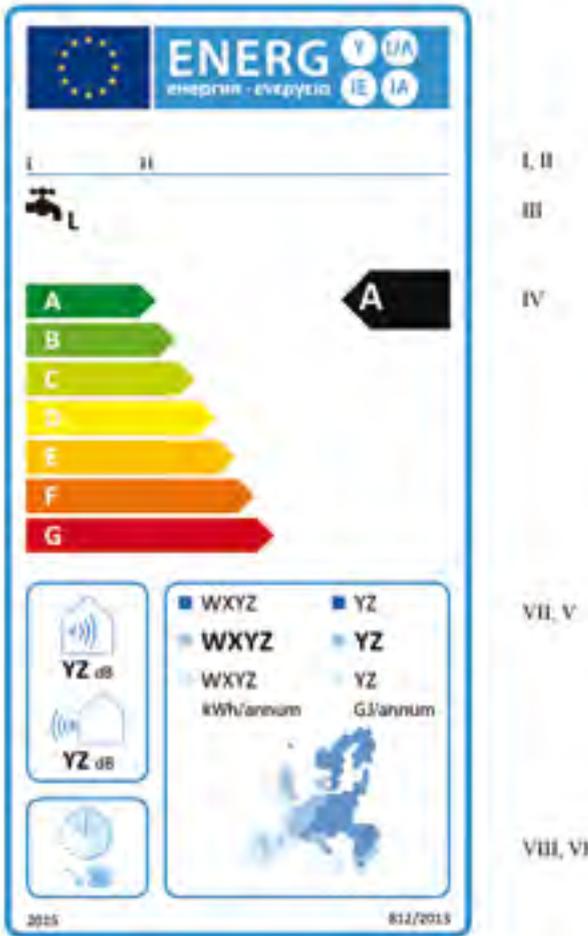
V. the annual electricity consumption in kWh in terms of final energy or the annual fuel consumption in GJ in terms of GCV, under average, colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VIII;

VI. European solar map displaying three indicative global solar irradiance zones;

VII. the sound power level L_{WA} , indoors, in dB, rounded to the nearest integer.

(b) The design aspects of the label for solar water heaters shall be in accordance with point 5 of this Annex.

1.1.3. Heat pump water heaters in water heating energy efficiency classes A to G



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII;

IV. the water heating energy efficiency class under average climate conditions, determined in accordance with point 1 of Annex II; the head of the arrow containing the water heating energy efficiency class of the water heater shall be placed at the same height as the head of the relevant energy efficiency class;

V. the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of GCV, under average, colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VIII;

VI. European temperature map displaying three indicative temperature zones;

VII. the sound power level L_{WA} , indoors (if applicable) and outdoors, in dB, rounded to the nearest integer;

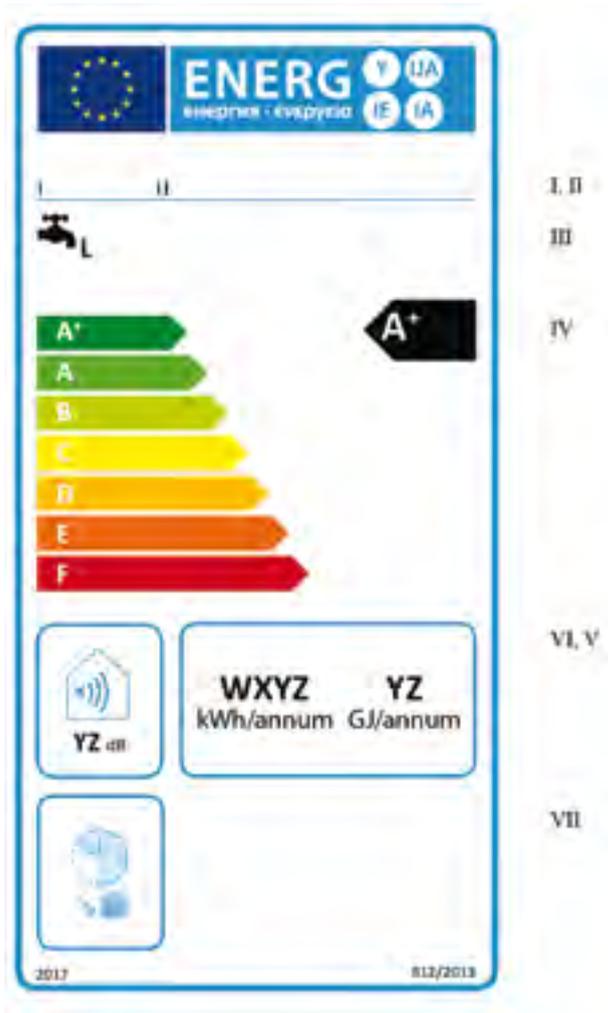
VIII. for heat pump water heaters able to work only during off-peak hours, the pictogram referred to in point 6(d)(11) of this Annex may be added.

(b) The design aspects of the label for heat pump water heaters shall be in accordance with point 6 of this Annex. By way of exception, where a model has been granted an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council⁹, a copy of the EU Ecolabel may be added.

⁹ OJ L 27, 30.1.2010, p. 1.

1.2. Label 2

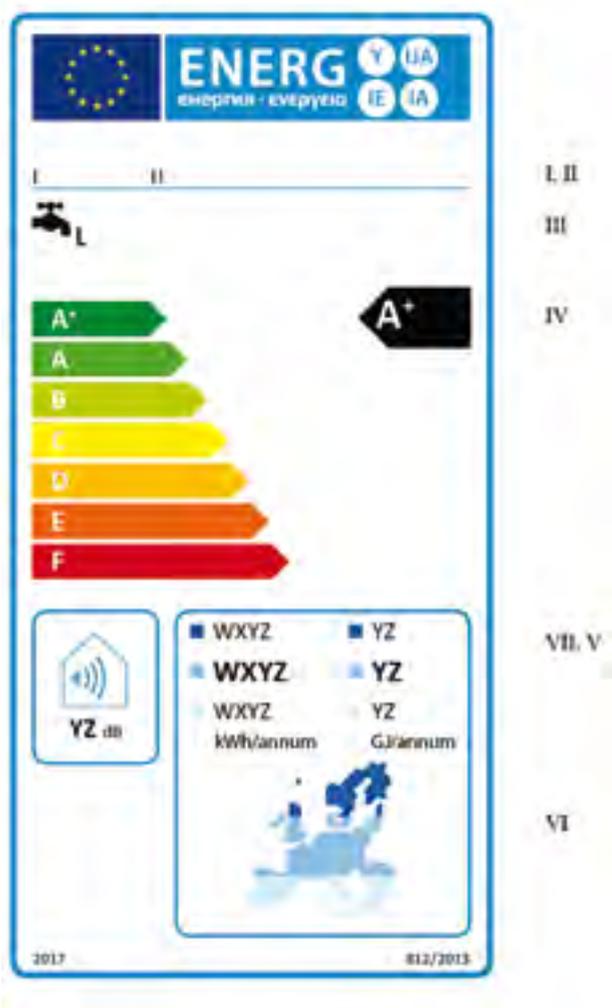
1.2.1. Conventional water heaters in water heating energy efficiency classes A+ to F



(a) The information listed in point 1.1.1(a) of this Annex shall be included in the label.

(b) The design aspects of the label for conventional water heaters shall be in accordance with point 4 of this Annex.

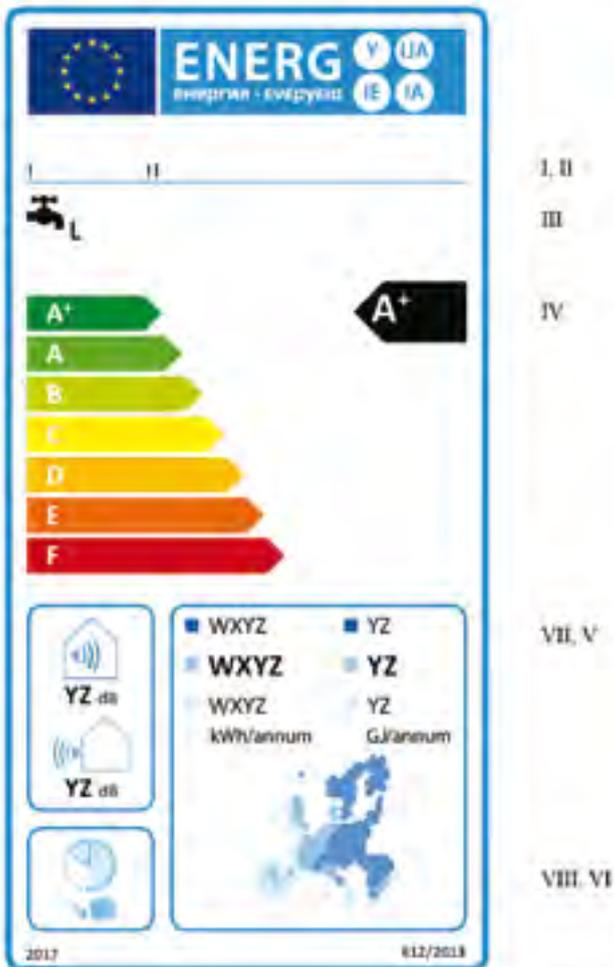
1.2.2.Solar water heaters in water heating energy efficiency classes A+ to F



(a) The information listed in point 1.1.2(a) of this Annex shall be included in the label.

(b) The design aspects of the label for solar water heaters shall be in accordance with point 5 of this Annex.

1.2.3. Heat pump water heaters in water heating energy efficiency classes A+ to F

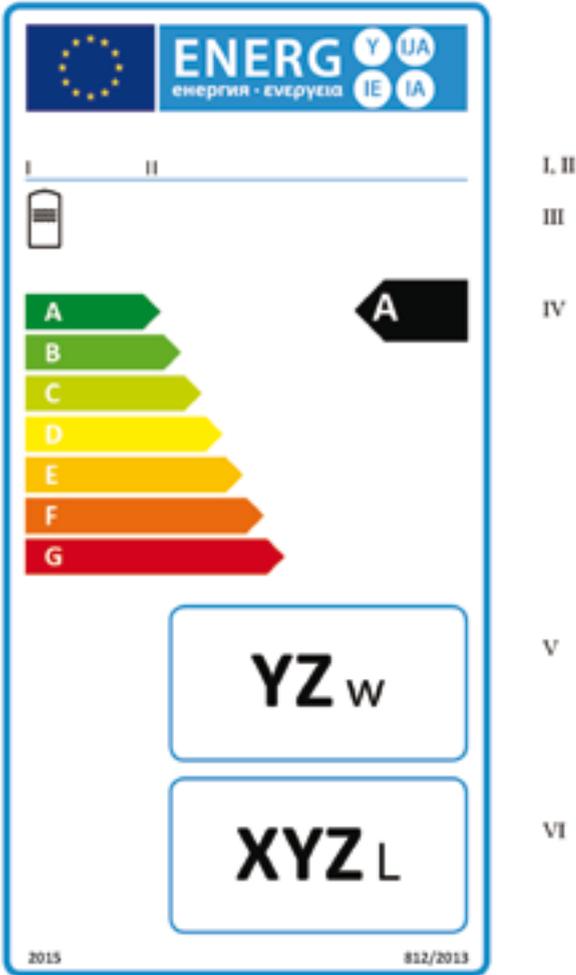


(a) The information listed in point 1.1.3(a) of this Annex shall be included in the label.

(b) The design aspects of the label for heat pump water heaters shall be in accordance with point 6 of this Annex.

2. HOT WATER STORAGE TANKS

2.1. Label 1 for hot water storage tanks in energy efficiency classes A to G

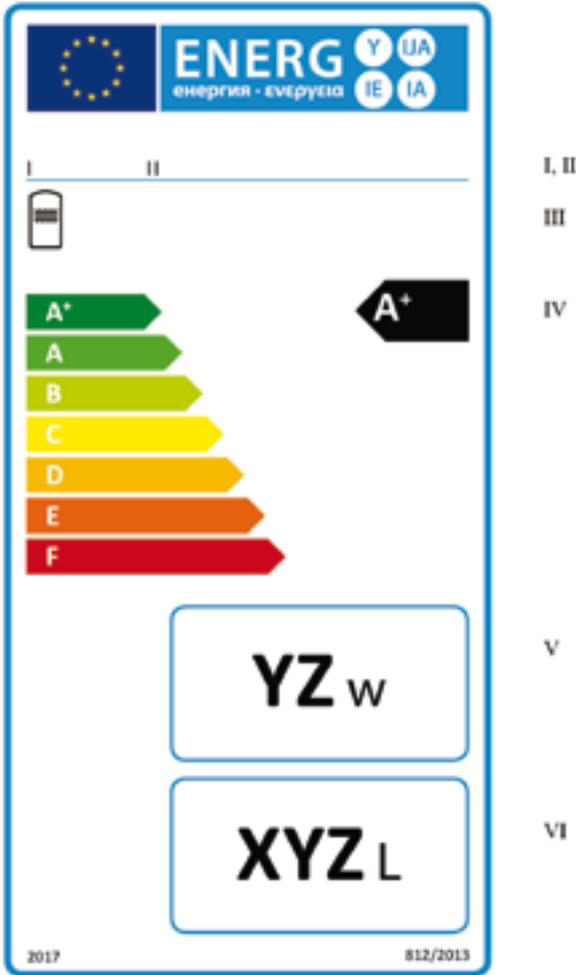


(a) The following information shall be included in the label:

- I. supplier's name or trade mark;
- II. supplier's model identifier;
- III. the water storage function;
- IV. the energy efficiency class, determined in accordance with point 2 of Annex II; the head of the arrow containing the energy efficiency class of the hot water storage tank shall be placed at the same height as the head of the relevant energy efficiency class;
- V. the standing loss in W , rounded to the nearest integer;
- VI. the hot water storage tank volume in litres, rounded to the nearest integer.

(b) The design aspects of the label for hot water storage tanks shall be in accordance with point 7 of this Annex.

2.2. Label 2 for hot water storage tanks in energy efficiency classes A+ to F

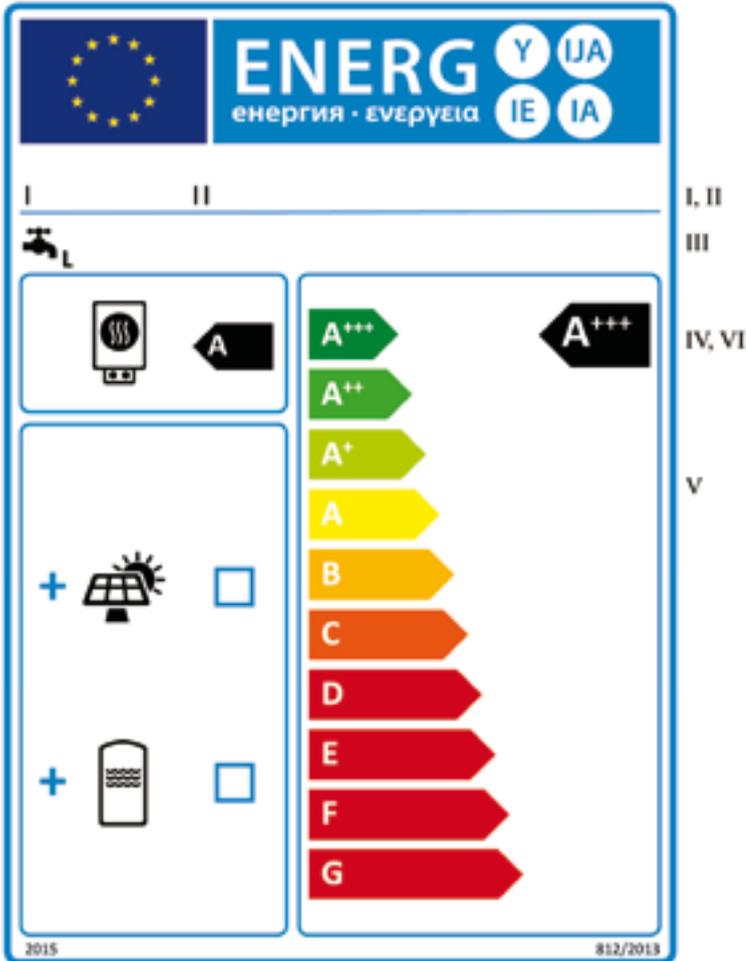


(a) The information listed in point 2.1(a) of this Annex shall be included in the label.

(b) The design aspects of the label for hot water storage tanks shall be in accordance with point 7 of this Annex.

3. PACKAGES OF WATER HEATER AND SOLAR DEVICE

Label for packages of water heater and solar device in water heating energy efficiency classes A+++ to G

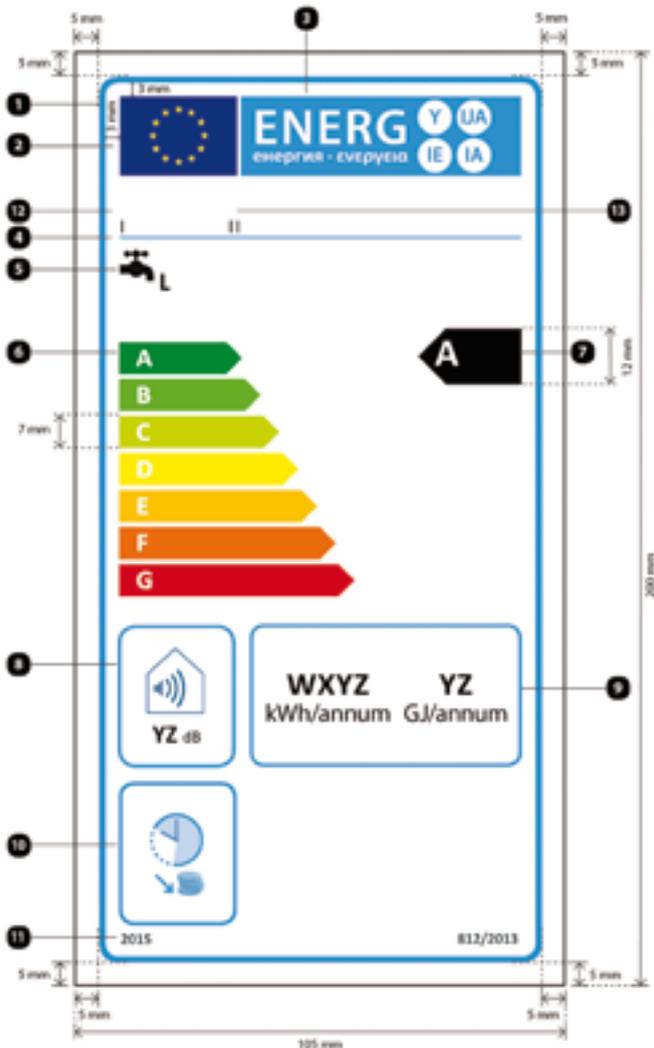


(a) The following information shall be included in the label:

- I. dealer's and/or supplier's name or trade mark;
- II. dealer's and/or supplier's model(s) identifier;
- III. the water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII;
- IV. the water heating energy efficiency class of the water heater, determined in accordance with point 1 of Annex II;
- V. indication of whether a solar collector and hot water storage tank may be included in the package of water heater and solar device;
- VI. the water heating energy efficiency class of the package of water heater and solar device, determined in accordance with point 4 of Annex IV; the head of the arrow containing the water heating energy efficiency class of the package of water heater and solar device shall be placed at the same height as the head of the relevant energy efficiency class.

(b) The design aspects of the label for packages of water heater and solar device shall be in accordance with point 8 of this Annex. For packages of water heater and solar device in water heating energy efficiency classes A+++ to D, the last classes E to G in the A+++ to G scale may be omitted.

4. The design of the label for conventional water heaters shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

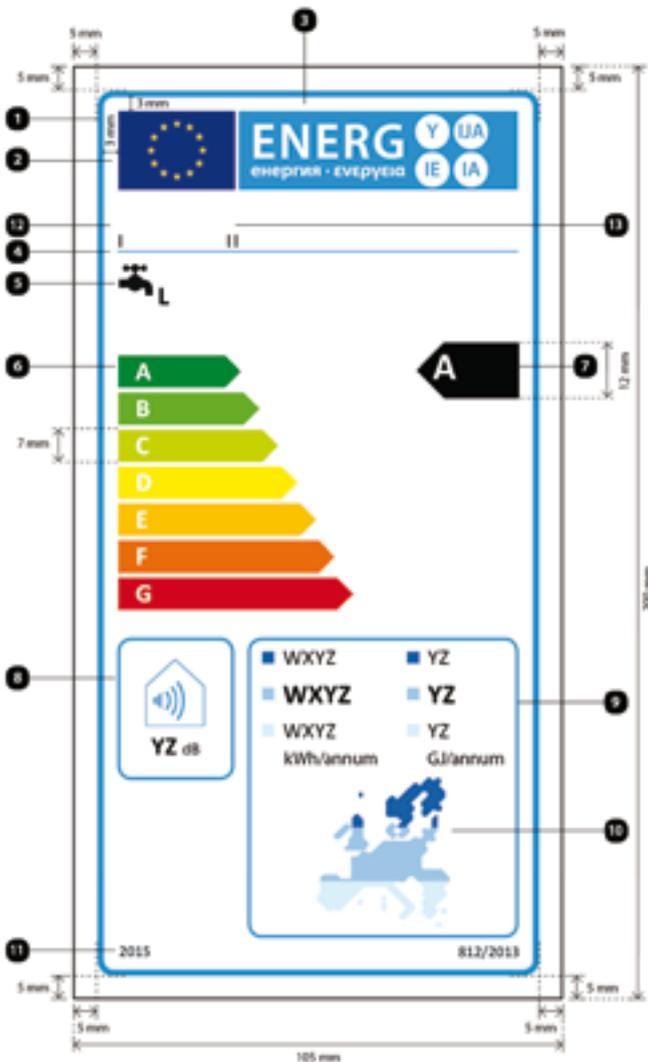
(c) Colours are coded as CMYK — cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

❶ EU label border stroke: 4 pt, colour: cyan 100 %, round corners: 3,5 mm.

- 2 EU logo: Colours: X-80-00-00 and 00-00-X-00.
- 3 Energy label: Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
- 4 Sub-logos border: 1 pt, colour: cyan 100 %, length: 86 mm.
- 5 Water heating function:
 - Pictogram as depicted, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII: Calibri bold 16 pt, 100 % black.
- 6 A-G or A+-F scale:
 - Arrow: height: 7 mm, gap: 1 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00,
 - Text: Calibri bold 16 pt, capitals, white, '+' symbol: superscript.
- 7 Water heating energy efficiency class:
 - Arrow: width: 22 mm, height: 12 mm, 100 % black,
 - Text: Calibri bold 24 pt, capitals, white, '+' symbol: superscript.
- 8 Sound power level, indoors:
 - Pictogram as depicted,
 - Border: 2 pt – colour: cyan 100 % – round corners: 3,5 mm,
 - Value 'YZ': Calibri bold 15 pt, 100 % black,
 - Text 'dB': Calibri regular 10 pt, 100 % black.
- 9 Annual energy consumption in kWh/annum or GJ/annum:
 - Border: 2 pt – colour: cyan 100 % – round corners: 3,5 mm,
 - Value 'WXYZ' or 'YZ': Calibri bold at least 20 pt, 100 % black,
 - Text 'kWh/annum' or 'GJ/annum': Calibri regular at least 15 pt, 100 % black.
- 10 If applicable, off-peak fitness:
 - Pictogram as depicted,
 - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 11 Year of label introduction and number of Regulation:
 - Text: Calibri bold 10 pt.
- 12 Supplier's name or trademark.
- 13 Supplier's model identifier:
 - The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

5. The design of the label for solar water heaters shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours are coded as CMYK — cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

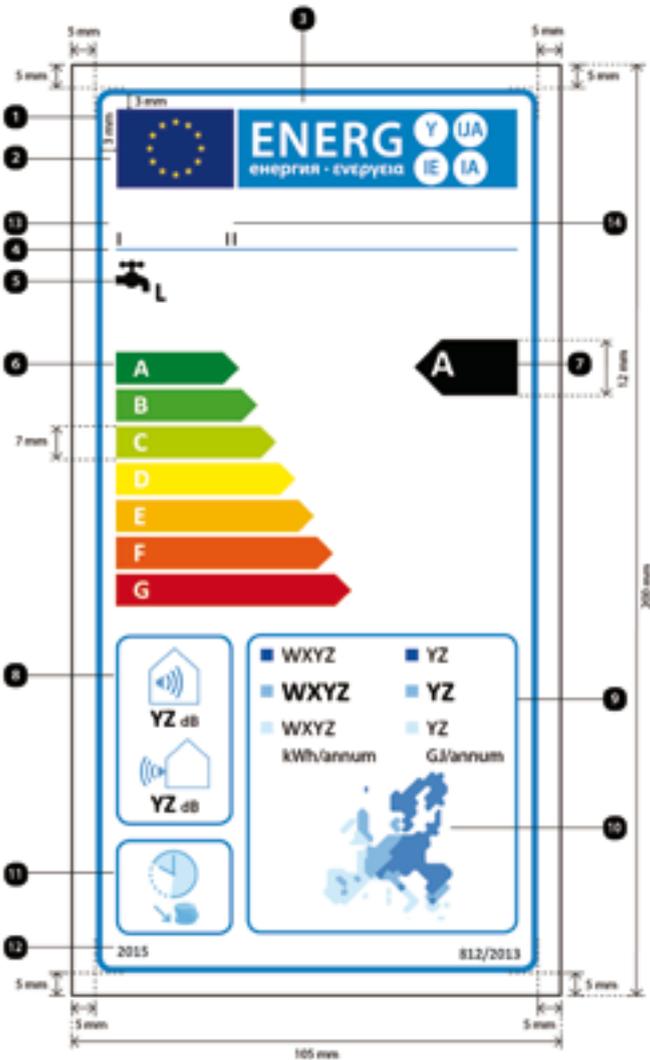
❶ EU label border stroke: 4 pt, colour: cyan 100 %, round corners: 3,5 mm.

- 2 EU logo: Colours: X-80-00-00 and 00-00-X-00.
- 3 Energy label: Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
- 4 Sub-logos border: 1 pt, colour: cyan 100 %, length: 86 mm.
- 5 Water heating function:
 - Pictogram as depicted, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII: Calibri bold 16 pt, 100 % black.
- 6 A-G or A+-F scale:
 - Arrow: height: 7 mm, gap: 1 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00,
 - Text: Calibri bold 16 pt, capitals, white, '+' symbol: superscript.
- 7 Water heating energy efficiency class:
 - Arrow: width: 22 mm, height: 12 mm, 100 % black,
 - Text: Calibri bold 24 pt, capitals, white, '+' symbol: superscript.
- 8 Sound power level, indoors:
 - Pictogram as depicted,
 - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
 - Value 'YZ': Calibri bold 15 pt, 100 % black,
 - Text 'dB': Calibri regular 10 pt, 100 % black.
- 9 Annual energy consumption in kWh/annum or GJ/annum:
 - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
 - Values 'WXYZ' or 'YZ': Calibri at least 13 pt, 100 % black,
 - Text 'kWh/annum' or 'GJ/annum': Calibri regular at least 11 pt, 100 % black.
- 10 European solar map and colour squares:
 - Pictogram as depicted,
 - Colours: Dark blue: 86-51-00-00,
Middle blue: 53-08-00-00,
Light blue: 25-00-02-00.
- 11 Year of label introduction and number of Regulation:
 - Text: Calibri bold 10 pt.
- 12 Supplier's name or trademark.

13 Supplier's model identifier:

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

6. The design of the label for heat pump water heaters shall be the following:



Whereby:

- (a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (b) The background shall be white.
- (c) Colours are coded as CMYK — cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- (d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

① EU label border stroke: 4 pt, colour: cyan 100 %, round corners: 3,5 mm.

- 2 EU logo: Colours: X-80-00-00 and 00-00-X-00.
- 3 Energy label: Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
- 4 Sub-logos border: 1 pt, colour: cyan 100 %, length: 86 mm.
- 5 Water heating function:
 - Pictogram as depicted, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII: Calibri bold 16 pt, 100 % black.
- 6 A-G or A+-F scale:
 - Arrow: height: 7 mm, gap: 1 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00,
 - Text: Calibri bold 16 pt, capitals, white, '+' symbol: superscript.
- 7 Water heating energy efficiency class:
 - Arrow: width: 22 mm, height: 12 mm, 100 % black,
 - Text: Calibri bold 24 pt, capitals, white, '+' symbol: superscript.
- 8 Sound power level, indoors (if applicable) and outdoors:
 - Pictogram as depicted,
 - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
 - Value 'YZ': Calibri bold 15 pt, 100 % black,
 - Text 'dB': Calibri regular 10 pt, 100 % black.
- 9 Annual energy consumption in kWh/annum or GJ/annum:
 - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
 - Values 'WXYZ' or 'YZ': Calibri at least 13 pt, 100 % black,
 - Text 'kWh/annum' or 'GJ/annum': Calibri regular at least 11 pt, 100 % black.
- 10 European temperature map and colour squares:
 - Pictogram as depicted,
 - Colours: Dark blue: 86-51-00-00,
Middle blue: 53-08-00-00,
Light blue: 25-00-02-00.
- 11 If applicable, off-peak fitness:
 - Pictogram as depicted,
 - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm.

12 Year of label introduction and number of Regulation:

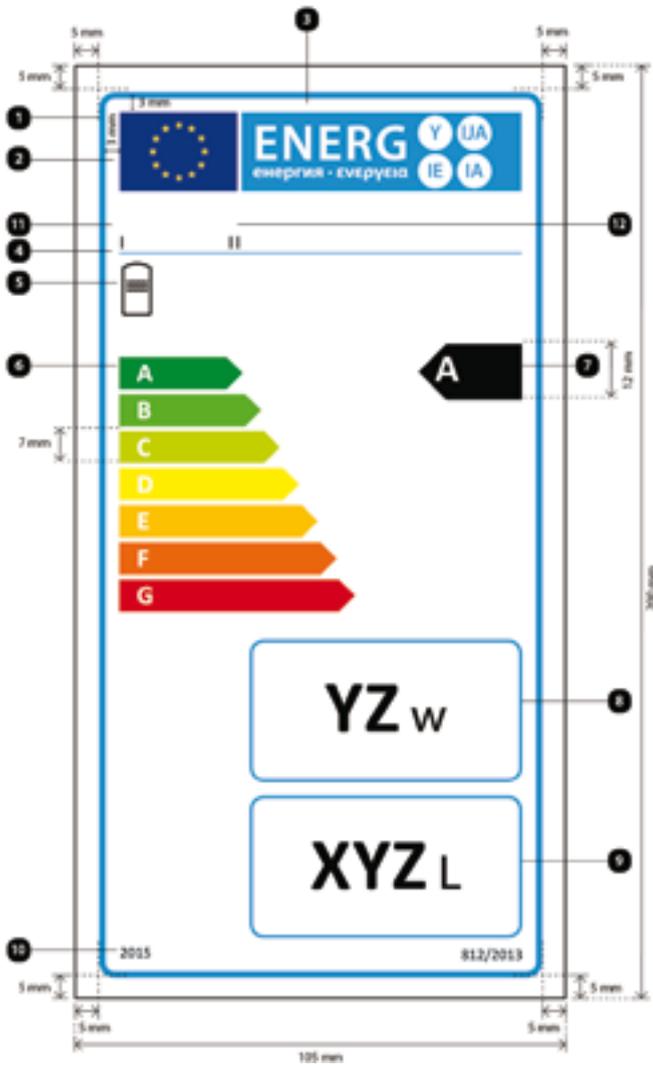
- Text: Calibri bold 10 pt.

13 Supplier's name or trademark.

14 Supplier's model identifier:

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

7. The design of the label for hot water storage tanks shall be the following:



Whereby:

(a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

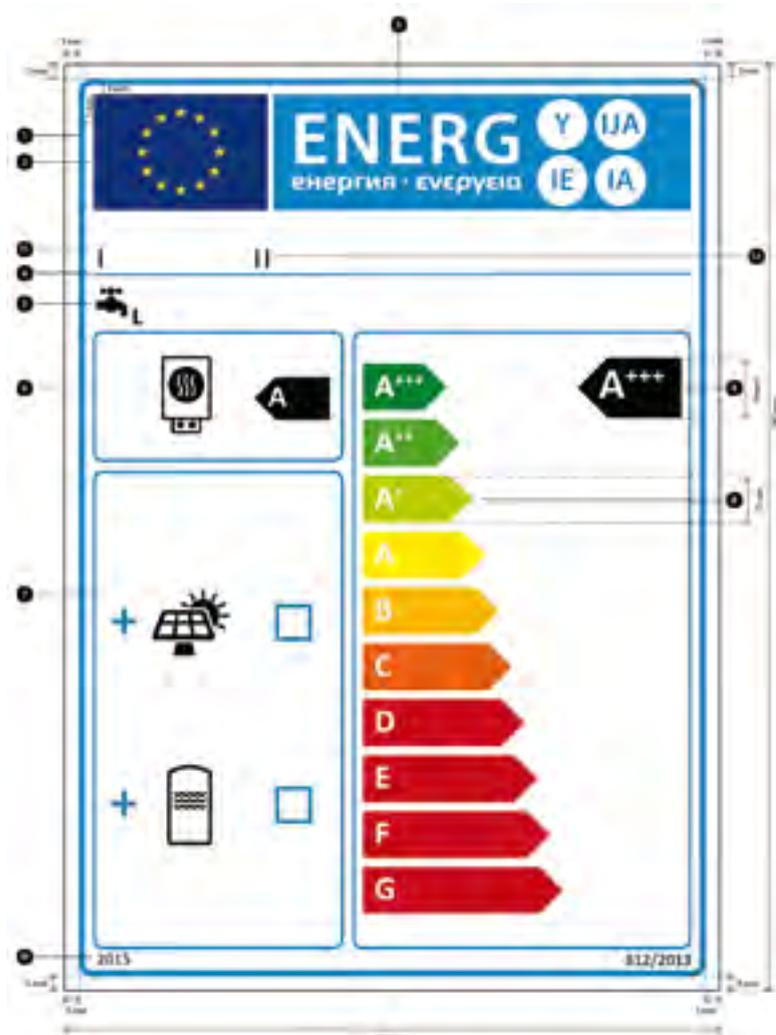
(c) Colours are coded as CMYK — cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

❶ EU label border stroke: 4 pt, colour: cyan 100 %, round corners: 3,5 mm.

- 2 EU logo: Colours: X-80-00-00 and 00-00-X-00.
- 3 Energy label: Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
- 4 Sub-logos border: 1 pt, colour: cyan 100 %, length: 86 mm.
- 5 Storage function:
 - Pictogram as depicted.
- 6 A-G or A+-F scale:
 - Arrow: height: 7 mm, gap: 1 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00,
 - Text: Calibri bold 16 pt, capitals, white, '+' symbol: superscript.
- 7 Energy efficiency class:
 - Arrow: width: 22 mm, height: 12 mm, 100 % black,
 - Text: Calibri bold 24 pt, capitals, white, '+' symbol: superscript.
- 8 Standing loss:
 - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
 - Value 'YZ': Calibri bold 45 pt, 100 % black,
 - Text 'W': Calibri regular 30 pt, 100 % black.
- 9 Storage volume:
 - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
 - Value 'XYZ': Calibri bold 45 pt, 100 % black,
 - Text 'L': Calibri regular 30 pt, 100 % black.
- 10 Year of label introduction and number of Regulation:
 - Text: Calibri bold 10 pt.
- 11 Supplier's name or trademark.
- 12 Supplier's model identifier:
 - The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

8. The design of the label for packages of water heater and solar device shall be the following:



Whereby:

- (a) The label shall be at least 210 mm wide and 297 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (b) The background shall be white.
- (c) Colours are coded as CMYK — cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- 1 EU label border stroke: 6 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 2 EU logo: Colours: X-80-00-00 and 00-00-X-00.
- 3 Energy label: Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 191 mm, height: 37 mm.
- 4 Sub-logos border: 2 pt, colour: cyan 100 %, length: 191 mm.
- 5 Water heating function:
 - Pictogram as depicted, including the declared load profile expressed as the appropriate letter in accordance with Table 3 of Annex VII: Calibri bold 22 pt, 100 % black.
- 6 Water Heater:
 - Pictogram as depicted.
 - Water heating energy efficiency class of water heater:
 - Arrow: width: 24 mm, height: 14 mm, 100 % black,
 - Text: Calibri bold 28 pt, capitals, white,
 - Border: 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 7 Package with solar collector and/or hot water storage tank:
 - Pictograms as depicted,
 - '+' symbol: Calibri bold 50 pt, cyan 100 %,
 - Boxes: width: 12 mm, height: 12 mm, border: 4 pt, cyan 100 %,
 - Border: 3 pt – colour: cyan 100 % – round corners: 3,5 mm.
- 8 A+++-G scale with border:
 - Arrow: height: 15 mm, gap: 3 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Seventh class: 00-X-X-00,
 - If applicable, last classes: 00-X-X-00,
 - Text: Calibri bold 30 pt, capitals, white, '+' symbols: superscript, aligned on a single row,
 - Border: 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 9 Water heating energy efficiency class for package of water heater and solar device:
 - Arrow: width: 33 mm, height: 19 mm, 100 % black,
 - Text: Calibri bold 40 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- 10 Year of label introduction and number of Regulation:
 - Text: Calibri bold 12 pt.

11 Dealer's and/or supplier's name or trademark.

12 Dealer's and/or supplier's model identifier:

The dealer's and/or supplier's name or trade mark and model identifier shall fit in a space of 191 × 19 mm.

ANNEX IV

Product Fiche

1. WATER HEATERS

1.1. The information in the product fiche of the water heater shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trade mark;
- (b) supplier's model identifier;
- (c) the declared load profile, expressed by the appropriate letter and typical usage in accordance with Table 3 of Annex VII;
- (d) the water heating energy efficiency class of the model, determined in accordance with point 1 of Annex II, whereby: for solar water heaters and heat pump water heaters, under average climate conditions;
- (e) the water heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with point 3 of Annex VIII, whereby: for solar water heaters and heat pump water heaters, under average climate conditions;
- (f) the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of GCV, rounded to the nearest integer and calculated in accordance with point 4 of Annex VIII, whereby: for solar water heaters and heat pump water heaters, under average climate conditions;
- (g) if applicable, other load profiles for which the water heater is suitable to use and the corresponding water heating energy efficiency and annual electricity consumption as set out in points (e) and (f);
- (h) the thermostat temperature settings of the water heater, as placed on the market by the supplier;
- (i) the sound power level L_{WA} , indoors, in dB, rounded to the nearest integer (for heat pump water heaters if applicable);
- (j) if applicable, an indication that the water heater is able to work only during off-peak hours;
- (k) any specific precautions that shall be taken when the water heater is assembled, installed or maintained;
- (l) where the value of smart is declared as being '1', an indication that the information on water heating energy efficiency, annual electricity and fuel consumption, as applicable, relate to enabled smart control settings only;

in addition, for solar water heaters and heat pump water heaters:

- (m) the water heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 3 of Annex VIII;
- (n) the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of GCV, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VIII;

in addition, for solar water heaters:

- (o) the collector aperture area in m^2 , to two decimal places;
- (p) the zero-loss efficiency, to three decimal places;
- (q) the first-order coefficient in $W/(m^2 K)$, to two decimal places;
- (r) the second-order coefficient in $W/(m^2 K^2)$, to three decimal places;
- (s) the incidence angle modifier, to two decimal places;
- (t) the storage volume in litres, rounded to the nearest integer;
- (u) the pump power consumption in W , rounded to the nearest integer;
- (v) the standby power consumption in W , to two decimal places;

in addition, for heat pump water heaters:

- (w) the sound power level L_{WA} , outdoors, in dB, rounded to the nearest integer.

1.2. One fiche may cover a number of water heater models supplied by the same supplier.

1.3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1.1 not already displayed on the label shall also be provided.

2. HOT WATER STORAGE TANKS

2.1. The information in the product fiche of the hot water storage tank shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trade mark;
- (b) supplier's model identifier;
- (c) the energy efficiency class of the model, determined in accordance with point 2 of Annex II;
- (d) the standing loss in W , rounded to the nearest integer;
- (e) the storage volume in litres, rounded to the nearest integer.

2.2. One fiche may cover a number of hot water storage tank models supplied by the same supplier.

2.3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 2.1 not already displayed on the label shall also be provided.

3. SOLAR DEVICES

3.1. The information in the product fiche of the solar device shall be provided in the following order and shall be included in the product brochure or other literature provided with the product (for pumps in the collector loop if applicable):

- (a) supplier's name or trade mark;
- (b) supplier's model identifier;
- (c) the collector aperture area in m^2 , to two decimal places;
- (d) the zero-loss efficiency, to three decimal places;
- (e) the first-order coefficient in $W/(m^2 K)$, to two decimal places;

- (f) the second-order coefficient in $W/(m^2 K^2)$, to three decimal places;
- (g) the incidence angle modifier, to two decimal places;
- (h) the storage volume in litres, rounded to the nearest integer;
- (i) the annual non-solar heat contribution $Q_{\text{non-sol}}$ in kWh in terms of primary energy for electricity and/or in kWh in terms of GCV for fuels, for the load profiles M, L, XL and XXL under average climate conditions, rounded to the nearest integer;
- (j) the pump power consumption in W, rounded to the nearest integer;
- (k) the standby power consumption in W, to two decimal places;
- (l) the annual auxiliary electricity consumption Q_{aux} in kWh in terms of final energy, rounded to the nearest integer.

3.2. One fiche may cover a number of solar device models supplied by the same supplier.

4. PACKAGES OF WATER HEATER AND SOLAR DEVICE

The fiche for packages of water heater and solar device shall contain the elements set out in Figure 1 for evaluating the water heating energy efficiency of a package of water heater and solar device, where the following information shall be included:

- I: the value of the water heating energy efficiency of the water heater, expressed in %,
- II: the value of the mathematical expression $(220 \cdot Q_{\text{ref}}) / Q_{\text{non-sol}}$, where Q_{ref} is taken from Table 3 in Annex VII and $Q_{\text{non-sol}}$ from the product fiche of the solar device for the declared load profile M, L, XL or XXL of the water heater,
- III: the value of the mathematical expression $(Q_{\text{aux}} - 2,5) / (220 - Q_{\text{ref}})$, expressed in %, where Q_{aux} is taken from the product fiche of the solar device and Q_{ref} from Table 3 in Annex VII for the declared load profile M, L, XL or XXL.

Figure 1

Fiche for a package of water heater and solar device indicating the water heating energy efficiency of the package offered

Water heating energy efficiency of water heater ① %

Declared load profile:

Solar contribution
From fiche of solar device

Auxiliary electricity

$(1,1) \times 7 - 10\% \times 7 - \text{②} = 7 + \text{③}$ %

Water heating energy efficiency of package under average climate ④

Water heating energy efficiency class of package under average climate

	G	F	E	D	C	B	A	A ⁺	A ⁺⁺	A ⁺⁺⁺
M	< 27 %	≥ 27 %	≥ 30 %	≥ 33 %	≥ 36 %	≥ 39 %	≥ 45 %	≥ 100 %	≥ 132 %	≥ 163 %
L	< 27 %	≥ 27 %	≥ 30 %	≥ 34 %	≥ 37 %	≥ 50 %	≥ 70 %	≥ 115 %	≥ 150 %	≥ 169 %
KL	< 27 %	≥ 27 %	≥ 30 %	≥ 35 %	≥ 38 %	≥ 55 %	≥ 80 %	≥ 123 %	≥ 160 %	≥ 200 %
CKL	< 28 %	≥ 28 %	≥ 32 %	≥ 36 %	≥ 40 %	≥ 60 %	≥ 85 %	≥ 131 %	≥ 170 %	≥ 213 %

Water heating energy efficiency under colder and warmer climate conditions

Colder: $- 0,2 \times$ = %

Warmer: $+ 0,4 \times$ = %

The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as this efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

ANNEX V

Technical documentation

1. WATER HEATERS

For water heaters, the technical documentation referred to in Article 3(1)(c) shall include:

- (a) the name and address of the supplier;
- (b) a description of the water heater model sufficient for its unambiguous identification;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) the results of the measurements for the technical parameters specified in point 7 of Annex VII;
- (g) the results of the calculations for the technical parameters specified in point 2 of Annex VIII;
- (h) any specific precautions that shall be taken when the water heater is assembled, installed or maintained.

2. HOT WATER STORAGE TANKS

For hot water storage tanks, the technical documentation referred to in Article 3(2)(c) shall include:

- (a) the name and address of the supplier;
- (b) a description of the hot water storage tank model sufficient for its unambiguous identification;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) the results of the measurements for the technical parameters specified in point 8 of Annex VII;
- (g) any specific precautions that shall be taken when the hot water storage tank is assembled, installed or maintained.

3. SOLAR DEVICES

The technical documentation of solar devices referred to in Article 3(3)(b) shall include:

- (a) the name and address of the supplier;
- (b) a description of the solar device model sufficient for its unambiguous identification;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) the results of the measurements for the technical parameters as specified in point 9 of Annex VII;
- (g) any specific precautions that shall be taken when the solar device is assembled, installed or maintained.

4. PACKAGES OF WATER HEATER AND SOLAR DEVICE

For packages of water heater and solar device, the technical documentation referred to in Article 3(4)(c) shall include:

- (a) the name and address of the supplier;
- (b) a description of the package of water heater and solar device model sufficient for its unambiguous identification;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) technical parameters:
 - the water heating energy efficiency in %, rounded to the nearest integer,
 - the technical parameters set out in points 1, 2 and 3 of this Annex;
- (g) any specific precautions that shall be taken when the package of water heater and solar device is assembled, installed or maintained.

ANNEX VI

Information to be provided in cases where end-users cannot be expected to see the product displayed

1. WATER HEATERS

1.1. The information referred to in Article 4(1)(b) shall be provided in the following order:

- (a) the declared load profile, expressed by the appropriate letter and typical usage in accordance with Table 3 of Annex VII;
- (b) the water heating energy efficiency class of the model, under average climate conditions, in accordance with point 1 of Annex II;
- (c) the water heating energy efficiency in %, under average climate conditions, rounded to the nearest integer and calculated in accordance with point 3 of Annex VIII;
- (d) the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of GCV, under average climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VIII;
- (e) the sound power level, indoors, in dB, rounded to the nearest integer (for heat pump water heaters, if applicable);

in addition, for solar water heaters and heat pump water heaters:

- (f) the water heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 3 of Annex VIII;
- (g) the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of GCV, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VIII; in addition, for solar water heaters:
- (h) the collector aperture area in m², to two decimal places;
- (i) the storage volume in litres, rounded to the nearest integer; in addition, for heat pump water heaters:
- (j) the sound power level, outdoors, in dB, rounded to the nearest integer.

1.2. Where other information contained in the product fiche is also provided, it shall be in the form and order specified in point 1 of Annex IV.

1.3. The size and font in which the information referred in points 1.1 and 1.2 is printed or shown shall be legible.

2. HOT WATER STORAGE TANKS

2.1. The information referred to in Article 4(2)(b) shall be provided in the following order:

- (a) the energy efficiency class of the model, determined in accordance with point 2 of Annex II;
- (b) the standing loss in W, rounded to the nearest integer;
- (c) the storage volume in litres, rounded to the nearest integer.

2.2. The size and font in which the information referred in point 2.1 is printed or shown shall be legible.

3. PACKAGES OF WATER HEATER AND SOLAR DEVICE

3.1. The information referred to in Article 4(3)(b) shall be provided in the following order:

- (a) the water heating energy efficiency class of the model, determined in accordance with point 1 of Annex II;
- (b) the water heating energy efficiency in %, rounded to the nearest integer;
- (c) the elements set out in Figure 1 of Annex IV.

3.2. The size and font in which the information referred in point 3.1 is printed or shown shall be legible.

ANNEX VII

Measurements

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements shall be made using harmonised standards the reference numbers of which have been published for this purpose in the *Official Journal of the European Union*, or using other reliable, accurate and reproducible measurement methods that take into account the generally recognised state-of-the-art methods. They shall meet the conditions and technical parameters set out in points 2 to 9.

2. General conditions for testing water heaters:

(a) measurements shall be carried out using the load profiles set out in Table 3;

(b) measurements shall be carried out using a 24-hour measurement cycle as follows:

- 00:00 to 06:59: no water draw-off,

- from 07:00: water draw-offs according to the declared load profile,

- from end of last water draw-off until 24:00: no water draw-off;

(c) the declared load profile shall be the maximum load profile or the load profile one below the maximum load profile.

Table 3

Load profiles of water heaters

h	3XS			XXS			XS			S			
	Q _{tap}	f	T _m	T _p									
	kWh	l/min	°C	°C									
07:00	0,015	2	25	0,105	2	25				0,105	3	25	
07:05	0,015	2	25										
07:15	0,015	2	25										
07:26	0,015	2	25										
07:30	0,015	2	25	0,105	2	25	0,525	3	35	0,105	3	25	
07:45													
08:01													
08:05													
08:15													
08:25													
08:30				0,105	2	25				0,105	3	25	
08:45													
09:00	0,015	2	25										
09:30	0,015	2	25	0,105	2	25				0,105	3	25	
10:00													

10:30													
11:00													
11:30	0,015	2	25	0,105	2	25				0,105	3	25	
11:45	0,015	2	25	0,105	2	25				0,105	3	25	
12:00	0,015	2	25	0,105	2	25							
12:30	0,015	2	25	0,105	2	25							
12:45	0,015	2	25	0,105	2	25	0,525	3	35	0,315	4	10	55
14:30	0,015	2	25										
15:00	0,015	2	25										
15:30	0,015	2	25										
16:00	0,015	2	25										
16:30													
17:00													
18:00				0,105	2	25				0,105	3	25	
18:15				0,105	2	25				0,105	3	40	
18:30	0,015	2	25	0,105	2	25							
19:00	0,015	2	25	0,105	2	25							
19:30	0,015	2	25	0,105	2	25							
20:00				0,105	2	25							
20:30							1,05	3	35	0,42	4	10	55
20:45				0,105	2	25							
20:46													
21:00				0,105	2	25							
21:15	0,015	2	25	0,105	2	25							
21:30	0,015	2	25							0,525	5	45	
21:35	0,015	2	25	0,105	2	25							
21:45	0,015	2	25	0,105	2	25							
Q _{ref}	0,345			2,100			2,100			2,100			

Continued Table 3

Load profiles of water heaters

h	M				L				XL			
	Q _{tap}	f	T _m	T _p	Q _{tap}	f	T _m	T _p	Q _{tap}	f	T _m	T _p
	kWh	l/min	°C	°C	kWh	l/min	°C	°C	kWh	l/min	°C	°C
07:00	0,105	3	25		0,105	3	25		0,105	3	25	
07:05	1,4	6	40		1,4	6	40					

07:15									1,82	6	40	
07:26									0,105	3	25	
07:30	0,105	3	25		0,105	3	25					
07:45					0,105	3	25		4,42	10	10	40
08:01	0,105	3	25						0,105	3	25	
08:05					3,605	10	10	40				
08:15	0,105	3	25						0,105	3	25	
08:25					0,105	3	25					
08:30	0,105	3	25		0,105	3	25		0,105	3	25	
08:45	0,105	3	25		0,105	3	25		0,105	3	25	
09:00	0,105	3	25		0,105	3	25		0,105	3	25	
09:30	0,105	3	25		0,105	3	25		0,105	3	25	
10:00									0,105	3	25	
10:30	0,105	3	10	40	0,105	3	10	40	0,105	3	10	40
11:00									0,105	3	25	
11:30	0,105	3	25		0,105	3	25		0,105	3	25	
11:45	0,105	3	25		0,105	3	25		0,105	3	25	
12:00												
12:30												
12:45	0,315	4	10	55	0,315	4	10	55	0,735	4	10	55
14:30	0,105	3	25		0,105	3	25		0,105	3	25	
15:00									0,105	3	25	
15:30	0,105	3	25		0,105	3	25		0,105	3	25	
16:00									0,105	3	25	
16:30	0,105	3	25		0,105	3	25		0,105	3	25	
17:00									0,105	3	25	
18:00	0,105	3	25		0,105	3	25		0,105	3	25	
18:15	0,105	3	40		0,105	3	40		0,105	3	40	
18:30	0,105	3	40		0,105	3	40		0,105	3	40	
19:00	0,105	3	25		0,105	3	25		0,105	3	25	
19:30												
20:00												
20:30	0,735	4	10	55	0,735	4	10	55	0,735	4	10	55
20:45												
20:46									4,42	10	10	40
21:00					3,605	10	10	40				
21:15	0,105	3	25						0,105	3	25	
21:30	1,4	6	40		0,105	3	25		4,42	10	10	40

21:35												
21:45												
Q_{ref}	5,845			11,655			19,07					

Continued Table 3

Load profiles of water heaters

h	XXL			
	Q_{tap}	f	T_m	T_p
	kWh	l/min	°C	°C
07:00	0,105	3	25	
07:05				
07:15	1,82	6	40	
07:26	0,105	3	25	
07:30				
07:45	6,24	16	10	40
08:01	0,105	3	25	
08:05				
08:15	0,105	3	25	
08:25				
08:30	0,105	3	25	
08:45	0,105	3	25	
09:00	0,105	3	25	
09:30	0,105	3	25	
10:00	0,105	3	25	
10:30	0,105	3	10	40
11:00	0,105	3	25	
11:30	0,105	3	25	
11:45	0,105	3	25	
12:00				
12:30				
12:45	0,735	4	10	55
14:30	0,105	3	25	
15:00	0,105	3	25	
15:30	0,105	3	25	
16:00	0,105	3	25	
16:30	0,105	3	25	

17:00	0,105	3	25	
18:00	0,105	3	25	
18:15	0,105	3	40	
18:30	0,105	3	40	
19:00	0,105	3	25	
19:30				
20:00				
20:30	0,735	4	10	55
20:45				
20:46	6,24	16	10	40
21:00				
21:15	0,105	3	25	
21:30	6,24	16	10	40
21:35				
21:45				
Q_{ref}	24,53			

3. Conditions for testing the smart control compliance (smart) of water heaters

Where the supplier deems it appropriate to declare the value of smart as being '1', measurements of the weekly electricity and/or fuel consumption with smart controls and the weekly electricity and/or fuel consumption without smart controls shall be carried out using a two-week measurement cycle as follows:

- days 1 to 5: random sequence of load profiles chosen from the declared load profile and the load profile one below the declared load profile, and smart control disabled,
- days 6 and 7: no water draw-offs, and smart control disabled,
- days 8 to 12: repetition of the same sequence applied for days 1 to 5, and smart control enabled,
- days 13 and 14: no water draw-offs, and smart control enabled,
- the difference between the useful energy content measured during days 1 to 7 and the useful energy content measured during days 8 to 14 shall not exceed 2 % of Q_{ref} of the declared load profile.

4. Conditions for testing solar water heaters

The solar collector, solar hot water storage tank, pump in the collector loop (if applicable) and heat generator shall be tested separately. Where the solar collector and solar hot water storage tank cannot be tested separately, they shall be tested in combination. The heat generator shall be tested under the conditions set out in point 2 of this Annex.

The results shall be used for the calculations set out in point 3(b) of Annex VIII under the conditions set out in Tables 4 and 5. For the purpose of establishing Q_{total} the efficiency of the heat generator using the Joule effect in electric resistance heating elements is assumed to be 100/CC, expressed in %.

5. Conditions for testing heat pump water heaters

- Heat pump water heaters shall be tested under the conditions set out in Table 6,
- Heat pump water heaters which use ventilation exhaust air as the heat source shall be tested under the conditions set out in Table 7.

6. Conditions for testing solar devices

The solar collector, solar hot water storage tank and pump in the collector loop (if applicable) shall be tested separately. Where the solar collector and solar hot water storage tank cannot be tested separately, they shall be tested in combination.

The results shall be used for the calculations of Q_{nonsol} for the load profiles M, L, XL and XXL under the average climate conditions set out in Tables 4 and 5 and Q_{aux} .

Table 4

Average daytime temperature [°C]

	January	February	March	April	May	June	July	August	September	October	November	December
Average climate conditions	+2,8	+2,6	+7,4	+12,2	+16,3	+19,8	+21,0	+22,0	+17,0	+11,9	+5,6	+3,2
Colder climate conditions	-3,8	-4,1	-0,6	+5,2	+11,0	+16,5	+19,3	+18,4	+12,8	+6,7	+1,2	-3,5
Warmer climate conditions	+9,5	+10,1	+11,6	+15,3	+21,4	+26,5	+28,8	+27,9	+23,6	+19,0	+14,5	+10,4

Table 5

Average global solar irradiance [W/m²]

	January	February	March	April	May	June	July	August	September	October	November	December
Average climate conditions	70	104	149	192	221	222	232	217	176	129	80	56
Colder climate conditions	22	75	124	192	234	237	238	181	120	64	23	13
Warmer climate conditions	128	137	182	227	248	268	268	263	243	175	126	109

Table 6

Standard rating conditions for heat pump water heaters, temperatures in dry bulb air temperature (wet bulb air temperature in brackets)

Heat source	Outdoor air			Indoor air	Exhaust air	Brine	Water
Climate conditions	Average climate conditions	Colder climate conditions	Warmer climate conditions	Not applicable	All climate conditions		
Temperature	+ 7 °C (+ 6 °C)	+ 2 °C (+ 1 °C)	+ 14 °C (+ 13 °C)	+ 20 °C (maximum + 15 °C)	+ 20 °C (+ 12 °C)	0 °C (inlet)/ - 3 °C (outlet)	+ 10 °C (inlet)/+ 7 °C (outlet)

Table 7

Maximum ventilation exhaust air available [m³/h], at a temperature of 20 °C and with humidity of 5,5 g/m³

Declared load profile	XXS	XS	S	M	L	XL	XXL
Maximum ventilation exhaust air available	109	128	128	159	190	870	1 021

7. Technical parameters of water heaters

The following parameters shall be established for water heaters:

- (a) the daily electricity consumption Q_{elec} in kWh, rounded to three decimal places;
- (b) the declared load profile, expressed by the appropriate letter in accordance with Table 3 of this Annex;
- (c) the sound power level in dB, indoors, rounded to the nearest integer (for heat pump water heaters, if applicable); in addition, for water heaters using fossil and/or biomass fuels:
- (d) the daily fuel consumption Q_{fuel} in kWh in terms of GCV, rounded to three decimal places; in addition, for water heaters for which the value of smart is declared as being '1':
- (e) the weekly fuel consumption with smart controls $Q_{\text{fuel,week,smart}}$ in kWh in terms of GCV, rounded to three decimal places;
- (f) the weekly electricity consumption with smart controls $Q_{\text{elec,week,smart}}$ in kWh, rounded to three decimal places;
- (g) the weekly fuel consumption without smart controls $Q_{\text{fuel,week}}$ in kWh in terms of GCV, rounded to three decimal places;
- (h) the weekly electricity consumption without smart controls $Q_{\text{elec,week}}$ in kWh, rounded to three decimal places; in addition, for solar water heaters:
 - (i) the collector aperture area A_{sol} in m², rounded to two decimal places;
 - (j) the zero-loss efficiency η_0 , rounded to three decimal places;
 - (k) the first-order coefficient a_1 in W/(m² K), rounded to two decimal places;
 - (l) the second-order coefficient a_2 in W/(m² K²), rounded to three decimal places;

- (m) the incidence angle modifier IAM, rounded to two decimal places;
- (n) the pump power consumption sol_{pump} in W, rounded to two decimal places;
- (o) the standby power consumption $sol_{standby}$ in W, rounded to two decimal places; in addition, for heat pump water heaters:
- (p) the sound power level L_{WA} in dB, outdoors, rounded to the nearest integer.

8. Technical parameters of hot water storage tanks

The following parameters shall be established for hot water storage tanks:

- (a) the storage volume V in litres, rounded to one decimal place;
- (b) the standing loss S in W, rounded to one decimal place.

9. Technical parameters of solar devices

The following parameters shall be established for solar devices:

- (a) the collector aperture area A_{sol} in m^2 , rounded to two decimal places;
- (b) the zero-loss efficiency η_0 , rounded to three decimal places;
- (c) the first-order coefficient a_1 in $W/(m^2 K)$, rounded to two decimal places;
- (d) the second-order coefficient a_2 in $W/(m^2 K^2)$, rounded to three decimal places;
- (e) the incidence angle modifier IAM, rounded to two decimal place;
- (f) the pump power consumption sol_{pump} in W, rounded to two decimal places;
- (g) the standby power consumption, $sol_{standby}$ in W, rounded to two decimal places.

ANNEX VIII

Method for calculating the water heating energy efficiency of water heaters

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, calculations shall be made using harmonised standards the reference numbers of which have been published for this purpose in the *Official Journal of the European Union*, or using other appropriate calculation methods that take into account the generally recognised state-of-the-art methods. They shall meet the technical parameters and calculations set out in points 2 to 6.

Technical parameters used for the calculations shall be measured in accordance with Annex VII.

2. Technical parameters of water heaters

The following parameters shall be calculated for water heaters under average climate conditions:

- (a) the water heating energy efficiency η_{wh} in %, rounded to one decimal place;
- (b) the annual electricity consumption AEC in kWh in terms of final energy, rounded to the nearest integer;

in addition, for water heaters using fuels under average climate conditions:

- (c) the annual fuel consumption AFC in kWh in terms of GCV, rounded to the nearest integer;

in addition, for solar water heaters under average climate conditions:

- (d) the heat generator water heating energy efficiency $\eta_{wh,nonсол}$ in %, rounded to one decimal place;

- (e) the annual auxiliary electricity consumption Q_{aux} in kWh in terms of final energy, rounded to one decimal place;

in addition, for solar water heaters and heat pump water heaters under colder and warmer climate conditions:

- (f) the parameters set out in points (a) to (c);

in addition for solar water heaters under average, colder and warmer climate conditions:

- (g) the annual non-solar heat contribution $Q_{nonсол}$ in kWh in terms of primary energy for electricity and/or in kWh in terms of GCV for fuels, rounded to one decimal place.

3. Calculation of the water heating energy efficiency η_{wh}

- (a) Conventional water heaters and heat pump water heaters:

The water heating energy efficiency is calculated as follows:

$$\eta_{wh} = \frac{Q_{ref}}{(Q_{fuel} + CC \cdot Q_{elec}) (1 - SCF \cdot smart) + Q_{cor}}$$

For water-/brine-to-water heat pump water heaters, the electricity consumption of one or more ground water pumps shall be taken into account.

(b) Solar water heaters:

The water heating energy efficiency is calculated as follows:

$$\eta_{wh} = \frac{0,6 \cdot 366 \cdot Q_{ref}}{Q_{total}}$$

Where:

$$Q_{total} = \frac{Q_{nonsol}}{1,1 \cdot \eta_{wh,nonsol} - 0,1} + Q_{aux} \cdot CC$$

4. Calculation of the annual electricity consumption AEC and the annual fuel consumption AFC

(a) Conventional water heaters and heat pump water heaters:

The annual electricity consumption AEC in kWh in terms of final energy is calculated as follows:

$$AEC = 0,6 \cdot 366 \cdot \left(Q_{elec} \cdot (1 - SCF \cdot smart) + \frac{Q_{cor}}{CC} \right)$$

The annual fuel consumption AFC in GJ in terms of GCV is calculated as follows:

$$AFC = 0,6 \cdot 366 \cdot (Q_{fuel} \cdot (1 - SCF \cdot smart) + Q_{cor})$$

(b) Solar water heaters:

The annual electricity consumption AEC in kWh in terms of final energy is calculated as follows:

$$AEC = \frac{CC \cdot Q_{elec}}{Q_{fuel} + CC \cdot Q_{elec}} \cdot \frac{Q_{total}}{CC}$$

The annual fuel consumption AFC in GJ in terms of GCV is calculated as follows:

$$AFC = \frac{Q_{fuel}}{Q_{fuel} + CC \cdot Q_{elec}} \cdot Q_{total}$$

5. Determination of the smart control factor SCF and of smart control compliance smart

(a) The smart control factor is calculated as follows:

$$SCF = 1 - \frac{Q_{fuel,week,smart} + CC \cdot Q_{elec,week,smart}}{Q_{fuel,week} + CC \cdot Q_{elec,week}}$$

(b) If $SCF \geq 0,07$, the value of *smart* shall be 1. In all other cases, the value of *smart* shall be 0.

6. Determination of the ambient correction term Q_{cor}

The ambient correction term is calculated as follows:

(a) for conventional water heaters using electricity:

$$Q_{cor} = -k \cdot (CC \cdot (Q_{elec} \cdot (1 - SCF \cdot smart) - Q_{ref}))$$

(b) for conventional water heaters using fuels:

$$Q_{cor} = -k \cdot (Q_{fuel} \cdot (1 - SCF \cdot smart) - Q_{ref})$$

(c) for heat pump water heaters:

$$Q_{cor} = -k \cdot 24h \cdot P_{stby}$$

Where:

the k-values are given in Table 8 for each load profile.

Table 8

k-values

	3XS	XXS	XS	S	M	L	XL	XXL
k	0,23	0,23	0,23	0,23	0,23	0,23	0,23	0,0

ANNEX IX

Verification procedure for market surveillance purposes

For the purposes of assessing the conformity with the requirements laid down in Articles 3 and 4, **Contracting Party** authorities shall test a single water heater, hot water storage tank, solar device or package of water heater and solar device and provide the information on the test results to the authorities of the other **Contracting Parties**. If the measured parameters do not meet the values declared by the supplier within the ranges set out in Table 9, the measurement shall be carried out on three additional water heaters, hot water storage tanks, solar devices or packages of water heater and solar device and the information on the test results shall be provided to the authorities of the other **Contracting Parties** and to the Commission within one month of testing. The arithmetic mean of the measured values of these three water heaters, hot water storage tanks, solar devices or packages of water heater and solar device shall meet the values declared by the supplier within the range set out in Table 9.

Otherwise, the model and all other equivalent water heater models, hot water storage tanks models, solar device models or package of water heater and solar device models shall be considered not to comply.

Contracting Party authorities shall use the procedures set out in Annexes VII and VIII.

Table 9

Verification tolerances

Measured parameter	Verification tolerance
Daily electricity consumption Q_{elec}	The measured value shall not be more than 5 % higher than the rated value ¹⁰ .
Sound power level L_{WA} , indoors and/or outdoors	The measured value shall not be more than 2 dB higher than the rated value.
Daily fuel consumption Q_{fuel}	The measured value shall not be more than 5 % higher than the rated value.
Weekly fuel consumption with smart controls $Q_{fuel,week,smart}$	The measured value shall not be more than 5 % higher than the rated value.
Weekly fuel consumption without smart controls $Q_{fuel,week}$	The measured value shall not be more than 5 % higher than the rated value.
Weekly electricity consumption with smart controls $Q_{elec,week,smart}$	The measured value shall not be more than 5 % higher than the rated value.
Weekly electricity consumption without smart controls $Q_{elec,week}$	The measured value shall not be more than 5 % higher than the rated value.
Collector aperture area A_{sol}	The measured value shall not be more than 2 % lower than the rated value.
Pump power consumption sol_{pump}	The measured value shall not be more than 3 % higher than the rated value.
Standby power consumption $sol_{standby}$	The measured value shall not be more than 5 % higher than the rated value.
Storage volume V	The measured value shall not be more than 2 % lower than the rated value.
Standing loss S	The measured value shall not be more than 5 % higher than the rated value.

¹⁰ 'Rated value' means the value declared by the supplier.



Delegated Regulation (EU) 811/2013 of 18 February 2013 supplementing Directive 2010/30/EU with regard to the energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device

Incorporated and adapted by Ministerial Council Decision 2014/02/MC-EnC of 23 September 2014 adapting certain Delegated Regulations on energy related products.

*The adaptations made by Ministerial Council Decision 2014/02/MC-EnC are highlighted in **bold and blue**.*

Whereas:

(1) Directive 2010/30/EU requires the Commission to adopt delegated acts as regards the labelling of energy-related products that have a significant potential for energy savings but exhibit a wide disparity in performance levels with equivalent functionality.

(2) The energy consumed by space heaters and by combination heaters providing space and water heating, accounts for a significant share of the total energy demand in the Union. Space heaters and combination heaters with equivalent functionality exhibit a wide disparity in terms of energy efficiency. The scope for reducing their energy consumption is significant and includes combining them with appropriate temperature controls and solar devices. Space heaters, combination heaters and packages of such heaters in combination with temperature controls and solar devices should therefore be covered by energy labelling requirements.

(3) Space heaters and combination heaters that are designed for using gaseous or liquid fuels predominantly (more than 50 %) produced from biomass have specific technical characteristics which require further technical, economic and environmental analyses. Depending on the outcome of the analyses, energy labelling requirements for those heaters should be set at a later stage, if appropriate.

(4) Harmonised provisions should be laid down on labelling and standard product information regarding the energy efficiency of space heaters and combination heaters in order to provide incentives for manufacturers to improve the energy efficiency of these heaters, to encourage end-users to purchase energy-efficient products and to contribute to the functioning of the internal market.

(5) As regards significant energy and cost savings for each type of heater, this Regulation should introduce a new labelling scale from A⁺⁺ to G for the space heating function of boiler space heaters, cogeneration space heaters, heat pump space heaters, boiler combination heaters and heat pump combination heaters. While classes A to G cover the various types of conventional boilers when not combined with cogeneration or renewable energy technologies, classes A⁺ and A⁺⁺ should promote the use of cogeneration and renewable energy sources.

(6) Furthermore, a new A-G labelling scale should be introduced for the water heating function of boiler combination heaters and heat pump combination heaters, in line with Commission Delegated Regulation (EU) No 812/2013 of 18 February 2013 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to the energy labelling of water heaters, hot water storage tanks and packages of water heater and solar device.

(7) Further classes A⁺⁺⁺ and A⁺ should be added after four years to the seasonal space heating

and water heating classes, respectively, unless the review of the Regulation proves otherwise, to accelerate the market penetration of high-efficiency space heaters and combination heaters using renewable energy sources.

(8) This Regulation should ensure that consumers get more accurate comparative information about the performance of heat pump heaters, based on a seasonal efficiency calculation and measurement method for three European climate zones. The Commission mandated the European standardisation bodies to investigate whether a similar method should be developed for other heaters. European standardised heating seasons for boiler heaters, cogeneration heaters and solar heaters could be considered in the review of this Regulation.

(9) The sound power level of a heater can be an important consideration for end-users. Information on sound power levels should be included on the labels of space heaters and combination heaters.

(10) The combined effect of this Regulation and Commission Regulation (EU) No 813/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for space heaters and combination heaters is expected to result in estimated annual energy savings of around 1 900 PJ (about 45 Mtoe) by 2020, corresponding to about 110 Mt CO₂ emissions, compared to what would happen if no measures were taken.

(11) The information provided on the label should be obtained through reliable, accurate and reproducible measurement and calculation procedures that take into account recognised state-of-the-art measurement and calculation methods including, where available, harmonised standards adopted by the European standardisation bodies under a request from the Commission, in accordance with the procedures laid down in the Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations and of rules on Information Society services¹, for the purpose of establishing ecodesign requirements.

(12) This Regulation should specify a uniform design and content of product labels for space heaters and combination heaters.

(13) In addition, this Regulation should specify requirements for the product fiche and technical documentation for space heaters and combination heaters.

(14) Moreover, this Regulation should specify requirements for the information to be provided for any form of distance selling of space heaters and combination heaters and in any advertisements and technical promotional material for such heaters.

(15) In addition to the product labels and fiches for stand-alone space heaters and combination heaters laid down in this Regulation, package labels and fiches based on product fiches from suppliers should ensure that the end-user has easy access to information on the energy performance of packages of heaters combined with solar devices and/or temperature controls. The most efficient class A+++ may be reached by such a package.

(16) It is appropriate to provide for a review of the provisions of this Regulation taking into account technological progress,

HAS ADOPTED THIS REGULATION:

¹ OJ L 204, 21.7.1998, p. 37.

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the energy labelling of, and the provision of supplementary product information on, space heaters and combination heaters with a rated heat output ≤ 70 kW, packages of space heater ≤ 70 kW, temperature control and solar device and packages of combination heater ≤ 70 kW, temperature control and solar device.
2. This Regulation shall not apply to:
 - (a) heaters specifically designed for using gaseous or liquid fuels predominantly produced from biomass;
 - (b) heaters using solid fuels;
 - (c) heaters within the scope of Directive 2010/75/EU of the European Parliament and of the Council²;
 - (d) heaters generating heat only for the purpose of providing hot drinking or sanitary water;
 - (e) heaters for heating and distributing gaseous heat transfer media such as vapour or air;
 - (f) cogeneration space heaters with a maximum electrical capacity of 50 kW or above.

Article 2

Definitions

In addition to the definitions set out in Article 2 of Directive 2010/30/EC, the following definitions shall apply for the purposes of this Regulation:

- (1) 'heater' means a space heater or combination heater;
- (2) 'space heater' means a device that
 - (a) provides heat to a water-based central heating system in order to reach and maintain at a desired level the indoor temperature of an enclosed space such as a building, a dwelling or a room; and
 - (b) is equipped with one or more heat generators;
- (3) 'combination heater' means a space heater that is designed to also provide heat to deliver hot drinking or sanitary water at given temperature levels, quantities and flow rates during given intervals, and is connected to an external supply of drinking or sanitary water;
- (4) 'water-based central heating system' means a system using water as a heat transfer medium to distribute centrally generated heat to heat emitters for the space heating of buildings, or parts thereof;
- (5) 'heat generator' means the part of a heater that generates the heat using one or more of the following processes:
 - (a) combustion of fossil fuels and/or biomass fuels;
 - (b) use of the Joule effect in electric resistance heating elements;
 - (c) capture of ambient heat from an air source, water source or ground source, and/or waste heat;
- (6) 'rated heat output' (*Prated*) means the declared heat output of a heater when providing space

² OJ L 334, 17.12.2010, p. 17.

heating and, if applicable, water heating at standard rating conditions, expressed in kW; for heat pump space heaters and heat pump combination heaters the standard rating conditions for establishing the rated heat output are the reference design conditions, as set out in Annex VII, Table 10;

(7) 'standard rating conditions' means the operating conditions of heaters under average climate conditions for establishing the rated heat output, seasonal space heating energy efficiency, water heating energy efficiency and sound power level;

(8) 'biomass' means the biodegradable fraction of products, waste and residues from biological origin from agriculture (including vegetal and animal substances), forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of industrial and municipal waste;

(9) 'biomass fuel' means a gaseous or liquid fuel produced from biomass;

(10) 'fossil fuel' means a gaseous or liquid fuel of fossil origin;

(11) 'cogeneration space heater' means a space heater simultaneously generating heat and electricity in a single process;

(12) 'temperature control' means the equipment that interfaces with the end-user regarding the values and timing of the desired indoor temperature, and communicates relevant data to an interface of the heater such as a central processing unit, thus helping to regulate the indoor temperature(s);

(13) 'solar device' means a solar-only system, a solar collector, a solar hot water storage tank or a pump in the collector loop, which are placed on the market separately;

(14) 'solar-only system' means a device that is equipped with one or more solar collectors and solar hot water storage tanks and possibly pumps in the collector loop and other parts, which is placed on the market as one unit and is not equipped with any heat generator except possibly one or more back-up immersion heaters;

(15) 'solar collector' means a device designed to absorb global solar irradiance and to transfer the heat energy so produced to a fluid passing through it;

(16) 'hot water storage tank' means a vessel for storing hot water for water and/or space heating purposes, including any additives, which is not equipped with any heat generator except possibly one or more back-up immersion heaters;

(17) 'solar hot water storage tank' means a hot water storage tank storing heat energy produced by one or more solar collectors;

(18) 'back-up immersion heater' means a Joule effect electric resistance heater that is part of a hot water storage tank and generates heat only when the external heat source is disrupted (including during maintenance periods) or out of order, or that is part of a solar hot water storage tank and provides heat when the solar heat source is not sufficient to satisfy required comfort levels;

(19) 'package of space heater, temperature control and solar device' means a package offered to the end-user containing one or more space heaters combined with one or more temperature controls and/or one or more solar devices;

(20) 'package of combination heater, temperature control and solar device' means a package offered to the end-user containing one or more combination heaters combined with one or more temperature controls, and/or one or more solar devices;

(21) 'seasonal space heating energy efficiency' (η_s) means the ratio between the space heating de-

mand for a designated heating season, supplied by a space heater, a combination heater, a package of space heater, temperature control and solar device or a package of combination heater, temperature control and solar device, and the annual energy consumption required to meet this demand, expressed in %;

(22) 'water heating energy efficiency' (η_{wh}) means the ratio between the useful energy in the drinking or sanitary water provided by a combination heater or a package of combination heater, temperature control and solar device, and the energy required for its generation, expressed in %;

(23) 'sound power level' (L_{WA}) means the A-weighted sound power level, indoors and/or outdoors, expressed in dB.

For the purposes of Annexes II to VIII, additional definitions are set out in Annex I.

Article 3

Responsibilities of suppliers and timetable

1. From **1 January 2018** suppliers placing space heaters on the market and/or putting them into service, including those integrated in packages of space heater, temperature control and solar device, shall ensure that:

(a) a printed label complying with the format and content of information set out in point 1.1 of Annex III is provided for each space heater conforming to the seasonal space heating energy efficiency classes set out in point 1 of Annex II, whereby: for heat pump space heaters, the printed label is provided at least in the packaging of the heat generator; for space heaters intended for use in packages of space heater, temperature control and solar device, a second label complying with the format and content of information set out in point 3 of Annex III is provided for each space heater;

(b) a product fiche, as set out in point 1 of Annex IV, is provided for each space heater, whereby: for heat pump space heaters, the product fiche is provided at least for the heat generator; for space heaters intended for use in packages of space heater, temperature control and solar device, a second fiche, as set out in point 5 of Annex IV, is provided;

(c) the technical documentation, as set out in point 1 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;

(d) any advertisement relating to a specific space heater model and containing energy-related or price information includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model;

(e) any technical promotional material concerning a specific space heater model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model.

From 26 September 2019 a printed label complying with the format and content of information set out in point 1.2 of Annex III shall be provided for each space heater conforming to the seasonal space heating energy efficiency classes set out in point 1 of Annex II, whereby: for heat pump space heaters, the printed label shall be provided at least in the packaging of the heat generator.

2. From **1 January 2018** suppliers placing combination heaters on the market and/or putting them into service, including those integrated in packages of combination heater, temperature control and

solar device, shall ensure that:

(a) a printed label complying with the format and content of information set out in point 2.1 of Annex III is provided for each combination heater conforming to the seasonal space heating energy efficiency classes and water heating energy efficiency classes set out in points 1 and 2 of Annex II, whereby: for heat pump combination heaters, the printed label is provided at least in the packaging of the heat generator; for combination heaters intended for use in packages of combination heater, temperature control and solar device, a second label complying with the format and content of information set out in point 4 of Annex III is provided for each combination heater;

(b) a product fiche, as set out in point 2 of Annex IV, is provided for each combination heater, whereby: for heat pump combination heaters, the product fiche is provided at least for the heat generator; for combination heaters intended for use in packages of combination heater, temperature control and solar device, a second fiche, as set out in point 6 of Annex IV, is provided;

(c) the technical documentation, as set out in point 2 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;

(d) any advertisement relating to a specific combination heater model and containing energy-related or price information includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model;

(e) any technical promotional material concerning a specific combination heater model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model.

From 26 September 2019 a printed label complying with the format and content of information set out in point 2.2 of Annex III shall be provided for each combination heater conforming to the seasonal space heating energy efficiency classes and water heating energy efficiency classes set out in points 1 and 2 of Annex II, whereby: for heat pump combination heaters, the printed label shall be provided at least in the packaging of the heat generator.

3. From **1 January 2018** suppliers placing temperature controls on the market and/or putting them into service shall ensure that:

(a) a product fiche, as set out in point 3 of Annex IV, is provided;

(b) the technical documentation, as set out in point 3 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission.

4. From **1 January 2018** suppliers placing solar devices on the market and/or putting them into service shall ensure that:

(a) a product fiche, as set out in point 4 of Annex IV, is provided;

(b) the technical documentation, as set out in point 4 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission.

5. From **1 January 2018** suppliers placing packages of space heater, temperature control and solar device on the market and/or putting them into service shall ensure that:

(a) a printed label complying with the format and content of information set out in point 3 of Annex III is provided for each package of space heater, temperature control and solar device conforming to the seasonal space heating energy efficiency classes set out in point 1 of Annex II;

(b) a product fiche, as set out in point 5 of Annex IV, is provided for each package of space heater, temperature control and solar device;

(c) the technical documentation, as set out in point 5 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;

(d) any advertisement relating to a specific package of space heater, temperature control and solar device model and containing energy-related or price information includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model;

(e) any technical promotional material concerning a specific package of space heater, temperature control and solar device model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model.

6. From **1 January 2018** suppliers placing packages of combination heater, temperature control and solar device on the market and/or putting them into service shall ensure that:

(a) a printed label complying with the format and content of information set out in point 4 of Annex III is provided for each package of combination heater, temperature control and solar device conforming to the seasonal space heating energy efficiency classes and water heating energy efficiency classes set out in points 1 and 2 of Annex II;

(b) a product fiche, as set out in point 6 of Annex IV, is provided for each package of combination heater, temperature control and solar device;

(c) the technical documentation, as set out in point 6 of Annex V, is provided on request to the authorities of the **Contracting Parties** and to the Commission;

(d) any advertisement relating to a specific package of combination heater, temperature control and solar device model and containing energy-related or price information includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model;

(e) any technical promotional material concerning a specific package of combination heater, temperature control and solar device model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model.

Article 4

Responsibilities of dealers

1. Dealers of space heaters shall ensure that:

(a) each space heater, at the point of sale, bears the label provided by suppliers in accordance with Article 3(1), as set out in point 1 of Annex III, on the outside of the front of the appliance, in such a way as to be clearly visible;

(b) space heaters offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the space heater displayed, are marketed with the information provided by the suppliers in accordance with point 1 of Annex VI;

(c) any advertisement relating to a specific space heater model and containing energy-related or price

information includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model;

(d) any technical promotional material concerning a specific space heater model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model.

2. Dealers of combination heaters shall ensure that:

(a) each combination heater, at the point of sale, bears the label provided by suppliers in accordance with Article 3(2), as set out in point 2 of Annex III, on the outside of the front of the appliance, in such a way as to be clearly visible;

(b) combination heaters offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the combination heater displayed, are marketed with the information provided by the suppliers in accordance with point 2 of Annex VI;

(c) any advertisement relating to a specific combination heater model and containing energy-related or price information includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model;

(d) any technical promotional material concerning a specific combination heater model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model.

3. Dealers of packages of space heater, temperature control and solar device shall ensure, based on the label and fiches provided by suppliers in accordance with Article 3(1), (3), (4) and (5), that:

(a) any offer for a specific package includes the seasonal space heating energy efficiency and the seasonal space heating energy efficiency class for that package under average, colder or warmer climate conditions, as applicable, by displaying with the package the label set out in point 3 of Annex III and providing the fiche set out in point 5 of Annex IV, duly filled in according to the characteristics of that package;

(b) packages of space heater, temperature control and solar device offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the package of space heater, temperature control and solar device displayed, are marketed with the information provided in accordance with point 3 of Annex VI;

(c) any advertisement relating to a specific package of space heater, temperature control and solar device model and containing energy-related or price information includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model;

(d) any technical promotional material concerning a specific package of space heater, temperature control and solar device model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class under average climate conditions for that model.

4. Dealers of packages of combination heater, temperature control and solar device shall ensure, based on the label and fiches provided by suppliers in accordance with Article 3(2), (3), (4) and (6), that:

(a) any offer for a specific package of combination heater, temperature control and solar device includes the seasonal space heating energy efficiency, the water heating energy efficiency, the sea-

sonal space heating energy efficiency class and the water heating energy efficiency class for that package under average, colder or warmer climate conditions, as applicable, by displaying with the package the label set out in point 4 of Annex III and providing the fiche set out in point 6 of Annex IV, duly filled in according to the characteristics of that package;

(b) packages of combination heater, temperature control and solar device offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the package of combination heater, temperature control and solar device displayed, are marketed with the information provided in accordance with point 4 of Annex VI;

(c) any advertisement relating to a specific package of combination heater, temperature control and solar device model and containing energy-related or price information includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model;

(d) any technical promotional material concerning a specific package of combination heater, temperature control and solar device model and describing its specific technical parameters includes a reference to the seasonal space heating energy efficiency class and water heating energy efficiency class under average climate conditions for that model.

Article 5

Measurement and calculation methods

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation methods which take into account the recognised state-of-the-art measurement and calculation methods, as set out in Annex VII.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure set out in Annex VIII when assessing the conformity of the declared seasonal space heating energy efficiency class, water heating energy efficiency class, seasonal space heating energy efficiency, water heating energy efficiency and sound power level of heaters.

Article 7

Review

...³

³ Not applicable

Article 8

Entry into force and application

This Regulation shall apply from 1 January 2016⁴.

The Secretariat shall monitor and review the implementation of the Delegated Regulations referred to in Article 1 in the Contracting Parties. Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by these Delegated Regulations, in the next year of the deadline for the overall implementation⁵.

This Decision (2014/02/MC-EnC) enters into force upon its adoption (23 September 2014) and it is addressed to the Contracting Parties⁶.

⁴ The text displayed here corresponds to Article 2(2) of Decision 2014/02/MC-EnC

⁵ The text displayed here corresponds to Article 2(3) of Decision 2014/02/MC-EnC

⁶ The text displayed here corresponds to Article 3(1) of Decision 2014/02/MC-EnC

ANNEX I

Definitions applicable for Annexes II to VIII

For the purposes of Annexes II to VIII the following definitions shall apply:

Definitions related to heaters:

- (1) 'boiler space heater', for the purposes of Figures 1 to 4 in Annex IV referred to as 'boiler', means a space heater that generates heat using the combustion of fossil fuels and/or biomass fuels, and/or using the Joule effect in electric resistance heating elements;
- (2) 'boiler combination heater', for the purposes of Figures 1 to 4 in Annex IV referred to as 'boiler', means a boiler space heater that is designed to also provide heat to deliver hot drinking or sanitary water at given temperature levels, quantities and flow rates during given intervals, and is connected to an external supply of drinking or sanitary water;
- (3) 'heat pump space heater', for the purposes of Figures 1 and 3 in Annex IV referred to as 'heat pump', means a space heater using ambient heat from an air source, water source or ground source, and/or waste heat for heat generation; a heat pump space heater may be equipped with one or more supplementary heaters using the Joule effect in electric resistance heating elements or the combustion of fossil and/or biomass fuels;
- (4) 'heat pump combination heater', for the purposes of Figures 1 and 3 in Annex IV referred to as 'heat pump', means a heat pump space heater that is designed to also provide heat to deliver hot drinking or sanitary water at given temperature levels, quantities and flow rates during given intervals, and is connected to an external supply of drinking or sanitary water;
- (5) 'supplementary heater' means a non-preferential heater that generates heat in cases where the heat demand is greater than the rated heat output of the preferential heater;
- (6) 'rated heat output of supplementary heater' (P_{sup}) means the declared heat output of the supplementary heater when providing space heating and, if applicable, water heating at standard rating conditions, expressed in kW; if the supplementary heater is a heat pump space heater or heat pump combination heater, the standard rating condition for establishing the rated heat output of supplementary heater is the outdoor temperature $T_j = + 7 \text{ }^\circ\text{C}$;
- (7) 'outdoor temperature' (T_j) means the dry bulb outdoor air temperature, expressed in degrees Celsius; the relative humidity may be indicated by a corresponding wet bulb temperature;
- (8) 'annual energy consumption' (Q_{HE}) means the annual energy consumption of a heater required for space heating to meet the reference annual heating demand for a designated heating season, expressed in kWh in terms of the final energy and/or in GJ in terms of GCV;
- (9) 'standby mode' means a condition where the heater is connected to the mains power source, depends on energy input from the mains power source to work as intended and provides only the following functions, which may persist for an indefinite time: reactivation function, or reactivation function and only an indication of enabled reactivation function, and/or information or status display;
- (10) 'standby mode power consumption' (P_{SB}) means the power consumption of a heater in standby mode, expressed in kW;

(11) 'conversion coefficient' (CC) means a coefficient reflecting the estimated 40 % average EU generation efficiency referred to in Directive 2012/27/EU of the European Parliament and of the Council⁷; the value of the conversion coefficient is $CC = 2,5$;

(12) 'gross calorific value' (GCV) means the total amount of heat released by a unit quantity of fuel when it is burned completely with oxygen and when the products of combustion are returned to ambient temperature; this quantity includes the condensation heat of any water vapour contained in the fuel and of the water vapour formed by the combustion of any hydrogen contained in the fuel;

Definitions related to boiler space heaters, boiler combination heaters and cogeneration space heaters:

(13) 'seasonal space heating energy efficiency in active mode' (η_{son}) means

- for fuel boiler space heaters and fuel boiler combination heaters, a weighted average of the useful efficiency at rated heat output and the useful efficiency at 30 % of the rated heat output, expressed in %;

- for electric boiler space heaters and electric boiler combination heaters, the useful efficiency at rated heat output, expressed in %;

- for cogeneration space heaters not equipped with supplementary heaters, the useful efficiency at rated heat output, expressed in %;

- for cogeneration space heaters equipped with supplementary heaters, a weighted average of the useful efficiency at rated heat output with supplementary heater disabled, and the useful efficiency at rated heat output with supplementary heater enabled, expressed in %;

(14) 'useful efficiency' (η) means the ratio of the useful heat output and the total energy input of a boiler space heater, boiler combination heater or cogeneration space heater, expressed in %, whereby the total energy input is expressed in terms of GCV and/or in terms of final energy multiplied by CC;

(15) 'useful heat output' (P) means the heat output of a boiler space heater, boiler combination heater or cogeneration space heater transmitted to the heat carrier, expressed in kW;

(16) 'electrical efficiency' (η_{el}) means the ratio of the electricity output and the total energy input of a cogeneration space heater, expressed in %, whereby the total energy input is expressed in terms of GCV and/or in terms of final energy multiplied by CC;

(17) 'ignition burner power consumption' (P_{ign}) means the power consumption of a burner intended to ignite the main burner, expressed in W in terms of GCV;

(18) 'condensing boiler' means a boiler space heater or boiler combination heater in which, under normal operating conditions and at given operating water temperatures, the water vapour in the combustion products is partially condensed, in order to make use of the latent heat of this water vapour for heating purposes;

(19) 'auxiliary electricity consumption' means the annual electricity required for the designated operation of a boiler space heater, boiler combination heater or cogeneration space heater, calculated from the electric power consumption at full load (el_{max}), at part load (el_{min}), in standby mode and default operating hours at each mode, expressed in kWh in terms of final energy;

(20) 'standby heat loss' (P_{stby}) means the heat loss of a boiler space heater, boiler combination heater

⁷ OJ L 315, 14.11.2012, p. 1.

or cogeneration space heater in operating modes without heat demand, expressed in kW;

Definitions related to heat pump space heaters and heat pump combination heaters:

(21) 'rated coefficient of performance' (COP_{rated}) or 'rated primary energy ratio' (PER_{rated}) means the declared heat capacity, expressed in kW, divided by the energy input, expressed in kW in terms of GCV and/or in kW in terms of final energy multiplied by CC, for heating provided at standard rating conditions;

(22) 'reference design conditions' means the combination of the reference design temperature, the maximum bivalent temperature and the maximum operation limit temperature, as set out in Annex VII, Table 10;

(23) 'reference design temperature' (T_{designh}) means the outdoor temperature, expressed in degrees Celsius, as set out in Annex VII, Table 10, at which the part load ratio is equal to 1;

(24) 'part load ratio' ($pl(T_p)$) means the outdoor temperature minus 16 °C divided by the reference design temperature minus 16 °C;

(25) 'heating season' means a set of operating conditions for average, colder and warmer climate conditions, describing per bin the combination of outdoor temperatures and the number of hours these temperatures occur per season;

(26) 'bin' (bin_j) means a combination of an outdoor temperature and bin hours, as set out in Annex VII, Table 12;

(27) 'bin hours' (H_j) means the hours per heating season, expressed in hours per year, at which an outdoor temperature occurs for each bin, as set out in Annex VII, Table 12;

(28) 'part load for heating' ($Ph(T_p)$) means the heating load at a specific outdoor temperature, calculated as the design load multiplied by the part load ratio and expressed in kW;

(29) 'seasonal coefficient of performance' (SCOP) or 'seasonal primary energy ratio' (SPER) means the overall coefficient of performance of a heat pump space heater or heat pump combination heater using electricity or the overall primary energy ratio of a heat pump space heater or heat pump combination heater using fuels, representative of the designated heating season, calculated as the reference annual heating demand divided by the annual energy consumption;

(30) 'reference annual heating demand' (Q_H) means the reference heating demand for a designated heating season, to be used as the basis for calculating SCOP or SPER and calculated as the product of the design load for heating and the annual equivalent active mode hours, expressed in kWh;

(31) 'annual equivalent active mode hours' (H_{HE}) means the assumed annual number of hours a heat pump space heater or heat pump combination heater has to provide the design load for heating to satisfy the reference annual heating demand, expressed in h;

(32) 'active mode coefficient of performance' ($SCOP_{\text{on}}$) or 'active mode primary energy ratio' ($SPER_{\text{on}}$) means the average coefficient of performance of the heat pump space heater or heat pump combination heater using electricity in active mode or the average primary energy ratio of the heat pump space heater or heat pump combination heater using fuels in active mode for the designated heating season;

(33) 'supplementary capacity for heating' ($sup(T_p)$) means the rated heat output P_{sup} of a supplementary heater that supplements the declared capacity for heating to meet the part load for heating, if

the declared capacity for heating is less than the part load for heating, expressed in kW;

(34) 'bin-specific coefficient of performance' ($COP_{bin}(T_p)$) or 'bin-specific primary energy ratio' ($PER_{bin}(T_p)$) means the coefficient of performance of the heat pump space heater or heat pump combination heater using electricity or primary energy ratio of the heat pump space heater or heat pump combination heater using fuel specific for every bin in a season, derived from the part load for heating, declared capacity for heating and declared coefficient of performance for specified bins and calculated for other bins by interpolation or extrapolation, corrected where necessary by the degradation coefficient;

(35) 'declared capacity for heating' ($P_{dh}(T_p)$) means the heating capacity a heat pump space heater or heat pump combination heater is able to deliver, for an outdoor temperature, expressed in kW;

(36) 'capacity control' means the ability of a heat pump space heater or heat pump combination heater to change its capacity by changing the volumetric flow rate of at least one of the fluids needed to operate the refrigeration cycle, to be indicated as 'fixed' if the volumetric flow rate cannot be changed or 'variable' if the volumetric flow rate is changed or varied in series of two or more steps;

(37) 'design load for heating' ($P_{designh}$) means the rated heat output (P_{rated}) of a heat pump space heater or heat pump combination heater at the reference design temperature, whereby the design load for heating is equal to the part load for heating with outdoor temperature equal to reference design temperature, expressed in kW;

(38) 'declared coefficient of performance' ($COP_d(T_p)$) or 'declared primary energy ratio' ($PER_d(T_p)$) means the coefficient of performance or primary energy ratio at a limited number of specified bins;

(39) 'bivalent temperature' (T_{biv}) means the outdoor temperature declared by the supplier for heating at which the declared capacity for heating equals the part load for heating and below which the declared capacity for heating requires supplementary capacity for heating to meet the part load for heating, expressed in degrees Celsius;

(40) 'operation limit temperature' (TOL) means the outdoor temperature declared by the supplier for heating, below which the air-to-water heat pump space heater or air-to-water heat pump combination heater will not be able to deliver any heating capacity and the declared capacity for heating is equal to zero, expressed in degrees Celsius;

(41) 'heating water operation limit temperature' (WTOL) means the outlet water temperature declared by the supplier for heating, above which the heat pump space heater or heat pump combination heater will not be able to deliver any heating capacity and the declared capacity heating is equal to zero, expressed in degrees Celsius;

(42) 'cycling interval capacity for heating' (P_{cyc}) means the integrated heating capacity over the cycling test interval for heating, expressed in kW;

(43) 'cycling interval efficiency' (COP_{cyc} or PER_{cyc}) means the average coefficient of performance or average primary energy ratio over the cycling test interval, calculated as the integrated heating capacity over the interval, expressed in kWh, divided by the integrated energy input over that same interval, expressed in kWh in terms of GCV and/or in kWh in terms of final energy multiplied by CC;

(44) 'degradation coefficient' (C_{dh}) means the measure of efficiency loss due to cycling of a heat pump space heater or heat pump combination heater; if C_{dh} is not determined by measurement then the default degradation coefficient is $C_{dh} = 0,9$;

(45) 'active mode' means the condition corresponding to the hours with a heating load for the

enclosed space and activated heating function; this condition may involve cycling of the heat pump space heater or heat pump combination heater to reach or maintain a required indoor air temperature;

(46) 'off mode' means a condition in which the heat pump space heater or heat pump combination heater is connected to the mains power source and is not providing any function, including conditions providing only an indication of off mode condition and conditions providing only functionalities intended to ensure electromagnetic compatibility pursuant to Directive 2004/108/EC of the European Parliament and of the Council⁸;

(47) 'thermostat-off mode' means the condition corresponding to the hours with no heating load and activated heating function, whereby the heating function is switched on but the heat pump space heater or heat pump combination heater is not operational; cycling in active mode is not considered as thermostat-off mode;

(48) 'crankcase heater mode' means the condition in which a heating device is activated to avoid the refrigerant migrating to the compressor so as to limit the refrigerant concentration in oil when the compressor is started;

(49) 'off mode power consumption' (P_{OFF}) means the power consumption of a heat pump space heater or heat pump combination heater in off mode, expressed in kW;

(50) 'thermostat-off mode power consumption' (P_{TO}) means the power consumption of the heat pump space heater or heat pump combination heater while in thermostat-off mode, expressed in kW;

(51) 'crankcase heater mode power consumption' (P_{CK}) means the power consumption of the heat pump space heater or heat pump combination heater while in crankcase heater mode, expressed in kW;

(52) 'low-temperature heat pump' means a heat pump space heater that is specifically designed for low-temperature application, and that cannot deliver heating water with an outlet temperature of 52 °C at an inlet dry (wet) bulb temperature of – 7 °C (– 8 °C) in the reference design conditions for average climate;

(53) 'low-temperature application' means an application where the heat pump space heater delivers its declared capacity for heating at an indoor heat exchanger outlet temperature of 35 °C;

(54) 'medium-temperature application' means an application where the heat pump space heater or heat pump combination heater delivers its declared capacity for heating at an indoor heat exchanger outlet temperature of 55 °C;

Definitions related to water heating in combination heaters:

(55) 'load profile' means a given sequence of water draw-offs, as specified in Annex VII, Table 15; each combination heater meets at least one load profile;

(56) 'water draw-off' means a given combination of useful water flow rate, useful water temperature, useful energy content and peak temperature, as specified in Annex VII, Table 15;

(57) 'useful water flow rate' (f) means the minimum flow rate, expressed in litres per minute, for which hot water is contributing to the reference energy, as specified in Annex VII, Table 15;

(58) 'useful water temperature' (T_m) means the water temperature, expressed in degrees Celsius,

⁸ OJ L 390, 31.12.2004, p. 24.

- at which hot water starts contributing to the reference energy, as specified in Annex VII, Table 15;
- (59) 'useful energy content' (Q_{tap}) means the energy content of hot water, expressed in kWh, provided at a temperature equal to, or above, the useful water temperature, and at water flow rates equal to, or above, the useful water flow rate, as specified in Annex VII, Table 15;
- (60) 'energy content of hot water' means the product of the specific heat capacity of water, the average temperature difference between the hot water output and cold water input, and the total mass of the hot water delivered;
- (61) 'peak temperature' (T_p) means the minimum water temperature, expressed in degrees Celsius, to be achieved during water draw-off, as specified in Annex VII, Table 15;
- (62) 'reference energy' (Q_{ref}) means the sum of the useful energy content of water draw-offs, expressed in kWh, in a particular load profile, as specified in Annex VII, Table 15;
- (63) 'maximum load profile' means the load profile with the greatest reference energy that a combination heater is able to provide while fulfilling the temperature and flow rate conditions of that load profile;
- (64) 'declared load profile' means the load profile applied when determining water heating energy efficiency;
- (65) 'daily electricity consumption' (Q_{elec}) means the consumption of electricity for water heating over 24 consecutive hours under the declared load profile, expressed in kWh in terms of final energy;
- (66) 'daily fuel consumption' (Q_{fuel}) means the consumption of fuels for water heating over 24 consecutive hours under the declared load profile, expressed in kWh in terms of GCV and, for the purposes of point 5(f) in Annex VII, expressed in GJ in terms of GCV;
- (67) 'annual electricity consumption' (AEC) means the annual electricity consumption of a combination heater for water heating under the declared load profile and under given climate conditions, expressed in kWh in terms of final energy;
- (68) 'annual fuel consumption' (AFC) means the annual fossil fuel and/or biomass fuel consumption of a combination heater for water heating under the declared load profile and under given climate conditions, expressed in GJ in terms of GCV;

Definitions related to solar devices:

- (69) 'annual non-solar heat contribution' (Q_{nonsol}), means the annual contribution of electricity (expressed in kWh in terms of primary energy) and/or fuels (expressed in kWh in terms of GCV) to the useful heat output of a package of combination heater, temperature control and solar device, taking into account the annual amount of heat captured by the solar collector and the heat losses of the solar hot water storage tank;
- (70) 'collector aperture area' (A_{sol}), for the purposes of Figures 1 to 4 in Annex IV referred to as 'collector size', means the maximum projected area through which unconcentrated solar radiation enters the collector, expressed in m^2 ;
- (71) 'collector efficiency' (η_{col}) means the efficiency of the solar collector at a temperature difference between the solar collector and the surrounding air of 40 K and a global solar irradiance of 1 000 W/m^2 , expressed in %;
- (72) 'standing loss' (S) means the heating power dissipated from a solar hot water storage tank at

given water and ambient temperatures, expressed in W;

(73) 'storage volume' (V), for the purposes of Figures 1 to 4 in Annex IV referred to as 'tank volume', means the rated volume of a solar hot water storage tank, expressed in litres or m³;

(74) 'auxiliary electricity consumption' (Q_{aux}), for the purpose of Figure 5 in Annex IV referred to as 'auxiliary electricity', means the annual electricity consumption of a solar-only system that is due to the pump power consumption and the standby power consumption, expressed in kWh in terms of final energy;

(75) 'pump power consumption' (solpump) means the rated electrical power consumption of the pump in the collector loop of a solar-only system, expressed in W;

(76) 'standby power consumption' (solstandby) means the rated electrical power consumption of a solar-only system when the pump and the heat generator are inactive, expressed in W;

Other definitions:

(77) 'average climate conditions', 'colder climate conditions' and 'warmer climate conditions' mean the temperature and global solar irradiance conditions characteristic for the cities of Strasbourg, Helsinki and Athens, respectively;

(78) 'model identifier' means the code, usually alphanumeric, which distinguishes a specific space heater, combination heater, temperature control, solar device, package of space heater, temperature control and solar device, or package of combination heater, temperature control and solar device model from other models with the same trade mark, supplier's name or dealer's name.

ANNEX II

Energy efficiency classes

1. SEASONAL SPACE HEATING ENERGY EFFICIENCY CLASSES

The seasonal space heating energy efficiency class of a heater, with the exception of low-temperature heat pumps and heat pump space heaters for low-temperature application, shall be determined on the basis of its seasonal space heating energy efficiency as set out in Table 1.

The seasonal space heating energy efficiency classes of a low-temperature heat pump and a heat pump space heater for low-temperature application shall be determined on the basis of its seasonal space heating energy efficiency as set out in Table 2.

The seasonal space heating energy efficiency of a heater shall be calculated in accordance with points 3 and 4 of Annex VII, for heat pump space heaters, heat pump combination heaters and low-temperature heat pumps under average climate conditions.

Table 1

Seasonal space heating energy efficiency classes of heaters, with the exception of low-temperature heat pumps and heat pump space heaters for low-temperature application

Seasonal space heating energy efficiency class	Seasonal space heating energy efficiency η_s in %
A+++	$\eta_s \geq 150$
A++	$125 \leq \eta_s < 150$
A+	$98 \leq \eta_s < 125$
A	$90 \leq \eta_s < 98$
B	$82 \leq \eta_s < 90$
C	$75 \leq \eta_s < 82$
D	$36 \leq \eta_s < 75$
E	$34 \leq \eta_s < 36$
F	$30 \leq \eta_s < 34$
G	$\eta_s < 30$

Table 2

Seasonal space heating energy efficiency classes of low-temperature heat pumps and heat pump space heaters for low-temperature application

Seasonal space heating energy efficiency class	Seasonal space heating energy efficiency η_s in %
A+++	$\eta_s \geq 175$
A++	$150 \leq \eta_s < 175$
A+	$123 \leq \eta_s < 150$
A	$115 \leq \eta_s < 123$
B	$107 \leq \eta_s < 115$
C	$100 \leq \eta_s < 107$
D	$61 \leq \eta_s < 100$
E	$59 \leq \eta_s < 61$
F	$55 \leq \eta_s < 59$
G	$\eta_s < 55$

2. WATER HEATING ENERGY EFFICIENCY CLASSES

The water heating energy efficiency class of a combination heater shall be determined on the basis of its water heating energy efficiency as set out in Table 3.

The water heating energy efficiency of a combination heater shall be calculated in accordance with point 5 of Annex VII.

Table 3

Water heating energy efficiency classes of combination heaters, categorised by declared load profiles, η_{wh} in %

	3XS	XXS	XS	S	M	L	XL	XXL
A+++	$\eta_{wh} \geq 62$	$\eta_{wh} \geq 62$	$\eta_{wh} \geq 69$	$\eta_{wh} \geq 90$	$\eta_{wh} \geq 163$	$\eta_{wh} \geq 188$	$\eta_{wh} \geq 200$	$\eta_{wh} \geq 213$
A++	$53 \leq \eta_{wh} < 62$	$53 \leq \eta_{wh} < 62$	$61 \leq \eta_{wh} < 69$	$72 \leq \eta_{wh} < 90$	$130 \leq \eta_{wh} < 163$	$150 \leq \eta_{wh} < 188$	$160 \leq \eta_{wh} < 200$	$170 \leq \eta_{wh} < 213$
A+	$44 \leq \eta_{wh} < 53$	$44 \leq \eta_{wh} < 53$	$53 \leq \eta_{wh} < 61$	$55 \leq \eta_{wh} < 72$	$100 \leq \eta_{wh} < 130$	$115 \leq \eta_{wh} < 150$	$123 \leq \eta_{wh} < 160$	$131 \leq \eta_{wh} < 170$
A	$35 \leq \eta_{wh} < 44$	$35 \leq \eta_{wh} < 44$	$38 \leq \eta_{wh} < 53$	$38 \leq \eta_{wh} < 55$	$65 \leq \eta_{wh} < 100$	$75 \leq \eta_{wh} < 115$	$80 \leq \eta_{wh} < 123$	$85 \leq \eta_{wh} < 131$
B	$32 \leq \eta_{wh} < 35$	$32 \leq \eta_{wh} < 35$	$35 \leq \eta_{wh} < 38$	$35 \leq \eta_{wh} < 38$	$39 \leq \eta_{wh} < 65$	$50 \leq \eta_{wh} < 75$	$55 \leq \eta_{wh} < 80$	$60 \leq \eta_{wh} < 85$
C	$29 \leq \eta_{wh} < 32$	$29 \leq \eta_{wh} < 32$	$32 \leq \eta_{wh} < 35$	$32 \leq \eta_{wh} < 35$	$36 \leq \eta_{wh} < 39$	$37 \leq \eta_{wh} < 50$	$38 \leq \eta_{wh} < 55$	$40 \leq \eta_{wh} < 60$

D	$26 \leq \eta_{wh} < 29$	$26 \leq \eta_{wh} < 29$	$29 \leq \eta_{wh} < 32$	$29 \leq \eta_{wh} < 32$	$33 \leq \eta_{wh} < 36$	$34 \leq \eta_{wh} < 37$	$35 \leq \eta_{wh} < 38$	$36 \leq \eta_{wh} < 40$
E	$22 \leq \eta_{wh} < 26$	$23 \leq \eta_{wh} < 26$	$26 \leq \eta_{wh} < 29$	$26 \leq \eta_{wh} < 29$	$30 \leq \eta_{wh} < 33$	$30 \leq \eta_{wh} < 34$	$30 \leq \eta_{wh} < 35$	$32 \leq \eta_{wh} < 36$
F	$19 \leq \eta_{wh} < 22$	$20 \leq \eta_{wh} < 23$	$23 \leq \eta_{wh} < 26$	$23 \leq \eta_{wh} < 26$	$27 \leq \eta_{wh} < 30$	$27 \leq \eta_{wh} < 30$	$27 \leq \eta_{wh} < 30$	$28 \leq \eta_{wh} < 32$
G	$\eta_{wh} < 19$	$\eta_{wh} < 20$	$\eta_{wh} < 23$	$\eta_{wh} < 23$	$\eta_{wh} < 27$	$\eta_{wh} < 27$	$\eta_{wh} < 27$	$\eta_{wh} < 28$

3. ENERGY EFFICIENCY CLASSES OF SOLAR HOT WATER STORAGE TANKS, IF (PART OF) A SOLAR DEVICE

The energy efficiency class of a solar hot water storage tank, if (part of) a solar device, shall be determined on the basis of its standing loss as set out in Table 4.

Table 4

Energy efficiency classes of solar hot water storage tanks, if (part of) a solar device

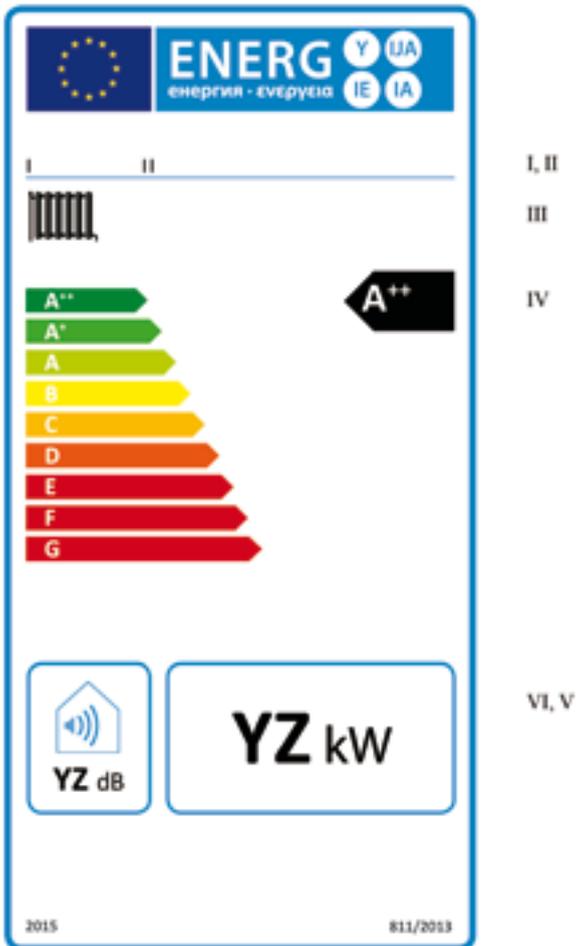
Energy efficiency class	Standing loss S in Watts, with storage volume V in litres
A+	$S < 5,5 + 3,16 \cdot V^{0,4}$
A	$5,5 + 3,16 \cdot V^{0,4} \leq S < 8,5 + 4,25 \cdot V^{0,4}$
B	$8,5 + 4,25 \cdot V^{0,4} \leq S < 12 + 5,93 \cdot V^{0,4}$
C	$12 + 5,93 \cdot V^{0,4} \leq S < 16,66 + 8,33 \cdot V^{0,4}$
D	$16,66 + 8,33 \cdot V^{0,4} \leq S < 21 + 10,33 \cdot V^{0,4}$
E	$21 + 10,33 \cdot V^{0,4} \leq S < 26 + 13,66 \cdot V^{0,4}$
F	$26 + 13,66 \cdot V^{0,4} \leq S < 31 + 16,66 \cdot V^{0,4}$
G	$S > 31 + 16,66 \cdot V^{0,4}$

ANNEX III The labels

1. Space heaters

1.1. Label 1

1.1.1. Boiler space heaters in seasonal space heating energy efficiency classes A⁺⁺ to G



(a) The following information shall be included in the label:

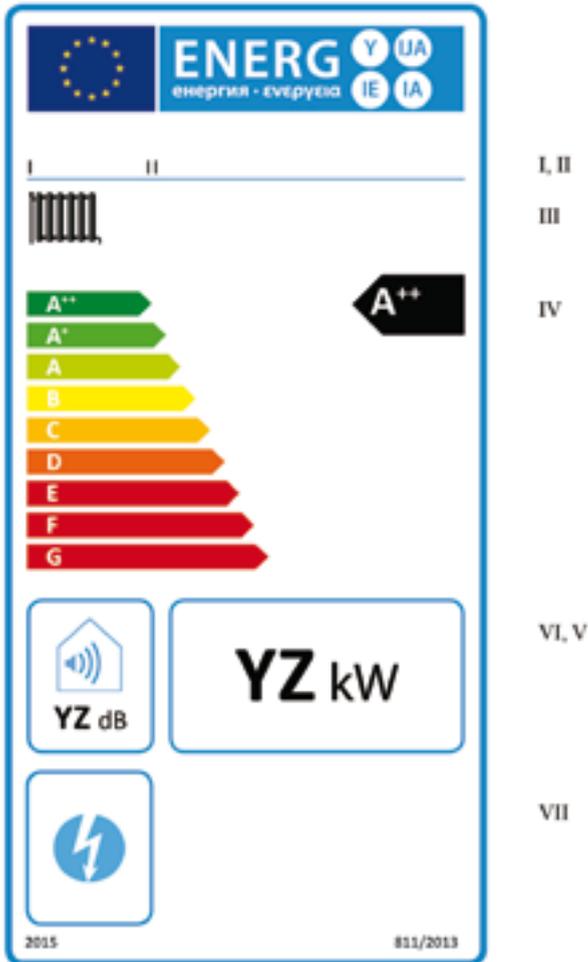
- I. supplier's name or trade mark;
- II. supplier's model identifier;
- III. the space heating function;
- IV. the seasonal space heating energy efficiency class, determined in accordance with point 1

of Annex II; the head of the arrow containing the seasonal space heating energy efficiency class of the boiler space heater shall be placed at the same height as the head of the relevant energy efficiency class;

V. the rated heat output in kW, rounded to the nearest integer;

VI. the sound power level L_{WA} , indoors, in dB, rounded to the nearest integer.

(b) The design aspects of the label for boiler space heaters shall be in accordance with point 5 of this Annex.

1.1.2. Cogeneration space heaters in seasonal space heating energy efficiency classes A⁺⁺ to G

(a) The following information shall be included in the label:

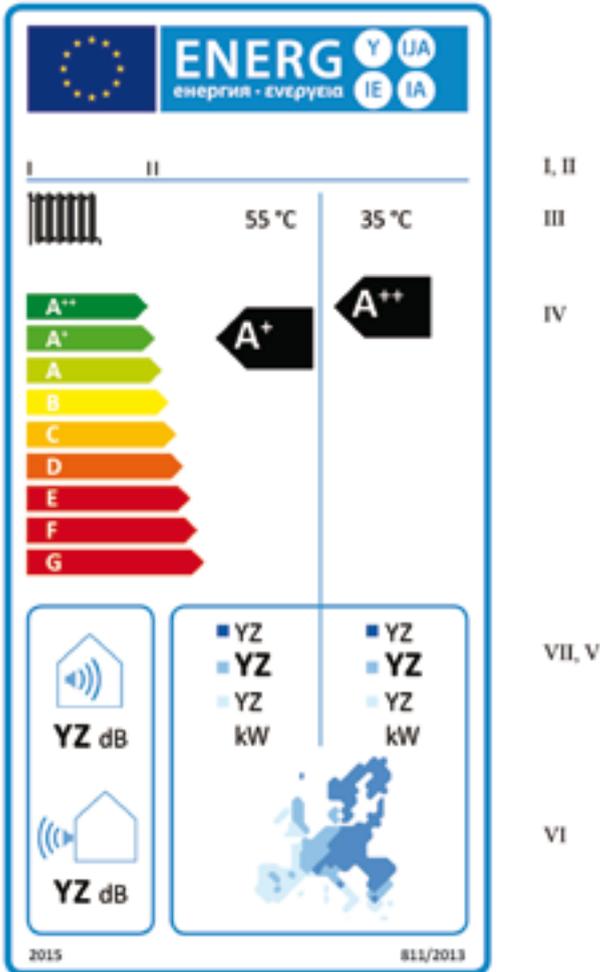
- I. supplier's name or trade mark;
- II. supplier's model identifier;
- III. the space heating function;
- IV. the seasonal space heating energy efficiency class, determined in accordance with point 1 of Annex II; the head of the arrow containing the seasonal space heating energy efficiency class of the cogeneration space heater shall be placed at the same height as the head of the relevant energy efficiency class;
- V. the rated heat output, including the rated heat output of any supplementary heater, in kW, rounded to the nearest integer;

VI. the sound power level L_{WA} , indoors, in dB, rounded to the nearest integer;

VII. the additional electricity generation function.

(b) The design aspects of the label for cogeneration space heaters shall be in accordance with point 6 of this Annex.

1.1.3. Heat pump space heaters, except low-temperature heat pumps, in seasonal space heating energy efficiency classes A⁺⁺ to G



(a) The following information shall be included in the label:

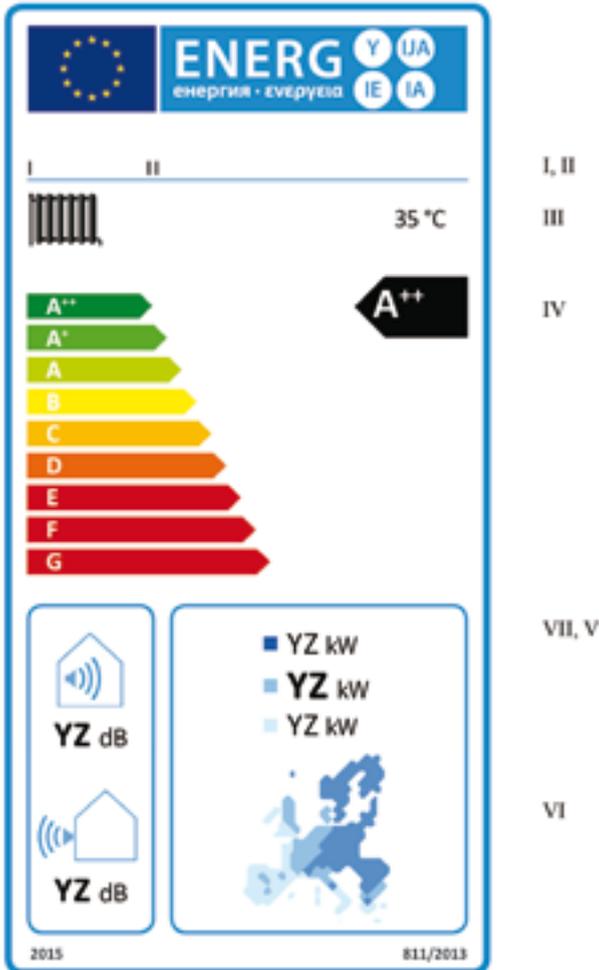
- I. supplier's name or trade mark;
- II. supplier's model identifier;
- III. the space heating function for medium- and low-temperature application, respectively;
- IV. the seasonal space heating energy efficiency class under average climate conditions for medium- and low-temperature application, respectively, determined in accordance with point 1 of Annex II; the head of the arrow containing the seasonal space heating energy efficiency class of the heat pump space heater for medium- and low-temperature application, respectively, shall be placed at the same height as the head of the relevant energy efficiency class;

V. the rated heat output, including the rated heat output of any supplementary heater, in kW, under average, colder and warmer climate conditions for medium- and low-temperature application, respectively, rounded to the nearest integer;

VI. European temperature map displaying three indicative temperature zones;

VII. the sound power level L_{WA} , indoors (if applicable) and outdoors, in dB, rounded to the nearest integer.

(b) The design aspects of the label for heat pump space heaters shall be in accordance with point 7 of this Annex. By way of exception, where a model has been granted an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU Ecolabel may be added.

1.1.4. Low-temperature heat pumps in seasonal space heating energy efficiency classes A⁺⁺ to G

(a) The following information shall be included in the label:

- I. supplier's name or trade mark;
- II. supplier's model identifier;
- III. the space heating function for low-temperature application;
- IV. the seasonal space heating energy efficiency class under average climate conditions, determined in accordance with point 1 of Annex II; the head of the arrow containing the seasonal space heating energy efficiency class of the low-temperature heat pump shall be placed at the same height as the head of the relevant energy efficiency class;
- V. the rated heat output, including the rated heat output of any supplementary heater, in kW,

under average, colder and warmer climate conditions, rounded to the nearest integer;

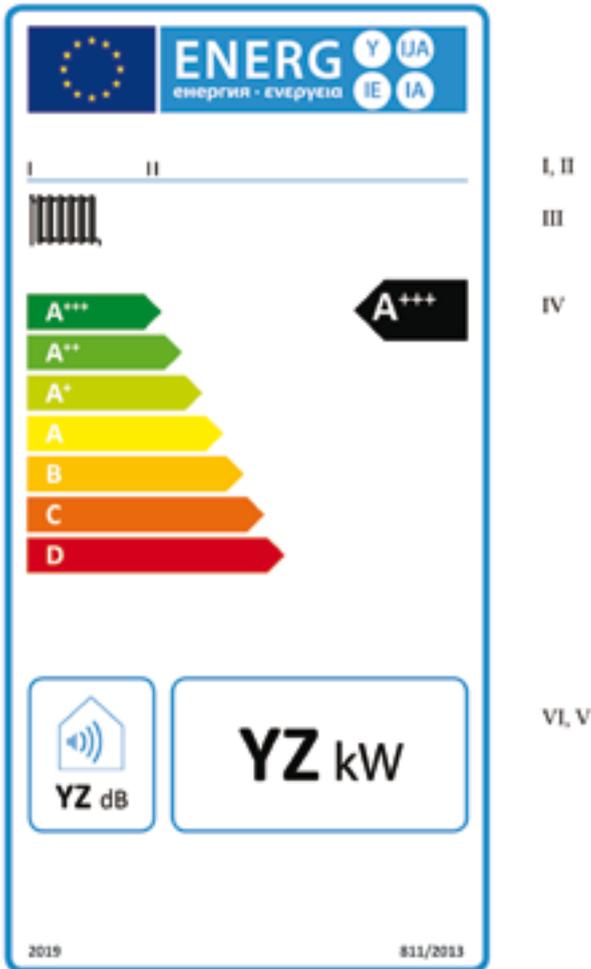
VI. European temperature map displaying three indicative temperature zones;

VII. the sound power level L_{WA} , indoors (if applicable) and outdoors, in dB, rounded to the nearest integer.

(b) The design aspects of the label for low-temperature heat pumps shall be in accordance with point 8 of this Annex. By way of exception, where a model has been granted an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU Ecolabel may be added.

1.2. Label 2

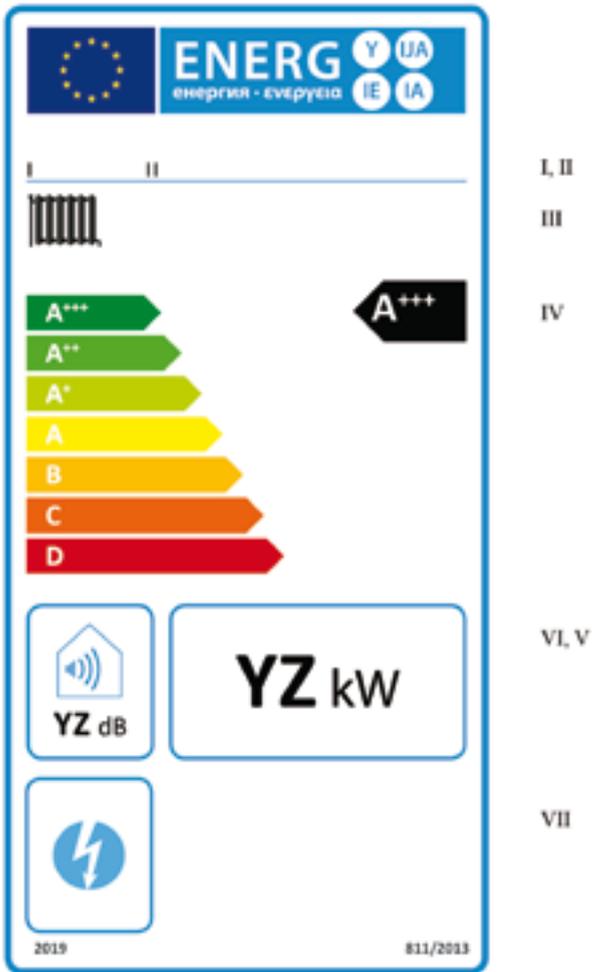
1.2.1. Boiler space heaters in seasonal space heating energy efficiency classes A+++ to D



(a) The information listed in point 1.1.1(a) of this Annex shall be included in the label.

(b) The design aspects of the label for boiler space heaters shall be in accordance with point 5 of this Annex.

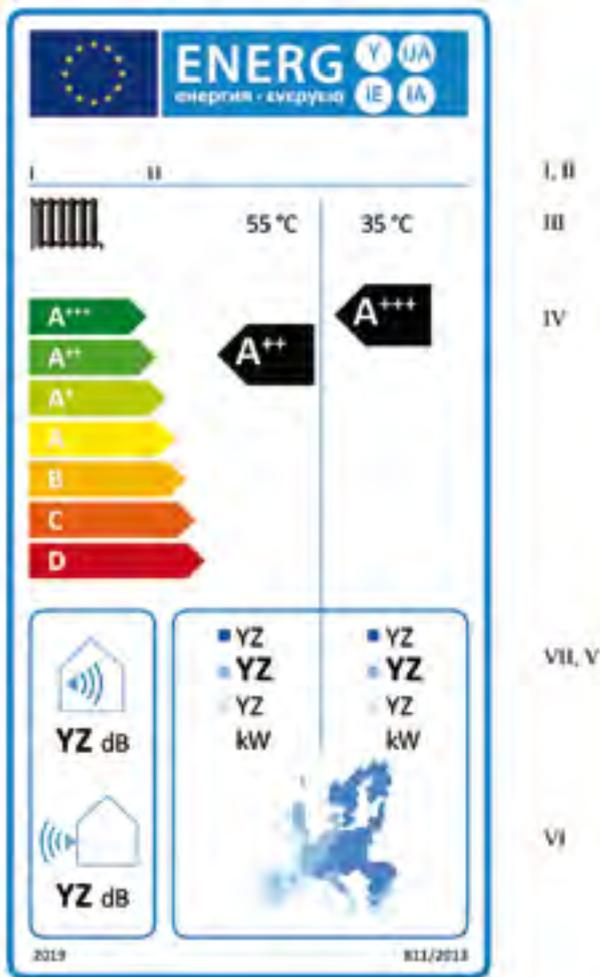
1.2.2. Cogeneration space heaters in seasonal space heating energy efficiency classes A+++ to D



(a) The information listed in point 1.1.2(a) of this Annex shall be included in the label.

(b) The design aspects of the label for cogeneration space heaters shall be in accordance with point 6 of this Annex.

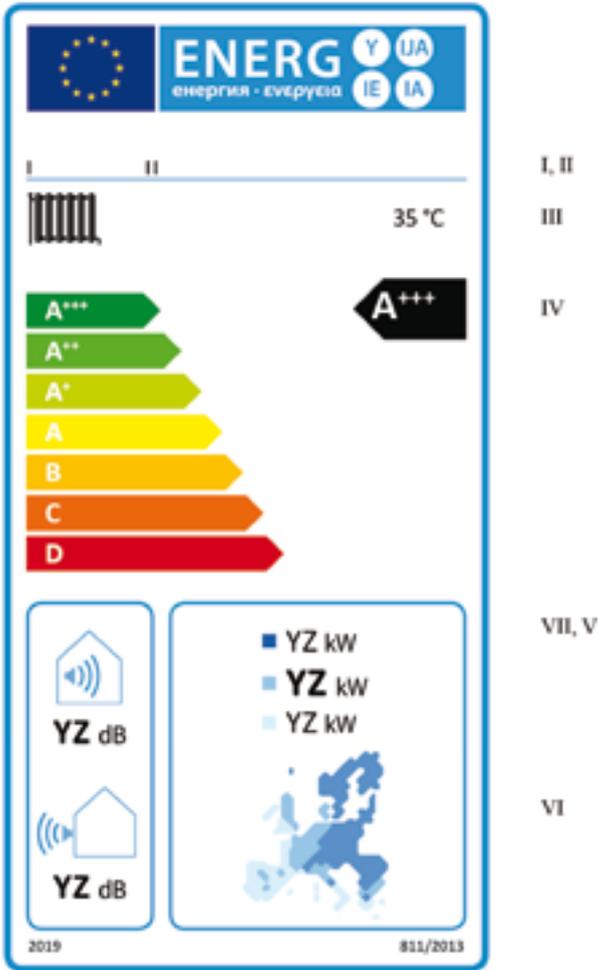
1.2.3. Heat pump space heaters, except low-temperature heat pumps, in seasonal space heating energy efficiency classes A+++ to D



(a) The information listed in point 1.1.3(a) of this Annex shall be included in the label.

(b) The design aspects of the label for heat pump space heaters shall be in accordance with point 7 of this Annex.

1.2.4. Low-temperature heat pumps in seasonal space heating energy efficiency classes A+++ to D



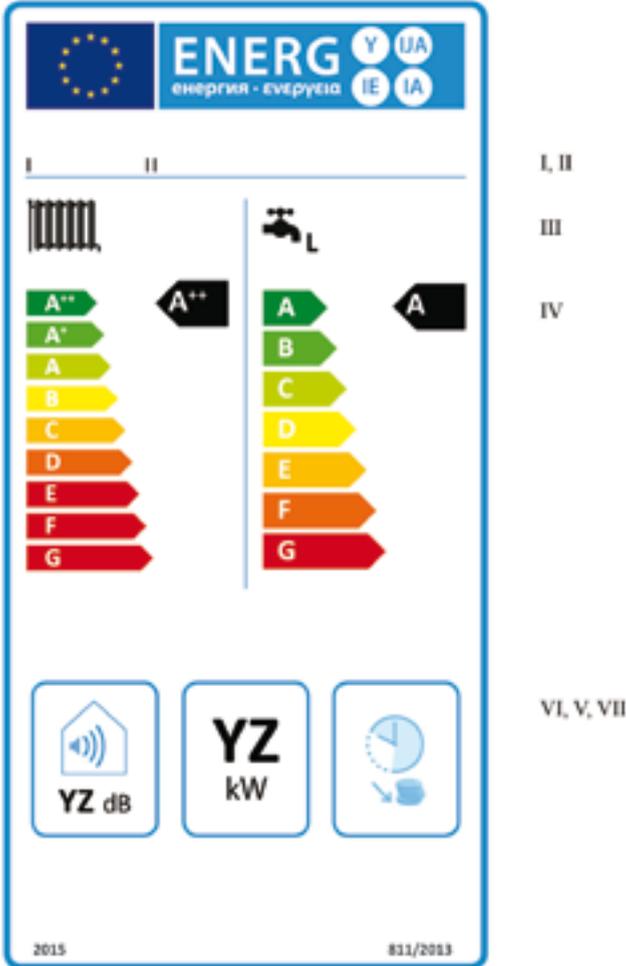
(a) The information listed in point 1.1.4(a) of this Annex shall be included in the label.

(b) The design aspects of the label for low-temperature heat pumps shall be in accordance with point 8 of this Annex.

2. Combination heaters

2.1. Label 1

2.1.1 Boiler combination heaters in seasonal space heating energy efficiency classes A⁺⁺ to G and in water heating energy efficiency classes A to G



(a) The following information shall be included in the label:

- I. supplier's name or trade mark;
- II. supplier's model identifier;
- III. the space heating function and the water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 15 of Annex VII;
- IV. the seasonal space heating energy efficiency class and the water heating energy efficiency class, determined in accordance with points 1 and 2 of Annex II; the head of the arrows contain-

ing the seasonal space heating energy efficiency class and water heating energy efficiency class of the boiler combination heater shall be placed at the same height as the head of the relevant energy efficiency class;

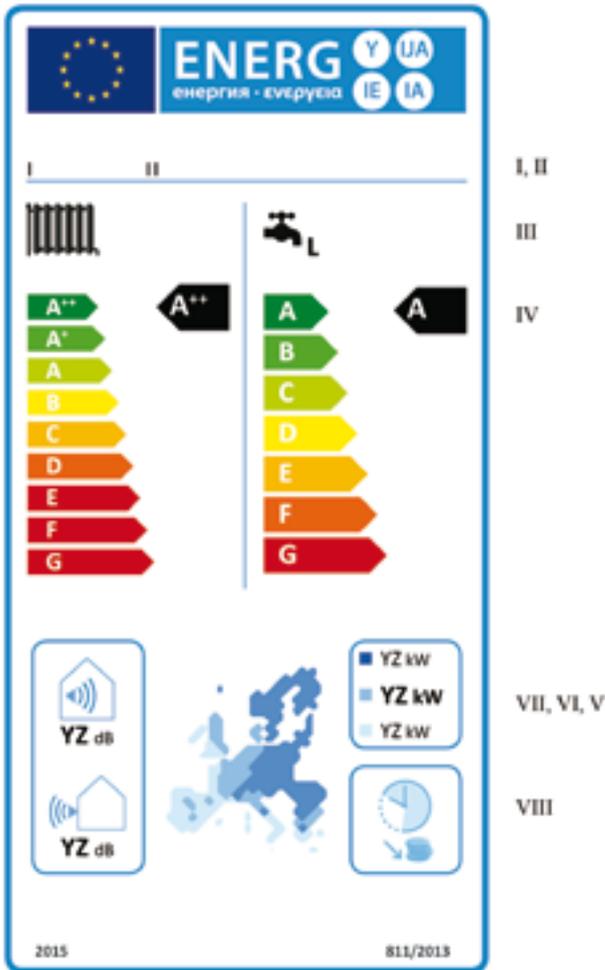
V. the rated heat output in kW, rounded to the nearest integer;

VI. the sound power level L_{WA} , indoors, in dB, rounded to the nearest integer.

VII. for boiler combination heaters able to work only during off-peak hours, the pictogram referred to in point 9(d)(11) of this Annex may be added.

(b) The design aspects of the label for boiler combination heaters shall be in accordance with point 9 of this Annex.

2.1.2. Heat pump combination heaters in seasonal space heating energy efficiency classes A⁺⁺ to G and in water heating energy efficiency classes A to G



(a) The following information shall be included in the label:

- I. supplier's name or trade mark;
- II. supplier's model identifier;
- III. the space heating function for medium-temperature application and the water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 15 of Annex VII;
- IV. the seasonal space heating energy efficiency class under average climate conditions for medium-temperature application and the water heating energy efficiency class under average climate conditions, determined in accordance with points 1 and 2 of Annex II; the head of the arrows containing the seasonal space heating energy efficiency class and water heating energy efficien-

cy class of the heat pump combination heater shall be placed at the same height as the head of the relevant energy efficiency class;

V. the rated heat output, including the rated heat output of any supplementary heater, in kW, under average, colder and warmer climate conditions, rounded to the nearest integer;

VI. European temperature map displaying three indicative temperature zones;

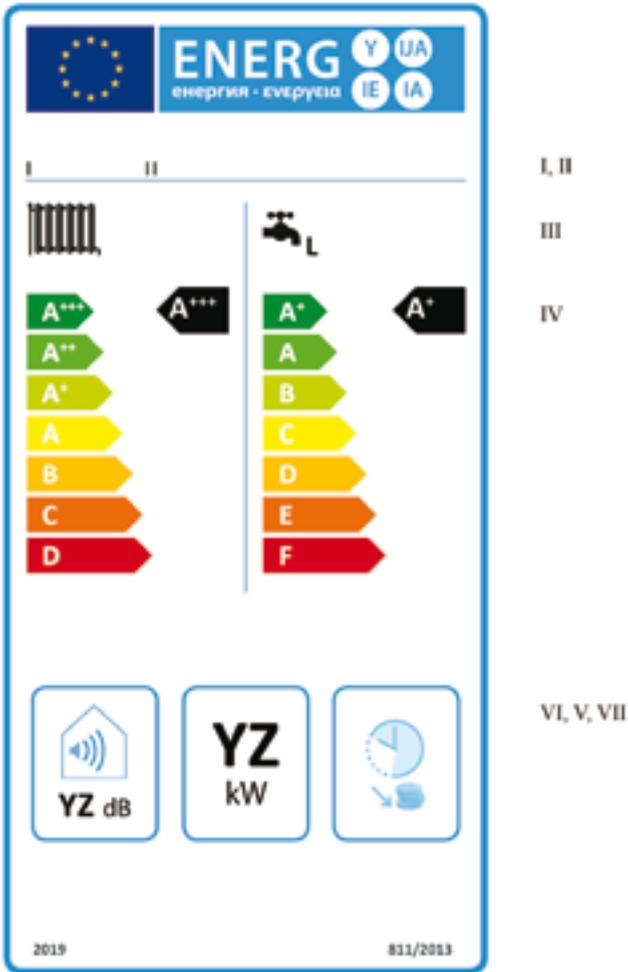
VII. the sound power level L_{WA} , indoors (if applicable) and outdoors, in dB, rounded to the nearest integer;

VIII. for heat pump combination heaters able to work only during off-peak hours, the pictogram referred to in point 10(d)(12) of this Annex may be added.

(b) The design aspects of the label for heat pump combination heaters shall be in accordance with point 10 of this Annex.

2.2. Label 2

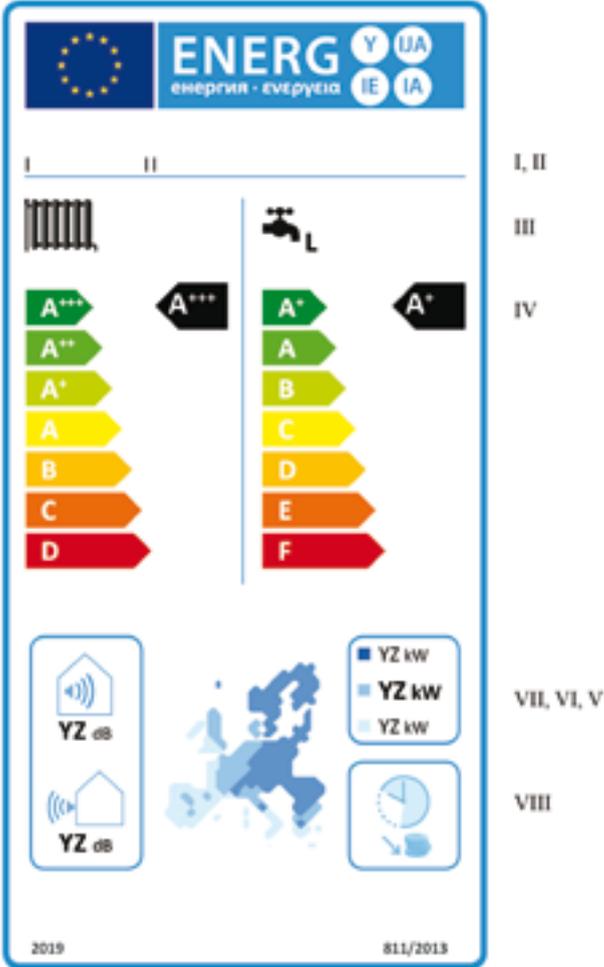
2.2.1. Boiler combination heaters in seasonal space heating energy efficiency classes A⁺⁺⁺ to D and in water heating energy efficiency classes A⁺ to F



(a) The information listed in point 2.1.1(a) of this Annex shall be included in the label.

(b) The design aspects of the label for boiler combination heaters shall be in accordance with point 9 of this Annex.

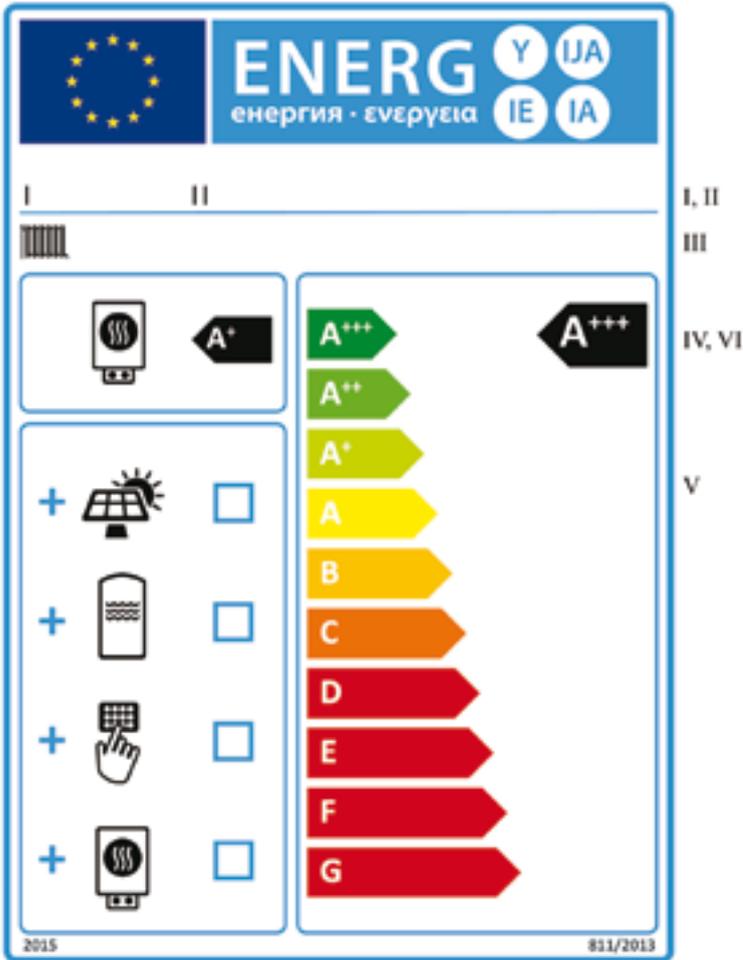
2.2.2. Heat pump combination heaters in seasonal space heating energy efficiency classes A+++ to D and in water heating energy efficiency classes A+ to F



- (a) The information listed in point 2.1.2(a) of this Annex shall be included in the label.
- (b) The design aspects of the label for heat pump combination heaters shall be in accordance with point 10 of this Annex.

3. Packages of space heater, temperature control and solar device

label for packages of space heater, temperature control and solar device in seasonal space heating energy efficiency classes A⁺⁺⁺ to G



(a) The following information shall be included in the label:

- I. dealer's and/or supplier's name or trade mark;
- II. dealer's and/or supplier's model(s) identifier;
- III. the space heating function;
- IV. the seasonal space heating energy efficiency class of the space heater, determined in accordance with point 1 of Annex II;
- V. indication of whether a solar collector, hot water storage tank, temperature control and/or supplementary space heater may be included in the package of space heater, temperature

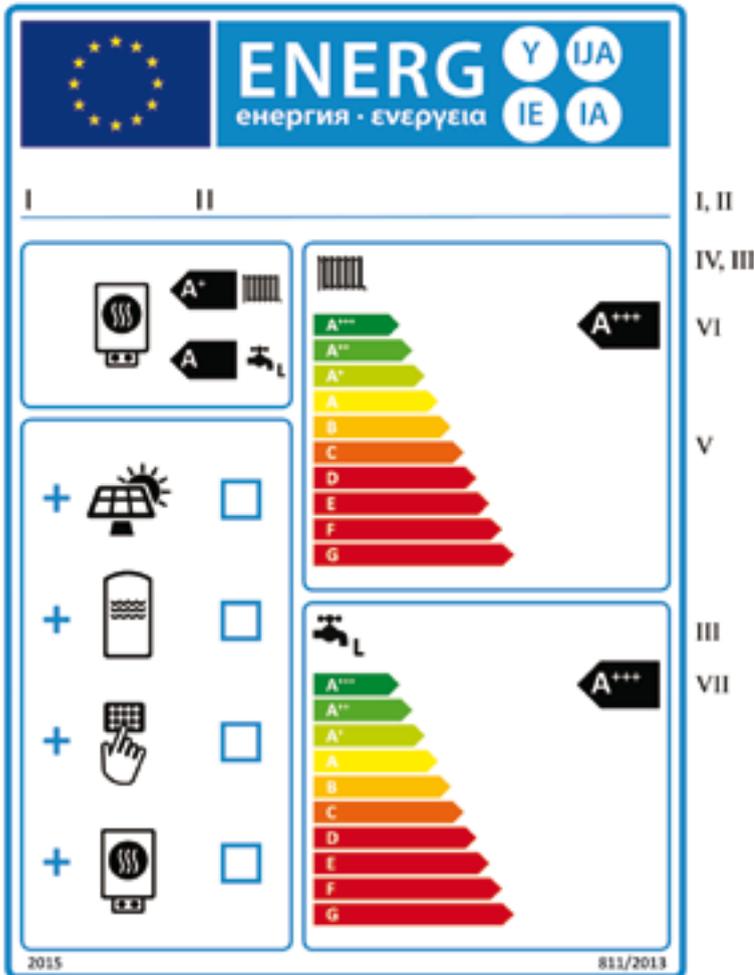
control and solar device;

VI. the seasonal space heating energy efficiency class of the package of space heater, temperature control and solar device, determined in accordance with point 5 of Annex IV; the head of the arrow containing the seasonal space heating energy efficiency class of the package of space heater, temperature control and solar device shall be placed at the same height as the head of the relevant energy efficiency class.

(b) The design aspects of the label for packages of space heater, temperature control and solar device shall be in accordance with point 11 of this Annex. For packages of space heater, temperature control and solar device in seasonal space heating energy efficiency classes A⁺⁺⁺ to D, the last classes E to G in the A⁺⁺⁺ to G scale may be omitted.

4. Packages of combination heater, temperature control and solar device

Label for packages of combination heater, temperature control and solar device in seasonal space heating and water heating energy efficiency classes A⁺⁺⁺ to G



(a) The following information shall be included in the label:

- I. dealer's and/or supplier's name or trade mark;
- II. dealer's and/or supplier's model(s) identifier;
- III. the space heating function and the water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 15 of Annex VII;
- IV. the seasonal space heating and water heating energy efficiency classes of the combination heater, determined in accordance with points 1 and 2 of Annex II;
- V. indication of whether a solar collector, hot water storage tank, temperature control and/

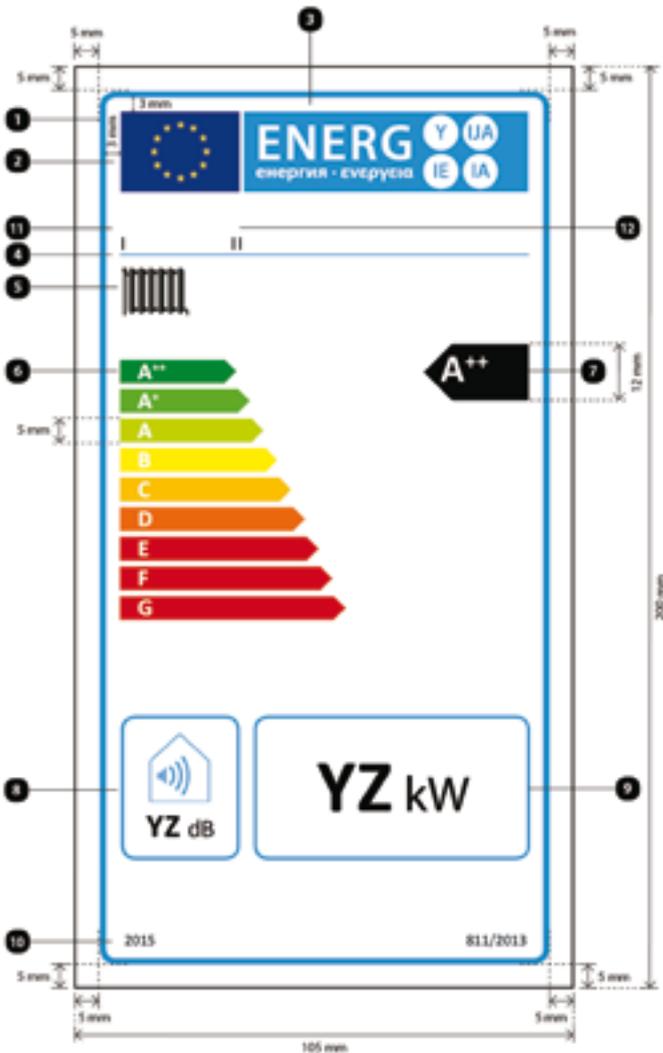
or supplementary heater, may be included in the package of combination heater, temperature control and solar device;

VI. the seasonal space heating energy efficiency class of the package of combination heater, temperature control and solar device, determined in accordance with point 6 of Annex IV; the head of the arrow containing the seasonal space heating energy efficiency class of the package of combination heater, temperature control and solar device shall be placed at the same height as the head of the relevant energy efficiency class;

VII. the water heating energy efficiency class of the package of combination heater, temperature control and solar device, determined in accordance with point 6 of Annex IV; the head of the arrow containing the water heating energy efficiency class of the package of combination heater, temperature control and solar device shall be placed at the same height as the head of the relevant energy efficiency class.

(b) The design aspects of the label for packages of combination heater, temperature control and solar device shall be in accordance with point 12 of this Annex. For packages of combination heater, temperature control and solar device in seasonal space heating and/or water heating energy efficiency classes A+++ to D, the last classes E to G in the A+++ to G scale may be omitted.

5. The design of the label for boiler space heaters shall be the following:



Whereby:

- The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- The background shall be white.
- Colours are coded as CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- The label shall fulfil all of the following requirements (numbers refer to the figure above):

- ❶ EU label border stroke: 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
- ❷ EU logo: Colours: X-80-00-00 and 00-00-X-00.
- ❸ Energy label: Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
- ❹ Sub-logos border: 1 pt, colour: cyan 100 %, length: 86 mm.
- ❺ Space heating function:
 - Pictogram as depicted.
- ❻ A++-G and A+++-D scales, respectively:
 - Arrow: height: 5 mm, gap: 1,3 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Seventh class: 00-X-X-00,
 - Eighth class: 00-X-X-00,
 - Last class: 00-X-X-00,
 - Text: Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;
 - Arrow: height: 7 mm, gap: 1 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00,
 - Text: Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- ❼ Seasonal space heating energy efficiency class:
 - Arrow: width: 22 mm, height: 12 mm, 100 % black,
 - Text: Calibri bold 24 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- ❽ Sound power level, indoors:
 - Pictogram as depicted,
 - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
 - Value 'YZ': Calibri bold 20 pt, 100 % black,
 - Text 'dB': Calibri regular 15 pt, 100 % black.

9 Rated heat output:

- Border: 2 pt – colour: cyan 100 % – round corners: 3,5 mm,
- Value 'YZ': Calibri bold 45 pt, 100 % black,
- Text 'kW': Calibri regular 30 pt, 100 % black.

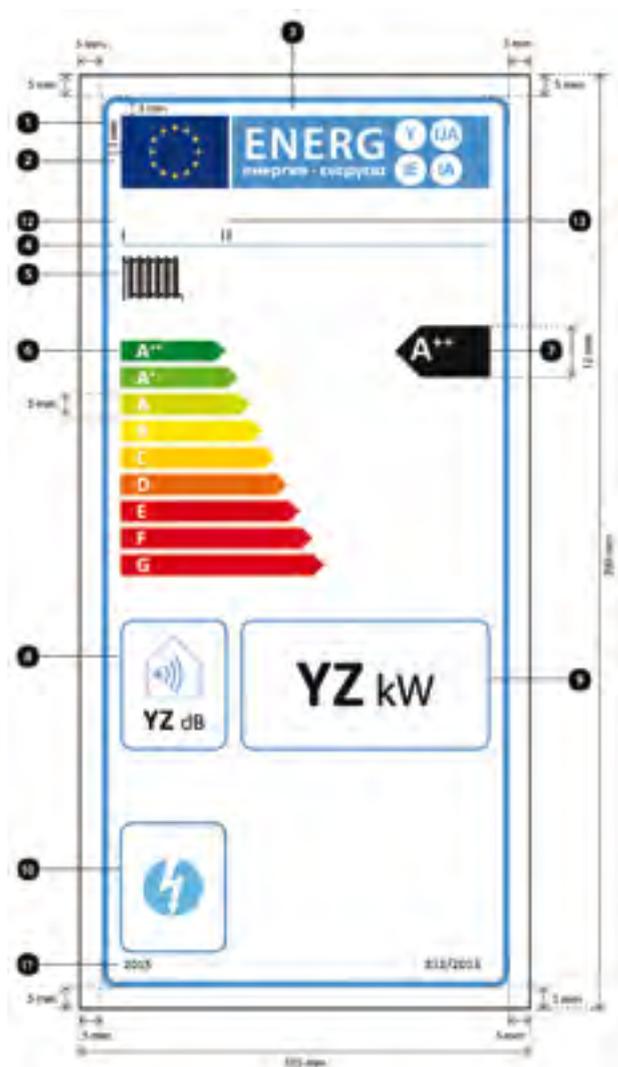
10 Year of label introduction and number of Regulation:

- Text: Calibri bold 10 pt.

11 Supplier's name or trademark.**12** Supplier's model identifier:

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

6. The design of the label for cogeneration space heaters shall be the following:



Whereby:

- (a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (b) The background shall be white.
- (c) Colours are coded as CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- (d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- ❶ EU label border stroke: 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
- ❷ EU logo: Colours: X-80-00-00 and 00-00-X-00.
- ❸ Energy label: Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
- ❹ Sub-logos border: 1 pt, colour: cyan 100 %, length: 86 mm.
- ❺ Space heating function:
 - Pictogram as depicted.
- ❻ A++-G and A+++-D scales, respectively:
 - Arrow: height: 5 mm, gap: 1,3 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Seventh class: 00-X-X-00,
 - Eighth class: 00-X-X-00,
 - Last class: 00-X-X-00,
 - Text: Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;
 - Arrow: height: 7 mm, gap: 1 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00,
 - Text: Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- ❼ Seasonal space heating energy efficiency class:
 - Arrow: width: 22 mm, height: 12 mm, 100 % black,
 - Text: Calibri bold 24 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- ❽ Sound power level, indoors:
 - Pictogram as depicted,
 - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
 - Value 'YZ': Calibri bold 20 pt, 100 % black,
 - Text 'dB': Calibri regular 15 pt, 100 % black.

9 Rated heat output:

- Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
- Value 'YZ': Calibri bold 45 pt, 100 % black,
- Text 'kW': Calibri regular 30 pt, 100 % black.

10 Electricity function:

- Pictogram as depicted,
- Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm.

11 Year of label introduction and number of Regulation:

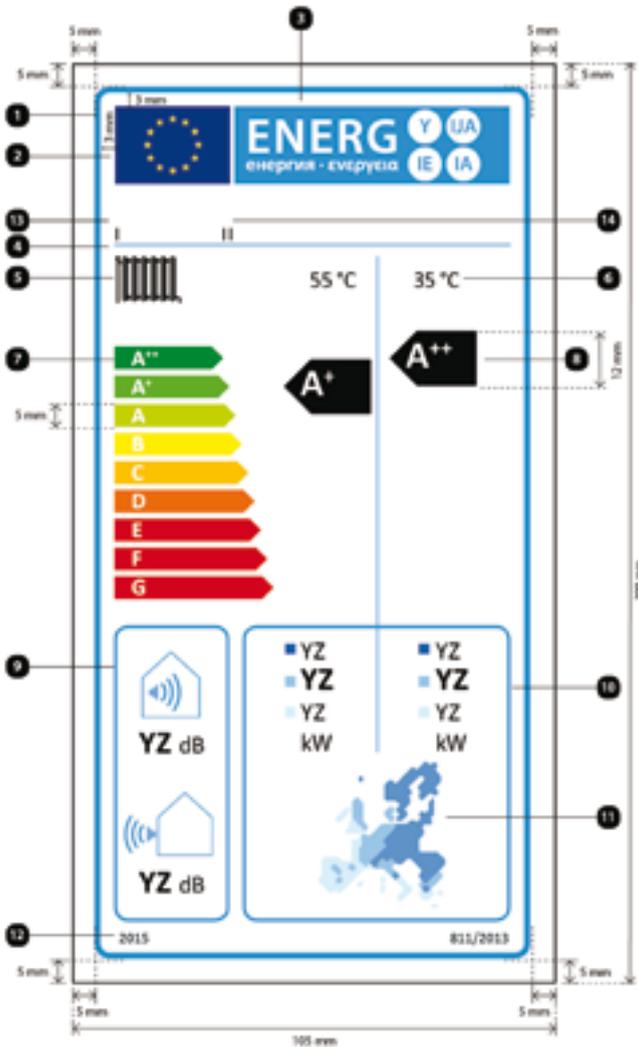
- Text: Calibri bold 10 pt.

12 Supplier's name or trademark.

13 Supplier's model identifier:

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

7. The design of the label for heat pump space heaters shall be the following:



Whereby:

- The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- The background shall be white.
- Colours are coded as CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- The label shall fulfil all of the following requirements (numbers refer to the figure above):

- ❶ EU label border stroke: 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
- ❷ EU logo: Colours: X-80-00-00 and 00-00-X-00.
- ❸ Energy label: Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
- ❹ Sub-logos border: 1 pt, colour: cyan 100 %, length: 86 mm.
- ❺ Space heating function:
 - Pictogram as depicted.
- ❻ Medium- and low-temperature application:
 - Text '55 °C' and '35 °C': Calibri regular 14 pt, 100 % black.
- ❼ A++-G and A+++-D scales, respectively:
 - Arrow: height: 5 mm, gap: 1,3 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Seventh class: 00-X-X-00,
 - Eighth class: 00-X-X-00,
 - Last class: 00-X-X-00,
 - Text: Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;
 - Arrow: height: 7 mm, gap: 1 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00,
 - Text: Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- ❽ Seasonal space heating energy efficiency class:
 - Arrow: width: 19 mm, height: 12 mm, 100 % black,
 - Text: Calibri bold 24 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- ❾ Sound power level, indoors (if applicable) and outdoors:
 - Pictogram as depicted,
 - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
 - Value 'YZ': Calibri bold 20 pt, 100 % black,

- Text 'dB': Calibri regular 15 pt, 100 % black.

10 Rated heat output:

- Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,

- Values 'YZ': Calibri at least 15 pt, 100 % black,

- Text 'kW': Calibri regular 15 pt, 100 % black.

11 European temperature map and colour squares:

- Pictogram as depicted,

- Colours:

- Dark blue: 86-51-00-00,

- Middle blue: 53-08-00-00,

- Light blue: 25-00-02-00.

12 Year of label introduction and number of Regulation:

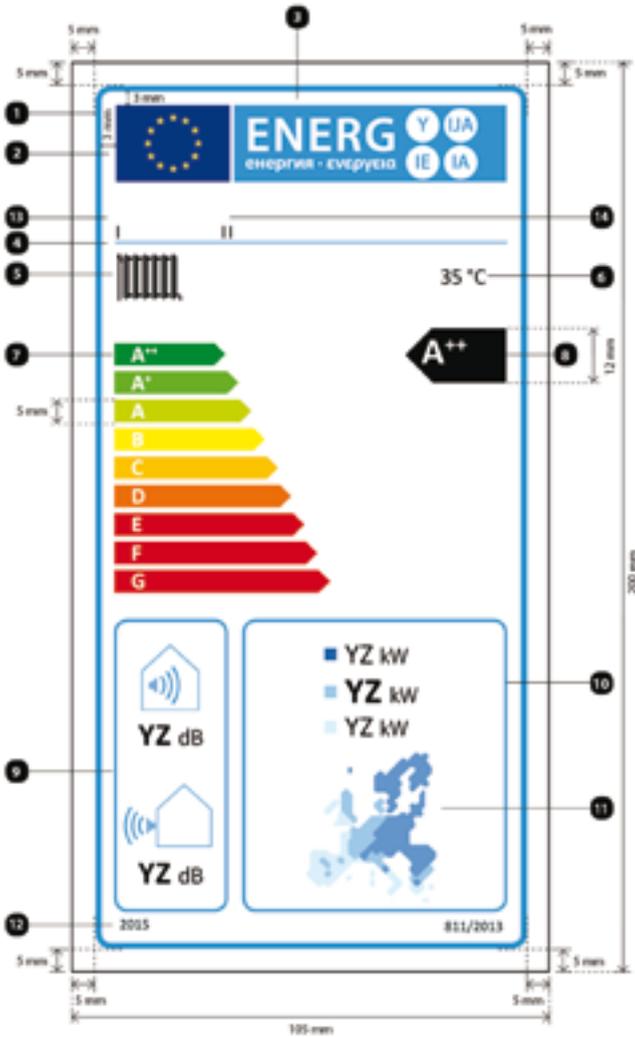
- Text: Calibri bold 10 pt.

13 Supplier's name or trademark.

14 Supplier's model identifier:

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

8. The design of the label for low-temperature heat pumps shall be the following:



Whereby:

- (a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (b) The background shall be white.
- (c) Colours are coded as CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- (d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- ① EU label border stroke: 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
- ② EU logo: Colours: X-80-00-00 and 00-00-X-00.
- ③ Energy label: Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
- ④ Sub-logos border: 1 pt, colour: cyan 100 %, length: 86 mm.
- ⑤ Space heating function:
 - Pictogram as depicted.
- ⑥ Low-temperature application:
 - Text '35 °C': Calibri regular 14 pt, 100 % black.
- ⑦ A++-G and A+++-D scales, respectively:
 - Arrow: height: 5 mm, gap: 1,3 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Seventh class: 00-X-X-00,
 - Eighth class: 00-X-X-00,
 - Last class: 00-X-X-00,
 - Text: Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;
 - Arrow: height: 7 mm, gap: 1 mm – colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00,
 - Text: Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- ⑧ Seasonal space heating energy efficiency class:
 - Arrow: width: 22 mm, height: 12 mm, 100 % black,
 - Text: Calibri bold 24 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- ⑨ Sound power level, indoors (if applicable) and outdoors:
 - Pictogram as depicted,
 - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
 - Value 'YZ': Calibri bold 20 pt, 100 % black,

- Text 'dB': Calibri regular 15 pt, 100 % black.

10 Rated heat output:

- Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,

- Values 'YZ': Calibri at least 18 pt, 100 % black,

- Text 'kW': Calibri regular 13,5 pt, 100 % black.

11 European temperature map and colour squares:

- Pictogram as depicted,

Colours:

- Dark blue: 86-51-00-00,

- Middle blue: 53-08-00-00,

- Light blue: 25-00-02-00.

12 Year of label introduction and number of Regulation:

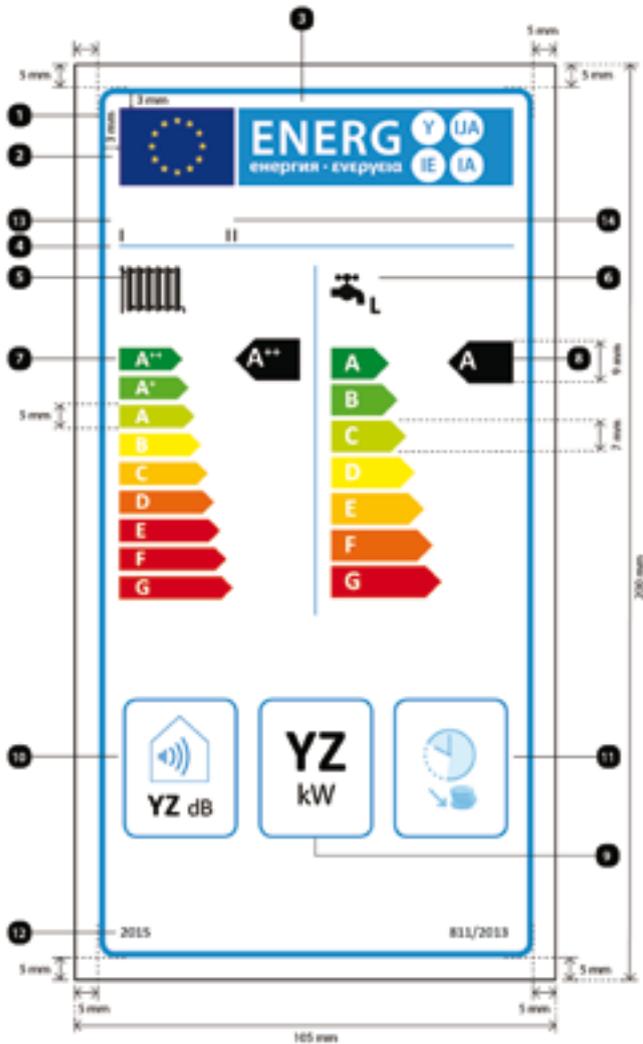
- Text: Calibri bold 10 pt.

13 Supplier's name or trademark.

14 Supplier's model identifier:

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

9. The design of the label for boiler combination heaters shall be the following:



Whereby:

- The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- The background shall be white.
- Colours are coded as CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- The label shall fulfil all of the following requirements (numbers refer to the figure above):

- ❶ EU label border stroke: 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
- ❷ EU logo: Colours: X-80-00-00 and 00-00-X-00.
- ❸ Energy label: Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
- ❹ Sub-logos border: 1 pt, colour: cyan 100 %, length: 86 mm.
- ❺ Space heating function:
 - Pictogram as depicted.
- ❻ Water heating function:
 - Pictogram as depicted, including the declared load profile expressed as the appropriate letter in accordance with Table 15 of Annex VII: Calibri bold 16 pt, 100 % black.
- ❼ A++-G and A-G, A+++-D or A+-F scales, respectively:
 - Arrow: height: 5 mm, gap: 1,3 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Seventh class: 00-X-X-00,
 - Eighth class: 00-X-X-00,
 - Last class: 00-X-X-00,
 - Text: Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;
 - Arrow: height: 7 mm, gap: 1 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00,
 - Text: Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- ❽ Seasonal space heating and water heating energy efficiency classes:
 - Arrow: width: 14 mm, height: 9 mm, 100 % black,
 - Text: Calibri bold 18 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- ❾ Rated heat output:
 - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
 - Value 'YZ': Calibri bold 37,5 pt, 100 % black,

- Text 'kW': Calibri regular 18 pt, 100 % black.

10 Sound power level, indoors:

- Pictogram as depicted,
- Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
- Value 'YZ': Calibri bold 20 pt, 100 % black,
- Text 'dB': Calibri regular 15 pt, 100 % black.

11 If applicable, off-peak fitness:

- Pictogram as depicted,
- Border: 2 pt – colour: cyan 100 % – round corners: 3,5 mm.

12 Year of label introduction and number of Regulation:

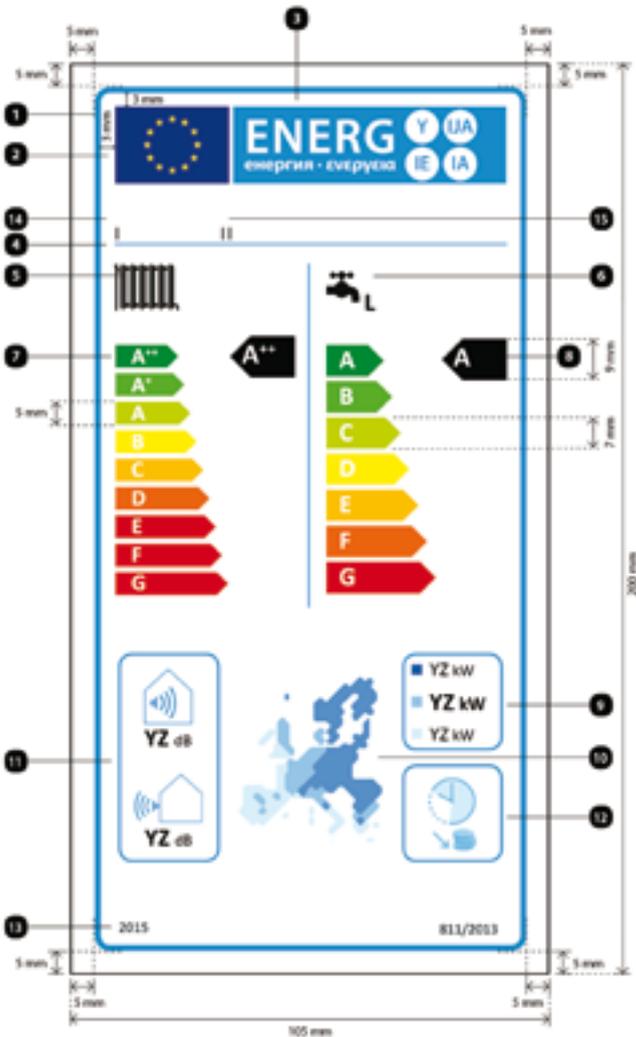
- Text: Calibri bold 10 pt.

13 Supplier's name or trademark.

14 Supplier's model identifier:

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

10. The design of the label for heat pump combination heaters shall be the following:



Whereby:

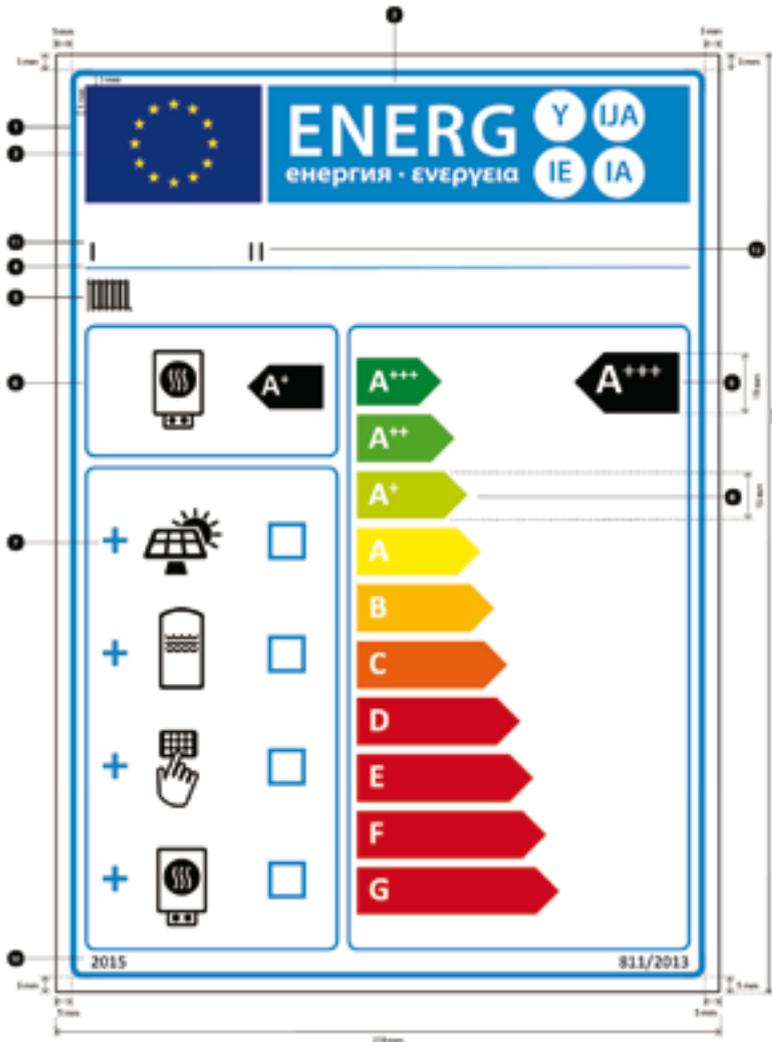
- (a) The label shall be at least 105 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (b) The background shall be white.
- (c) Colours are coded as CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- (d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- ❶ EU label border stroke: 4 pt, colour: cyan 100 %, round corners: 3,5 mm.
- ❷ EU logo: Colours: X-80-00-00 and 00-00-X-00.
- ❸ Energy label: Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 86 mm, height: 17 mm.
- ❹ Sub-logos border: 1 pt, colour: cyan 100 %, length: 86 mm.
- ❺ Space heating function:
 - Pictogram as depicted.
- ❻ Water heating function:
 - Pictogram as depicted, including the declared load profile expressed as the appropriate letter in accordance with Table 15 of Annex VII: Calibri bold 16 pt, 100 % black.
- ❼ A+++-G and A-G, A+++-D or A+-F scales, respectively:
 - Arrow: height: 5 mm, gap: 1,3 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Seventh class: 00-X-X-00,
 - Eighth class: 00-X-X-00,
 - Last class: 00-X-X-00,
 - Text: Calibri bold 14 pt, capitals, white, '+' symbols: superscript, aligned on a single row;
 - Arrow: height: 7 mm, gap: 1 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00,
 - Text: Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- ❽ Seasonal space heating and water heating energy efficiency classes:
 - Arrow: width: 14 mm, height: 9 mm, 100 % black,
 - Text: Calibri bold 18 pt, capitals, white, '+' symbols: superscript, aligned on a single row.
- ❾ Rated heat output:
 - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
 - Values 'YZ': Calibri at least 12 pt, 100 % black,

- Text 'kW': Calibri regular 10 pt, 100 % black.
- 10 European temperature map and colour squares:
 - Pictogram as depicted,
 - Colours:
 - Dark blue: 86-51-00-00,
 - Middle blue: 53-08-00-00,
 - Light blue: 25-00-02-00.
- 11 Sound power level, indoors (if applicable) and outdoors:
 - Pictogram as depicted,
 - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm,
 - Value 'YZ': Calibri bold 15 pt, 100 % black,
 - Text 'dB': Calibri regular 10 pt, 100 % black.
- 12 If applicable, off-peak fitness:
 - Pictogram as depicted,
 - Border: 2 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 13 Year of label introduction and number of Regulation:
 - Text: Calibri bold 10 pt.
- 14 Supplier's name or trademark.
- 15 Supplier's model identifier:

The supplier's name or trade mark and model identifier shall fit in a space of 86 × 12 mm.

11. The design of the label for packages of space heater, temperature control and solar device shall be the following:



Whereby:

- (a) The label shall be at least 210 mm wide and 297 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (b) The background shall be white.
- (c) Colours are coded as CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- (d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

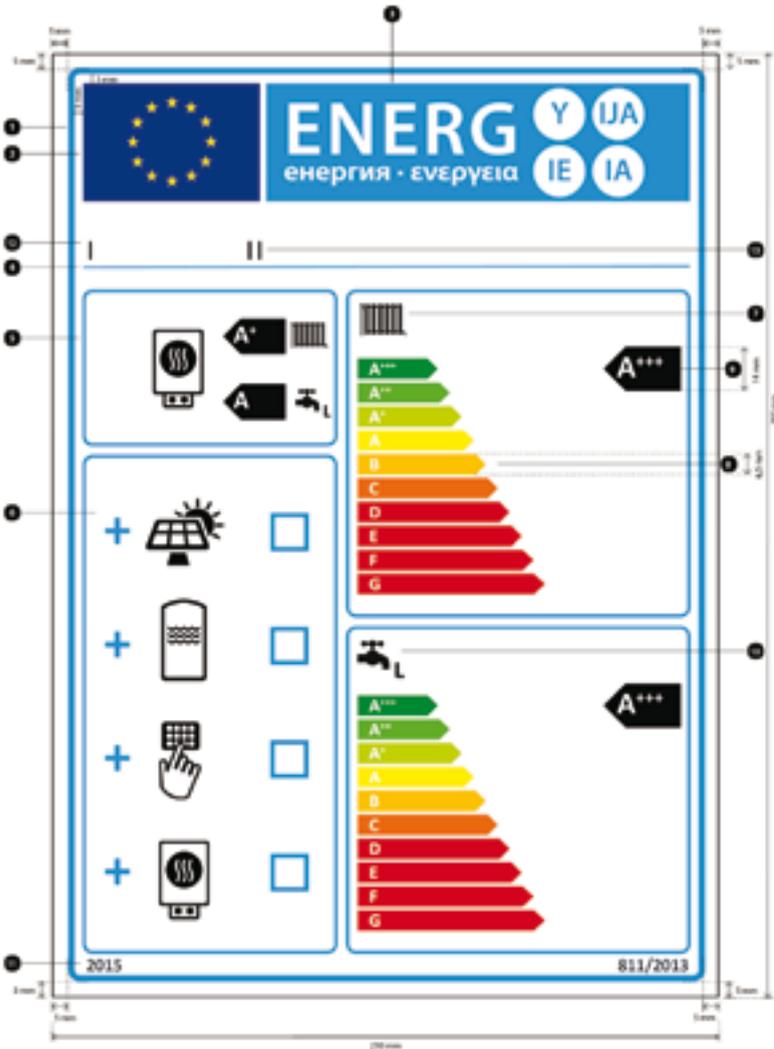
- 1 EU label border stroke: 6 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 2 EU logo: Colours: X-80-00-00 and 00-00-X-00.
- 3 Energy label: Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 191 mm, height: 37 mm.
- 4 Sub-logos border: 2 pt, colour: cyan 100 %, length: 191 mm.
- 5 Space heating function:
 - Pictogram as depicted.
- 6 Space heater:
 - Pictogram as depicted,
 - Seasonal space heating energy efficiency class of space heater:
 - Arrow: width: 24 mm, height: 14 mm, 100 % black;
 - Text: Calibri bold 28 pt, capitals, white, '+' symbols: superscript, aligned on a single row,
 - Border: 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 7 Package with solar collector, hot water storage tank, temperature control and/or supplementary heater:
 - Pictograms as depicted,
 - '+' symbol: Calibri bold 50 pt, cyan 100 %,
 - Boxes: width: 12 mm, height: 12 mm, border: 4 pt, cyan 100 %,
 - Border: 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 8 A+++–G scale with border:
 - Arrow: height: 15 mm, gap: 3 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Seventh class: 00-X-X-00,
 - If applicable, last classes: 00-X-X-00,
 - Text: Calibri bold 30 pt, capitals, white, '+' symbols: superscript, aligned on a single row,
 - Border: 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
- 9 Seasonal space heating energy efficiency class for package of space heater, temperature control and solar device:
 - Arrow: width: 33 mm, height: 19 mm, 100 % black,
 - Text: Calibri bold 40 pt, capitals, white, '+' symbols: superscript, aligned on a single row.

Year of label introduction and number of Regulation:

 - Text: Calibri bold 12 pt.

- 10 Dealer's and/or supplier's name or trademark.
- 11 Dealer's and/or supplier's model identifier:
- 12 The dealer's and/or supplier's name or trade mark and model identifier shall fit in a space of 191 × 19 mm.

12. The design of the label for packages of combination heater, temperature control and solar device shall be the following:



Whereby:

- (a) The label shall be at least 210 mm wide and 297 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.
- (b) The background shall be white.
- (c) Colours are coded as CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- (d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- ❶ EU label border stroke: 6 pt, colour: cyan 100 %, round corners: 3,5 mm.
- ❷ EU logo: Colours: X-80-00-00 and 00-00-X-00.
- ❸ Energy label: Colour: X-00-00-00. Pictogram as depicted: EU logo + energy label: width: 191 mm, height: 37 mm.
- ❹ Sub-logos border: 2 pt, colour: cyan 100 %, length: 191 mm.
- ❺ Combination heater:
 - Pictograms as depicted; for water heating function, including the declared load profile expressed as the appropriate letter in accordance with Table 15 of Annex VII: Calibri bold 16 pt, 100 % black.
 - Seasonal space heating and water heating energy efficiency class of combination heater:
 - Arrow: width: 19 mm, height: 11 mm, 100 % black,
 - Text: Calibri bold 23 pt, capitals, white, '+' symbols: superscript, aligned on a single row,
 - Border: 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
- ❻ Package with solar collector, hot water storage tank, temperature control and/or supplementary heater:
 - Pictograms as depicted,
 - '+' symbol: Calibri bold 50 pt, cyan 100 %,
 - Boxes: width: 12 mm, height: 12 mm, border: 4 pt, cyan 100 %,
 - Border: 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
- ❼ Space heating function:
 - Pictogram as depicted.
- ❽ A+++–G scale with border:
 - Arrow: height: 6,5 mm, gap: 1 mm, colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Seventh class: 00-X-X-00,
 - If applicable, last classes: 00-X-X-00,
 - Text: Calibri bold 16 pt, capitals, white, '+' symbols: superscript, aligned on a single row,
 - Border: 3 pt, colour: cyan 100 %, round corners: 3,5 mm.
- ❾ Seasonal space heating and water heating energy efficiency class, respectively, for package of combination heater, temperature control and solar device:
 - Arrow: width: 24 mm, height: 14 mm, 100 % black,
 - Text: Calibri bold 28 pt, capitals, white, '+' symbols: superscript, aligned on a single row.

10 Water heating function:

- Pictogram as depicted, including the declared load profile expressed as the appropriate letter in accordance with Table 15 of Annex VII: Calibri bold 22 pt, 100 % black.

11 Year of label introduction and number of Regulation:

- Text: Calibri bold 12 pt.

12 Dealer's and/or supplier's name or trademark.

13 Dealer's and/or supplier's model identifier:

The dealer's and/or supplier's name or trade mark and model identifier shall fit in a space of 191 × 19 mm.

ANNEX IV

Product fiche

1. Space heaters

1.1. The information in the product fiche of the space heater shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trademark;
- (b) supplier's model identifier;
- (c) the seasonal space heating energy efficiency class of the model, determined in accordance with point 1 of Annex II;
- (d) the rated heat output, including the rated heat output of any supplementary heater, in kW, rounded to the nearest integer (for heat pump space heaters under average climate conditions);
- (e) the seasonal space heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump space heaters under average climate conditions);
- (f) the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of GCV, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump space heaters under average climate conditions);
- (g) the sound power level L_{WA} , indoors, in dB, rounded to the nearest integer (for heat pump space heaters if applicable);
- (h) any specific precautions that shall be taken when the space heater is assembled, installed or maintained;

in addition, for cogeneration space heaters:

- (i) the electrical efficiency in %, rounded to the nearest integer;

in addition, for heat pump space heaters:

- (j) the rated heat output, including the rated heat output of any supplementary heater, in kW, under colder and warmer climate conditions, rounded to the nearest integer;
- (k) the seasonal space heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII;
- (l) the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of GCV, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII;
- (m) the sound power level LWA, outdoors, in dB, rounded to the nearest integer.

1.2. One fiche may cover a number of space heater models supplied by the same supplier.

1.3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1.1 not already displayed on the label shall also be provided.

2. Combination heaters

2.1. The information in the product fiche of the combination heater shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trademark;
- (b) supplier's model identifier;
- (c) for space heating, the medium-temperature application (and for heat pump combination heaters the low-temperature application, if applicable); for water heating, the declared load profile, expressed as the appropriate letter and typical usage in accordance with Table 15 of Annex VII;
- (d) the seasonal space heating energy efficiency class and the water heating energy efficiency class of the model, determined in accordance with points 1 and 2 of Annex II;
- (e) the rated heat output, including the rated heat output of any supplementary heater, in kW, rounded to the nearest integer (for heat pump combination heaters under average climate conditions);
- (f) for space heating, the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of GCV, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump combination heaters under average climate conditions); for water heating, the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of GCV, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII (for heat pump combination heaters under average climate conditions);
- (g) the seasonal space heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump combination heaters under average climate conditions); the water heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII (for heat pump combination heaters under average climate conditions);
- (h) the sound power level L_{WA} , indoors, in dB, rounded to the nearest integer (for heat pump combination heaters if applicable);
- (i) if applicable, an indication that the combination heater is able to work only during off-peak hours;
- (j) any specific precautions that shall be taken when the combination heater is assembled, installed or maintained;

in addition, for heat pump combination heaters:

- (k) the rated heat output, including the rated heat output of any supplementary heater, in kW, under colder and warmer climate conditions, rounded to the nearest integer;
- (l) for space heating, the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of GCV, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII; for water heating, the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of GCV, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII;

(m) the seasonal space heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII; the water heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII;

(n) the sound power level LWA, outdoors, in dB, rounded to the nearest integer.

2.2. One fiche may cover a number of combination heater models supplied by the same supplier.

2.3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 2.1 not already displayed on the label shall also be provided.

3. Temperature controls

3.1. The information in the product fiche of the temperature control shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trade mark;
- (b) supplier's model identifier;
- (c) the class of the temperature control;
- (d) the contribution of the temperature control to seasonal space heating energy efficiency in %, rounded to one decimal place.

3.2. One fiche may cover a number of temperature control models supplied by the same supplier.

4. Solar devices

4.1. The information in the product fiche of the solar device shall be provided in the following order and shall be included in the product brochure or other literature provided with the product (for pumps in the collector loop if applicable):

- (a) supplier's name or trade mark;
- (b) supplier's model identifier;
- (c) the collector aperture area in m^2 , to two decimal places;
- (d) the collector efficiency in %, rounded to the nearest integer;
- (e) the energy efficiency class of the solar hot water storage tank, determined in accordance with point 3 of Annex II;
- (f) the standing loss of the solar hot water storage tank in W, rounded to the nearest integer;
- (g) the storage volume of the solar hot water storage tank in litres and m^3 ;
- (h) the annual non-solar heat contribution Q_{nonsol} in kWh in terms of primary energy for electricity and/or in kWh in terms of GCV for fuels, for the load profiles M, L, XL and XXL under average climate conditions, rounded to the nearest integer;
- (i) the pump power consumption in W, rounded to the nearest integer;
- (j) the standby power consumption in W, to two decimal places;
- (k) the annual auxiliary electricity consumption Q_{aux} in kWh in terms of final energy, rounded to the nearest integer.

4.2. One fiche may cover a number of solar device models supplied by the same supplier.

5. Packages of space heater, temperature control and solar device

the fiche for packages of space heater, temperature control and solar device shall contain the elements set out in Figure 1, Figure 2, Figure 3 and Figure 4, respectively, for evaluating the seasonal space heating energy efficiency of a package of space heater, temperature control and solar device, including the following information:

- I: the value of the seasonal space heating energy efficiency of the preferential space heater, expressed in %;
- II: the factor for weighting the heat output of preferential and supplementary heaters of a package as set out in Tables 5 and 6 of this Annex, respectively;
- III: the value of the mathematical expression: $294 / (11 \cdot Prated)$, whereby Prated is related to the preferential space heater;
- IV: the value of the mathematical expression $115 / (11 \cdot Prated)$, whereby Prated is related to the preferential space heater; in addition, for preferential heat pump space heaters:
- V: the value of the difference between the seasonal space heating energy efficiencies under average and colder climate conditions, expressed in %;
- VI: the value of the difference between the seasonal space heating energy efficiencies under warmer and average climate conditions, expressed in %.

6. Packages of combination heater, temperature control and solar device

the fiche for packages of combination heater, temperature control and solar device shall contain the elements set out in points (a) and (b):

(a) the elements set out in Figure 1 and Figure 3, respectively, for evaluating the seasonal space heating energy efficiency of a package of combination heater, temperature control and solar device, including the following information:

- I: the value of the seasonal space heating energy efficiency of the preferential combination heater, expressed in %;
- II: the factor for weighting the heat output of the preferential and supplementary heaters of a package as set out in Tables 5 and 6 of this Annex, respectively;
- III: the value of the mathematical expression: $294 / (11 \cdot Prated)$, whereby Prated is related to the preferential combination heater;
- IV: the value of the mathematical expression $115 / (11 \cdot Prated)$, whereby Prated is related to the preferential combination heater; in addition, for preferential heat pump combination heaters:
- V: the value of the difference between the seasonal space heating energy efficiencies under average and colder climate conditions, expressed in %;

- VI: the value of the difference between the seasonal space heating energy efficiencies under warmer and average climate conditions, expressed in %;

(b) the elements set out in Figure 5 for evaluating the water heating energy efficiency of a package of combination heater, temperature control and solar device, where the following information shall be included:

- I: the value of the water heating energy efficiency of the combination heater, expressed in %;

- II: the value of the mathematical expression $(220 \cdot Q_{ref}) / Q_{nonsol}$, where Q_{ref} is taken from

Table 15 in Annex VII and Q_{nonsol} from the product fiche of the solar device for the declared load profile M, L, XL or XXL of the combination heater;

- III: the value of the mathematical expression $(Q_{aux} \cdot 2,5) / (220 \cdot Q_{ref})$, expressed in %, where Q_{aux} is taken from the product fiche of the solar device and Q_{ref} from Table 15 in Annex VII for the declared load profile M, L, XL or XXL.

where Q_{aux} is taken from the product fiche of the solar device and Q_{ref} from Table 15 in Annex VII for the declared load profile M, L, XL or XXL.

Table 5

For the purposes of Figure 1 of this Annex, weighting of preferential boiler space heater or boiler combination heater and supplementary heater⁹

$P_{sup} / (P_{rated} + P_{sup})$ ¹⁰	II, package without hot water storage tank	II, package with hot water storage tank
0	0	0
0,1	0,30	0,37
0,2	0,55	0,70
0,3	0,75	0,85
0,4	0,85	0,94
0,5	0,95	0,98
0,6	0,98	1,00
$\geq 0,7$	1,00	1,00

⁹ The intermediate values are calculated by linear interpolation between the two adjacent values.

¹⁰ P_{rated} is related to the preferential space heater or combination heater.

Table 6

For the purposes of Figures 2 to 4 of this Annex, weighting of preferential cogeneration space heater, heat pump space heater, heat pump combination heater or low-temperature heat pump and supplementary heater¹¹

$\frac{Prated}{(Prated + Psup)}$ ¹²	II, package without hot water storage tank	II, package with hot water storage tank
0	1,00	1,00
0,1	0,70	0,63
0,2	0,45	0,30
0,3	0,25	0,15
0,4	0,15	0,06
0,5	0,05	0,02
0,6	0,02	0
$\geq 0,7$	0	0

¹¹ The intermediate values are calculated by linear interpolation between the two adjacent values.

¹² Prated is related to the preferential space heater or combination heater.

Figure 1

For preferential boiler space heaters and preferential boiler combination heaters, element of the fiche for a package of space heater, temperature control and solar device and a package of combination heater, temperature control and solar device, respectively, indicating the seasonal space heating energy efficiency of the package offered

Seasonal space heating energy efficiency of boiler ① %

Temperature control
From fiche of temperature control

Class I = 1 %, Class II = 2 %, Class III = 1,5 %,
 Class IV = 2 %, Class V = 3 %, Class VI = 4 %, Class VII = 3,5 %, Class VIII = 5 %

② %

Supplementary boiler:
From fiche of boiler

Seasonal space heating energy efficiency (in %)

$$\left(\text{[]} - \text{①} \right) \times 0,1 = \pm \text{[]} \%$$

③ %

Solar contribution
From fiche of solar device

Collector area (in m²)

Tank volume (in m³)

Collector efficiency (in %)

Tank rating:
 A* = 0,35, A = 0,91,
 B = 0,88, C = 0,83,
 D-G = 0,81

$$\left(\text{[]} \times \text{[]} + \text{[]} \times \text{[]} \right) \times 0,9 \times \left(\text{[]} / 100 \right) \times \text{[]} = + \text{[]} \%$$

④ %

Supplementary heat pump
From fiche of heat pump

Seasonal space heating energy efficiency (in %)

$$\left(\text{[]} - \text{①} \right) \times \text{[]} = + \text{[]} \%$$

⑤ %

Solar contribution AND Supplementary heat pump

Select smaller value $0,5 \times \text{[]}$ OR $0,5 \times \text{[]}$ = ⑥ %

Seasonal space heating energy efficiency of package ⑦ %

Seasonal space heating energy efficiency class of package

G	F	E	D	C	B	A	A*	A**	A***
≥ 30 %	≥ 30 %	≥ 34 %	≥ 38 %	≥ 43 %	≥ 48 %	≥ 52 %	≥ 60 %	≥ 68 %	≥ 72 %

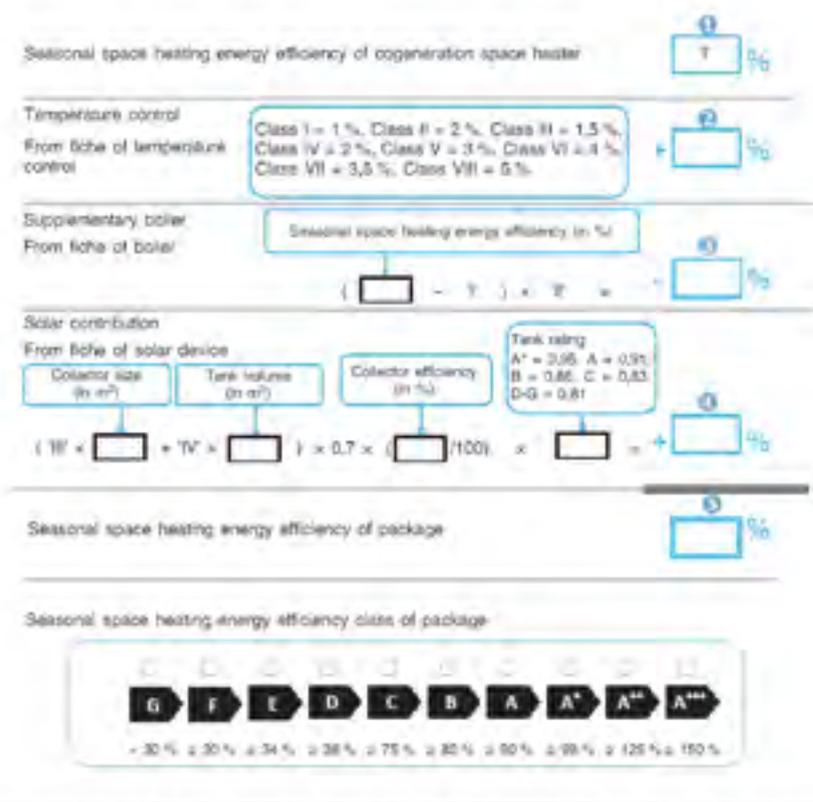
Boiler and supplementary heat pump installed with low temperature heat emitters at 35 °C?

From fiche of heat pump + $\left(50 \times \text{[]} \right) = \text{[]} \%$

The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

Figure 2

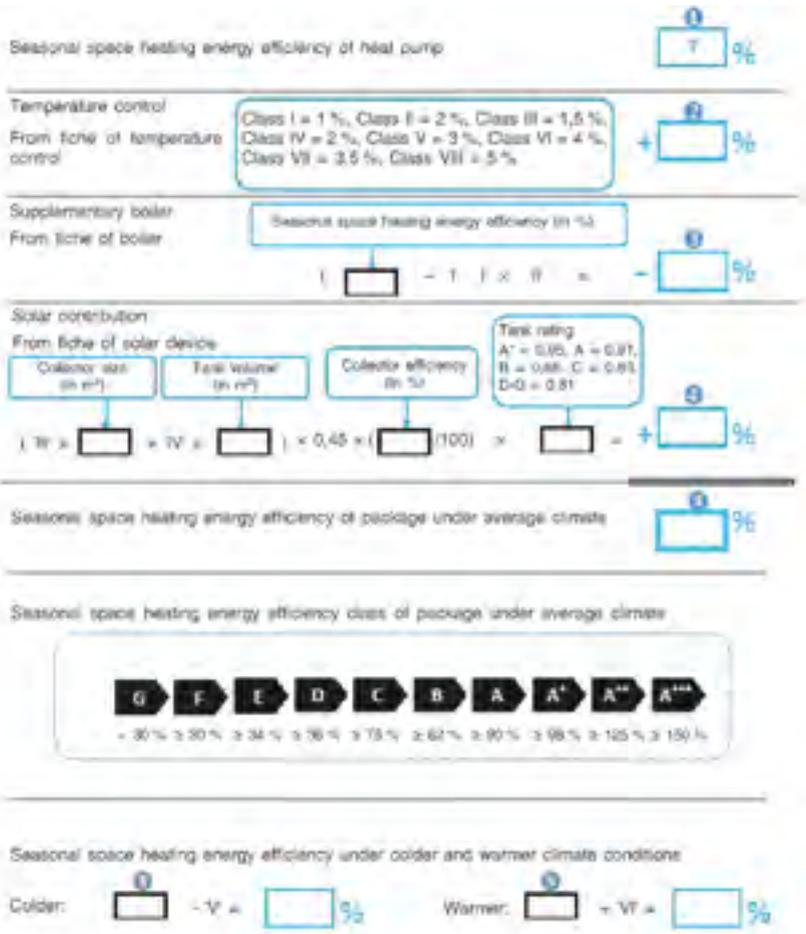
For preferential cogeneration space heaters, element of the fiche for a package of space heater, temperature control and solar device indicating the seasonal space heating energy efficiency of the package offered



The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

Figure 3

For preferential heat pump space heaters and preferential heat pump combination heaters, element of the fiche for a package of space heater, temperature control and solar device and a package of combination heater, temperature control and solar device, respectively, indicating the seasonal space heating energy efficiency of the package offered



The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

Figure 4

For preferential low-temperature heat pumps, element of the fiche for a package of space heater, temperature control and solar device indicating the seasonal space heating energy efficiency of the package offered

Seasonal space heating energy efficiency of low temperature heat pump: T %

Temperature control
From fiche of temperature control: Class I = 1%, Class II = 2%, Class III = 1,5%, Class IV = 2%, Class V = 3%, Class VI = 4%, Class VII = 3,5%, Class VIII = 5%

Supplementary boiler
From fiche of boiler: Seasonal space heating energy efficiency (in %)

Solar contribution
From fiche of solar device: Collector size (in m²), Tank volume (in m³), Collector efficiency (in %), Tank rating (A' = 0,25, A = 0,35, B = 0,85, C = 0,80, D-C = 0,81)

Seasonal space heating energy efficiency of package under average climate

Seasonal space heating energy efficiency class of package under average climate

Seasonal space heating energy efficiency under colder and warmer climate conditions

Colder: $\square - V = \square$ % Warmer: $\square + V = \square$ %

The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

Figure 5

For preferential boiler combination heaters and preferential heat pump combination heaters, element of the fiche for a package of combination heater, temperature control and solar device indicating the water heating energy efficiency of the package offered

Water heating energy efficiency of combination heater: %

Declared load profile:

Boiler contribution
From fiche of solar device

Auxiliary electricity:

$(1,1 \times 7 - 10\%) \times 10 - 7 =$ %

Water heating energy efficiency of package under average climate: %

Water heating energy efficiency class of package under average climate:

	G	F	E	D	C	B	A	A ⁺	A ⁺⁺	A ⁺⁺⁺
M	< 27%	≥ 27%	≥ 32%	≥ 43%	≥ 58%	≥ 66%	≥ 65%	≥ 101%	≥ 150%	≥ 180%
L	< 27%	≥ 27%	≥ 30%	≥ 44%	≥ 57%	≥ 59%	≥ 73%	≥ 110%	≥ 150%	≥ 160%
SL	< 27%	≥ 27%	≥ 30%	≥ 35%	≥ 38%	≥ 38%	≥ 40%	≥ 105%	≥ 160%	≥ 200%
SO	< 28%	≥ 28%	≥ 32%	≥ 35%	≥ 40%	≥ 40%	≥ 40%	≥ 101%	≥ 170%	≥ 213%

Water heating energy efficiency under colder and warmer climate conditions

Colder: × 0,2 × = %

Warmer: × 0,4 × = %

The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

ANNEX V

Technical documentation

1. SPACE HEATERS

For space heaters, the technical documentation referred to in Article 3(1)(c) shall include:

- (a) the name and address of the supplier;
- (b) a description of the space heater model sufficient for its unambiguous identification;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) technical parameters:
 - for boiler space heaters and cogeneration space heaters, the technical parameters set out in Table 7, measured and calculated in accordance with Annex VII;
 - for heat pump space heaters, the technical parameters set out in Table 8, measured and calculated in accordance with Annex VII;
 - for heat pump space heaters where the information relating to a specific model comprising a combination of indoor and outdoor units has been obtained by calculation on the basis of design and/or extrapolation from other combinations, the details of such calculations and/or extrapolations, and of any tests undertaken to verify the accuracy of the calculations, including details of the mathematical model for calculating the performance of such combinations and details of the measurements taken to verify this model;
- (g) any specific precautions that shall be taken when the space heater is assembled, installed or maintained.

2. COMBINATION HEATERS

For combination heaters, the technical documentation referred to in Article 3(2)(c) shall include:

- (a) the name and address of the supplier;
- (b) a description of the combination heater model sufficient for its unambiguous identification;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) technical parameters:
 - for boiler combination heaters, the technical parameters set out in Table 7, measured and calculated in accordance with Annex VII;
 - for heat pump combination heaters, the technical parameters set out in Table 8, measured and calculated in accordance with Annex VII;
 - for heat pump combination heaters where the information relating to a specific model comprising a combination of indoor and outdoor units has been obtained by calculation on the basis of design and/or extrapolation from other combinations, the details of such calculations and/or

extrapolations, and of any tests undertaken to verify the accuracy of the calculations, including details of the mathematical model for calculating the performance of such combinations and details of the measurements taken to verify this model;

(g) any specific precautions that shall be taken when the combination heater is assembled, installed or maintained.

Table 7

Technical parameters for boiler space heaters, boiler combination heaters and cogeneration space heaters

Model(s): [information identifying the model(s) to which the information relates]							
Condensing boiler: [yes/no]							
Low-temperature ¹³ boiler: [yes/no]							
B11 boiler: [yes/no]							
Cogeneration space heater: [yes/no]				If yes, equipped with a supplementary heater: [yes/no]			
Combination heater: [yes/no]							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output	P_{rated}	x	kW	Seasonal space heating energy efficiency	η_s	x	%
For boiler space heaters and boiler combination heaters: Useful heat output				For boiler space heaters and boiler combination heaters: Useful efficiency			
At rated heat output and high-temperature regime ¹⁴	P_d	x,x	kW	At rated heat output and high-temperature regime	η_d	x,x	%
At 30 % of rated heat output and low-temperature regime	P_l	x,x	kW	At 30 % of rated heat output and low-temperature regime	η_l	x,x	%
For cogeneration space heaters: Useful heat output				For cogeneration space heaters: Useful efficiency			
At rated heat output of cogeneration space heater with supplementary heater disabled	$P_{CHP100+Sup0}$	x,x	kW	At rated heat output of cogeneration space heater with supplementary heater disabled	$\eta_{CHP100+Sup0}$	x,x	%
At rated heat output of cogeneration space heater with supplementary heater enabled	$P_{CHP100+Sup100}$	x,x	kW	At rated heat output of cogeneration space heater with supplementary heater enabled	$\eta_{CHP100+Sup100}$	x,x	%
For cogeneration space heaters: Electrical efficiency				Supplementary heater			
At rated heat output of cogeneration space heater with supplementary heater disabled	$\eta_{el,CHP100+Sup0}$	x,x	%	Rated heat output	P_{sup}	x,x	kW
At rated heat output of cogeneration space heater with supplementary heater enabled	$\eta_{el,CHP100+Sup100}$	x,x	%	Type of energy input			
Auxiliary electricity consumption				Other items			
At full load	el_{max}	x,x	kW	Standby heat loss	P_{stby}	x,x	kW
At part load	el_{min}	x,x	kW	Ignition burner power consumption	P_{ign}	x,x	kW
In standby mode	P_{sb}	x,xxx	kW	Annual energy consumption	Q_{HE}	x	kWh or GJ
				Sound power level, indoors	L_{WA}	x	dB
For combination heaters:							
Declared load profile				Water heating energy efficiency	η_{wh}	x	%
Daily electricity consumption	Q_{elec}	x,xxx	kWh	Daily fuel consumption	Q_{fuel}	x,xxx	kWh
Annual electricity consumption	AEC	x	kWh	Annual fuel consumption	AFC	x	GJ
Contact details	Name and address of the supplier.						

¹³ Low temperature means for condensing boilers 30 °C, for low-temperature boilers 37 °C and for other heaters 50 °C return temperature (at heater inlet).

¹⁴ High-temperature regime means 60 °C return temperature at heater inlet and 80 °C feed temperature at heater outlet.

Table 8

Technical parameters for heat pump space heaters and heat pump combination heaters

Model(s): [information identifying the model(s) to which the information relates]							
Air-to-water heat pump: [yes/no]							
Water-to-water heat pump: [yes/no]							
Brine-to-water heat pump: [yes/no]							
Low-temperature heat pump: [yes/no]							
Equipped with a supplementary heater: [yes/no]							
Heat pump combination heater: [yes/no]							
Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.							
Parameters shall be declared for average, colder and warmer climate conditions.							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output¹⁵	<i>Prated</i>	x	kW	Seasonal space heating energy efficiency	η_s	x	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T_j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T_j			
$T_j = -7$ °C	<i>Pdh</i>	x,x	kW	$T_j = -7$ °C	<i>COPd</i> or <i>PERd</i>	x,xx or x,x	– or %
$T_j = +2$ °C	<i>Pdh</i>	x,x	kW	$T_j = +2$ °C	<i>COPd</i> or <i>PERd</i>	x,xx or x,x	– or %
$T_j = +7$ °C	<i>Pdh</i>	x,x	kW	$T_j = +7$ °C	<i>COPd</i> or <i>PERd</i>	x,xx or x,x	– or %
$T_j = +12$ °C	<i>Pdh</i>	x,x	kW	$T_j = +12$ °C	<i>COPd</i> or <i>PERd</i>	x,xx or x,x	– or %
$T_j =$ bivalent temperature	<i>Pdh</i>	x,x	kW	$T_j =$ bivalent temperature	<i>COPd</i> or <i>PERd</i>	x,xx or x,x	– or %
$T_j =$ operation limit temperature	<i>Pdh</i>	x,x	kW	$T_j =$ operation limit temperature	<i>COPd</i> or <i>PERd</i>	x,xx or x,x	– or %
For air-to-water heat pumps: $T_j = -15$ °C (if <i>TOL</i> < -20 °C)	<i>Pdh</i>	x,x	kW	For air-to-water heat pumps: $T_j = -15$ °C (if <i>TOL</i> < -20 °C)	<i>COPd</i> or <i>PERd</i>	x,xx or x,x	– or %
Bivalent temperature	T_{biv}	x	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	x	°C
Cycling interval capacity for heating	<i>Pcyc</i>	x,x	kW	Cycling interval efficiency	<i>COPcyc</i> or <i>PERcyc</i>	x,xx or x,x	– or %
Degradation co-efficient ¹⁶	<i>Cdh</i>	x,x	—	Heating water operating limit temperature	<i>WTOL</i>	x	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	x,xxx	kW	Rated heat output	P_{sup}	x,x	kW
Thermostat-off mode	P_{TO}	x,xxx	kW	Type of energy input			
Standby mode	P_{SB}	x,xxx	kW				
Crankcase heater mode	P_{CK}	x,xxx	kW				
Other items							
Capacity control	fixed/variable			For air-to-water heat pumps: Rated air flow rate, outdoors	—	x	m ³ /h

¹⁵ For heat pump space heaters and heat pump combination heaters, the rated heat output *Prated* is equal to the design load for heating *Pdesignh*, and the rated heat output of a supplementary heater *Psup* is equal to the supplementary capacity for heating *sup(Tj)*.

¹⁶ If *Cdh* is not determined by measurement then the default degradation coefficient is *Cdh* = 0,9.

Sound power level, indoors/outdoors	L_{WA}	x / x	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	—	x	m^3/h
Annual energy consumption	Q_{HE}	x	kWh or GJ				
For heat pump combination heater:							
Declared load profile	x			Water heating energy efficiency	η_{wh}	x	%
Daily electricity consumption	Q_{elec}	x,xxx	kWh	Daily fuel consumption	Q_{fuel}	x,xxx	kWh
Annual electricity consumption	AEC	x	kWh	Annual fuel consumption	AFC	x	GJ
Contact details	Name and address of the supplier.						

3. TEMPERATURE CONTROLS

For temperature controls, the technical documentation referred to in Article 3(3)(b) shall include:

- (a) the name and address of the supplier;
- (b) a description of the temperature control model sufficient for its unambiguous identification;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) technical parameters:
 - the class of the temperature control;
 - the contribution of the temperature control to seasonal space heating energy efficiency in %, rounded to one decimal place;
- (g) any specific precautions that shall be taken when the temperature control is assembled, installed or maintained.

4. SOLAR DEVICES

For solar devices, the technical documentation referred to in Article 3(4)(b) shall include:

- (a) the name and address of the supplier;
- (b) a description of the solar device model sufficient for its unambiguous identification;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) technical parameters (for pumps in the collector loop if applicable):
 - the collector aperture area $Asol$ in m^2 , to two decimal places;
 - the collector efficiency η_{col} in %, rounded to the nearest integer;
 - the energy efficiency class of the solar hot water storage tank, determined in accordance with point 3 of Annex II;
 - the standing loss S of the solar hot water storage tank in W , rounded to the nearest integer;

- the storage volume V of the solar hot water storage tank in litres and m^3 ;
- the annual non-solar heat contribution Q_{nonsol} in kWh in terms of primary energy for electricity and/or in kWh in terms of GCV for fuels, for the load profiles M, L, XL and XXL under average climate conditions, rounded to the nearest integer;
- the pump power consumption sol_{pump} in W, rounded to the nearest integer;
- the standby power consumption $sol_{standby}$ in W, to two decimal places;
- the annual auxiliary electricity consumption Q_{aux} in kWh in terms of final energy, rounded to the nearest integer;

(g) any specific precautions that shall be taken when the solar device is assembled, installed or maintained.

5. PACKAGES OF SPACE HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

For packages of space heater, temperature control and solar device, the technical documentation referred to in Article 3(5)(c) shall include:

- (a) the name and address of the supplier;
- (b) a description of the package of space heater, temperature control and solar device model sufficient for its unambiguous identification;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) technical parameters:
 - the seasonal space heating energy efficiency in %, rounded to the nearest integer;
 - the technical parameters set out in points 1, 3 and 4 of this Annex;
- (g) any specific precautions that shall be taken when the package of space heater, temperature control and solar device is assembled, installed or maintained.

6. PACKAGES OF COMBINATION HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

For packages of combination heater, temperature control and solar device, the technical documentation referred to in Article 3(6)(c) shall include:

- (a) the name and address of the supplier;
- (b) a description of the package of combination heater, temperature control and solar device model sufficient for its unambiguous identification;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) technical parameters:
 - the seasonal space heating energy efficiency and water heating energy efficiency in %, rounded to the nearest integer;

- the technical parameters set out in points 2, 3 and 4 of this Annex;

(g) any specific precautions that shall be taken when the package of combination heater, temperature control and solar device is assembled, installed or maintained.

ANNEX VI

Information to be provided in cases where end-users cannot be expected to see the product displayed

1. SPACE HEATERS

1.1. The information referred to in Article 4(1)(b) shall be provided in the following order:

(a) the seasonal space heating energy efficiency class of the model, determined in accordance with point 1 of Annex II;

(b) the rated heat output, including the rated heat output of any supplementary heater, in kW, rounded to the nearest integer (for heat pump space heaters, under average climate conditions);

(c) the seasonal space heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump space heaters, under average climate conditions);

(d) the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of GCV, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump space heaters, under average climate conditions);

(e) the sound power level L_{WA} , indoors, in dB, rounded to the nearest integer (for heat pump space heaters if applicable);

in addition, for cogeneration space heaters:

(f) the electrical efficiency in %, rounded to the nearest integer;

in addition, for heat pump space heaters:

(g) the rated heat output, including the rated heat output of any supplementary heater, in kW, under colder and warmer climate conditions, rounded to the nearest integer;

(h) the seasonal space heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII;

(i) the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of GCV, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII;

(j) the sound power level L_{WA} , outdoors, in dB, rounded to the nearest integer;

in addition, for low-temperature heat pumps:

(k) an indication that the low-temperature heat pump is only suitable for low-temperature application;

1.2. The size and font in which the information referred in point 1.1 is printed or shown shall be legible.

2. COMBINATION HEATERS

2.1. The information referred to in Article 4(2)(b) shall be provided in the following order:

(a) for space heating, the medium-temperature application; for water heating, the declared load profile, expressed as the appropriate letter and typical usage in accordance with Table 15 of Annex VII;

(b) the seasonal space heating energy efficiency class and the water heating energy efficiency class of the model, determined in accordance with points 1 and 2 of Annex II;

(c) the rated heat output, including the rated heat output of any supplementary heater, in kW, rounded to the nearest integer (for heat pump combination heaters, under average climate conditions);

(d) for space heating, the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of GCV, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump combination heaters, under average climate conditions); for water heating, the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of GCV, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII (for heat pump combination heaters, under average climate conditions);

(e) the seasonal space heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII (for heat pump combination heaters, under average climate conditions); the water heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII (for heat pump combination heaters, under average climate conditions);

(f) the sound power level L_{WA} , indoors, in dB, rounded to the nearest integer (for heat pump combination heaters if applicable);

(g) if applicable, an indication that the combination heater is able to work only during off-peak hours;

in addition, for heat pump combination heaters:

(h) the rated heat output, including the rated heat output of any supplementary heater, in kW, under colder and warmer climate conditions, rounded to the nearest integer;

(i) for space heating, the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of GCV, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII; for water heating, the annual electricity consumption in kWh in terms of final energy and/or the annual fuel consumption in GJ in terms of GCV, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII;

(j) the seasonal space heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII; the water heating energy efficiency in %, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 5 of Annex VII;

(k) the sound power level LWA, outdoors, in dB, rounded to the nearest integer.

2.2. The size and font in which the information referred in point 2.1 is printed or shown shall be legible.

3. PACKAGES OF SPACE HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

3.1. The information referred to in Article 4(3)(b) shall be provided in the following order:

(a) the seasonal space heating energy efficiency class of the model, determined in accordance with point 1 of Annex II;

(b) the seasonal space heating energy efficiency in %, rounded to the nearest integer;

(c) the elements set out in Figure 1, Figure 2, Figure 3 and Figure 4, respectively, of Annex IV.

3.2. The size and font in which the information referred in point 3.1 is printed or shown shall be legible.

4. PACKAGES OF COMBINATION HEATER, TEMPERATURE CONTROL AND SOLAR DEVICE

4.1. The information referred to in Article 4(4)(b) shall be provided in the following order:

(a) the seasonal space heating energy efficiency class and the water heating energy efficiency class of the model, determined in accordance with points 1 and 2 of Annex II;

(b) the seasonal space heating energy efficiency and the water heating energy efficiency in %, rounded to the nearest integer;

(c) the elements set out in Figure 1 and Figure 3, respectively, of Annex IV;

(d) the elements set out in Figure 5 of Annex IV.

4.2. The size and font in which the information referred in point 4.1 is printed or shown shall be legible.

ANNEX VII

Measurements and calculations

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using harmonised standards the reference numbers of which have been published for this purpose in the *Official Journal of the European Union*, or using other reliable, accurate and reproducible methods that take into account the generally recognised state-of-the-art methods. They shall meet the conditions and technical parameters set out in points 2 to 6.

2. General conditions for measurements and calculations

(a) For the purposes of the measurements set out in points 3 to 7, the indoor ambient temperature shall be set at 20 °C.

(b) For the purposes of the calculations set out in points 3 to 7, electricity consumption shall be multiplied by a conversion coefficient CC of 2,5, unless the annual electricity consumption is expressed in final energy for the end-user, as set out in points 3(b), 4(g), 5(e) and 6.

(c) For heaters equipped with supplementary heaters, the measurement and calculation of rated heat output, seasonal space heating energy efficiency, water heating energy efficiency, sound power level and emissions of nitrogen oxides shall take account of the supplementary heater.

(d) Declared values for rated heat output, seasonal space heating energy efficiency, water heating energy efficiency, annual energy consumption and sound power level shall be rounded to the nearest integer.

3. Seasonal space heating energy efficiency and consumption of boiler space heaters, boiler combination heaters and cogeneration space heaters

(a) The seasonal space heating energy efficiency η_s shall be calculated as the seasonal space heating energy efficiency in active mode η_{son} , corrected by contributions accounting for temperature controls, auxiliary electricity consumption, standby heat loss, ignition burner power consumption (if applicable) and, for cogeneration space heaters, corrected by adding the electrical efficiency multiplied by a conversion coefficient CC of 2,5.

(b) The annual energy consumption Q_{HE} in kWh in terms of final energy and/or in GJ in terms of GCV shall be calculated as the ratio of the reference annual heating demand and the seasonal space heating energy efficiency.

4. Seasonal space heating energy efficiency and consumption of heat pump space heaters and heat pump combination heaters

(a) For establishing the rated coefficient of performance COP_{rated} or rated primary energy ratio PER_{rated} , or the sound power level, the operating conditions shall be the standard rating conditions set out in Table 9 and the same declared capacity for heating shall be used.

(b) The active mode coefficient of performance $SCOP_{on}$ for average, colder and warmer climate conditions shall be calculated on the basis of the part load for heating $Ph(T_p)$, the supplementary ca-

capacity for heating $\text{sup}(T_j)$ (if applicable), and the bin-specific coefficient of performance $\text{COP}_{\text{bin}}(T_j)$ or bin-specific primary energy ratio $\text{PER}_{\text{bin}}(T_j)$, weighted by the bin-hours for which the bin conditions apply, using the following conditions:

- the reference design conditions set out in Table 10;
- the European reference heating season under average, colder and warmer climate conditions set out in Table 12;
- if applicable, the effects of any degradation of energy efficiency caused by cycling, depending on the type of control of the heating capacity.

(c) The reference annual heating demand Q_H shall be the design load for heating P_{designH} for average, colder and warmer climate conditions, multiplied by the annual equivalent active mode hours H_{HE} of 2 066, 2 465 and 1 336 for average, colder and warmer climate conditions, respectively.

(d) The annual energy consumption Q_{HE} shall be calculated as the sum of:

- the ratio of the reference annual heating demand Q_H and the active mode coefficient of performance SCOP_{on} or active mode primary energy ratio SPER_{on} ; and
- the energy consumption for off, thermostat-off, standby, and crankcase heater mode during the heating season.

(e) The seasonal coefficient of performance SCOP or seasonal primary energy ratio SPER shall be calculated as the ratio of the reference annual heating demand Q_H and the annual energy consumption Q_{HE} .

(f) The seasonal space heating energy efficiency η_s shall be calculated as the seasonal coefficient of performance SCOP divided by the conversion coefficient CC or the seasonal primary energy ratio SPER , corrected by contributions accounting for temperature controls and, for water-/brine-to-water heat pump space heaters and heat pump combination heaters, the electricity consumption of one or more ground water pumps.

(g) The annual energy consumption Q_{HE} in kWh in terms of final energy and/or GJ in terms of GCV shall be calculated as the ratio of the reference annual heating demand Q_H and the seasonal space heating energy efficiency η_s .

5. Water heating energy efficiency of combination heaters

The water heating energy efficiency η_{wh} of a combination heater shall be calculated as the ratio between the reference energy Q_{ref} and the energy required for its generation under the following conditions:

(a) measurements shall be carried out using the load profiles set out in Table 15;

(b) measurements shall be carried out using a 24-hour measurement cycle as follows:

- 00:00 to 06:59: no water draw-off;
- from 07:00: water draw-offs according to the declared load profile;
- from end of last water draw-off until 24:00: no water draw-off;

(c) the declared load profile shall be the maximum load profile or the load profile one below the maximum load profile;

(d) for heat pump combination heaters, the following additional conditions apply:

- heat pump combination heaters shall be tested under the conditions set out in Table 9;
- heat pump combination heaters which use ventilation exhaust air as the heat source shall be tested under the conditions set out in Table 11;

(e) the annual electricity consumption AEC in kWh in terms of final energy shall be calculated as daily electricity consumption Q_{elec} in kWh in terms of final energy multiplied by 220;

(f) the annual fuel consumption AFC in GJ in terms of GCV shall be calculated as daily fuel consumption Q_{fuel} multiplied by 220.

6. Conditions for measurements and calculations of solar devices

The solar collector, solar hot water storage tank and pump in the collector loop (if applicable) shall be tested separately. Where the solar collector and solar hot water storage tank cannot be tested separately, they shall be tested in combination.

The results shall be used for the determination of the standing loss S and the calculations of the collector efficiency η_{col} , the annual non-solar heat contribution Q_{nonsol} for the load profiles M, L, XL and XXL under the average climate conditions set out in Tables 13 and 14, and the annual auxiliary electricity consumption Q_{aux} in kWh in terms of final energy.

Table 9

Standard rating conditions for heat pump space heaters and heat pump combination heaters

Heat source	Outdoor heat exchanger		Indoor heat exchanger			
	Climate condition	Inlet dry bulb (wet bulb) temperature	Heat pump space heaters and heat pump combination heaters, except low-temperature heat pumps		Low-temperature heat pumps	
			Inlet temperature	Outlet temperature	Inlet temperature	Outlet temperature
Outdoor air	Average	+ 7 °C (+ 6 °C)	+47 °C	+55 °C	+30 °C	+35 °C
	Colder	+ 2 °C (+ 1 °C)				
	Warmer	+ 14 °C (+ 13 °C)				
Exhaust air	All	+ 20 °C (+ 12 °C)	+47 °C	+55 °C	+30 °C	+35 °C
		Inlet / outlet temperature				
Water	All	+ 10 °C / + 7 °C	+47 °C	+55 °C	+30 °C	+35 °C
Brine	All	0 °C/- 3 °C	+47 °C	+55 °C	+30 °C	+35 °C

Table 10

Reference design conditions for heat pump space heaters and heat pump combination heaters, temperatures in dry bulb air temperature (wet bulb air temperature indicated in brackets)

Climate condition	Reference design temperature	Bivalent temperature	Operation limit temperature
	$T_{designh}$	T_{biv}	TOL
Average	- 10 (- 11) °C	maximum + 2 °C	maximum - 7 °C
Colder	- 22 (- 23) °C	maximum - 7 °C	maximum - 15 °C
Warmer	+ 2 (+ 1) °C	maximum + 7 °C	maximum + 2 °C

Table 11

Maximum ventilation exhaust air available [m^3/h], with humidity of 5,5 g/m^3

Declared load profile	XXS	XS	S	M	L	XL	XXL
Maximum ventilation exhaust air available	109	128	128	159	190	870	1 021

Table 12

European reference heating season under average, colder and warmer climate conditions for heat pump space heaters and heat pump combination heaters

bin_j	T_j [°C]	Average climate conditions	Colder climate conditions	Warmer climate conditions
		H_j [h/annum]	H_j [h/annum]	H_j [h/annum]
1 to 8	-30 to -23	0	0	0
9	-22	0	1	0
10	-21	0	6	0
11	-20	0	13	0
12	-19	0	17	0
13	-18	0	19	0
14	-17	0	26	0
15	-16	0	39	0
16	-15	0	41	0
17	-14	0	35	0
18	-13	0	52	0
19	-12	0	37	0
20	-11	0	41	0
21	-10	1	43	0
22	-9	25	54	0
23	-8	23	90	0
24	-7	24	125	0
25	-6	27	169	0
26	-5	68	195	0

27	-4	91	278	0
28	-3	89	306	0
29	-2	165	454	0
30	-1	173	385	0
31	0	240	490	0
32	1	280	533	0
33	2	320	380	3
34	3	357	228	22
35	4	356	261	63
36	5	303	279	63
37	6	330	229	175
38	7	326	269	162
39	8	348	233	259
40	9	335	230	360
41	10	315	243	428
42	11	215	191	430
43	12	169	146	503
44	13	151	150	444
45	14	105	97	384
46	15	74	61	294
Total hours:		4 910	6 446	3 590

Table 13

Average daytime temperature [°C]

	January	February	March	April	May	June	July	August	September	October	November	December
Average climate conditions	+2,8	+2,6	+7,4	+12,2	+16,3	+19,8	+21,0	+22,0	+17,0	+11,9	+5,6	+3,2

Table 14

Average global solar irradiance [W/m²]

	January	February	March	April	May	June	July	August	September	October	November	December
Average climate conditions	70	104	149	192	221	222	232	217	176	129	80	56

Table 15

Water heating load profiles of combination heaters

h	3XS			XXS			XS			S			
	Q _{tap}	f	T _m	T _p									
	kWh	l/min	°C	°C									
07:00	0,015	2	25	0,105	2	25				0,105	3	25	
07:05	0,015	2	25										
07:15	0,015	2	25										
07:26	0,015	2	25										
07:30	0,015	2	25	0,105	2	25	0,525	3	35	0,105	3	25	
07:45													
08:01													
08:05													
08:15													
08:25													
08:30				0,105	2	25				0,105	3	25	
08:45													
09:00	0,015	2	25										
09:30	0,015	2	25	0,105	2	25				0,105	3	25	
10:00													
10:30													
11:00													
11:30	0,015	2	25	0,105	2	25				0,105	3	25	
11:45	0,015	2	25	0,105	2	25				0,105	3	25	
12:00	0,015	2	25	0,105	2	25							
12:30	0,015	2	25	0,105	2	25							
12:45	0,015	2	25	0,105	2	25	0,525	3	35	0,315	4	10	55
14:30	0,015	2	25										
15:00	0,015	2	25										
15:30	0,015	2	25										
16:00	0,015	2	25										
16:30													
17:00													
18:00				0,105	2	25				0,105	3	25	
18:15				0,105	2	25				0,105	3	40	
18:30	0,015	2	25	0,105	2	25							
19:00	0,015	2	25	0,105	2	25							
19:30	0,015	2	25	0,105	2	25							
20:00				0,105	2	25							
20:30							1,05	3	35	0,42	4	10	55
20:45				0,105	2	25							

20:46												
21:00				0,105	2	25						
21:15	0,015	2	25	0,105	2	25						
21:30	0,015	2	25						0,525	5	45	
21:35	0,015	2	25	0,105	2	25						
21:45	0,015	2	25	0,105	2	25						
Q _{ref}	0,345			2,100			2,100			2,100		

Continued Table 15

Water heating load profiles of combination heaters

h	M				L				XL			
	Q _{tap}	f	T _m	T _p	Q _{tap}	f	T _m	T _p	Q _{tap}	f	T _m	T _p
	kWh	l/min	°C	°C	kWh	l/min	°C	°C	kWh	l/min	°C	°C
07:00	0,105	3	25		0,105	3	25		0,105	3	25	
07:05	1,4	6	40		1,4	6	40					
07:15									1,82	6	40	
07:26									0,105	3	25	
07:30	0,105	3	25		0,105	3	25					
07:45					0,105	3	25		4,42	10	10	40
08:01	0,105	3	25						0,105	3	25	
08:05					3,605	10	10	40				
08:15	0,105	3	25						0,105	3	25	
08:25					0,105	3	25					
08:30	0,105	3	25		0,105	3	25		0,105	3	25	
08:45	0,105	3	25		0,105	3	25		0,105	3	25	
09:00	0,105	3	25		0,105	3	25		0,105	3	25	
09:30	0,105	3	25		0,105	3	25		0,105	3	25	
10:00									0,105	3	25	
10:30	0,105	3	10	40	0,105	3	10	40	0,105	3	10	40
11:00									0,105	3	25	
11:30	0,105	3	25		0,105	3	25		0,105	3	25	
11:45	0,105	3	25		0,105	3	25		0,105	3	25	
12:00												
12:30												
12:45	0,315	4	10	55	0,315	4	10	55	0,735	4	10	55
14:30	0,105	3	25		0,105	3	25		0,105	3	25	
15:00									0,105	3	25	
15:30	0,105	3	25		0,105	3	25		0,105	3	25	
16:00									0,105	3	25	
16:30	0,105	3	25		0,105	3	25		0,105	3	25	
17:00									0,105	3	25	

18:00	0,105	3	25		0,105	3	25		0,105	3	25	
18:15	0,105	3	40		0,105	3	40		0,105	3	40	
18:30	0,105	3	40		0,105	3	40		0,105	3	40	
19:00	0,105	3	25		0,105	3	25		0,105	3	25	
19:30												
20:00												
20:30	0,735	4	10	55	0,735	4	10	55	0,735	4	10	55
20:45												
20:46									4,42	10	10	40
21:00					3,605	10	10	40				
21:15	0,105	3	25						0,105	3	25	
21:30	1,4	6	40		0,105	3	25		4,42	10	10	40
21:35												
21:45												
Q _{ref}	5,845				11,655				19,07			

Continued Table 15

Water heating load profiles of combination heaters

h	XXL			
	Q _{tap} kWh	f l/min	T _m °C	T _p °C
07:00	0,105	3	25	
07:05				
07:15	1,82	6	40	
07:26	0,105	3	25	
07:30				
07:45	6,24	16	10	40
08:01	0,105	3	25	
08:05				
08:15	0,105	3	25	
08:25				
08:30	0,105	3	25	
08:45	0,105	3	25	
09:00	0,105	3	25	
09:30	0,105	3	25	
10:00	0,105	3	25	
10:30	0,105	3	10	40
11:00	0,105	3	25	
11:30	0,105	3	25	
11:45	0,105	3	25	
12:00				

12:30				
12:45	0,735	4	10	55
14:30	0,105	3	25	
15:00	0,105	3	25	
15:30	0,105	3	25	
16:00	0,105	3	25	
16:30	0,105	3	25	
17:00	0,105	3	25	
18:00	0,105	3	25	
18:15	0,105	3	40	
18:30	0,105	3	40	
19:00	0,105	3	25	
19:30				
20:00				
20:30	0,735	4	10	55
20:45				
20:46	6,24	16	10	40
21:00				
21:15	0,105	3	25	
21:30	6,24	16	10	40
21:35				
21:45				
Q _{ref}		24,53		

ANNEX VIII

Verification procedure for market surveillance purposes

For the purposes of assessing the conformity with the requirements laid down in Articles 3 and 4, the authorities of the **Contracting Parties** shall apply the following verification procedure:

1. The **Contracting Party** authorities shall test one single unit per heater, temperature control, solar device, package of space heater, temperature control and solar device, and package of combination heater, temperature control and solar device model and provide the information on the test results to the authorities of the other **Contracting Parties**.

2. The model shall be considered to comply with the applicable requirements if:

(a) for heaters, packages of space heater, temperature control and solar device, and packages of combination heater, temperature control and solar device, the seasonal space heating energy efficiency η_s is not more than 8 % lower than the declared value at the rated heat output of the unit;

(b) for combination heaters and packages of combination heater, temperature control and solar device, the water heating energy efficiency η_{wh} is not more than 8 % lower than the declared value at the rated heat output of the unit;

(c) for heaters, the sound power level L_{WA} is not more than 2 dB higher than the declared value of the unit;

(d) for temperature controls, the class of the temperature control complies with the declared class of the unit;

(e) for solar devices, the collector efficiency η_{col} is not more than 5 % lower than the declared value of the unit;

(f) for solar devices, the standing loss S of the solar hot water storage tank is not more than 5 % higher than the declared value of the unit; and

(g) for solar devices, the auxiliary electricity consumption Q_{aux} is not more than 5 % higher than the declared value of the unit.

3. If the result referred to in point 2 is not achieved, the **Contracting Party** authorities shall randomly select three additional units of the same model for testing and provide the information on the test results to the authorities of the other **Contracting Parties** and to the Commission within one month of testing.

4. The model shall be considered to comply with the applicable requirements if:

(a) for heaters, packages of space heater, temperature control and solar device, and packages of combination heater, temperature control and solar device, the average of the three units for seasonal space heating energy efficiency η_s is not more than 8 % lower than the declared value at the rated heat output of the unit;

(b) for combination heaters and packages of combination heater, temperature control and solar device, the average of the three units for water heating energy efficiency η_{wh} is not more than 8 % lower than the declared value at the rated heat output of the unit;

(c) for heaters, the average of the three units for sound power level L_{WA} is not more than 2 dB higher than the declared value of the unit;

(d) for temperature controls, the class of the temperature control of the three units complies with

the declared class of the unit;

(e) for solar devices, the average of the three units for collector efficiency η_{col} is not more than 5 % lower than the declared value of the unit;

(f) for solar devices, the average of the three units for standing loss S of the solar hot water storage tank is not more than 5 % higher than the declared value of the unit; and

(g) for solar devices, the average of the three units for auxiliary electricity consumption Q_{aux} is not more than 5 % higher than the declared value of the unit.

5. If the results referred to in point 4 are not achieved, the model shall be considered not to comply with this Regulation.

Contracting Party authorities shall use the measurement and calculation methods set out in Annex VII.



Delegated Regulation (EU) 874/2012 of 12 July 2012 supplementing Directive 2010/30/EU with regard to energy labelling of electrical lamps and luminaires

Incorporated and adapted by Ministerial Council Decision 2014/02/MC-EnC of 23 September 2014 adapting certain Delegated Regulations on energy related products.

*The adaptations made by Ministerial Council Decision 2014/02/MC-EnC are highlighted in **bold and blue**.*

Whereas:

(1) Directive 2010/30/EU requires the Commission to adopt delegated acts as regards the labelling of energy-related products having significant potential for energy savings and a wide disparity in performance levels with equivalent functionality.

(2) Provisions on the energy labelling of household lamps were established by Commission Directive 98/11/EC.

(3) The electricity used by electrical lamps accounts for a significant share of total electricity demand in the Union. In addition to the energy efficiency improvements already achieved, the scope for further reducing the energy consumption of electrical lamps is substantial.

(4) Directive 98/11/EC should be repealed and new provisions should be set out in this Regulation in order to ensure that the energy label provides dynamic incentives for suppliers further to improve the energy efficiency of electrical lamps and to speed up the market shift towards energy-efficient technologies. The scope of Directive 98/11/EC is limited to certain technologies within the category of household lamps. In order to use the label to improve the energy efficiency of other lamp technologies, including in professional lighting, this Regulation should also cover directional lamps, extra low voltage lamps, light-emitting diodes, and lamps used predominantly in professional lighting, such as high-intensity discharge lamps.

(5) Luminaires are often sold with incorporated or accompanying lamps. This Regulation should ensure that consumers are informed about the compatibility of the luminaire with energy-saving lamps and about the energy efficiency of the lamps included with the luminaire. At the same time, this Regulation should not impose a disproportionate administrative burden on luminaire manufacturers and retailers, nor should it discriminate between luminaires as regards the obligation to provide consumers with information on energy efficiency.

(6) The information provided on the label should be obtained through reliable, accurate and reproducible measurement procedures, which take into account the recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Directive 98/34/EC of the European Parliament and of the Council¹.

(7) This Regulation should specify a uniform design and content for the label for electrical lamps and luminaires.

(8) In addition, this Regulation should specify requirements for the technical documentation of electrical lamps and luminaires and for the fiche of electrical lamps.

¹ OJ L 204, 21.7.1998, p. 37.

(9) Moreover, this Regulation should specify requirements for the information to be provided for any form of distance selling, advertisements and technical promotional materials for electrical lamps and luminaires.

(10) It is appropriate to provide for a review of the provisions of this Regulation taking into account technological progress.

(11) In order to facilitate the transition from Directive 98/11/EC to this Regulation, household lamps labelled in accordance with this Regulation should be considered compliant with Directive 98/11/EC.

(12) Directive 98/11/EC should therefore be repealed,

HAS ADOPTED THIS REGULATION:

Article 1

Subject matter and scope

1. This Regulation establishes requirements for labelling of and providing supplementary product information on electrical lamps such as:

- (a) filament lamps;
- (b) fluorescent lamps;
- (c) high-intensity discharge lamps;
- (d) LED lamps and LED modules. This Regulation also establishes requirements for labelling luminaires designed to operate such lamps and marketed to end users, including when they are integrated into other products that are not dependent on energy input in fulfilling their primary purpose during use (such as furniture).

2. The following products shall be excluded from the scope of this Regulation:

- (a) lamps and LED modules with a luminous flux of less than 30 lumens;
- (b) lamps and LED modules marketed for operation with batteries;
- (c) lamps and LED modules marketed for applications where their primary purpose is not lighting, such as:
 - (i) emission of light as an agent in chemical or biological processes (such as polymerisation, photodynamic therapy, horticulture, petcare, anti-insect products);
 - (ii) image capture and image projection (such as camera flashlights, photocopiers, video projectors);
 - (iii) heating (such as infrared lamps);
 - (iv) signalling (such as airfield lamps). These lamps and LED modules are not excluded when they are marketed for lighting;
- (d) lamps and LED modules marketed as part of a luminaire and not intended to be removed by the end-user, except when they are offered for sale, hire or hire purchase or displayed separately to the end user, for example as spare parts;
- (e) lamps and LED modules marketed as part of a product whose primary purpose is not lighting. However, if they are offered for sale, hire or hire purchase or displayed separately, for example

as spare parts, they shall be included within the scope of this Regulation;

(f) lamps and LED modules that do not comply with requirements becoming applicable in 2013 and 2014 according to Regulations implementing Directive 2009/125/EC of the European Parliament and of the Council²;

(g) luminaires that are designed to operate exclusively with the lamps and LED modules listed in points (a) to (c).

Article 2

Definitions

In addition to the definitions laid down in Article 2 of Directive 2010/30/EU, the following definitions shall apply for the purposes of this Regulation:

- (1) 'Light source' means a surface or object designed to emit mainly visible optical radiation produced by a transformation of energy. The term 'visible' refers to a wavelength of 380-780 nm;
- (2) 'Lighting' means the application of light to a scene, objects or their surroundings so that they may be seen by humans;
- (3) 'Accent lighting' means a form of lighting where light is directed so as to highlight an object or a part of an area;
- (4) 'Lamp' means a unit whose performance can be assessed independently and which consists of one or more light sources. It may include additional components necessary for starting, power supply or stable operation of the unit or for distributing, filtering or transforming the optical radiation, in cases where those components cannot be removed without permanently damaging the unit;
- (5) 'Lamp cap' means that part of a lamp which provides connection to the electrical supply by means of a lamp holder or lamp connector and may also serve to retain the lamp in the lamp holder;
- (6) 'Lamp holder' or 'socket' means a device which holds the lamp in position, usually by having the cap inserted in it, in which case it also provides the means of connecting the lamp to the electric supply;
- (7) 'Directional lamp' means a lamp having at least 80 % light output within a solid angle of π sr (corresponding to a cone with angle of 120°);
- (8) 'Non-directional lamp' means a lamp that is not a directional lamp;
- (9) 'Filament lamp' means a lamp in which light is produced by means of a threadlike conductor which is heated to incandescence by the passage of an electric current. The lamp may contain gases influencing the process of incandescence;
- (10) 'Incandescent lamp' means a filament lamp in which the filament operates in an evacuated bulb or is surrounded by inert gas;
- (11) '(Tungsten) halogen lamp' means a filament lamp in which the filament is made of tungsten and is surrounded by gas containing halogens or halogen compounds. They may be supplied with an integrated power supply;
- (12) 'Discharge lamp' means a lamp in which the light is produced, directly or indirectly, by an electric discharge through a gas, a metal vapour or a mixture of several gases and vapours;

² OJ L 285, 31.10.2009, p. 10.

(13) 'Fluorescent lamp' means a discharge lamp of the low pressure mercury type in which most of the light is emitted by one or more layers of phosphors excited by the ultraviolet radiation from the discharge. Fluorescent lamps may be supplied with an integrated ballast;

(14) 'Fluorescent lamp without integrated ballast' means a single- or double-capped fluorescent lamp without integrated ballast;

(15) 'High-intensity discharge lamp' means an electric discharge lamp in which the light producing arc is stabilised by wall temperature and the arc has a bulb wall loading in excess of 3 watts per square centimetre;

(16) 'Light-emitting diode (LED)' means a light source which consists of a solid state device embodying a p-n junction. The junction emits optical radiation when excited by an electric current;

(17) 'LED package' means an assembly having one or more LED(s). The assembly may include an optical element and thermal, mechanical and electrical interfaces;

(18) 'LED module' means an assembly having no cap and incorporating one or more LED packages on a printed circuit board. The assembly may have electrical, optical, mechanical and thermal components, interfaces and control gear;

(19) 'LED lamp' means a lamp incorporating one or more LED modules. The lamp may be equipped with a cap;

(20) 'Lamp control gear' means a device located between the electrical supply and one or more lamps, which provides a functionality related to the operation of the lamp(s), such as transforming the supply voltage, limiting the current of the lamp(s) to the required value, providing a starting voltage and preheating current, preventing cold starting, correcting the power factor or reducing radio interference. The device may be designed to connect to other lamp control gear to perform these functions. The term does not include:

- control devices,

- power supplies converting the mains voltage to another supply voltage that are designed to supply in the same installation both lighting products and products whose primary purpose is not lighting;

(21) 'Control device' means an electronic or mechanical device controlling or monitoring the luminous flux of the lamp by other means than power conversion for the lamp, such as timer switches, occupancy sensors, light sensors and daylight regulation devices. In addition, phase cut dimmers shall also be considered as control devices;

(22) 'External lamp control gear' means non-integrated lamp control gear designed to be installed outside the enclosure of a lamp or luminaire, or to be removed from the enclosure without permanently damaging the lamp or the luminaire;

(23) 'Ballast' means lamp control gear inserted between the supply and one or more discharge lamps which by means of inductance, capacitance or a combination of inductance and capacitance, serves mainly to limit the current of the lamp(s) to the required value;

(24) 'Halogen lamp control gear' means lamp control gear that transforms mains voltage to extra low voltage for halogen lamps;

(25) 'Compact fluorescent lamp' means a fluorescent lamp that includes all the components necessary for starting and stable operation of the lamp;

(26) 'Luminaire' means an apparatus which distributes, filters or transforms the light transmitted

from one or more lamps and which includes all the parts necessary for supporting, fixing and protecting the lamps and, where necessary, circuit auxiliaries together with the means for connecting them to the electric supply;

(27) 'Point of sale' means a physical location where the product is displayed or offered for sale, hire or hire-purchase to the end-user;

(28) 'End-user' means a natural person buying or expected to buy an electrical lamp or luminaire for purposes which are outside his trade, business, craft or profession;

(29) 'Final owner' means the person or entity owning a product during the use phase of its life cycle, or any person or entity acting on behalf of such a person or entity.

Article 3

Responsibilities of suppliers

1. Suppliers of electrical lamps placed on the market as individual products shall ensure that:

- (a) a product fiche, as set out in Annex II, is made available;
- (b) the technical documentation as set out in Annex III is made available on request to the authorities of the **Contracting Parties** and to the Commission;
- (c) any advertisement, formal price quote or tender offer disclosing energy-related or price information for a specific lamp states the energy efficiency class;
- (d) any technical promotional material concerning a specific lamp which describes its specific technical parameters states the energy efficiency class of that lamp;
- (e) if the lamp is intended to be marketed through a point of sale, a label produced in the format and containing information as set out in Annex I.1 is placed or printed on, or attached to, the outside of the individual packaging, and the packaging displays the nominal power of the lamp outside the label.

2. Suppliers of luminaires intended to be marketed to end-users shall ensure that:

- (a) the technical documentation as set out in Annex III is made available on request to the authorities of the **Contracting Parties** and to the Commission;
- (b) the information contained in the label according to Annex I.2 is provided in the following situations:
 - (i) in any advertisement, formal price quote or tender offer disclosing energy-related or price information for a specific luminaire;
 - (ii) in any technical promotional material concerning a specific lamp which describes its specific technical parameters. In these cases the information may be provided in formats other than the one set out in Annex I.2, such as fully textual;
- (c) if the luminaire is intended to be marketed through a point of sale, a label produced in the format and containing information as set out in Annex I is made available free of charge to dealers in electronic or paper format. If the supplier chooses a delivery system in which labels are provided only on request from dealers, the supplier shall promptly deliver the labels on request;
- (d) if the luminaire is placed on the market in a packaging for end-users that includes electrical lamps

which the end-user can replace in the luminaire, the original packaging of those lamps is included in the luminaire's packaging. If not, then the outside or inside of the luminaire packaging must present, in some other form, the information given on the lamps' original packaging and required by this Regulation and by Commission regulations setting ecodesign requirements for lamps pursuant to Directive 2009/125/EC. Suppliers of luminaires intended to be marketed through a point of sale who provide information under this Regulation shall be considered to have fulfilled their responsibilities as distributors with respect to the product information requirements for lamps laid down in Commission regulations setting ecodesign requirements for lamps pursuant to Directive 2009/125/EC.

Article 4

Responsibilities of dealers

1. Dealers of electrical lamps shall ensure that:

- (a) each model offered for sale, hire or hire-purchase where the final owner cannot be expected to see the product displayed is marketed with the information to be provided by suppliers in accordance with Annex IV;
- (b) any advertisement, formal price quote or tender offer disclosing energy-related or price information for a specific model states the energy efficiency class;
- (c) any technical promotional material concerning a specific model which describes its specific technical parameters states the energy efficiency class of that model.

2. Dealers of luminaires marketed to end-users shall ensure that:

- (a) the information contained in the label in accordance with Annex I.2 is provided in the following situations:
 - (i) in any advertisement, formal price quote or tender offer disclosing energy-related or price information for a specific luminaire;
 - (ii) in any technical promotional material concerning a specific luminaire which describes its specific technical parameters. In these cases the information may be provided in formats other than the one set out in Annex I.2, such as fully textual;
- (b) each model presented at a point of sale is accompanied by the label as set out in Annex I.2. The label shall be displayed in one or both of the following ways:
 - (i) in proximity to the displayed luminaire, so as to be clearly visible and identifiable as the label belonging to the model, without having to read the brand name and model number on the label;
 - (ii) clearly accompanying the most directly-visible information about the displayed luminaire (such as price or technical information) in the point of sale;

(c) if the luminaire is sold in a packaging for end-users that includes electrical lamps which the end-user can replace in the luminaire, the original packaging of those lamps is included in the luminaire's packaging. If not, then the outside or inside of the luminaire packaging must present, in some other form, the information given on the lamps' original packaging and required by this Regulation and by Commission regulations setting ecodesign requirements for lamps pursuant to Directive 2009/125/EC.

Article 5

Measurement methods

The information to be provided under Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement procedures, which take into account the recognised state-of-the-art measurement methods, as set out in Annex V.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure laid down in Annex V when assessing the conformity of the declared energy efficiency class and energy consumption.

Article 7

Revision

...³

Article 8

Repeal

...

Article 9

Transitional provisions

1. Articles 3(2) and 4(2) shall not apply to luminaires before **1 July 2016**.
2. Article 3(1)(c-d) and Article 4(1)(a-c) shall not apply to printed advertisements and printed technical promotional material published before **1 July 2016**.
3. Lamps referred to in Article 1(1) and (2) of Directive 98/11/EC placed on the market before **1 January 2016** shall comply with the provisions set out in Directive 98/11/EC.
4. Lamps referred to in Article 1(1) and (2) of Directive 98/11/EC which comply with the provisions of this Regulation and which are placed on the market or offered for sale, hire or hire-purchase before **1 January 2016** shall be regarded as complying with the requirements of Directive 98/11/EC.

³ Not applicable

Article 10

Entry into force and application

1. **This Decision (2014/02/MC-EnC) enters into force upon its adoption (23 September 2014) and it is addressed to the Contracting Parties⁴.**

2. It shall apply from **1 January 2016**, except in the cases listed in Article 9.

This Regulation shall be binding in its entirety and directly applicable in all **Contracting Parties**.

The Secretariat shall monitor and review the implementation of the Delegated Regulations referred to in Article 1 in the Contracting Parties. Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by these Delegated Regulations, in the next year of the deadline for the overall implementation⁵.

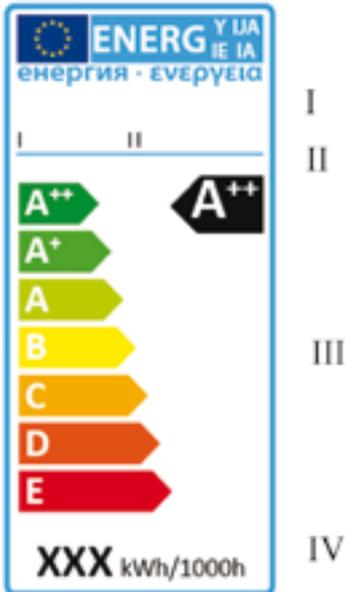
⁴ The text displayed here corresponds to Article 3(1) of Decision 2014/02/MC-EnC

⁵ The text displayed here corresponds to Article 2(3) of Decision 2014/02/MC-EnC

ANNEX I Label

1. LABEL FOR ELECTRICAL LAMPS PRESENTED AT A POINT OF SALE

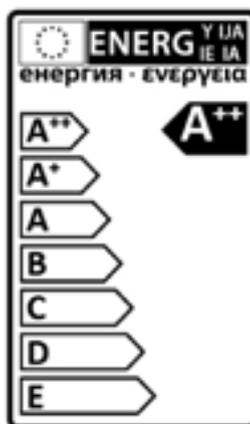
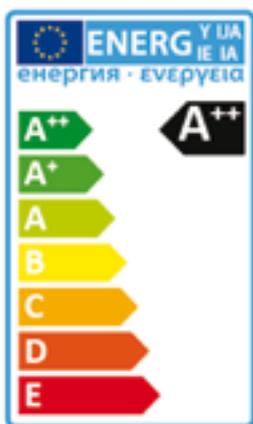
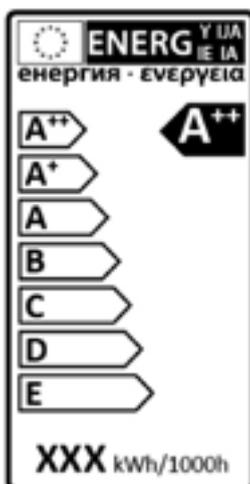
(1) The label shall be as in the following illustration if it is not printed on the packaging:



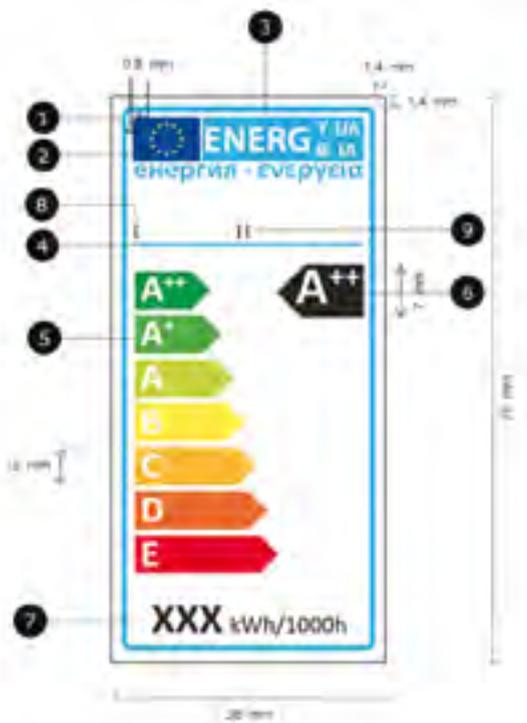
(2) The following information shall be included on the label:

- I. supplier's name or trade mark;
- II. supplier's model identifier, meaning the code, usually alphanumeric, which distinguishes a specific lamp model from other models with the same trade mark or supplier's name;
- III. the energy efficiency class determined in accordance with Annex VI; the head of the arrow containing the energy efficiency class of the lamp shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;
- IV. weighted energy consumption (EC) in kWh per 1 000 hours, calculated and rounded up to the nearest integer in accordance with Annex VII.

(3) If the label is printed on the packaging and the information specified in point (2)(I), (II) and (IV) is included elsewhere on the packaging, that information may be omitted from the label. The label shall then be chosen from the following illustrations:



(4) The design of the label shall be as follows:



where:

(a) the size specifications in the figure above and in point (d) apply to a lamp label 36 mm wide and 75 mm high. If the label is printed in a different format, its content must nevertheless remain proportionate to the specifications above.

The label version specified in points (1) and (2) must be at least 36 mm wide and 75 mm high, and the versions specified in point (3) must be, respectively, at least 36 mm wide and 68 mm high and at least 36 mm wide and 62 mm high. If no side of the packaging is large enough to contain the label and its blank border or if this would cover more than 50 % of the surface area of the largest side, the label and border may be reduced, but by no more than is required to meet both these conditions. However, in no case may the label be reduced to less than 40 % (by height) of its standard size. If the packaging is too small to take such a reduced label, a 36 mm wide and 75 mm high label must be attached to the lamp or the packaging;

(b) the background shall be white for both the multicoloured and the monochrome versions of the label;

(c) for the multicoloured version of the label, the colours shall be CMYK — cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black;

(d) the label shall meet all the following requirements (numbers refer to the figure above; colour specifications apply only to the multicoloured version of the label):

- 1 Border stroke: 2 pt — colour: Cyan 100 % — round corners: 1 mm.
- 2 EU logo — colours: X-80-00-00 and 00-00-X-00.
- 3 Energy logo: colour: X-00-00-00. Pictogram as depicted: EU logo and energy logo (combined): width: 30 mm, height: 9 mm.
- 4 Sub-logos border: 1 pt — colour: Cyan 100 % — length: 30 mm.
- 5 A++-E scale
 - Arrow: height: 5 mm, gap: 0,8 mm — colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00.
 - Text: Calibri bold 15 pt, capitals and white; '+' symbols: Calibri bold 15 pt, Superscript, white, aligned on a single row.
- 6 Energy efficiency class
 - Arrow: width: 11,2 mm, height: 7 mm, 100 % black.
 - Text: Calibri bold 20 pt, capitals and white; '+' symbols: Calibri bold 20 pt, Superscript, white, aligned on a single row.
- 7 Weighted energy consumption
 - Value: Calibri bold 16 pt, 100 % black; and Calibri regular 9 pt, 100 % black.
- 8 Supplier's name or trade mark
- 9 Supplier's model identifier
 - The suppliers' name or trade mark and the model identifier shall fit in a space of 30 × 7 mm.

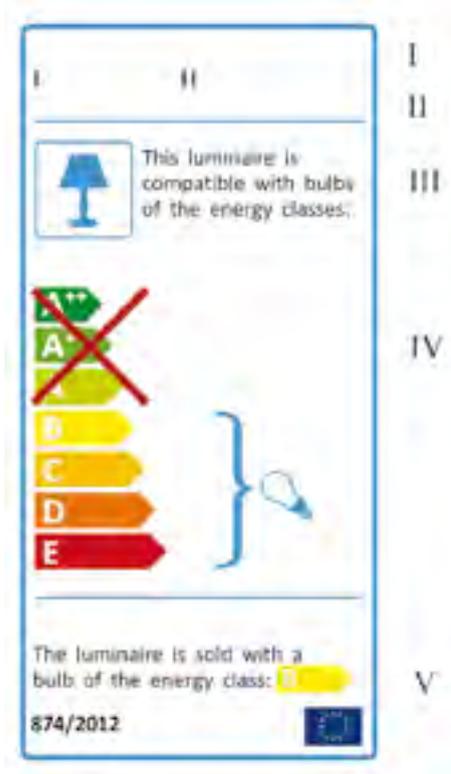
Nothing else placed or printed on, or attached to, the individual packaging shall obscure the label or reduce its visibility.

By way of derogation, if a model has been awarded an 'EU ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council⁶, a copy of the EU ecolabel may be added.

⁶ OJ L 27, 30.1.2010, p. 1.

2. LABEL FOR LUMINAIRES PRESENTED AT A POINT OF SALE

(1) The label shall be the relevant language version, and shall be as shown in the following illustration, or as in variants defined under points (2) and (3):



(2) The following information shall be included in the label:

- I. the supplier's name or trade mark;
- II. the supplier's model identifier, meaning the code, usually alphanumeric, which distinguishes a specific luminaire model from other models with the same trade mark or supplier's name;
- III. the sentence as shown in the example in point (1), or one of its alternatives from the examples in point (3) below, as applicable. Instead of the word 'luminaire', a more precise term may be used describing the particular luminaire type or the product into which the luminaire is integrated (such as furniture), as long as it remains clear that the term refers to the product on sale that operates the light sources;
- IV. the range of energy-efficiency classes according to part 1 of this Annex, accompanied by the following elements, as applicable:
 - (a) a 'bulb' pictogram indicating the classes of user-replaceable lamps with which the luminaire is compatible according to state-of-the-art requirements for compatibility;
 - (b) a cross over the classes of lamps with which the luminaire is not compatible according to state-of-the-art requirements for compatibility;

(c) the letters 'LED' arranged vertically along the classes A to A++ if the luminaire contains LED modules not intended to be removed by the end-user. If such a luminaire does not contain sockets for user-replaceable lamps, the classes from B to E shall be covered by a cross;

V. one of the following options, as applicable:

(a) if the luminaire operates with lamps that are replaceable by the end-user, and such lamps are included in the packaging of the luminaire, the sentence as shown in the example in point (1), containing the appropriate energy classes. Where necessary, the sentence can be adjusted to refer to one lamp or several lamps, and several energy classes can be listed;

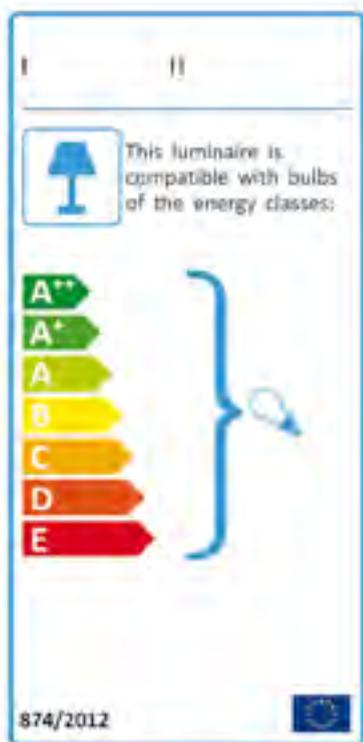
(b) if the luminaire contains only LED modules not intended to be removed by the end-user, the sentence as shown in the example in point (3)(b);

(c) if the luminaire contains both LED modules not intended to be removed by the end-user and sockets for replaceable lamps, and such lamps are not included with the luminaire, the sentence as shown in the example in point (3)(d);

(d) if the luminaire operates only with lamps that are replaceable by the end-user and there are no such lamps included with the luminaire, the space shall be left empty, as shown in the example in point (3)(a).

(3) The following illustrations provide examples of typical luminaire labels in addition to the illustration in point (1), without showing all possible combinations:

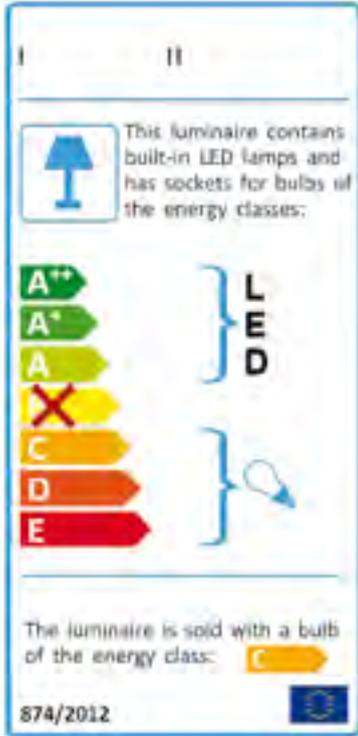
(a) luminaire operating with user-replaceable lamps compatible with lamps of all energy classes with no lamps included:



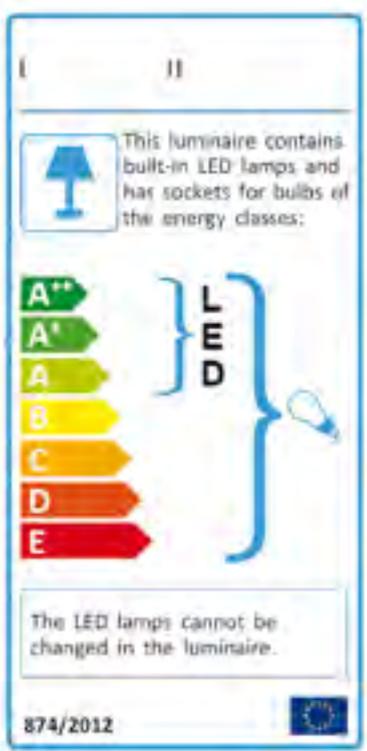
(b) luminaire containing only non-replaceable LED modules:



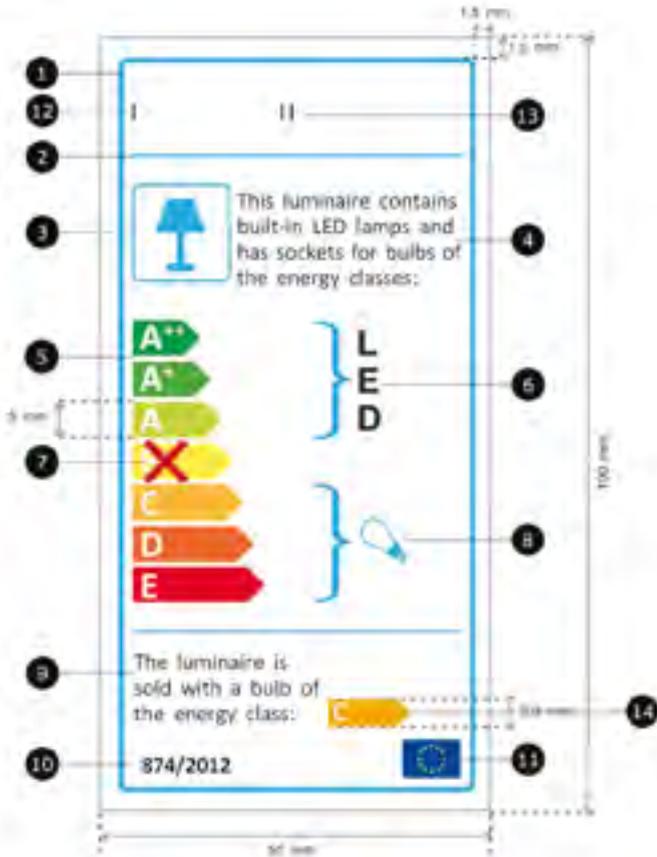
(c) luminaire containing both non-replaceable LED modules and sockets for user-replaceable lamps, with lamps included:



(d) luminaire containing both non-replaceable LED modules and sockets for user-replaceable lamps, with lamps not included:



(4) The design of the label shall be as in the figures below:



(a) the label version shall be at least 50 mm wide and 100 mm high;

(b) the background shall be white or transparent, but the letters of the energy classes shall always be white. When the background is transparent, the dealer shall ensure that the label is applied to a surface which is white or a light shade of grey that preserves the legibility of all the elements of the label;

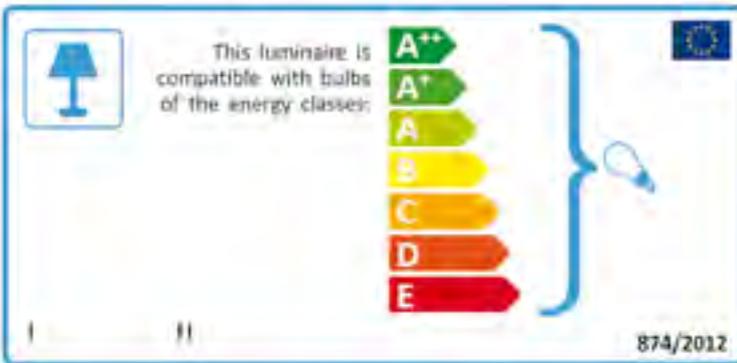
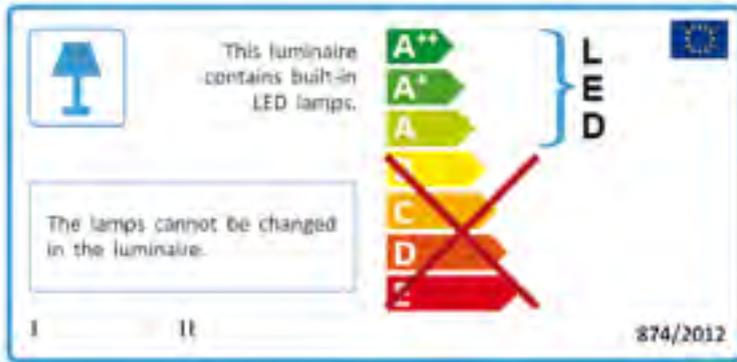
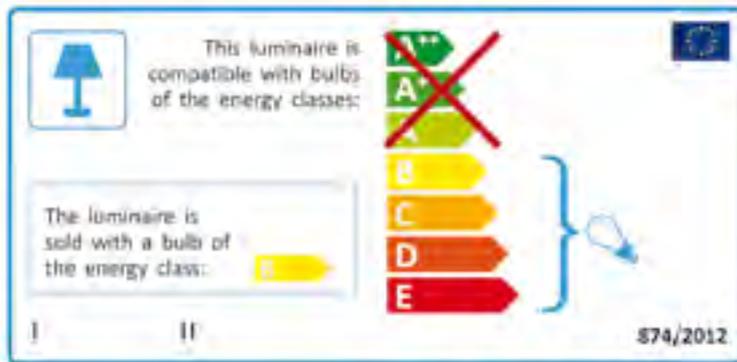
(c) the colours shall be CMYK — cyan, magenta, yellow and black, following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black;

(d) the label shall fulfil all of the following requirements (the numbers refer to the figure above):

- ❶ Border stroke: 2 pt — colour: Cyan 100 % — round corners: 1 mm.
- ❷ Sub-logos border: 1 pt — colour: Cyan 100 % — length: 43 mm.
- ❸ Luminaire logo: stroke: 1 pt — colour: Cyan 100 % — Size: 13 mm x 13 mm — round corners: 1 mm. Pictogram as depicted, or the supplier's own pictogram or photo, if it describes better the luminaire belonging to the label.

- 4 Text: Calibri Regular 9 pt or larger, 100 % black.
- 5 A++-E scale
- Arrow: height: 5 mm, gap: 0,8 mm — colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00.
 - Text: Calibri bold 14 pt, capitals and white; '+' symbols: Calibri bold 14 pt, Superscript, white, aligned on a single row.
- 6 LED text: Verdana Regular 15 pt, 100 % black.
- 7 Cross: colour: 13-X-X-04, stroke: 3 pt.
- 8 Bulb logo: Pictogram as depicted.
- 9 Text: Calibri Regular 10 pt or larger, 100 % black.
- 10 Numbering of the Regulation: Calibri bold 10 pt, 100 % black.
- 11 EU logo: Colours: X-80-00-00 and 00-00-X-00.
- 12 Supplier's name or trademark.
- 13 Supplier's model identifier:
- The supplier's name or trade mark and the model identifier shall fit into a space measuring 43 x 10 mm.
- 14 Energy class arrow
- Arrow: height: 3,9 mm, width: as shown in the illustration in point (4) but reduced in the same proportion as the height, colour: the colour defined in point (5), as applicable.
 - Text: Calibri bold 10,5 pt, capitals and white; '+' symbols: Calibri bold 10,5 pt, Superscript, white, aligned on a single row.
- If there is not enough space for displaying the energy class arrows within the area of the sentence referred to in point (2)(V)(a), the area between the number of the Regulation and the EU logo may be used for that purpose;

(e) the label may also be displayed in horizontal orientation, in which case it shall be at least 100 mm wide and 50 mm high. The components of the label shall be as described in points (b) to (d) and shall be arranged according to the following examples, as applicable. If there is not enough space for displaying the energy class arrows in the text box to the left from the A++ to E scale, the text box may be enlarged vertically as necessary.



ANNEX II

Product fiche for electrical lamps

The fiche shall contain the information specified for the label. Where product brochures are not supplied, the label provided with the product can also be considered to be the fiche.

ANNEX III

Technical documentation

The technical documentation referred to in Article 3(1)(b) and (2)(a) shall include:

- (a) the name and address of the supplier;
- (b) a general description of the model, sufficient for it to be unequivocally and easily identified;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) the technical parameters for determining energy consumption and energy efficiency in the case of electrical lamps, and compatibility with lamps in the case of luminaires, specifying at least one realistic combination of product settings and conditions in which to test the product;
- (g) for electrical lamps, the results of calculations performed in accordance with Annex VII. The information contained in this technical documentation may be merged with the technical documentation provided in accordance with measures under Directive 2009/125/EC.

ANNEX IV

Information to be provided in cases where final owners cannot be expected to see the product displayed

1. The information referred to in Article 4(1)(a) shall be provided in the following order:
 - (a) the energy efficiency class as defined in Annex VI;
 - (b) where required by Annex I, the weighted energy consumption in kWh per 1 000 hours, rounded up to the nearest integer and calculated in accordance with part 2 of Annex VII.
2. When other information contained in the product fiche is also provided, it shall be in the form and order specified in Annex II.
3. The size and font in which all the information referred to in this Annex is printed or shown shall be legible.

ANNEX V

Verification procedure for market surveillance purposes

When carrying out market surveillance checks, the market surveillance authorities shall inform the other **Contracting Parties** and the Commission of the results of these checks.

Contracting Parties' authorities shall use reliable, accurate and reproducible measurement procedures, which take into account the generally recognised state-of-the-art measurement methods, including methods set out in documents whose reference numbers have been published for that purpose in the *Official Journal of the European Union*.

1. VERIFICATION PROCEDURE FOR ELECTRICAL LAMPS AND LED MODULES MARKETED AS INDIVIDUAL PRODUCTS

For the purposes of checking conformity with the requirements laid down in Articles 3 and 4, **Contracting Parties'** authorities shall test a sample batch of a minimum of 20 lamps of the same model from the same manufacturer, where possible obtained in equal proportion from four randomly selected sources, and taking into account the technical parameters set out in the technical documentation according to point (f) in Annex III.

The model shall be considered to comply with the requirements laid down in Articles 3 and 4 if the model's energy efficiency index corresponds to its declared energy efficiency class and if the average results of the batch do not vary from the limit, threshold or declared values (including the energy efficiency index) by more than 10 %.

Otherwise, the model shall be considered not to comply with the requirements laid down in Articles 3 and 4.

The tolerances for variation indicated above relate only to the verification of the measured parameters by the **Contracting Parties'** authorities and shall not be used by the supplier as an allowed tolerance on the values in the technical documentation to achieve a more efficient energy class.

The declared values shall not be more favourable for the supplier than the values reported in the technical documentation.

2. VERIFICATION PROCEDURE FOR LUMINAIRES INTENDED TO BE MARKETED OR MARKETED TO THE END-USER

The luminaire shall be considered to comply with the requirements laid down in Articles 3 and 4 if it is accompanied by the required product information, and if it is found to be compatible with any lamps with which it is claimed to be compatible according to point 2.2(IV)(a) and (b) of Annex I, applying state-of-the-art methods and criteria for assessing compatibility.

ANNEX VI

Energy efficiency classes

The energy efficiency class of lamps shall be determined on the basis of their energy efficiency index (EEI) as set out in Table 1.

The EEI of lamps shall be determined in accordance with Annex VII.

Table 1

Energy efficiency classes for lamps

Energy efficiency class	Energy efficiency index (EEI) for non-directional lamps	Energy efficiency index (EEI) for directional lamps
A++ (most efficient)	$EEI \leq 0,11$	$EEI \leq 0,13$
A+	$0,11 < EEI \leq 0,17$	$0,13 < EEI \leq 0,18$
A	$0,17 < EEI \leq 0,24$	$0,18 < EEI \leq 0,40$
B	$0,24 < EEI \leq 0,60$	$0,40 < EEI \leq 0,95$
C	$0,60 < EEI \leq 0,80$	$0,95 < EEI \leq 1,20$
D	$0,80 < EEI \leq 0,95$	$1,20 < EEI \leq 1,75$
E (least efficient)	$EEI > 0,95$	$EEI > 1,75$

ANNEX VII

Method for calculating the energy efficiency index and energy consumption

1. CALCULATION OF THE ENERGY EFFICIENCY INDEX

For the calculation of the energy efficiency index (EEI) of a model, its power corrected for any control gear losses is compared with its reference power. The reference power is obtained from the useful luminous flux, which is the total flux for non-directional lamps, and the flux in a 90° or 120° cone for directional lamps.

The EEI is calculated as follows and rounded to two decimal places:

$$EEI = P_{cor}/P_{ref}$$

where:

P_{cor} is the rated power (P_{rated}) for models without external control gear and the rated power (P_{rated}) corrected in accordance with Table 2 for models with external control gear. The rated power of the lamps is measured at their nominal input voltage.

Table 2

Power correction if the model requires external control gear

Scope of the correction	Power corrected for control gear losses (P_{cor})
Lamps operating on external halogen lamp control gear	$P_{rated} \times 1,06$
Lamps operating on external LED lamp control gear	$P_{rated} \times 1,10$
Fluorescent lamps of 16 mm diameter (T5 lamps) and 4-pin single capped fluorescent lamps operating on external fluorescent lamp control gear	$P_{rated} \times 1,10$
Other lamps operating on external fluorescent lamp control gear	$P_{rated} \times \frac{0,24\sqrt{\Phi_{use}} + 0,0103\Phi_{use}}{0,15\sqrt{\Phi_{use}} + 0,0097\Phi_{use}}$
Lamps operating on external high-intensity discharge lamp control gear	$P_{rated} \times 1,10$
Lamps operating on external low pressure sodium lamp control gear	$P_{rated} \times 1,15$

P_{ref} is the reference power obtained from the useful luminous flux of the model (use) by the following formulae:

For models with $\Phi_{use} < 1\,300$ lumen: $P_{ref} = 0,88\sqrt{\Phi_{use}} + 0,049\Phi_{use}$

For models with $\Phi_{use} \geq 1\,300$ lumen: $P_{ref} = 0,07341\Phi_{use}$ The useful luminous flux (Φ_{use}) is defined in accordance with Table 3.

Table 3

Definition of the useful luminous flux

Model	Useful luminous flux (Φ_{use})
Non-directional lamps	Total rated luminous flux (Φ)
Directional lamps with a beam angle $\geq 90^\circ$ other than filament lamps and carrying a textual or graphical warning on their packaging that they are not suitable for accent lighting	Rated luminous flux in a 120° cone (Φ_{120°)
Other directional lamps	Rated luminous flux in a 90° cone (Φ_{90°)

2. CALCULATION OF THE ENERGY CONSUMPTION

The weighted energy consumption (E_c) is calculated in kWh/1000 h as follows and is rounded to two decimal places:

$$E_c = \frac{P_{cor} \times 1000h}{1000}$$

Where P_{cor} is the power corrected for any control gear losses in accordance with part 1 above.



Delegated Regulation (EU) 392/2012 of 1 March 2012 supplementing Directive 2010/30/EU with regard to energy labelling of household tumble driers

Incorporated and adapted by Ministerial Council Decision 2014/02/MC-EnC of 23 September 2014 adapting certain Delegated Regulations on energy related products.

*The adaptations made by Ministerial Council Decision 2014/02/MC-EnC are highlighted in **bold and blue**.*

Whereas:

(1) Directive 2010/30/EU requires the Commission to adopt delegated acts for the labelling of energy-related products representing significant potential for energy savings and presenting a wide disparity in performance levels with equivalent functionality.

(2) Provisions for the energy labelling of household tumble driers were established by Commission Directive 95/13/EC of 23 May 1995 implementing Council Directive 92/75/EEC with regard to energy labelling of household electric tumble driers.

(3) The energy used by household tumble driers accounts for a significant part of total household energy demand in the Union. In addition to the energy efficiency improvements already achieved, the scope for further reducing the energy consumption of household tumble driers is substantial.

(4) Directive 95/13/EC should be repealed and new provisions should be laid down by this Regulation in order to ensure that the energy label provides dynamic incentives for suppliers to further improve the energy efficiency of household tumble driers and to accelerate market transformation towards energy-efficient technologies.

(5) Household combined washer-driers are addressed in Commission Directive 96/60/EC of 19 September 1996 implementing Council Directive 92/75/EEC with regard to energy labelling of household combined washer-driers. They have particular characteristics and should therefore be exempted from the scope of this Regulation.

(6) The information provided on the label should be obtained through reliable, accurate and reproducible measurement procedures which take into account the recognised state-of-the-art measurement methods, including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations¹.

(7) This Regulation should specify a uniform design and content for the label for household tumble driers, including gas-fired driers.

(8) In addition, this Regulation should specify requirements as to the 'technical documentation' and the 'product fiche' for household tumble driers.

(9) Moreover, this Regulation should specify requirements as to the information to be provided for any form of distance selling and advertisement of household tumble driers and any form of technical promotional material for such appliances.

(10) It is appropriate to provide for a review of this Regulation in order to take into account technological progress.

¹ OJ L 204, 21.7.1998, p. 37.

(11) In order to facilitate the transition from Directive 95/13/EC to this Regulation, household tumble driers labelled in accordance with this Regulation should be considered as compliant with Directive 95/13/EC.

(12) Directive 95/13/EC should therefore be repealed,

HAS ADOPTED THIS REGULATION:

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the labelling of and the provision of supplementary product information on electric mains-operated and gas-fired household tumble driers and built-in household tumble driers, including those sold for non-household use.

2. This Regulation shall not apply to household combined washer-driers and household spin-extractors.

Article 2

Definitions

In addition to the definitions laid down in Article 2 of Directive 2010/30/EU, the following definitions shall apply for the purposes of this Regulation:

(1) 'household tumble drier' means an appliance in which textiles are dried by tumbling in a rotating drum, through which heated air is passed and which is designed to be used principally for non-professional purposes;

(2) 'built-in household tumble drier' means a household tumble drier intended to be installed in a cabinet, a prepared recess in a wall or a similar location, requiring furniture finishing;

(3) 'household combined washer-drier' means a household washing machine which includes both a spin extraction function and also a means for drying the textiles, usually by heating and tumbling;

(4) 'household spin-extractor', also known commercially as 'spin-drier', means an appliance in which water is removed from the textiles by centrifugal action in a rotating drum and drained through an automatic pump and which is designed to be used principally for non-professional purposes;

(5) 'air-vented tumble drier' means a tumble drier that draws in fresh air, passes it over the textiles and vents the resulting moist air into the room or outside;

(6) 'condenser tumble drier' means a tumble drier which includes a device (either using condensation or any other means) for removing moisture from the air used for the drying process;

(7) 'automatic tumble drier' means a tumble drier which switches off the drying process when a certain moisture content of the load is detected, for example through conductivity or temperature sensing;

(8) 'non-automatic tumble drier' means a tumble drier which switches off the drying process after a predefined period, usually controlled by a timer, but which may also be manually switched off;

(9) 'programme' means a series of operations that are predefined and which are declared by the supplier as suitable for drying certain types of textile;

- (10) 'cycle' means a complete drying process, as defined for the selected programme;
- (11) 'programme time' means the time that elapses from the initiation of the programme until the completion of the programme, excluding any end-user programmed delay;
- (12) 'rated capacity' means the maximum mass in kilograms, indicated by the supplier in 0,5 kilogram increments of dry textiles of a particular type, which can be treated in a household tumble drier with the selected programme, when loaded in accordance with the supplier's instructions;
- (13) 'partial load' means half of the rated capacity of a household tumble drier for a given programme;
- (14) 'condensation efficiency' means the ratio between the mass of moisture condensed by a condenser tumble drier and the mass of moisture removed from the load at the end of a cycle;
- (15) 'off-mode' means a condition where the household tumble drier is switched off using appliance controls or switches accessible to and intended for operation by the end-user during normal use to attain the lowest power consumption that may persist for an indefinite time while the household tumble drier is connected to a power source and used in accordance with the supplier's instructions; where there is no control or switch accessible to the end-user, 'off-mode' means the condition reached after the household tumble drier reverts to a steady-state power consumption on its own;
- (16) 'left-on mode' means the lowest power consumption mode that may persist for an indefinite time after completion of the programme without any further intervention by the end-user besides unloading of the household tumble drier;
- (17) 'equivalent household tumble drier' means a model of household tumble drier placed on the market with the same rated capacity, technical and performance characteristics, energy consumption, condensation efficiency where relevant, standard cotton programme time and airborne acoustical noise emissions during drying as another model of household tumble drier placed on the market under a different commercial code number by the same supplier;
- (18) 'end-user' means a consumer buying or expected to buy a household tumble drier;
- (19) 'point of sale' means a location where household tumble driers are displayed or offered for sale, hire or hire-purchase.
- (20) 'standard cotton programme' means the cycle which dries cotton laundry with an initial moisture content of the load of 60 % up to a remaining moisture content of the load of 0 %.

Article 3

Responsibilities of suppliers

Suppliers shall ensure that:

- (a) each household tumble drier is supplied with a printed label in the format and containing the information set out in Annex I;
- (b) a product fiche, as set out in Annex II, is made available;
- (c) technical documentation as set out in Annex III is made available on request to the authorities of the **Contracting Parties** and to the Commission;
- (d) any advertisement for a specific model of household tumble drier contains the energy efficiency

class, if the advertisement discloses energy-related or price information;

(e) any technical promotional material concerning a specific model of household tumble drier which describes its specific technical parameters includes the energy efficiency class of that model.

Article 4

Responsibilities of dealers

Dealers shall ensure that:

(a) each household tumble drier, at the point of sale, bears the label provided by suppliers in accordance with Article 3(a) on the outside of the front or top of the household tumble drier, in such a way as to be clearly visible;

(b) household tumble driers offered for sale, hire or hire-purchase where the end-user cannot be expected to see the product displayed, as specified in Article 7 of Directive 2010/30/EU, are marketed with the information provided by suppliers in accordance with Annex IV to this Regulation;

(c) any advertisement for a specific model of household tumble drier contains a reference to the energy efficiency class, if the advertisement discloses energy-related or price information;

(d) any technical promotional material concerning a specific model of household tumble drier which describes its specific technical parameters includes a reference to the energy efficiency class of that model.

Article 5

Measurement methods

The information to be provided under Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement procedures, which take into account the recognised state-of-the-art measurement methods.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure set out in Annex V for assessing the conformity of the declared energy efficiency class, the energy consumption per cycle, the condensation efficiency class where applicable, the rated capacity, the power consumption in off-mode and left-on mode, the duration of the left-on mode, the programme time and airborne acoustical noise emissions.

Article 7

Revision

...²

² Not applicable

Article 8**Repeal**

...

Article 9**Transitional provisions**

1. Article 3(d) and (e) and Article 4(b), (c) and (d) shall not apply to printed advertisements and printed technical promotional material published before **30 April 2016**.
2. Household tumble driers placed on the market before **1 January 2016** shall comply with the provisions of Directive 95/13/EC.
3. Household tumble driers which comply with the provisions of this Regulation and which are placed on the market or offered for sale, hire or hire-purchase before **1 January 2016** shall be regarded as complying with the requirements of Directive 95/13/EC.

Article 10**Entry into force and application**

1. **This Decision (2014/02/MC-EnC) enters into force upon its adoption (23 September 2014) and it is addressed to the Contracting Parties³.**
2. It shall apply from **1 January 2016**. However, Article 3(d) and (e) and Article 4(b), (c) and (d) shall apply from **30 April 2016**.

The Secretariat shall monitor and review the implementation of the Delegated Regulations referred to in Article 1 in the Contracting Parties. Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by these Delegated Regulations, in the next year of the deadline for the overall implementation⁴.

³ The text displayed here corresponds to Article 3(1) of Decision 2014/02/MC-EnC

⁴ The text displayed here corresponds to Article 2(3) of Decision 2014/02/MC-EnC

1.1. The following information shall be included in the label for air vented household tumble driers:

- I. supplier's name or trade mark;
- II. supplier's model identifier, meaning the code, usually alphanumeric, which distinguishes a specific household tumble drier model from other models with the same trade mark or supplier's name;
- III. the energy efficiency class as defined in point 1 of Annex VI; the head of the arrow containing the energy efficiency class of the household tumble drier shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;
- IV. weighted annual energy consumption (AE_c) in kWh/year, rounded up to the nearest integer and calculated in accordance with Annex VII;
- V. information on the type of household tumble drier;
- VI. cycle time corresponding to the standard cotton programme at full load in minutes and rounded to the nearest minute;
- VII. rated capacity, in kg, for the standard cotton programme at full load;
- VIII. the sound power level (weighted average value - LWA), during the drying phase, for the standard cotton programme at full load, expressed in dB, rounded to the nearest integer.

1.2. The design of the label for air vented household tumble driers shall be in accordance with point 4 of this Annex. Where a model has been granted an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council⁵, a copy of the EU Ecolabel may be added.

⁵ OJ L 27, 30.1.2010, p. 1.

Whereby

(a) The label must be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content must nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours shall be CMYK - cyan, magenta, yellow and black following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above).

- ① Eu label border stroke: 5 pt - colour: Cyan 100 % - round corners: 3,5 mm.
- ② EU logo - colours: X-80-00-00 and 00-00-X-00.
- ③ Energy label: colour: X-00-00-00. Pictogram as depicted; EU logo and energy logo (combined): width: 92 mm, height: 17 mm.
- ④ Sub-logos border: 1 pt - colour: Cyan 100 % - length: 92,5 mm.
- ⑤ A-G scale
 - Arrow: height: 7 mm, gap: 0,75 mm – colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00.
 - Text: Calibri bold 18 pt, capitals and white; '+' symbols: Calibri bold 12 pt, white aligned on a single row.
- ⑥ Energy efficiency class
 - Arrow: width: 26 mm, height: 14 mm, 100 % black;
 - Text: Calibri bold 29 pt, capitals and white; '+' symbols: Calibri bold 18 pt, white aligned on a single row.
- ⑦ Energy
 - Text: Calibri regular 11 pt, capitals, 100 % black.
- ⑧ Weighted annual energy consumption:
 - Border: 2 pt - colour: Cyan 100 % - round corners: 3,5 mm.
 - Value: Calibri bold 30 pt, 100 % black.
 - Second line: Calibri regular 14 pt, 100 % black.
- ⑨ Type of household tumble drier:
 - Pictogram as depicted
 - Border: 2 pt - colour: Cyan 100 % - round corners: 3,5 mm.

- 10 Cycle time:
 - Pictogram as depicted
 - Border: 2 pt - colour: Cyan 100 % - round corners: 3,5 mm.
 - Value: Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.
- 11 Rated capacity:
 - Pictogram as depicted
 - Border: 2 pt - colour: Cyan 100% - round corners: 3,5 mm.
 - Value: Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.
- 12 Sound power level:
 - Pictogram as depicted
 - Border: 2 pt - colour: Cyan 100 % - round corners: 3,5 mm.
 - Value: Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.
- 13 Asterisk: Calibri regular 6 pt, 100 % black.
- 14 Supplier's name or trade mark
- 15 Supplier's model identifier
- 16 The supplier's name or trademark and model identifier should fit in a space of 92 × 15 mm.
- 17 Numbering of the Regulation: Calibri bold 9 pt, 100 % black.

Whereby

(a) The label must be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content must nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours shall be CMYK - cyan, magenta, yellow and black following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above).

❶ Eu label border stroke: 5 pt - colour: Cyan 100 % - round corners: 3,5 mm.

❷ EU logo - colours: X-80-00-00 and 00-00-X-00.

❸ Energy label: colour: X-00-00-00. Pictogram as depicted; EU logo and energy logo (combined): width: 92 mm, height: 17 mm.

❹ Sub-logos border: 1 pt - colour: Cyan 100 % - length: 92,5 mm.

❺ A-G scale

- Arrow: height: 7 mm, gap: 0,75 mm - colours:

- Highest class: X-00-X-00,

- Second class: 70-00-X-00,

- Third class: 30-00-X-00,

- Fourth class: 00-00-X-00,

- Fifth class: 00-30-X-00,

- Sixth class: 00-70-X-00,

- Last class: 00-X-X-00.

- Text: Calibri bold 18 pt, capitals and white; '+' symbols: Calibri bold 12 pt, white aligned on a single row.

❻ Energy efficiency class

- Arrow: width: 26 mm, height: 14 mm, 100 % black;

- Text: Calibri bold 29 pt, capitals and white; '+' symbols: Calibri bold 18 pt, white aligned on a single row.

❼ Energy

- Text: Calibri regular 11 pt, capitals, 100 % black.

❽ Weighted annual energy consumption:

- Border: 2 pt - colour: Cyan 100 % - round corners: 3,5 mm.

- Value: Calibri bold 30 pt, 100 % black.

- Second line: Calibri regular 14 pt, 100 % black.

❾ Type of household tumble drier:

- Pictogram as depicted

- Border: 2 pt - colour: Cyan 100 % - round corners: 3,5 mm.

- 10 Cycle time:
- Pictogram as depicted
 - Border: 2 pt - colour: Cyan 100 % - round corners: 3,5 mm.
 - Value: Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.
- 11 Rated capacity:
- Pictogram as depicted
 - Border: 2 pt - colour: Cyan 100 % - round corners: 3,5 mm.
 - Value: Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.
- 12 Sound power level:
- Pictogram as depicted
 - Border: 2 pt - colour: Cyan 100 % - round corners: 3,5 mm.
 - Value: Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.
- 13 Asterisk: Calibri regular 6 pt, 100 % black.
- 14 Supplier's name or trade mark
- 15 Supplier's model identifier
- 16 The supplier's name or trademark and model identifier should fit in a space of 92 × 15 mm.
- 17 Numbering of the Regulation: Calibri bold 9 pt, 100 % black.
- 18 Condensation efficiency class:
- Pictogram as depicted
 - Border: 2 pt - colour: Cyan 100 % - round corners: 3,5 mm.
 - Value: Calibri regular 16 pt, horizontal scale 75 %, 100 % black and Calibri bold 22 pt, horizontal scale 75 %, 100 % black.

Whereby

(a) The label must be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content must nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours shall be CMYK - cyan, magenta, yellow and black following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above).

- ① Eu label border stroke: 5 pt - colour: Cyan 100 % - round corners: 3,5 mm.
- ② EU logo - colours: X-80-00-00 and 00-00-X-00.
- ③ Energy label: colour: X-00-00-00. Pictogram as depicted; EU logo and energy logo (combined): width: 92 mm, height: 17 mm.
- ④ Sub-logos border: 1 pt - colour: Cyan 100 % - length: 92,5 mm.
- ⑤ A-G scale
 - Arrow: height: 7 mm, gap: 0,75 mm - colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00.
 - Text: Calibri bold 18 pt, capitals and white; '+' symbols: Calibri bold 12 pt, white aligned on a single row.
- ⑥ Energy efficiency class
 - Arrow: width: 26 mm, height: 14 mm, 100 % black;
 - Text: Calibri bold 29 pt, capitals and white; '+' symbols: Calibri bold 18 pt, white aligned on a single row.
- ⑦ Energy
 - Text: Calibri regular 11 pt, capitals, 100 % black.
- ⑧ Weighted annual energy consumption:
 - Border: 2 pt - colour: Cyan 100 % - round corners: 3,5 mm.
 - Value: Calibri bold 30 pt, 100 % black.
 - Second line: Calibri regular 14 pt, 100 % black.
- ⑨ Type of household tumble drier:
 - Pictogram as depicted
 - Border: 2 pt - colour: Cyan 100 % - round corners: 3,5 mm.

- 10** Cycle time:
 - Pictogram as depicted
 - Border: 2 pt - colour: Cyan 100 % - round corners: 3,5 mm.
 - Value: Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.
- 11** Rated capacity:
 - Pictogram as depicted
 - Border: 2 pt - colour: Cyan 100 % - round corners: 3,5 mm.
 - Value: Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.
- 12** Sound power level:
 - Pictogram as depicted
 - Border: 2 pt - colour: Cyan 100 % - round corners: 3,5 mm.
 - Value: Calibri bold 24 pt, 100 % black; and Calibri regular 16 pt, 100 % black.
- 13** Asterisk: Calibri regular 6 pt, 100 % black
- 14** Supplier's name or trade mark
- 15** Supplier's model identifier
- 16** The supplier's name or trademark and model identifier should fit in a space of 92 × 15 mm.
- 17** Numbering of the Regulation: Calibri bold 9 pt, 100 % black.

ANNEX II

Product Fiche

1. The information in the product fiche of household tumble driers shall be given in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trade mark;
- (b) supplier's model identifier, which means the code, usually alphanumeric, which distinguishes a specific household tumble drier model from other models with the same trade mark or supplier's name;
- (c) rated capacity in kg of cotton laundry for the standard cotton programme at full load;
- (d) whether the household tumble drier is an air-vented, condenser or gas-fired household tumble drier;
- (e) energy efficiency class in accordance with point 1 of Annex VI;
- (f) for electric mains-operated household tumble drier:

the weighted Annual Energy Consumption (AE_c) rounded up to one decimal place; it shall be described as: 'Energy consumption "X" kWh per year, based on 160 drying cycles of the standard cotton programme at full and partial load, and the consumption of the low-power modes. Actual energy consumption per cycle will depend on how the appliance is used.';

for household gas-fired tumble drier:

the weighted Annual Energy Consumption ($AE_{C(Gas)}$) rounded up to one decimal place; it shall be described as: 'Energy consumption "X" kWh-Gas per year, based on 160 drying cycles of the standard cotton programme at full and partial load. Actual energy consumption per cycle will depend on how the appliance is used.';

and

the weighted Annual Energy Consumption ($AE_{C(Gas)el}$) rounded up to one decimal place; it shall be described as: 'Energy consumption "X" kWh per year, based on 160 drying cycles of the standard cotton programme at full and partial load, and the consumption of the low-power modes. Actual energy consumption per cycle will depend on how the appliance is used.';

(g) whether the household tumble drier is an 'automatic tumble drier' or 'non-automatic tumble drier';

(h) where the household tumble drier has been awarded an 'EU Ecolabel award' under Regulation (EC) No 66/2010, this information may be included;

(i) the energy consumption (E_{dry} , $E_{dry/2}$, $E_{g_{dry}}$, $E_{g_{dry/2}}$, $E_{g_{dry,a}}$, $E_{g_{dry/2,a}}$) of the standard cotton programme at full and partial load;

(j) the power consumption of the off-mode (P_o) and of the left-on mode (P_l) for the standard cotton programme at full load;

(k) if the household tumble drier is equipped with a power management system, the duration of the 'left-on mode';

(l) indication that the 'standard cotton programme' used at full and partial load is the standard drying programme to which the information in the label and the fiche relates, that this programme is suitable for drying normal wet cotton laundry and that it is the most efficient

programme in terms of energy consumption for cotton;

(m) the weighted programme time (T_p) of the 'standard cotton programme at full and partial load' in minutes and rounded to the nearest minute as well as the programme time of the 'standard cotton programme at full load' (T_{dry}) and the programme time of the 'standard cotton programme at partial load' ($T_{dry/2}$) in minutes and rounded to the nearest minute;

(n) if the household tumble drier is a condenser tumble drier, the condensation efficiency class in accordance with point 2 of Annex VI, expressed as 'condensation efficiency class 'X' on a scale from G (least efficient) to A (most efficient)'; this may be expressed by other means provided it is clear that the scale is from G (least efficient) to A (most efficient);

(o) if the household tumble drier is a condenser tumble drier, the average condensation efficiency C_{dry} and $C_{dry/2}$ of the standard cotton programme at full load and partial load and the weighted condensation efficiency (C_p) for the 'standard cotton programme at full and partial load', as a percentage and rounded to the nearest whole percent;

(p) the sound power level (weighted average value — L_{WA}) expressed in dB and rounded to the nearest integer for the standard cotton programme at full load;

(q) if the household tumble drier is intended to be built-in, an indication to this effect.

2. One product fiche may cover a number of household tumble drier models supplied by the same supplier.

3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1 not already displayed on the label shall also be provided.

ANNEX III

Technical documentation

1. The technical documentation referred to in Article 3(c) shall include:

- (a) the name and address of the supplier;
- (b) a general description of the household tumble drier model, sufficient for it to be unequivocally and easily identified;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) the identification and signature of the person empowered to bind the supplier;
- (f) technical parameters for measurements as follows:

(i) for electric mains-operated household tumble drier:

the energy consumption (E_{dry} , $E_{dry^{1/2}}$, $E_{g_{dry}}$, $E_{g_{dry^{1/2}}}$, $E_{g_{dry,a}}$, $E_{g_{dry^{1/2},a}}$) of the standard cotton programme at full and partial load,

for household gas-fired tumble drier:

the weighted Annual Energy Consumption ($AE_{C(Gas)}$) rounded up to one decimal place; it shall be described as: 'Energy consumption "X" kWh-Gas per year, based on 160 drying cycles of the standard cotton programme at full and partial load. Actual energy consumption per cycle will depend on how the appliance is used';

and

the weighted Annual Energy Consumption ($AE_{C(Gas)el}$) rounded up to one decimal place; it shall be described as: 'Energy consumption "X" kWh per year, based on 160 drying cycles of the standard cotton programme at full and partial load, and the consumption of the low-power modes. Actual energy consumption per cycle will depend on how the appliance is used.';

(ii) power consumption in 'off-mode' and the power consumption in 'left-on mode';

(iii) the programme time of the 'standard cotton programme at full load' (T_{dry}) and the programme time of the 'standard cotton programme at partial load' ($T_{dry^{1/2}}$), in minutes and rounded to the nearest minute;

(iv) if the household tumble drier is equipped with a power management system, the duration of the 'left-on mode';

(v) if the household tumble drier is a condenser tumble drier, the average condensation efficiency C_{dry} of the standard cotton programme at full load and the average condensation efficiency of the standard cotton programme at partial load $C_{dry^{1/2}}$;

(vi) the sound power level;

(g) the results of calculations performed in accordance with Annex VII.

2. Where the information included in the technical documentation for a particular household tumble drier model has been obtained by calculation on the basis of design or by extrapolation from other equivalent household tumble driers, or both, the documentation shall include details of such calcu-

lations or extrapolations, or both, and of tests undertaken by suppliers to verify the accuracy of the calculations undertaken. The information shall also include a list of all other equivalent household tumble drier models where the information was obtained in the same way.

ANNEX IV

Information to be provided in cases where end-users cannot be expected to see the product displayed

1. The information referred to in Article 4(b) shall be provided in the following order:
 - (a) the rated capacity in kg of cotton, for the standard cotton programme at full load;
 - (b) whether the household tumble drier is an air-vented, condenser or gas-fired household tumble drier;
 - (c) the energy efficiency class as defined in point 1 of Annex VI;
 - (d) for electric mains-operated household tumble drier:

the weighted Annual Energy Consumption (AE_c) rounded up to the nearest integer, to be described as: 'Energy consumption "X" kWh per year, based on 160 drying cycles of the standard cotton programmes at full and partial load, and the consumption of the low-power modes. Actual energy consumption per cycle will depend on how the appliance is used.';

for household gas-fired tumble drier:

the weighted Annual Energy Consumption ($AE_{c(\text{Gas})}$) rounded up to one decimal place; it shall be described as: 'Energy consumption "X" kWh-Gas per year, based on 160 drying cycles of the standard cotton programme at full and partial load. Actual energy consumption per cycle will depend on how the appliance is used';

and

the weighted Annual Energy Consumption ($AE_{c(\text{Gas}+\text{el})}$) rounded up to one decimal place; it shall be described as: 'Energy consumption "X" kWh per year, based on 160 drying cycles of the standard cotton programme at full and partial load, and the consumption of the low-power modes. Actual energy consumption per cycle will depend on how the appliance is used.';
 - (e) whether the household tumble drier is an 'automatic tumble drier' or 'non-automatic tumble drier';
 - (f) the energy consumption ($E_{\text{dry}}, E_{\text{dry}1/2}, E_{\text{g}_{\text{dry}}}, E_{\text{g}_{\text{dry}1/2}}, E_{\text{g}_{\text{dry},a}}, E_{\text{g}_{\text{dry}1/2,a}}$) of the standard cotton programme at full and partial load, rounded up to two decimal places and calculated in accordance with Annex VII;
 - (g) the power consumption of the off-mode (P_o) and the left-on mode (P_l) for the standard cotton programme at full load;
 - (h) the programme time of the 'standard cotton programme at full load' (T_{dry}) and the programme time of the 'standard cotton programme at partial load' ($T_{\text{dry}1/2}$), in minutes and rounded to the nearest minute, calculated in accordance with Annex VII;
 - (i) if the household tumble drier is a condenser tumble drier, the condensation efficiency class in accordance with point 2 of Annex VI;
 - (j) the sound power level (weighted average value — L_{WA}) for the standard cotton programme at full load, expressed in dB and rounded to the nearest integer;
 - (k) if the household tumble drier is intended to be built-in, an indication to this effect.

2. Where other information contained in the product fiche is also provided, it shall be in the form and order specified in Annex II.

3. The size and font in which all the information referred in this Annex is printed or shown shall be legible.

ANNEX V

Verification procedure for market surveillance purposes

For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using harmonised standards the reference numbers of which have been published in the *Official Journal of the European Union*, or other reliable, accurate and reproducible methods, which take into account the generally recognised state of the art methods, and whose results are deemed to be of low uncertainty.

For the purposes of checking conformity with the requirements laid down in Articles 3 and 4, **Contracting Party** authorities shall test a single household tumble drier. If the measured parameters do not meet the values declared by the supplier within the ranges set out in Table 1, the measurements shall be carried out on three more household tumble driers. The arithmetic mean of the measured values of those three household tumble driers shall meet the values declared by the supplier within the ranges defined in Table 1.

Otherwise, the model and all other equivalent household tumble driers models shall be considered not to comply with the requirements laid down in Articles 3 and 4.

Table 1

Measured parameter	Verification tolerances
Weighted annual energy consumption	The measured value shall not be greater than the rated value ⁶ of AE_C by more than 6 %.
Weighted energy consumption	The measured value shall not be greater than the rated value of E_t by more than 6 %.
Weighted condensation efficiency	The measured value shall not be less than the rated value of C_t by more than 6 %.
Weighted programme time	The measured value shall not be longer than the rated values of T_t by more than 6 %.
Power consumption in off-mode and left-on mode	The measured value of power consumption P_o and P_l of more than 1,00 W shall not be greater than the rated value by more than 6 %. The measured value of power consumption P_o and P_l of less than or equal to 1,00 W shall not be greater than the rated value by more than 0,10 W.
Duration of the left-on mode	The measured value shall not be longer than the rated value of T_l by more than 6 %.
Sound power level L_{WA}	The measured value shall not be greater than the rated value.

⁶ 'Rated value' means a value that is declared by the supplier. The 6 % uncertainty in the measurement represent the current acceptable testing laboratory error in measuring the declared parameters with the new measurement method used for the new labelling/ecodesign requirements including full and partial load cycles.

ANNEX VI

Energy efficiency classes and condensation efficiency classes

1. ENERGY EFFICIENCY CLASSES

The energy efficiency class of a household tumble drier shall be determined on the basis of its Energy Efficiency Index (EEI) as set out in Table 1.

The Energy Efficiency Index (EEI) of a household tumble drier shall be determined in accordance with point 1 of Annex VII.

Table 1

Energy efficiency classes

Energy efficiency class	Energy Efficiency Index
A+++ (most efficient)	$EEI < 24$
A++	$24 \leq EEI < 32$
A+	$32 \leq EEI < 42$
A	$42 \leq EEI < 65$
B	$65 \leq EEI < 76$
C	$76 \leq EEI < 85$
D (least efficient)	$85 \leq EEI$

2. CONDENSATION EFFICIENCY CLASSES

The condensation efficiency class of a condenser household tumble drier shall be determined on the basis of the weighted condensation efficiency (C_t) as set out in Table 2.

The weighted condensation efficiency (C_t) of a condenser household tumble drier shall be determined in accordance with point 2 of Annex VII.

Table 2

Condensation efficiency classes

Condensation efficiency class	Weighted condensation efficiency
A (most efficient)	$C_t > 90$
B	$80 < C_t \leq 90$
C	$70 < C_t \leq 80$
D	$60 < C_t \leq 70$
E	$50 < C_t \leq 60$
F	$40 < C_t \leq 50$
G (least efficient)	$C_t \leq 40$

ANNEX VII

Method for calculating the Energy Efficiency Index and the weighted condensation efficiency

1. CALCULATION OF THE ENERGY EFFICIENCY INDEX

For the calculation of the Energy Efficiency Index (EEI) of a household tumble drier model, the weighted Annual Energy Consumption of a household tumble drier for the standard cotton programme at full and partial load is compared to its Standard Annual Energy Consumption.

(a) The Energy Efficiency Index (EEI) is calculated as follows and rounded to one decimal place:

$$EEI = \frac{AE_C}{SAE_C} \times 100$$

where:

AE_C = weighted Annual Energy Consumption of the household tumble drier.

SAE_C = standard Annual Energy Consumption of the household tumble drier.

(b) The Standard Annual Energy Consumption (SAE_C) is calculated in kWh/year as follows and rounded to two decimal places:

- for all household tumble driers that are not air-vented:

$$SAE_C = 140 \times c^{0,8}$$

- for air-vented household tumble driers:

$$SAE_C = 140 \times c^{0,8} - \left(30 \times \frac{T_t}{60} \right)$$

where:

c is the rated capacity of the household tumble drier for the standard cotton programme.

T_t is the weighted programme time for the standard cotton programme.

(c) The weighted Annual Energy Consumption (AE_C) is calculated in kWh/year as follows and is rounded to two decimal places:

(i)

$$AE_C = E_t \times 160 + \frac{\left[P_o \times \frac{525\,600 - (T_t \times 160)}{2} + P_1 \times \frac{525\,600 - (T_t \times 160)}{2} \right]}{60 \times 1\,000}$$

where:

E_t = weighted energy consumption, in kWh and rounded to two decimal places.

P_o = power in 'off-mode' for the standard cotton programme at full load, in W and rounded to two decimal places.

P_l = power in 'left-on mode' for the standard cotton programme at full load, in W and rounded to two decimal places.

T_t = weighted programme time, in minutes and rounded to the nearest minute.

160 = total number of drying cycles per year.

(ii) When the household tumble drier is equipped with a power management system, with the household tumble drier reverting automatically to 'off-mode' after the end of the programme, the weighted Annual Energy Consumption (AE_C) is calculated taking into consideration the effective duration of the 'left-on mode', according to the following formula:

$$AE_C = E_t \times 160 + \frac{\{(P_l \times T_l \times 160) + P_o \times [525600 - (T_t \times 160) - (T_l \times 160)]\}}{60 \times 1000}$$

where:

T_l = duration of the 'left-on mode' for the standard cotton programme at full load, in minutes and rounded to the nearest minute.

(d) The weighted programme time (T_t) for the standard cotton programme is calculated in minutes as follows and rounded to the nearest minute:

$$T_t = (3 \times T_{dry} + 4 \times T_{dry/2}) / 7$$

where:

T_{dry} = programme time for the standard cotton programme at full load, in minutes and rounded to the nearest minute.

$T_{dry/2}$ = programme time for the standard cotton programme at partial load, in minutes and rounded to the nearest minute.

(e) The weighted energy consumption (E_t) is calculated in kWh as follows and rounded to two decimal places:

$$E_t = (3 \times E_{dry} + 4 \times E_{dry/2}) / 7$$

where:

E_{dry} = energy consumption of the standard cotton programme at full load, in kWh and rounded to two decimal places.

$E_{dry/2}$ = energy consumption of the standard cotton programme at partial load, in kWh and rounded to two decimal places.

(f) For gas-fired household tumble driers, the energy consumption for the standard cotton programme at full and partial load is calculated in kWh and rounded to two decimal places, as:

$$E_{\text{dry}} = \frac{E_{\text{g,dry}}}{f_g} + E_{\text{g,dry,a}} \quad E_{\text{dry}\lambda_i} = \frac{E_{\text{g,dry}\lambda_i}}{f_g} + E_{\text{g,dry}\lambda_i,a}$$

where:

E_{dry} = gas consumption of the standard cotton programme at full load, in kWh and rounded to two decimal places.

$E_{\text{dry}/2}$ = gas consumption of the standard cotton programme at partial load, in kWh and rounded to two decimal places.

$E_{\text{dry,a}}$ = auxiliary electricity consumption of the standard cotton programme at full load, in kWh and rounded to two decimal places.

$E_{\text{dry}/2,a}$ = auxiliary electricity consumption of the standard cotton programme at partial load, in kWh and rounded to two decimal places.

$$f_g = 2,5.$$

2. CALCULATION FOR THE PRODUCT INFORMATION DESCRIBED IN 'ANNEX II PRODUCT FICHE', 'ANNEX III TECHNICAL DOCUMENTATION' AND 'ANNEX IV INFORMATION TO BE PROVIDED IN CASES WHERE END-USERS CANNOT BE EXPECTED TO SEE THE PRODUCT DISPLAYED'

For gas-fired household tumble driers, the energy consumption on gas for the standard cotton programme at full and partial load for the information in Annex II, III and IV is calculated in kWhGas and rounded to two decimal places, as:

$$AE_{C(\text{Gas})} = 160 \times (3 \times E_{\text{dry}} + 4 \times E_{\text{dry}/2})/7$$

For gas-fired household tumble driers, the energy consumption on electricity for the standard cotton programme at full and partial load for the information in Annex II, III and IV is calculated in kWh and rounded to two decimal places, as:

$$AE_{C(\text{Gas})\text{el}} = 160 \times (3 \times E_{\text{dry,a}} + 4 \times E_{\text{dry}/2,a})/7 + ((P_l \times T_l \times 160) + P_o \times [525\,600 - (T_t \times 160) - (T_l \times 160)])/60 \times 1\,000$$

3. CALCULATION OF THE WEIGHTED CONDENSATION EFFICIENCY

The condensation efficiency of a programme is the ratio between the mass of moisture condensed and collected in the container of a condenser household tumble drier and the mass of moisture removed from the load by the programme, the latter being the difference between the mass of the wet test load before drying and the mass of the test load after drying. For calculating the weighted condensation efficiency, the average condensation efficiency for the standard cotton programme at both full and partial load is considered.

The weighted condensation efficiency (C_t) of a programme is calculated as a percentage and rounded to the nearest whole percent as:

$$C_t = (3 \times C_{\text{dry}} + 4 \times C_{\text{dry}/2})/7$$

where:

C_{dry} = average condensation efficiency of the standard cotton programme at full load.

$C_{\text{dry}/2}$ = average condensation efficiency of the standard cotton programme at partial load. The average condensation efficiency C is calculated from the condensation efficiencies of test runs and expressed as a percentage:

$$C = \frac{1}{(n-1)} \sum_{j=2}^n \left(\frac{W_{wj}}{W_i - W_f} \times 100 \right)$$

where:

n is the number of test runs, comprising at least four valid test runs for the selected programme.

j is the test run number.

W_{wj} is the mass of water collected in the condenser reservoir during test run j .

W_i is the mass of the wet test load before drying.

W_f is the mass of the test load after drying.



Delegated Regulation (EU) 626/2011 of 4 May 2011 supplementing Directive 2010/30/EU with regard to energy labelling of air conditioners

Incorporated and adapted by Ministerial Council Decision 2011/03/MC-EnC of 6 October 2011 on adopting certain Delegated Regulations on energy related products.

*The adaptations made by Ministerial Council Decision 2011/03/MC-EnC are highlighted in **bold and blue**.*

Whereas:

(1) Directive 2010/30/EU requires the Commission to adopt delegated acts as regards the labelling of energy-related products representing significant potential for energy savings and having a wide disparity in performance levels with equivalent functionality.

(2) Provisions for the energy labelling of air conditioners were established by Commission Directive 2002/31/EC of 22 March 2002 implementing Council Directive 92/75/EEC with regard to energy labelling of household air-conditioners. The implementing Directive establishes different labelling scales for air conditioners using different technologies and the determination of energy efficiency is based on full load operation only.

(3) The electricity used by air conditioners accounts for a significant part of total household and commercial electricity demand in the Union. In addition to the energy efficiency improvements already achieved, the scope for further reducing the energy consumption of air conditioners is substantial.

(4) Directive 2002/31/EC should be repealed and new provisions should be laid down by this Regulation in order to ensure that the energy label provides dynamic incentives for manufacturers to further improve the energy efficiency of air conditioners and to accelerate the market transformation towards energy-efficient technologies.

(5) The provisions of this Regulation should apply to air-to-air air conditioners up to 12 kW cooling power output (or heating power output, if only heating function is provided).

(6) Technological developments in the energy efficiency improvement of air conditioners have been very rapid in recent years. This has allowed several third-countries to introduce stringent minimum energy efficiency requirements and led to a process of introducing new energy labelling schemes based on seasonal performance. Today's appliances, excluding single and double duct air conditioners, that achieve the highest efficiency levels have largely surpassed the A efficiency levels established by Directive 2002/31/EC.

(7) This Regulation introduces two energy efficiency scales based on the primary function and on specific aspects important to consumer. Given that air conditioners are used mainly in part-load conditions, the efficiency testing should be changed to a seasonal efficiency measurement method, except for single and double duct air conditioners. The seasonal measurement method takes better into account the benefits of the inverter driven technology and the conditions in which these appliances are used. The new efficiency calculation method with an Ecodesign implementing measure setting minimum energy efficiency requirements higher than the current A level, will lead to a reclassification of these appliances. Consequently, split, window and wall air conditioners should have a new A-G energy efficiency class scale with a "+" added on the top of the scale every two years until the A+++ class has been reached.

(8) For double duct and single duct air conditioners, steady-state energy efficiency performance indicators should continue to be applied, as there are currently no inverter units on the market. As no reclassification of these appliances is appropriate, single and double duct air conditioners should have an A+++–D scale. While these, inherently less efficient than split appliances, can go only up to an A+ energy efficiency class in a scale of A+++–D, the more efficient split appliances can reach up to the A+++ energy efficiency class.

(9) This Regulation should ensure that consumers get more accurate comparative information about the performance of air conditioners.

(10) The combined effect of energy labeling set out in this Regulation and of Regulation implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for air conditioners is expected to result in annual electricity savings of 11 TWh by 2020, compared to the situation if no measures are taken.

(11) The noise level of an air conditioner could be an important aspect for end-users. In order to enable them to make an informed decision, information on noise emissions should be included on the label of air conditioners.

(12) The information provided on the label should be obtained through reliable, accurate and reproducible measurement procedures, which take into account the recognised state of the art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations.

(13) This Regulation should specify a uniform design and requirements as to the content of labels for air conditioners.

(14) In addition, this Regulation should specify requirements as to the technical documentation and the fiche for air conditioners.

(15) Moreover, this Regulation should specify requirements as to the information to be provided for any form of distance selling, advertisements and technical promotional material of air conditioners.

(16) It is appropriate to provide for a review of the provisions of this Regulation taking into account technological progress.

(17) In order to facilitate the transition from Directive 2002/31/EC to this Regulation, air conditioners labelled in accordance with this Regulation should be considered compliant with Directive 2002/31/EC.

(18) Suppliers wishing to place on the market air conditioners that can meet the requirements for higher energy efficiency classes should be allowed to provide labels showing those classes in advance of the date for mandatory display of such classes.

(19) Directive 2002/31/EC should therefore be repealed,

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the labelling and the provision of supplementary product information for electric mains-operated air conditioners with a rated capacity of ≤ 12 kW for cooling, or heating, if the product has no cooling function.
2. This Regulation shall not apply to:
 - a) appliances that use non-electric energy sources;
 - b) air conditioners of which the condenser- or evaporator-side, or both, do not use air for heat transfer medium.

Article 2

Definitions

In addition to the definitions set out in Article 2 of Directive 2010/30/EU of the European Parliament and of the Council, the following definitions shall apply:

- (1) "air conditioner" means a device capable of cooling or heating, or both, indoor air, using a vapour compression cycle driven by an electric compressor, including air conditioners that provide additional functionalities such as dehumidification, air-purification, ventilation or supplemental air-heating by means of electric resistance heating and appliances that may use water (either condensate water that is formed on the evaporator side or externally added water) for evaporation on the condenser, provided that the device is also able to function without the use of additional water, using air only;
- (2) "double duct air conditioner" means an air conditioner in which, during cooling or heating, the condenser or evaporator intake air is introduced from the outdoor environment to the unit by a duct and rejected to the outdoor environment by a second duct, and which is placed wholly inside the space to be conditioned, near a wall;
- (3) "single duct air conditioner" means an air conditioner in which, during cooling or heating, the condenser or evaporator intake air is introduced from the space containing the unit and discharged outside this space;
- (4) "rated capacity" (Prated) means the cooling or heating capacity of the vapour compression cycle of the unit at standard rating conditions;
- (5) "end-user" means a consumer buying or expected to buy an air conditioner;
- (6) "point of sale" means a location where air conditioners are displayed or offered for sale, hire or hire-purchase.

Additional definitions for the purpose of Annexes II to VIII are set out in Annex I.

Article 3

Responsibilities of suppliers

1. Suppliers shall take action as described in points (a) to (g):

(a) a printed label is provided for each air conditioner respecting energy efficiency classes as set out in Annex II. The label shall comply with the format and content of information as set out in Annex III. For air conditioners, except single and double duct air conditioners, a printed label must be provided, at least in the packaging of the outdoor unit, for at least one combination of indoor and outdoor units at capacity ratio 1. For other combinations, the information can be alternatively provided on a free access web site;

(b) a product fiche, as set out in Annex IV, is made available. For air conditioners, except single and double duct air conditioners, a product fiche must be provided at least in the packaging of the outdoor unit, for at least one combination of indoor and outdoor units at capacity ratio 1. For other combinations, the information can be alternatively provided on a free access web site;

(c) technical documentation as set out in Annex V is made available electronically on request to the authorities of the **Contracting Parties** and to the **Secretariat**;

(d) any advertisement for a specific model of an air conditioner shall contain the energy efficiency class, if the advertisement discloses energy-related or price information. Where more than one efficiency class is possible, the supplier or the manufacturer, as appropriate, shall declare the energy efficiency class for heating at least in "Average" heating season. Information in the cases where end-users cannot be expected to see the product displayed is to be provided as set out in Annex VI;

(e) any technical promotional material concerning a specific model of an air conditioner which describes its specific technical parameters shall include the energy efficiency class of that model as set out Annex II;

(f) instructions for use are made available;

(g) single ducts shall be named "local air conditioners" in packaging, product documentation and in any advertisement material, whether electronic or in paper.

2. The energy efficiency class shall be determined as set out in Annex VII.

3. The format of the label for air conditioners except for single and double duct air conditioners shall be as set out in Annex III.

4. For the air conditioners, except for single and double duct air conditioners, the format of the label set out in Annex III shall be applied according to the following timetable:

(a) as regards air conditioners, except single duct and double duct air conditioners, placed on the market from 1 January 2013, labels with energy efficiency classes A, B, C, D, E, F, G shall be in accordance with point 1.1 of Annex III for reversible air conditioners, with point 2.1 of Annex III for cooling-only air conditioners and with point 3.1 of Annex III for heating-only air conditioners;

(b) as regards air conditioners, except single duct and double duct air conditioners, placed on the market from 1 January 2015, labels with energy efficiency classes A+, A, B, C, D, E, F, shall be in accordance with point 1.2 of Annex III for reversible air conditioners, with point 2.2 of Annex III for cooling-only air conditioners and with point 3.2 of Annex III for heating-only air conditioners;

(c) as regards air conditioners, except single duct and double duct air conditioners, placed on the

market from 1 January 2017, labels with energy efficiency classes A++, A+, A, B, C, D, E, shall be in accordance with point 1.3 of Annex III for reversible air conditioners, with point 2.3 of Annex III for cooling-only air conditioners and with point 3.3 of Annex III for heating-only air conditioners;

(d) as regards air conditioners, except single duct and double duct air conditioners, placed on the market from 1 January 2019, labels with energy efficiency classes A+++, A++, A+, A, B, C, D shall be in accordance with point 1.4 of Annex III for reversible air conditioners, with point 2.4 of Annex III for cooling-only air conditioners and with point 3.4 of Annex III for heating-only air conditioners.

5. The format of the label for double duct air conditioners placed on the market from 1 January 2013 with energy efficiency classes A+++, A++, A+, A, B, C, D shall be in accordance with point 4.1 of Annex III for reversible double duct air conditioners, with point 4.3 of Annex III for cooling-only double duct air conditioners and with point 4.5 of Annex III for heating-only double duct air conditioners.

6. The format of the label for single duct air conditioners placed on the market from 1 January 2013 with energy efficiency classes A+++, A++, A+, A, B, C, D shall be in accordance with point 5.1 of Annex III for reversible single duct air conditioners, with point 5.3 of Annex III for cooling-only single ducts air conditioners and with point 5.5 of Annex III heating-only single duct air conditioners.

Article 4

Responsibilities of dealers

Dealers shall ensure that:

(a) air conditioners, at the point of sale, bear the label provided by suppliers in accordance with Article 3(1) on the outside of the front or top of the appliance, in such a way as to be clearly visible;

(b) air conditioners offered for sale, hire or hire purchase where the end-user cannot be expected to see the product displayed, are marketed with the information provided by suppliers in accordance with Annexes V and VI;

(c) any advertisement for a specific model of air conditioner contains a reference to the energy efficiency class, if the advertisement discloses energy-related or price information. Where more than one efficiency class is possible, the supplier/manufacturer will declare the energy efficiency class at least in "Average" season zone;

(d) any technical promotional material concerning a specific model which describes the technical parameters of an air conditioner includes a reference to the energy efficiency class(es) of the model and the instructions for use provided by the supplier. Where more than one efficiency class is possible, the supplier/manufacturer will declare the energy efficiency class at least in "Average" season zone;

(e) single ducts shall be named "local air conditioners" in packaging, product documentation and in any promotional or advertisement material, whether electronic or in paper.

Article 5

Measurement methods

The information to be provided under Article 3 shall be obtained by reliable, accurate and reproducible measurement procedures, which take into account the recognised state of the art calculation and measurement methods, as set out in Annex VII.

Article 6

Verification procedure for market surveillance purposes

When **Contracting Parties** assess the conformity of the declared energy efficiency class, the annual or hourly energy consumption, as appropriate, and the noise emissions, they shall apply the procedure laid down in Annex VIII.

Article 7

Revision

...

Article 8

Repeal

...

Article 9

Transitional provision

1. Air conditioners placed on the market before 1 January 2013 shall comply with the provisions set out in Directive 2002/31/EC.

Article 10

Entry into force and application

1. **This Decision [2011/03/MC-EnC] enters into force upon its adoption**¹

2. It shall apply from 1 January 2013.

This Regulation shall be binding in its entirety and directly applicable in all **Contracting Parties**.

Article 2(5) of Decision 2011/03/MC-EnC

The Secretariat shall monitor and review the implementation of [this] Delegated Regulation ... and shall submit a progress report to the Permanent High Level Group by 1 October 2013.

¹ The text displayed here corresponds to Article 3(1) of Decision 2011/03/MC-EnC.

ANNEX I

Definitions applicable for the purposes of annexes II to VII

For the purposes of Annexes II to VII, the following definitions shall apply:

- (1) 'Reversible air conditioner' means an air conditioner capable of both cooling and heating;
- (2) 'Standard rating conditions' means the combination of indoor (T_{in}) and outdoor temperatures (T_j) that describe the operating conditions while establishing the sound power level, rated capacity, rated air flow rate, rated energy efficiency ratio (EER_{rated}) and/or rated coefficient of performance (COP_{rated}), as set out in Annex VII, table 2;
- (3) 'Indoor temperature' (T_{in}) means the dry bulb indoor air temperature [$^{\circ}C$] (with the relative humidity indicated by the corresponding wet bulb temperature);
- (4) 'Outdoor temperature' (T_j) means the dry bulb outdoor air temperature [$^{\circ}C$] (with the relative humidity indicated by the corresponding wet bulb temperature);
- (5) 'Rated energy efficiency ratio' (EER_{rated}) means the declared capacity for cooling [kW] divided by the rated power input for cooling [kW] of a unit when providing cooling at standard rating conditions;
- (6) 'Rated coefficient of performance' (COP_{rated}) means the declared capacity for heating [kW] divided by the rated power input for heating [kW] of a unit when providing heating at standard rating conditions;
- (7) 'Global warming potential' (GWP) means the measure of how much 1 kg of the refrigerant applied in the vapour compression cycle is estimated to contribute to global warming, expressed in kg CO₂ equivalents over a 100 year time horizon;
 GWP values considered will be those set out in Annex I of Regulation (EC) No 842/2006 of the European Parliament and of the Council';
 for fluorinated refrigerants, the GWP values shall be those published in the Third Assessment Report (TAR), adopted by the Intergovernmental Panel on Climate Change² (2001 IPCC GWP values for a 100 year period);
 for non-fluorinated gases, the GWP values are those published in the first IPCC assessment³ over a 100 year period;
 total GWP values for mixtures of refrigerants shall be based on the formula stated in Annex I of the Regulation (EC) No 842/2006;
 for refrigerants not included in the above references, the IPCC UNEP 2010 report on Refrigeration, Air Conditioning and Heat Pumps, dated February 2011, or newer, shall be used as a reference;
- (8) 'Off mode' is a condition in which the air conditioner or comfort fan is connected to the mains power source and is not providing any function. As off mode also are considered conditions providing only an indication of off mode condition, as well as conditions providing only functionalities intended to ensure electromagnetic compatibility pursuant to Directive 2004/108/EC of the European

¹ OJ L 161, 14.6.2006, p. 1.

² IPCC Third Assessment Climate Change 2001. A Report of the Intergovernmental Panel on Climate Change: http://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml

³ Climate Change, The IPCC Scientific Assessment, J.T Houghton, G.J.Jenkins, J.J. Ephraums (ed.) Cambridge University Press, Cambridge (UK) 1990.

Parliament and of the Council⁴;

(9) 'Standby mode' means a condition where the equipment is connected to the mains power source, depends on energy input from the mains power source to work as intended and provides only the following functions, which may persist for an indefinite time: reactivation function, or re-activation function and only an indication of enabled reactivation function, and/or information or status display;

(10) 'Reactivation function' means a function facilitating the activation of other modes, including active mode, by remote switch including remote control, internal sensor, timer to a condition providing additional functions, including the main function;

(11) 'Information or status display' is a continuous function providing information or indicating the status of the equipment on a display, including clocks;

(12) 'Sound power level' means the A-weighted sound power level [dB(A)] indoors and/or outdoors measured at standard rating conditions for cooling (or heating, if the product has no cooling function);

(13) 'Reference design conditions' means the combination of requirements for the reference design temperature, the maximum bivalent temperature and the maximum operation limit temperature, as set out in Annex VII, Table 3;

(14) 'Reference design temperature' means the outdoor temperature [°C] for either cooling ($T_{designc}$) or heating ($T_{designh}$) as described in Annex VII, Table 3, at which the part load ratio shall be equal to 1, and which varies according the designated cooling or heating season;

(15) 'Part load ratio' ($pl(T_j)$) means the outdoor temperature minus 16°C, divided by the reference design temperature minus 16°C, for either cooling or heating;

(16) 'Season' means one of the four sets of operating conditions (available for four seasons: one cooling season, three heating seasons: average / colder / warmer) describing per bin the combination of outdoor temperatures and the number of hours these temperatures occur per season for which the unit is declared fit for purpose;

(17) 'Bin' (with index 'j') means a combination of an outdoor temperature (T_j) and bin hours (h_j), as set out in Annex VII, Table 1;

(18) 'Bin hours' means the hours per season (h_j) the outdoor temperature occurs for each bin, as set out in Annex VII, Table 1;

(19) 'Seasonal energy efficiency ratio' (SEER) is the overall energy efficiency ratio of the unit, representative for the whole cooling season, calculated as the reference annual cooling demand divided by the annual electricity consumption for cooling;

(20) 'Reference annual cooling demand' (QC) means the reference cooling demand [kWh/a] to be used as basis for calculation of SEER and calculated as the product of the design load for cooling ($P_{designc}$) and the equivalent active mode hours for cooling (HCE);

(21) 'Equivalent active mode hours for cooling' (HCE) means the assumed annual number of hours [h/a] the unit must provide the design load for cooling ($P_{designc}$) in order to satisfy the reference annual cooling demand, as set out in Annex VII, Table 4;

(22) 'Annual electricity consumption for cooling' (QCE) means the electricity consumption [kWh/a] required to meet the reference annual cooling demand and is calculated as the reference annual

⁴ OJ L 390, 31.12.2004, p. 24.

cooling demand divided by the active mode seasonal energy efficiency ratio (SEERon), and the electricity consumption of the unit for thermostat off-, standby-, off- and crankcase heater-mode during the cooling season;

(23) 'Active seasonal mode energy efficiency ratio' (SEERon) means the average energy efficiency ratio of the unit in active mode for the cooling function, constructed from part load and bin-specific energy efficiency ratio's (EERbin(Tj)) and weighted by the bin hours the bin condition occurs;

(24) 'Part load' means the cooling load (Pc(Tj)) or the heating load (Ph(Tj)) [kW] at a specific outdoor temperature Tj, calculated as the design load multiplied by the part load ratio;

(25) 'Bin-specific energy efficiency ratio' (EERbin(Tj)) means the energy efficiency ratio specific for every bin j with outdoor temperature Tj in a season, derived from the part load, declared capacity and declared energy efficiency ratio (EERd(Tj)) for specified bins (j) and calculated for other bins through inter/extrapolation, when necessary corrected by the degradation coefficient;

(26) 'Seasonal coefficient of performance' (SCOP) is the overall coefficient of performance of the unit, representative for the whole designated heating season (the value of SCOP pertains to a designated heating season), calculated as the reference annual heating demand divided by the annual electricity consumption for heating;

(27) 'Reference annual heating demand' (QH) means the reference heating demand [kWh/a], pertaining to a designated heating season, to be used as basis for calculation of SCOP and calculated as the product of the design load for heating (Pdesignh) and the seasonal equivalent active mode hours for heating (H HE);

(28) 'Equivalent active mode hours for heating' (H_{HE}) means the assumed annual number of hours [h/a] the unit must provide the design load for heating (Pdesignh) in order to satisfy the reference annual heating demand, as set out in Annex VII, Table 4;

(29) 'Annual electricity consumption for heating' (Q_{HE}) means the electricity consumption [kWh/a] required to meet the indicated reference annual heating demand and which pertains to a designated heating season; and is calculated as the reference annual heating demand divided by the active mode seasonal coefficient of performance (SCOPon), and the electricity consumption of the unit for thermostat off-, standby-, off- and crankcase heater-mode during the heating season;

(30) 'Active mode seasonal coefficient of performance' (SCOPon) means the average coefficient of performance of the unit in active mode for the designated heating season, constructed from the part load, electric back up heating capacity (where required) and bin-specific coefficients of performance (COPbin(Tj)) and weighted by the bin hours the bin condition occurs;

(31) 'Electric back-up heater capacity' (elbu(Tj)) is the heating capacity [kW] of a real or assumed electric back-up heater with COP of 1 that supplements the declared capacity for heating (Pdh(Tj)) in order to meet the part load for heating (Ph(Tj)) in case Pdh(Tj) is less than Ph(Tj), for the outdoor temperature (Tj);

(32) 'Bin-specific coefficient of performance' (COPbin(Tj)) means the coefficient of performance specific for every bin j with outdoor temperature Tj in a season, derived from the part load, declared capacity and declared coefficient of performance (COPd(Tj)) for specified bins (j) and calculated for other bins through inter/extrapolation, when necessary corrected by the degradation coefficient;

(33) 'Declared capacity' [kW] is the capacity of the vapour compression cycle of the unit for cooling (Pdc(Tj)) or heating (Pdh(Tj)), pertaining to an outdoor temperature Tj and indoor temperature (Tin),

as declared by the manufacturer;

(34) 'Function' means the indication of whether the unit is capable of indoor air cooling, indoor air heating or both;

(35) 'Design load' means the declared cooling load ($P_{designc}$) and/or declared heating load ($P_{designh}$) [kW] at the reference design temperature, whereby

(a) for cooling mode, $P_{designc}$ is equal to the declared capacity for cooling at T_j equal to $T_{designc}$;

(b) for heating mode, $P_{designh}$ is equal to the part load at T_j equal to $T_{designh}$;

(36) 'Declared energy efficiency ratio' ($EER_d(T_j)$) means the energy efficiency ratio at a limited number of specified bins (j) with outdoor temperature (T_j), as declared by the manufacturer;

(37) 'Declared coefficient of performance' ($COP_d(T_j)$) means the coefficient of performance at a limited number of specified bins (j) with outdoor temperature (T_j), as declared by the manufacturer;

(38) 'Bivalent temperature' (T_{biv}) means the outdoor temperature (T_j) [°C] declared by the manufacturer for heating at which the declared capacity equals the part load and below which the declared capacity must be supplemented with electric back up heater capacity in order to meet the part load for heating;

(39) 'Operation limit temperature' (T_{ol}) means the outdoor temperature [°C] declared by the manufacturer for heating, below which air conditioner will not be able to deliver any heating capacity. Below this temperature, the declared capacity is equal to zero;

(40) 'Active mode' means the mode corresponding to the hours with a cooling or heating load of the building and whereby the cooling or heating function of the unit is activated. This condition may involve on/off-cycling of the unit in order to reach or maintain a required indoor air temperature;

(41) 'Thermostat-off mode' means a mode corresponding to the hours with no cooling or heating load whereby the cooling or heating function of the unit is switched on but the unit is not operational as there is no cooling or heating load. This condition is therefore related to outdoor temperatures and not to indoor loads. Cycling on / off in active mode is not considered as thermostat off;

(42) 'Crankcase heater operation mode' means a condition where the unit has activated a heating device to avoid the refrigerant migrating to the compressor in order to limit the refrigerant concentration in oil at compressor start;

(43) 'Thermostat-off mode operating hours' (HTO) means the annual number of hours [h/a] the unit is considered to be in thermostat-off mode, the value of which depends on the designated season and function;

(44) 'Standby mode operating hours' (HSB) means the annual number of hours [h/a] the unit is considered to be in standby mode, the value of which depends on the designated season and function;

(45) 'Off-mode hours' (HOFF) means the annual number of hours [h/a] the unit is considered to be in off-mode, the value of which depends on the designated season and function;

(46) 'Crankcase heater mode operating hours' (HCK) means the annual number of hours [h/a] the unit is considered to be in crankcase heater operation mode, the value of which depends on the designated season and function;

(47) 'Electricity consumption of single and double ducts' (QSD respectively QDD) means the electricity consumption of single or double duct air conditioners for the cooling and/or heating mode (whichever applies) [single duct in kWh/h, double duct in kWh/a];

(48) 'Capacity ratio' means the ratio of the total declared cooling or heating capacity of all operating indoor units to the declared cooling or heating capacity of the outdoor unit at standard rating conditions.

ANNEX II

Energy efficiency classes

1. The energy efficiency of air conditioners shall be determined on the basis of measurements and calculations set out Annex VII.

Both the SEER and SCOP shall take into account the reference design conditions and the operational hours per relevant mode of operation, and the SCOP shall relate to the heating season 'average', as laid down in Annex VII. The rated energy efficiency ratio (EER_{rated}) and the rated coefficient of performance (COP_{rated}) shall relate to standard rating conditions, as laid down in Annex VII.

Table 1

Energy efficiency classes for air conditioners except double ducts and single ducts

Energy Efficiency Class	SEER	SCOP
A+++	$SEER \geq 8.50$	$SCOP \geq 5.10$
A++	$6.10 \leq SEER < 8.50$	$4.60 \leq SCOP < 5.10$
A+	$5.60 \leq SEER < 6.10$	$4.00 \leq SCOP < 4.60$
A	$5.10 \leq SEER < 5.60$	$3.40 \leq SCOP < 4.00$
B	$4.60 \leq SEER < 5.10$	$3.10 \leq SCOP < 3.40$
C	$4.10 \leq SEER < 4.60$	$2.80 \leq SCOP < 3.10$
D	$3.60 \leq SEER < 4.10$	$2.50 \leq SCOP < 2.80$
E	$3.10 \leq SEER < 3.60$	$2.20 \leq SCOP < 2.50$
F	$2.60 \leq SEER < 3.10$	$1.90 \leq SCOP < 2.20$
G	$SEER < 2.60$	$SCOP < 1.90$

Table 2

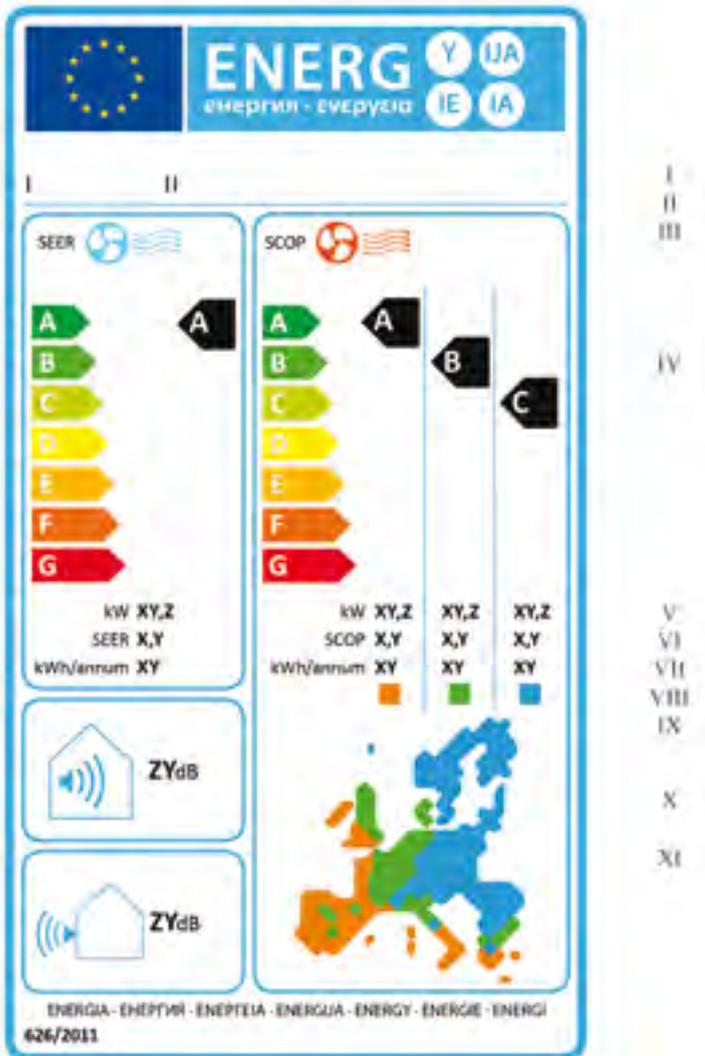
Energy efficiency classes for double ducts and single ducts

Energy Efficiency Class	Double ducts		Single ducts	
	EER_{rated}	COP_{rated}	EER_{rated}	COP_{rated}
A+++	≥ 4.10	≥ 4.60	≥ 4.10	≥ 3.60
A++	$3.60 \leq EER < 4.10$	$4.10 \leq COP < 4.60$	$3.60 \leq EER < 4.10$	$3.10 \leq COP < 3.60$
A+	$3.10 \leq EER < 3.60$	$3.60 \leq COP < 4.10$	$3.10 \leq EER < 3.60$	$2.60 \leq COP < 3.10$
A	$2.60 \leq EER < 3.10$	$3.10 \leq COP < 3.60$	$2.60 \leq EER < 3.10$	$2.30 \leq COP < 2.60$
B	$2.40 \leq EER < 2.60$	$2.60 \leq COP < 3.10$	$2.40 \leq EER < 2.60$	$2.00 \leq COP < 2.30$
C	$2.10 \leq EER < 2.40$	$2.40 \leq COP < 2.60$	$2.10 \leq EER < 2.40$	$1.80 \leq COP < 2.00$
D	$1.80 \leq EER < 2.10$	$2.00 \leq COP < 2.40$	$1.80 \leq EER < 2.10$	$1.60 \leq COP < 1.80$
E	$1.60 \leq EER < 1.80$	$1.80 \leq COP < 2.00$	$1.60 \leq EER < 1.80$	$1.40 \leq COP < 1.60$
F	$1.40 \leq EER < 1.60$	$1.60 \leq COP < 1.80$	$1.40 \leq EER < 1.60$	$1.20 \leq COP < 1.40$
G	< 1.40	< 1.60	< 1.40	< 1.20

ANNEX III The label

1. LABEL OF AIR CONDITIONERS, EXCEPT SINGLE DUCT AND DOUBLE DUCT AIR CONDITIONERS

1.1. Reversible air conditioners classified in energy efficiency classes A to G



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'SEER' and 'SCOP' for cooling and heating, with a blue fan and air wave indication for SEER and red fan and air wave indication for SCOP;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class. Energy efficiency must be indicated for cooling and heating. For heating, energy efficiency for Average heating season is mandatory. Indication of efficiency for Warmer and Colder seasons is optional;

V. for cooling mode: design load in kW, rounded up to one decimal;

VI. for heating mode: design load in kW, for up to 3 heating seasons rounded up to one decimal. Values for heating seasons for which the design load is not provided shall be indicated as 'X';

VII. for cooling mode: seasonal energy efficiency ratio (SEER value), rounded up to one decimal;

VIII. for heating mode: seasonal coefficient of performance (SCOP value), for up to 3 heating seasons rounded up to one decimal. Values for heating seasons for which SCOP is not provided shall be indicated as 'X';

IX. annual energy consumption in kWh per year, for cooling and heating, rounded up to the nearest integer. Values for climate profiles for which annual energy consumption is not provided shall be indicated as 'X';

X. sound power levels for indoor and outdoor units expressed in dB(A) re1 pW, rounded to the nearest integer;

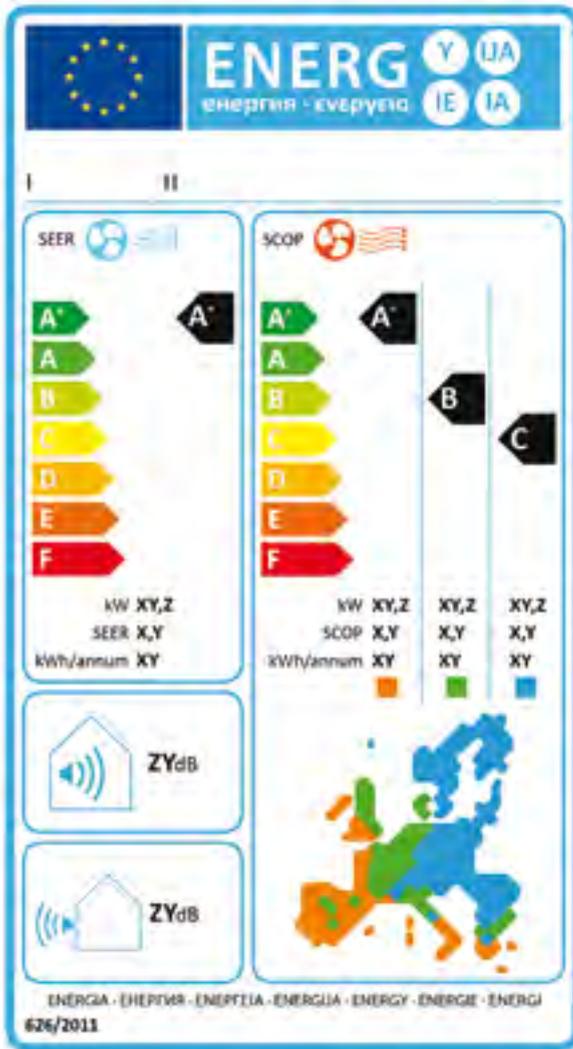
XI European map with a display of three indicative heating seasons and corresponding colour squares.

All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 1.5. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010 of the European Parliament and of the Council¹, a copy of the EU eco-label may be added.

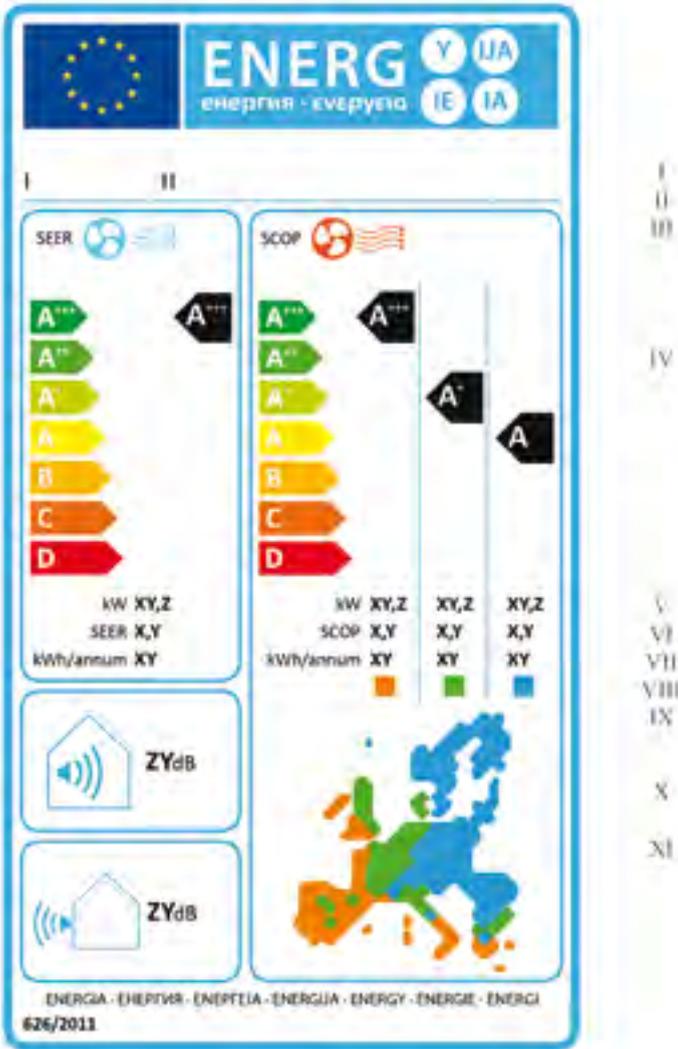
¹ OJ L 27, 30.1.2010, p. 1.

1.2. Reversible air conditioners classified in energy efficiency classes A+ to F



- (a) The information listed in point 1.1 shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 1.5.

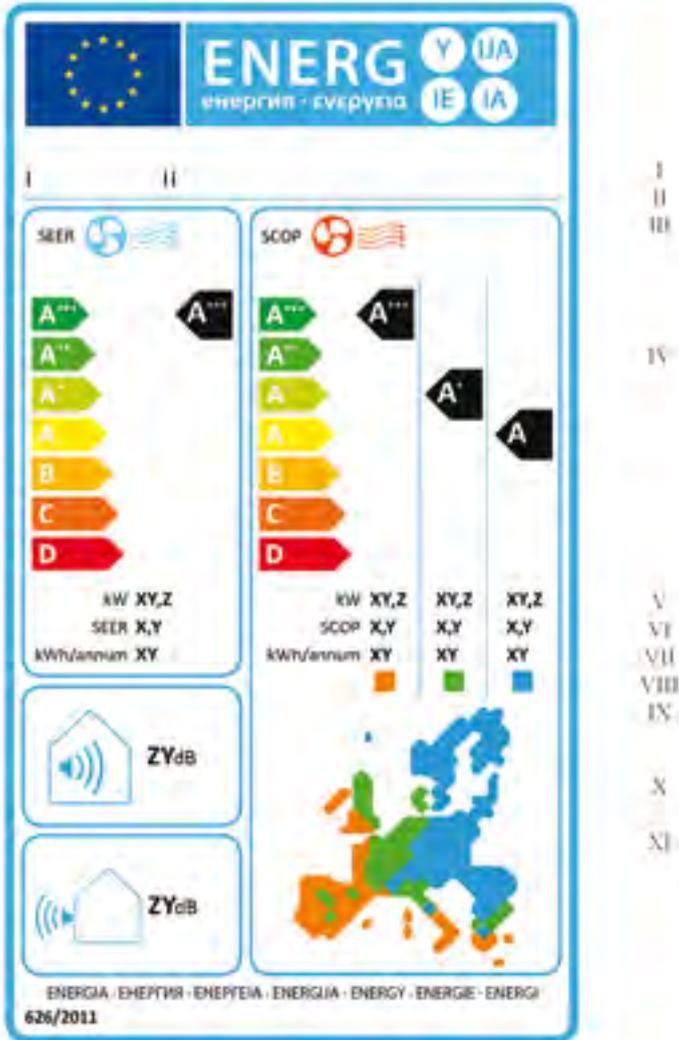
1.3. Reversible air conditioners classified in energy efficiency classes A++ to E



(a) The information listed in point 1.1 shall be included in the label.

(b) The design aspects of the label shall be in accordance with point 1.5.

1.4. Reversible air conditioners classified in energy efficiency classes A+++ to D



- (a) The information listed in point 1.1 shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 1.5.

Whereby:

(i) The label shall be at least 120 mm wide and 210 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours are coded as CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 EU label border: stroke 5 pt – colour: cyan 100% – round corners: 3,5 mm.

2 EU logo: Colours: X-80-00-00 and 00-00-X-00.

3 Energy label: Colour: X-00-00-00.

Pictogram as depicted: EU logo + energy label:

width: 102 mm, height: 20 mm.

4 Sub-logos border: 1 pt – colour: cyan 100% – length: 103,6 mm.

5 SEER and SCOP indication:

Border: 2 pt – colour: cyan 100% – round corners: 3,5 mm.

Text: Calibri regular 10 pt, capitals, 100% black.

6 A-G scale:

- Arrow: height: 7 mm, gap: 1 mm – colours:

Highest class: X-00-X-00

Second class: 70-00-X-00,

Third class: 30-00-X-00,

Fourth class: 00-00-X-00,

Fifth class: 00-30-X-00,

Sixth class: 00-70-X-00,

Last class(es): 00-X-X-00.

- Text: Calibri bold 16 pt, capitals, white.

7 Energy efficiency class(es):

- Arrow: width: 11 mm, height: 10 mm, 100% black;

- Text: Calibri bold 18 pt, capitals, white.

8 Energy

- Text: Calibri regular 9 pt, capitals, 100% black.

9 Rated capacity for cooling and heating in kW:

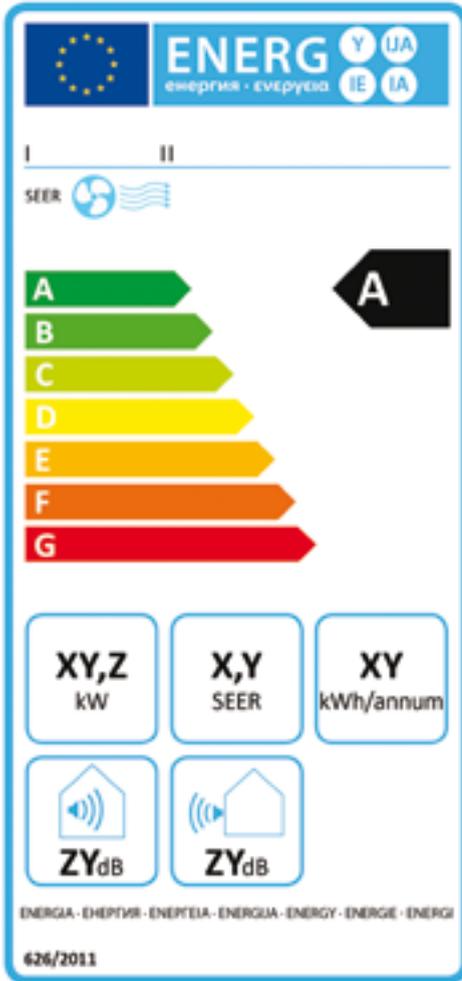
- Text 'kW': Calibri regular 10 pt, 100% black.

- Value 'XY,Z': Calibri bold 11 pt, 100% black.

- 10** SCOP and SEER values, rounded up to one decimal:
- Text 'SEER'/'SCOP': Calibri regular 10 pt, capitals, 100% black.
 - Value 'X,Y': Calibri bold 11 pt, 100% black.
- 11** Annual energy consumption in kWh/annum:
- Text 'kWh/annum': Calibri regular 10 pt, 100 % black.
 - Value 'XY': Calibri bold 11 pt, 100 % black.
- 12** Noise emissions:
- Border: 2 pt – colour: cyan 100 % – round corners: 3,5 mm.
 - Value: Calibri bold 15 pt, 100 % black;
Calibri regular 12 pt, 100 % black.
- 13** European map and colour squares:
- Colours:
Orange: 00-46-46-00.
Green: 59-00-47-00.
Blue: 54-08-00-00.
- 14** Supplier's name or trademark.
- 15** Supplier's model identifier:
The suppliers' name or trade mark and model identifier should fit in a space of 102 × 13 mm.
- 16** Reference period:
- Text: Calibri bold 10 pt.

2. LABEL OF AIR CONDITIONERS, EXCEPT SINGLE DUCT AND DOUBLE DUCT AIR CONDITIONERS

2.1. Cooling-only air conditioners classified in energy efficiency classes A to G



I
II
III

IV

V
VI
VII

VIII

(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'SEER', with a blue fan and air wave indication;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

V. design load for cooling in kW, rounded up to one decimal;

VI. seasonal energy efficiency ratio (SEER value), rounded up to one decimal;

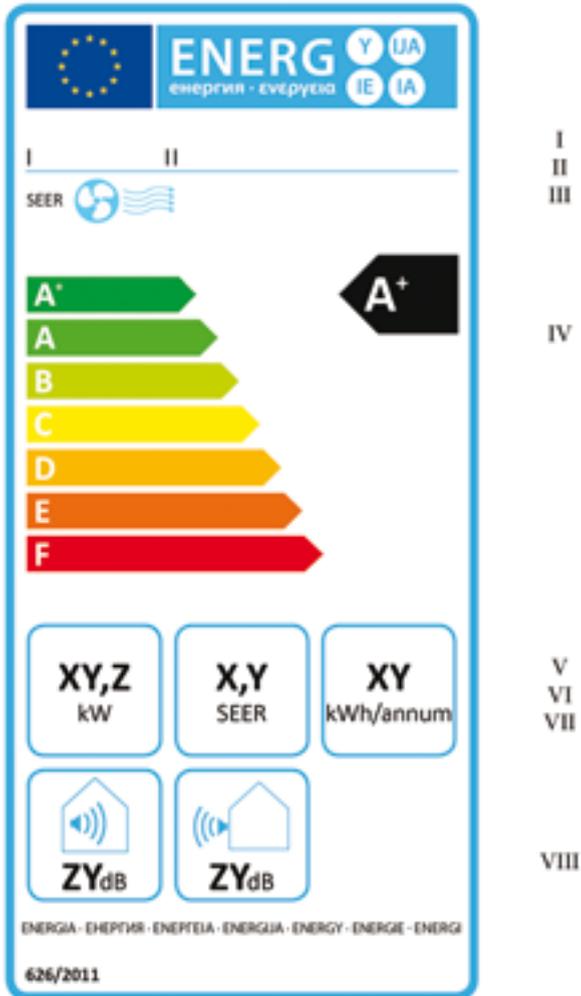
VII. annual energy consumption in kWh per year, rounded up to the nearest integer;

VIII. sound power levels for indoor and outdoor units expressed in dB(A) re1 pW, rounded to the nearest integer.

All the requested values shall be determined in accordance with Annex VII.

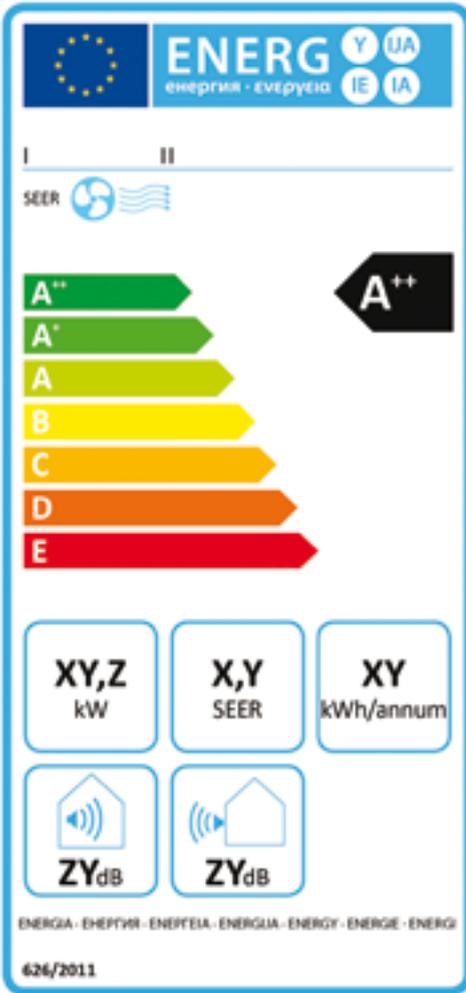
(b) The design of the label shall be in accordance with point 2.5. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

2.2. Cooling-only air conditioners classified in energy efficiency classes A+ to F



- (a) The information listed in point 2.1 shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 2.5.

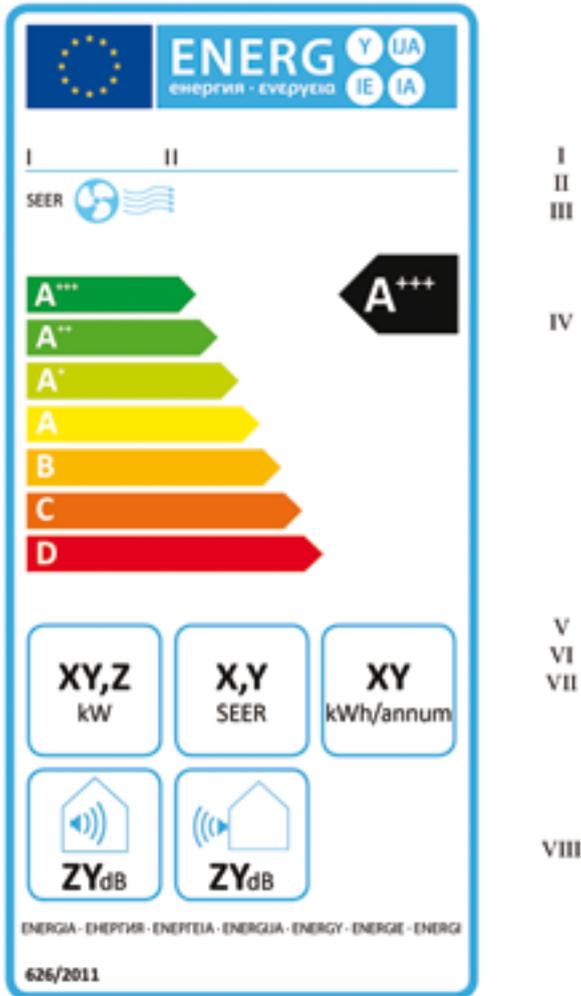
2.3. Cooling-only air conditioners classified in energy efficiency classes A++ to E



I
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VIII

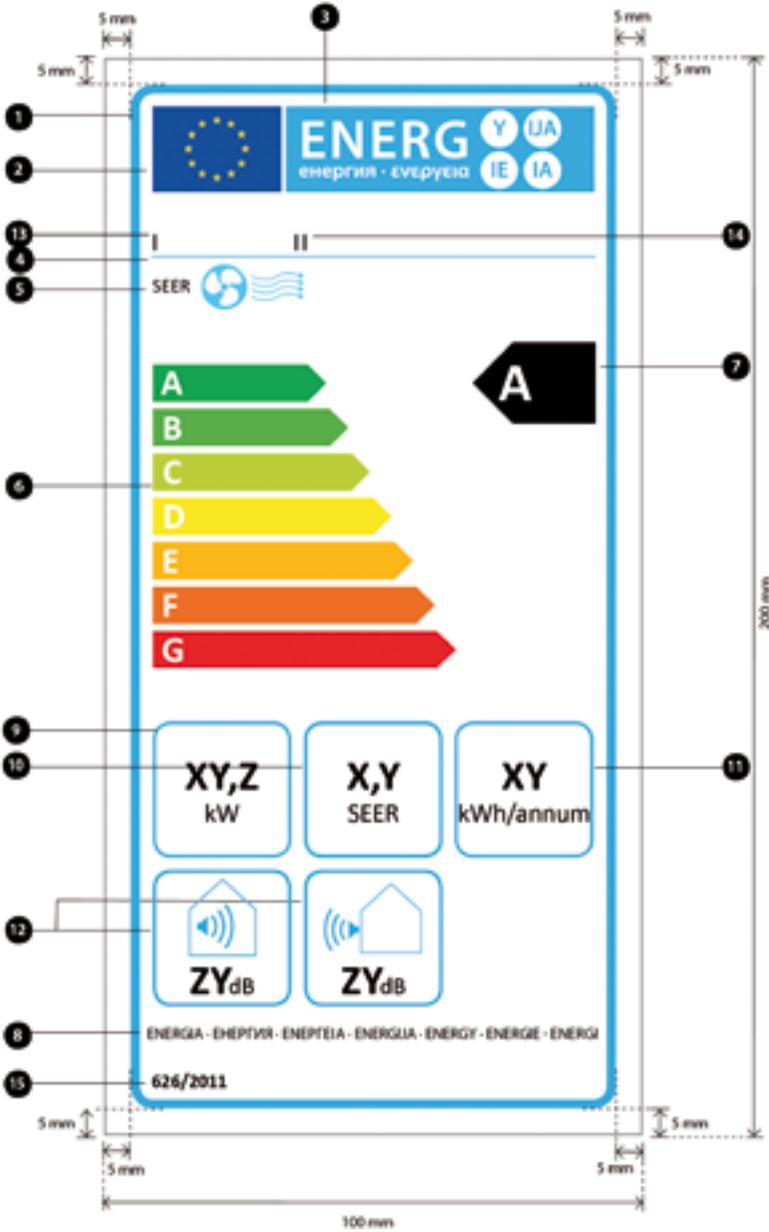
- (a) The information listed in point 2.1 shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 2.5.

2.4. Cooling-only air conditioners classified in energy efficiency classes A+++ to D



- (a) The information listed in point 2.1 shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 2.5.

2.5. Label design



Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours are coded as CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 EU label border: stroke: 5 pt – colour: cyan 100% – round corners: 3,5 mm.

2 EU logo: Colours: X-80-00-00 and 00-00-X-00.

3 Energy label:

Colour: X-00-00-00.

Pictogram as depicted: EU logo + energy label: width: 93 mm, height: 18 mm.

4 Sub-logos border: 1 pt – colour: cyan 100% – length: 93,7 mm.

5 SEER indication:

Text: Calibri regular 10 pt, capitals, 100% black.

6 A-G scale:

- Arrow: height: 7 mm, gap: 1,3 mm – colours:

Highest class: X-00-X-00,

Second class: 70-00-X-00,

Third class: 30-00-X-00,

Fourth class: 00-00-X-00,

Fifth class: 00-30-X-00,

Sixth class: 00-70-X-00,

Last class(es): 00-X-X-00.

- Text: Calibri bold 18 pt, capitals, white.

7 Energy efficiency class:

- Arrow: Width: 23 mm, height: 15 mm, 100% black;

- Text: Calibri bold 29 pt, capitals, white.

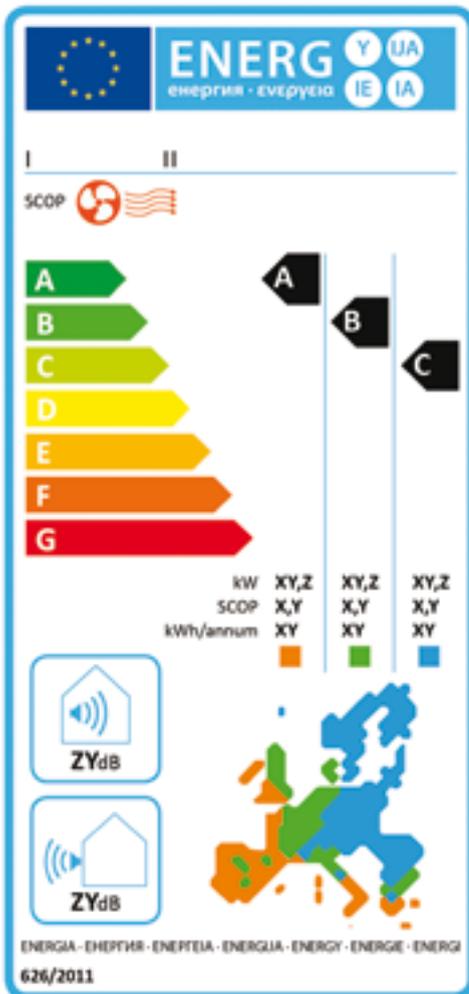
8 Energy:

- Text: Calibri regular 8 pt, capitals, 100% black.

- 9 Rated capacity in kW:
Text 'kW': Calibri regular 14 pt, 100% black.
Value 'XY,Z': Calibri bold 22 pt, 100% black.
- 10 SEER value rounded up to one decimal:
- Border: 3 pt – colour: cyan 100% – round corners: 3,5 mm.
- Text 'SEER': Calibri regular 14 pt, capitals, 100% black.
- Value 'X,Y': Calibri bold 22 pt, 100% black.
- 11 Annual energy consumption in kWh/annum:
- Text 'kWh/annum': Calibri regular 14 pt, 100% black.
- Value 'XY': Calibri bold 22 pt, 100% black.
- 12 Noise emissions:
- Border: 2 pt – colour: cyan 100% – round corners: 3,5 mm.
- Value: Calibri bold 22 pt, 100% black.
- Text: Calibri regular 14 pt, 100% black.
- 13 Supplier's name or trademark.
- 14 Supplier's model identifier:
The suppliers' name or trade mark and model identifier should fit in a space of 90 × 15 mm.
- 15 Reference period:
- Text: Calibri bold 10 pt.

3. LABEL OF AIR CONDITIONERS, EXCEPT SINGLE DUCT AND DOUBLE DUCT AIR CONDITIONERS

3.1. Heating-only air conditioners classified in energy efficiency classes A to G



I
II
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IX

(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'SCOP', with red fan and air wave indication;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class. Energy efficiency for Average heating season is mandatory. Indication of efficiency for Warmer and Colder climates is optional;

V. design load for heating in kW, for up to 3 heating seasons rounded up to one decimal. Values for heating seasons for which design load is not provided shall be indicated as 'X';

VI. seasonal coefficient of performance (SCOP) for up to 3 heating seasons rounded up to one decimal. Values for heating seasons for which SCOP is not provided shall be indicated as 'X';

VII. annual energy consumption in kWh per year, rounded up to the nearest integer. Values for heating seasons for which annual energy consumption is not provided shall be indicated as 'X';

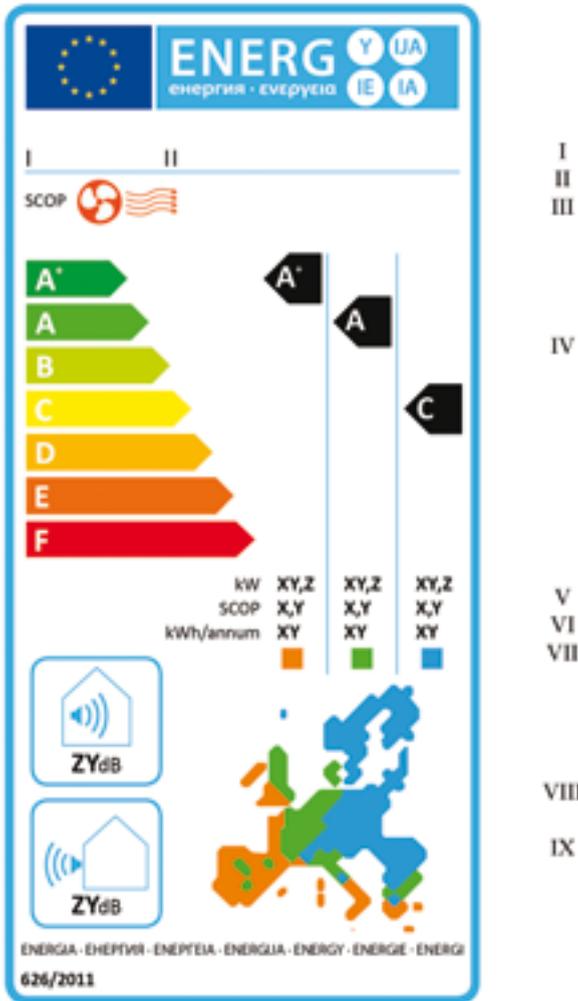
VIII. sound power levels for indoor and outdoor units expressed in dB(A) re1 pW, rounded to the nearest integer;

IX. European map with a display of three indicative heating seasons and corresponding colour squares.

All the requested values shall be determined in accordance with Annex VII.

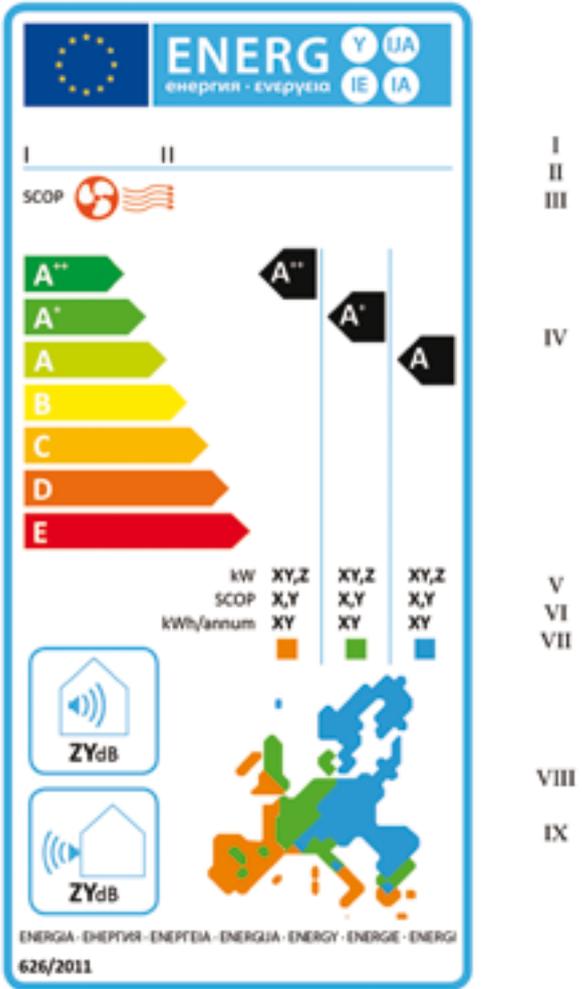
(b) The design of the label shall be in accordance with point 3.5. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

3.2. Heating-only air conditioners classified in energy efficiency classes A+ to F



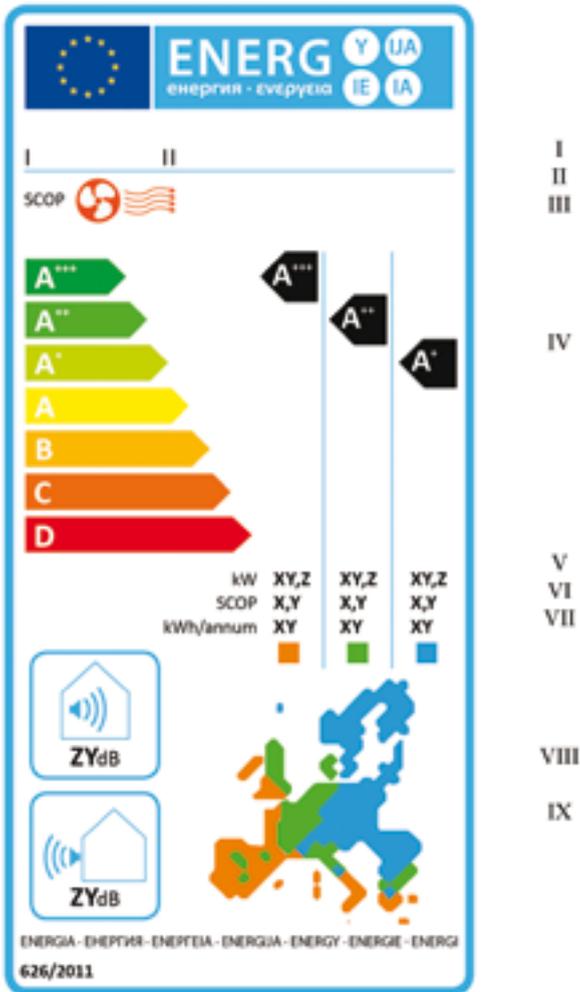
- (a) The information listed in point 3.1 shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 3.5.

3.3. Heating-only air conditioners classified in energy efficiency classes A++ to E



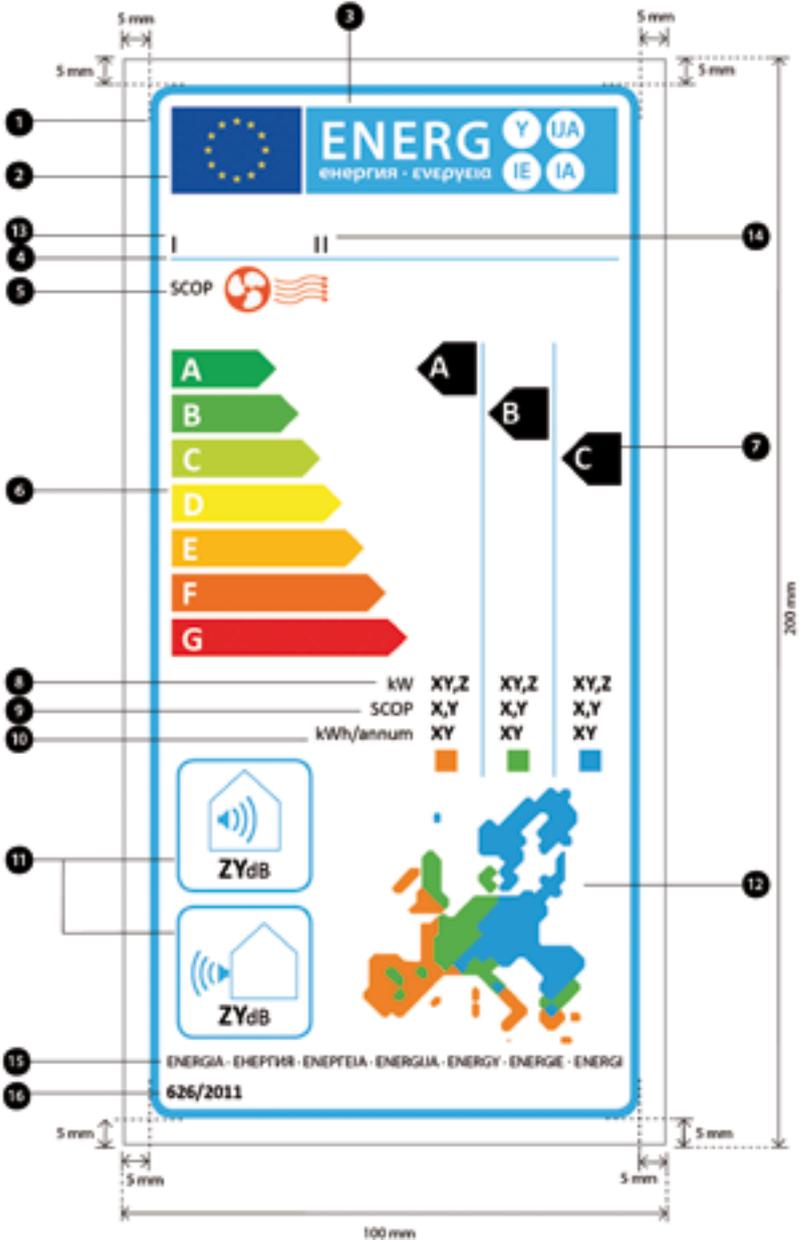
- (a) The information listed in point 3.1 shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 3.5.

3.4. Heating-only air conditioners classified in energy efficiency classes A+++ to D



- (a) The information listed in point 3.1 shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 3.5.

3.5. Label design



Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours shall be CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 EU label border: stroke: 5 pt – colour: cyan 100% – round corners: 3,5 mm.

2 EU logo: Colours: X-80-00-00 and 00-00-X-00.

3 Energy label: Colour: X-00-00-00.

Pictogram as depicted: EU logo + energy label: width: 93 mm, height: 18 mm.

4 Sub-logos border: 1 pt – colour: cyan 100% – length: 93,7 mm.

5 SCOP indication:

Text: Calibri regular 10 pt, capitals, 100% black.

6 A-G scale:

- Arrow: height: 7 mm, gap: 1,3 mm – colours:

Highest class: X-00-X-00,

Second class: 70-00-X-00,

Third class: 30-00-X-00,

Fourth class: 00-00-X-00,

Fifth class: 00-30-X-00,

Sixth class: 00-70-X-00,

Last class(es): 00-X-X-00.

- Text: Calibri bold 18 pt, capitals, white.

7 Energy efficiency class(es):

- Arrow: width: 11 mm, height: 10 mm, 100% black;

- Text: Calibri bold 18 pt, capitals, white.

8 Rated capacity in kW:

- Text 'kW': Calibri regular 10 pt, 100% black.

- Value 'XY,Z': Calibri bold 11 pt, 100% black.

9 SCOP values, rounded up to one decimal:

- Text 'SCOP': Calibri regular 10 pt, capitals, 100% black.

- Value 'X,Y': Calibri bold 11 pt, 100% black.

- 10** Annual energy consumption in kWh/annum:
- Text 'kWh/annum': Calibri regular 10 pt, 100% black.
 - Value 'XY': Calibri bold 11 pt, 100% black.
- 11** Noise emissions:
- Border: 2 pt – colour: cyan 100% – round corners: 3,5 mm.
 - Value: Calibri bold 15 pt, 100% black.
 - Text: Calibri regular 12 pt, 100% black.
- 12** European map and colour squares:
- Colours:
- Orange: 00-46-46-00.
- Green: 59-00-47-00.
- Blue: 54-08-00-00.
- 13** Supplier's name or trademark.
- 14** Supplier's model identifier:
- The suppliers' name or trade mark and model identifier should fit in a space of 90 × 15 mm.
- 15** Energy:
- Text: Calibri regular 8 pt, capitals, 100% black.
- 16** Reference period:
- Text: Calibri bold 10, pt.

4. LABEL OF DOUBLE DUCT AIR CONDITIONERS

4.1. Reversible double duct air conditioners classified in energy efficiency classes A+++ to D



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(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'EER' and 'COP' for cooling and heating, with a blue fan and air wave indication for EER and red fan and air wave indication for COP;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class. Energy efficiency must be indicated for cooling and heating;

V. Rated capacity for cooling and heating mode in kW, rounded up to one decimal;

VI. EER rated and COP rated , rounded up to one decimal;

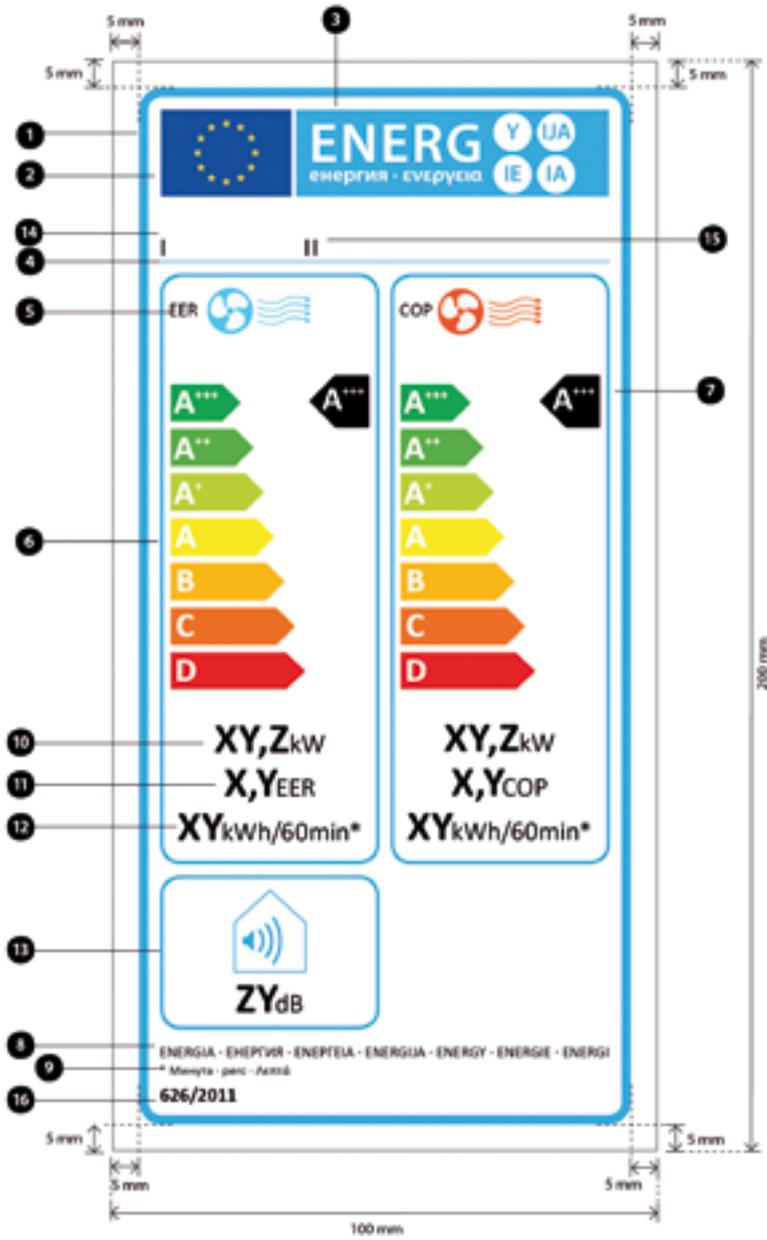
VII. hourly energy consumption in kWh per 60 minutes, for cooling and heating mode, rounded up to the nearest integer;

VIII. sound power level for indoor unit expressed in dB(A) re1 pW, rounded to the nearest integer.

All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 4.2. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

4.2. Label Design



Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours shall be CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

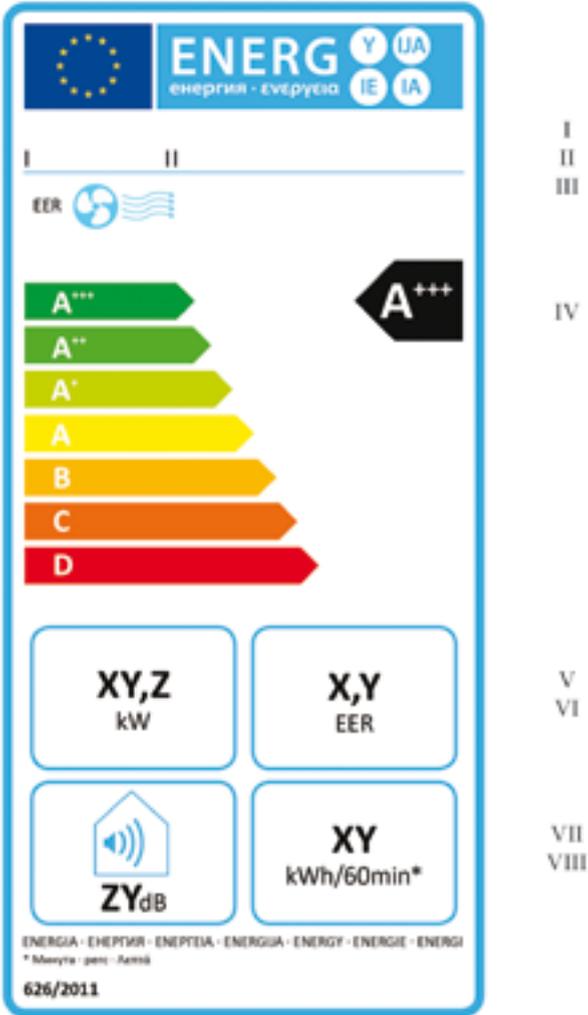
(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- 1 EU label border: stroke: 5 pt – colour: cyan 100% – round corners: 3,5 mm.
- 2 EU logo: Colours: X-80-00-00 and 00-00-X-00.
- 3 Energy label: Colour: X-00-00-00.
Pictogram as depicted: EU logo + energy label: width: 82 mm, height: 16 mm.
- 4 Sub-logos border: 1 pt – colour: cyan 100% – length: 92,5 mm.
- 5 EER and COP indication:
Text: Calibri regular 10 pt, 100% black
- 6 A-G scale:
 - Arrow: height: 7 mm, gap: 1,3 mm – colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class(es): 00-X-X-00.
 - Text: Calibri bold 18 pt, capitals, white;
 - Calibri bold 7 pt, white.
- 7 Energy efficiency classes:
 - Arrow: width: 11 mm, height: 10 mm, 100% black;
 - Text: Calibri bold 18 pt, capitals, white.
 - Calibri bold 7 pt, white.
- 8 Energy:
 - Text: Calibri regular 8 pt, capitals, 100% black.
- 9 'Minutes'-translation:
 - Text: Calibri regular 7 pt, 100% black.

- 10 Rated capacity for cooling and heating mode in kW:
 - Text 'kW': Calibri regular 14 pt, 100% black.
 - Value 'XY,Z': Calibri bold 22 pt, 100% black.
- 11 COP and EER values, rounded up to one decimal:
 - Text 'EER'/'COP': Calibri regular 14 pt, capitals, 100% black.
 - Value 'X,Y': Calibri bold 22 pt, 100% black.
- 12 Hourly energy consumption in kWh/60min:
 - Text 'kWh/60min*': Calibri regular 14 pt, 100% black.
 - Value 'XY': Calibri bold 22 pt, 100% black.
- 13 Noise emissions:
 - Border: 2 pt – colour: cyan 100% – round corners: 3,5 mm.
 - Value: Calibri bold 22 pt, 100% black.
 - Text: Calibri regular 14 pt, 100% black.
- 14 Supplier's name or trademark.
- 15 Supplier's model identifier:

The suppliers' name or trade mark and model identifier should fit in a space of 82 × 10,5 mm.
- 16 Reference period:
 - Text: Calibri bold 10 pt.

4.3. Cooling-only double duct air conditioners classified in energy efficiency classes A+++ to D



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'EER', with a blue fan and air wave indication;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

V. Rated capacity for cooling in kW, rounded up to one decimal;

VI. EER rated , rounded up to one decimal;

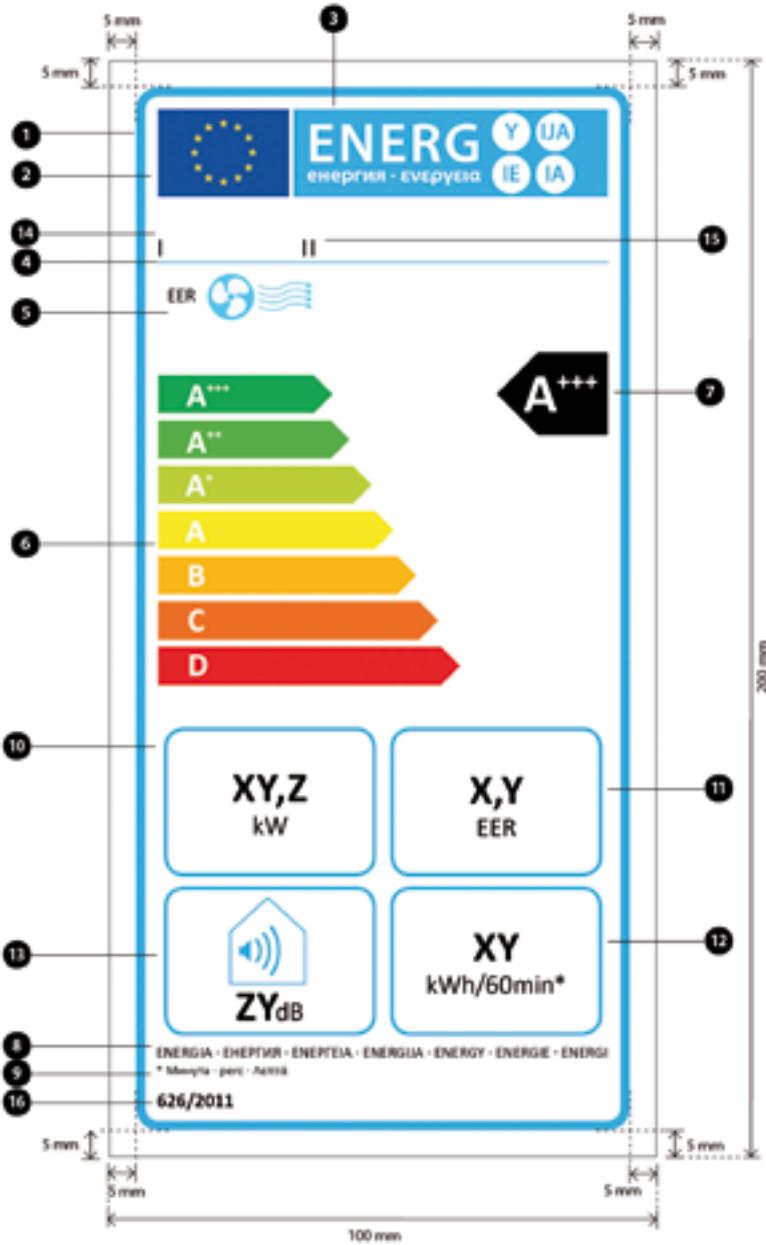
VII. hourly energy consumption in kWh per 60 minutes, rounded up to the nearest integer;

VIII. sound power level for indoor unit expressed in dB(A) re1 pW, rounded to the nearest integer;

All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 4.4. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

4.4. Label Design



Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours are coded as CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

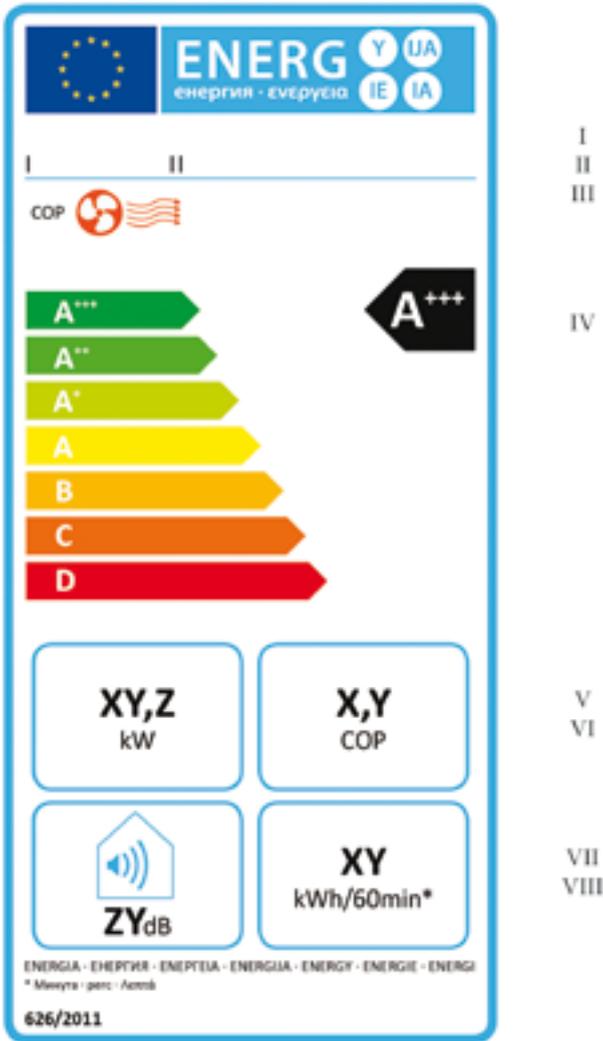
(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- ❶ EU label border: stroke: 5 pt – colour: Cyan 100% – round corners: 3,5 mm.
- ❷ EU logo: Colours: X-80-00-00 and 00-00-X-00.
- ❸ Energy label: Colour: X-00-00-00.
Pictogram as depicted: EU logo + energy label: width: 82 mm, height: 16 mm.
- ❹ Sub-logos border: 1 pt – colour: cyan 100% – length: 92,5 mm.
- ❺ EER indication:
Text: Calibri regular 10 pt, capitals, 100% black
- ❻ A-G scale:
- Arrow: height: 7 mm, gap: 1,3 mm – colours:
Highest class: X-00-X-00,
Second class: 70-00-X-00,
Third class: 30-00-X-00,
Fourth class: 00-00-X-00,
Fifth class: 00-30-X-00,
Sixth class: 00-70-X-00,
Last class(es): 00-X-X-00.
- Text: Calibri bold 18 pt, capitals, white;
Calibri bold 7 pt, white.
- ❼ Energy efficiency class:
- Arrow: width: 20 mm, height: 15 mm, 100% black;
- Text: Calibri bold 30 pt, capitals, white;
Calibri bold 14 pt, white.
- ❽ Energy
- Text: Calibri regular 8 pt, capitals, 100% black.
- ❾ 'Minutes'-translation:
- Text: Calibri regular 7 pt, 100% black.

- 10 Rated capacity in kW:
 - Text 'kW': Calibri regular 14 pt, 100% black.
 - Value 'XY,Z': Calibri bold 22 pt, 100% black.
- 11 EER value, rounded up to one decimal:
 - Text 'EER': Calibri regular 14 pt, capitals, 100% black.
 - Value 'X,Y': Calibri bold 22 pt, 100% black.
- 12 Hourly energy consumption in kWh/60min:
 - Text 'kWh/60min*': Calibri regular 14 pt, 100% black.
 - Value 'XY': Calibri bold 22 pt, 100% black.
- 13 Noise emissions:
 - Border: 2 pt – colour: 100% cyan – round corners: 3,5 mm.
 - Value: Calibri bold 22 pt, 100% black.
 - Text: Calibri regular 14 pt, 100% black.
- 14 Supplier's name or trademark.
- 15 Supplier's model identifier:

The suppliers' name or trade mark and model identifier should fit in a space of 82 × 10,5 mm.
- 16 Reference period:
 - Text: Calibri bold 10 pt.

4.5. Heating-only double duct air conditioners classified in energy efficiency classes A+++ to D



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'COP' with red fan and air wave indication;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

V. rated capacity for heating in kW, rounded up to one decimal;

VI. COP rated , rounded up to one decimal;

VII. hourly energy consumption in kWh per 60 minutes, rounded up to the nearest integer;

VIII. sound power level for indoor unit expressed in dB(A) re1 pW, rounded to the nearest integer.

All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 4.6. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours are coded as CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

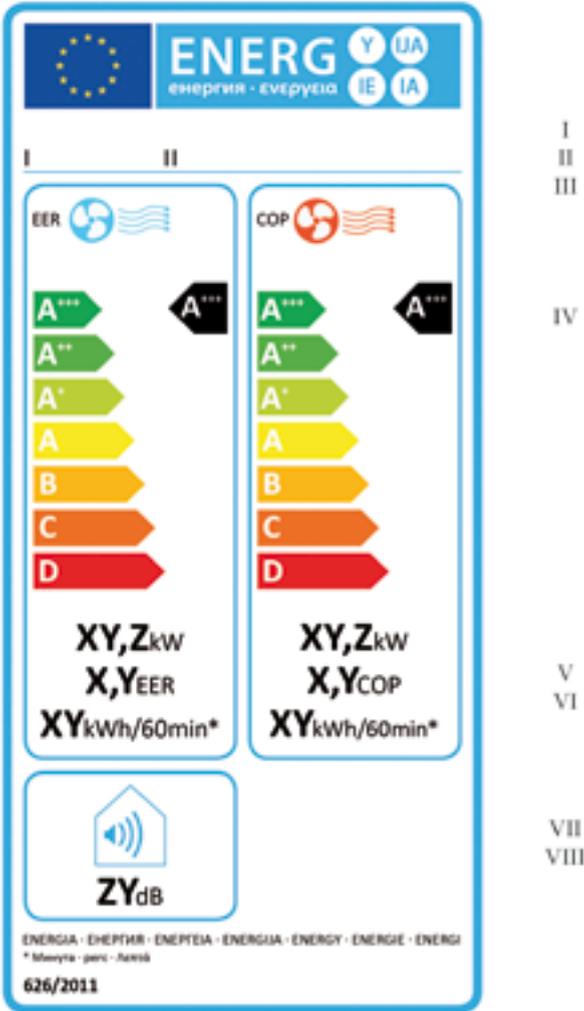
(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- ❶ EU label border: stroke: 5 pt – colour: cyan 100% – round corners: 3,5 mm.
- ❷ EU logo: Colours: X-80-00-00 and 00-00-X-00.
- ❸ Energy label: Colour: X-00-00-00.
Pictogram as depicted: EU logo + energy label: width: 82 mm, height: 16 mm.
- ❹ Sub-logos border: 1 pt – colour: 100% cyan – length: 92,5 mm.
- ❺ COP indication:
Text: Calibri regular 10 pt, capitals, 100% black
- ❻ A-G scale:
 - Arrow: height: 7 mm, gap: 1,3 mm – colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class(es): 00-X-X-00.
 - Text: Calibri Bold 18 pt, capitals, white;
 - Calibri bold 7 pt, white.
- ❼ Energy efficiency class:
 - Arrow: width: 20 mm, height: 15 mm, 100% black;
 - Text: Calibri bold 30 pt, capitals, white;
 - Calibri bold 14 pt, white.
- ❽ Energy:
 - Text: Calibri regular 8 pt, capitals, 100% black.
- ❾ ‘Minutes’-translation:
 - Text: Calibri regular 7 pt, 100% black.

- 10 Rated capacity in kW:
- Text 'kW': Calibri regular 14 pt, 100% black.
 - Value 'XY,Z': Calibri bold 22 pt, 100% black.
- 11 COP value, rounded up to one decimal:
- Text 'COP': Calibri regular 14 pt, capitals, 100% black.
 - Value 'X,Y': Calibri bold 22 pt, 100% black.
- 12 Hourly energy consumption in kWh/60min:
- Text 'kWh/60min*': Calibri regular 14 pt, 100% black.
 - Value 'XY': Calibri bold 22 pt, 100% black.
- 13 Noise emissions:
- Border: 2 pt – colour: cyan 100% – round corners: 3,5 mm.
 - Value: Calibri bold 22 pt, 100% black.
 - Text: Calibri regular 14 pt, 100% black.
- 14 Supplier's name or trademark.
- 15 Supplier's model identifier:
The suppliers' name or trade mark and model identifier should fit in a space of 82 × 10,5 mm.
- 16 Reference period:
- Text: Calibri bold 10 pt.

5. LABEL OF SINGLE DUCT AIR CONDITIONERS

5.1. Reversible single duct air conditioners classified in energy efficiency classes A+++ to D



(a) The following information shall be included in the label:

- I. supplier's name or trade mark;
- II. supplier's model identifier;
- III. text 'EER' and 'COP' for cooling and heating, with a blue fan and air wave indication for EER and red fan and air wave indication for COP;
- IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class. Energy efficiency must be indicated for cooling and heating;
- V. rated capacity for cooling and heating mode in kW, rounded up to one decimal;
- VI. EER_{rated} and COP_{rated} , rounded up to one decimal;
- VII. hourly energy consumption in kWh per 60 minutes, for cooling and heating, rounded up to one decimal;
- VIII. sound power level for indoor unit expressed in dB(A) re1 pW, rounded to the nearest integer.

All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 5.2. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours are coded as CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 EU label border: stroke: 5 pt – colour: cyan 100% – round corners: 3,5 mm.

2 EU logo: Colours: X-80-00-00 and 00-00-X-00.

3 Energy label: Colour: X-00-00-00.

Pictogram as depicted: EU logo + energy label: width: 82 mm, height: 16 mm.

4 Sub-logos border: 1 pt – colour: cyan 100% – length: 92,5 mm.

5 EER and COP indication:

- Border: 2 pt – colour: cyan 100% – round corners: 3,5 mm.

- Text: Calibri regular 10 pt, capitals, 100% black.

6 A-G scale:

- Arrow: height: 7 mm, gap: 1,3 mm – colours:

Highest class: X-00-X-00,

Second class: 70-00-X-00,

Third class: 30-00-X-00,

Fourth class: 00-00-X-00,

Fifth class: 00-30-X-00,

Sixth class: 00-70-X-00,

Last class(es): 00-X-X-00.

- Text: Calibri bold 18 pt, capitals, white;

Calibri bold 7 pt, white.

7 Energy efficiency classes:

- Arrow: Width: 11 mm, height: 10 mm, 100% black;

- Text: Calibri bold 18 pt, capitals, white.

8 Energy:

- Text: Calibri regular 8 pt, capitals, 100% black.

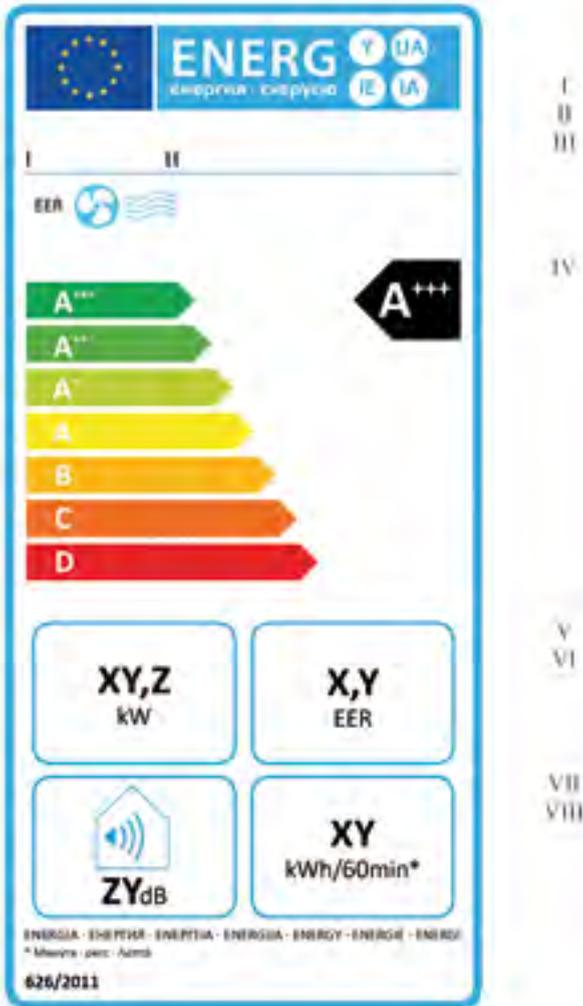
9 'Minutes'-translation:

- Text: Calibri regular 7 pt, 100% black.

- 10 Rated capacity for cooling and heating in kW:
 - Text 'kW': Calibri regular 14 pt, 100% black.
 - Value 'XY,Z': Calibri bold 22 pt, 100% black.
- 11 EER and COP values, rounded up to one decimal:
 - Text: Calibri regular 14 pt, capitals, 100% black.
 - Value 'X,Y': Calibri bold 22 pt, 100% black.
- 12 Hourly energy consumption in kWh/60min:
 - Text 'kWh/60min*': Calibri regular 14 pt, 100% black.
 - Value 'XY': Calibri bold 22 pt, 100% black.
- 13 Noise emissions:
 - Border: 2 pt – colour: cyan 100% – round corners: 3,5 mm.
 - Value: Calibri bold 22 pt, 100% black.
 - Text: Calibri regular 14 pt, 100% black.
- 14 Supplier's name or trademark.
- 15 Supplier's model identifier:

The suppliers' name or trade mark and model identifier should fit in a space of 82 × 10,5 mm.
- 16 Reference period:
 - Text: Calibri bold 10 pt.

5.3. Cooling-only single duct air conditioners classified in energy efficiency classes A+++ to D



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. text 'EER', with a blue fan and air wave indication;

IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

V. rated capacity for cooling in kW, rounded up to one decimal;

VI. EER rated , rounded up to one decimal;

VII. hourly energy consumption in kWh per 60 minutes, rounded up to one decimal;

VIII. sound power level for indoor unit expressed in dB(A) re1 pW, rounded to the nearest integer.

All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 5.4. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours shall be CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

① EU label border: stroke: 5 pt – colour: cyan 100% – round corners: 3,5 mm.

② EU logo: Colours: X-80-00-00 and 00-00-X-00.

③ Energy label: Colour: X-00-00-00.

Pictogram as depicted: EU logo + energy label: width: 82 mm, height: 16 mm.

④ Sub-logos border: 1 pt – colour: cyan 100% – length: 92,5 mm.

⑤ EER indication:

Text: Calibri regular 10 pt, capitals, 100% black.

⑥ A-G scale:

- Arrow: height: 7 mm, gap: 1,3 mm – colours:

Highest class: X-00-X-00,

Second class: 70-00-X-00,

Third class: 30-00-X-00,

Fourth class: 00-00-X-00,

Fifth class: 00-30-X-00,

Sixth class: 00-70-X-00,

Last class(es): 00-X-X-00.

- Text: Calibri bold 18 pt, capitals, white;

Calibri bold 7 pt, white.

⑦ Energy efficiency class:

- Arrow: Width: 20 mm, height: 15 mm, 100% black;

- Text: Calibri bold 30 pt, capitals, white;

Calibri bold 14 pt, capitals, white.

⑧ Energy:

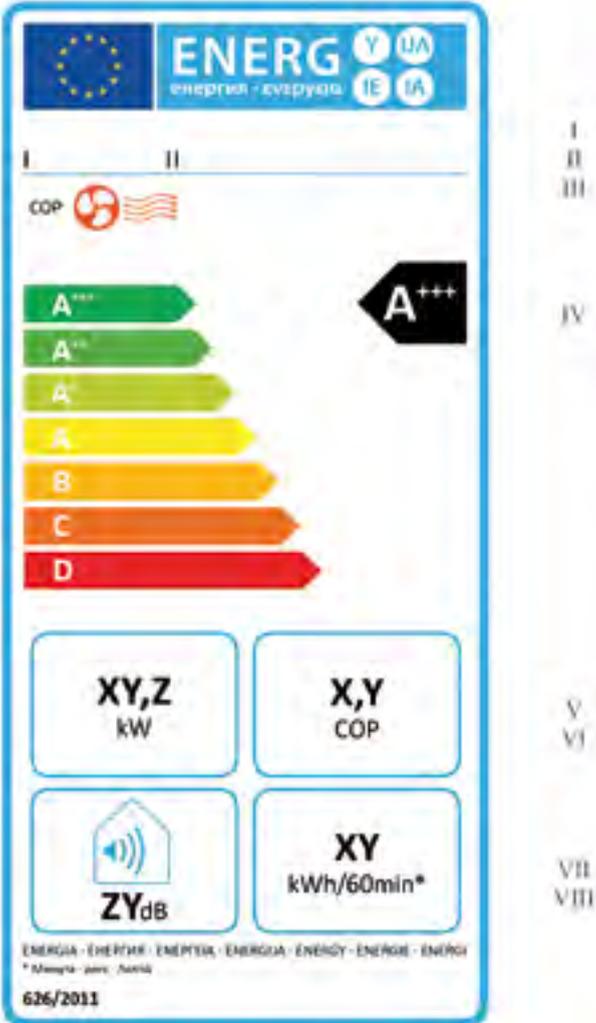
- Text: Calibri regular 8 pt, capitals, 100% black.

⑨ 'Minutes'-translation:

- Text: Calibri regular 7 pt, 100% black.

- 10** Rated capacity in kW:
- Text 'kW': Calibri regular 14 pt, 100% black.
 - Value 'XY,Z': Calibri bold 22 pt, 100% black.
- 11** EER value, rounded up to one decimal:
- Text 'EER': Calibri regular 14 pt, capitals, 100% black.
 - Value 'X,Y': Calibri bold 22 pt, 100% black.
- 12** Hourly energy consumption in kWh/60min:
- Text 'kWh/60min*': Calibri regular 14 pt, 100% black.
 - Value 'XY': Calibri bold 22 pt, 100% black.
- 13** Noise emissions:
- Border: 2 pt – colour: 100% cyan – round corners: 3,5 mm.
 - Value: Calibri bold 22 pt, 100% black.
 - Text: Calibri regular 14 pt, 100% black.
- 14** Supplier's name or trademark.
- 15** Supplier's model identifier:
The suppliers' name or trade mark and model identifier should fit in a space of 82 × 10,5 mm.
- 16** Reference period:
- Text: Calibri bold 10 pt.

5.5. Heating-only single duct air conditioners classified in energy efficiency classes A+++ to D



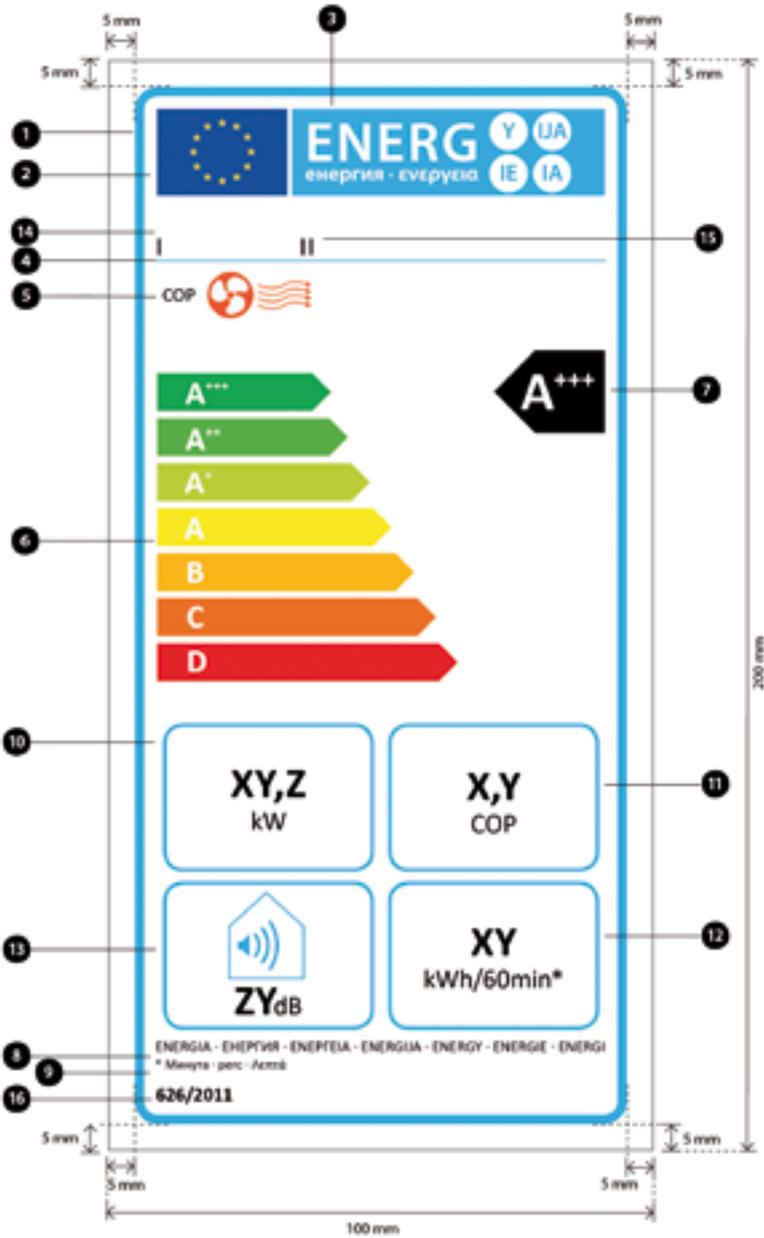
(a) The following information shall be included in the label:

- I. supplier's name or trade mark;
- II. supplier's model identifier;
- III. text 'COP' with red fan and air wave indication;
- IV. the energy efficiency; the head of the arrow containing the energy efficiency class of the appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;
- V. rated capacity for heating in kW, rounded up to one decimal;
- VI. COP_{rated} , rounded up to one decimal;
- VII. hourly energy consumption in kWh per 60 minutes, rounded to the nearest integer;
- VIII. sound power level for indoor unit expressed in dB(A) re 1 pW, rounded to the nearest integer.

All the requested values shall be determined in accordance with Annex VII.

(b) The design of the label shall be in accordance with point 5.6. By way of derogation, where a model has been granted an 'EU eco-label' under Regulation (EC) No 66/2010, a copy of the EU eco-label may be added.

5.6. Label Design



Whereby:

(i) The label shall be at least 100 mm wide and 200 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(ii) The background shall be white.

(iii) Colours shall be CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(iv) The label shall fulfil all of the following requirements (numbers refer to the figure above):

1 EU label border: stroke: 5 pt – colour: cyan 100% – round corners: 3,5 mm.

2 EU logo: Colours: X-80-00-00 and 00-00-X-00.

3 Energy label: Colour: X-00-00-00.

Pictogram as depicted: EU logo + energy label: width: 82 mm, height: 16 mm.

4 Sub-logos border: 1 pt – colour: cyan 100% – length: 92,5 mm.

5 COP indication:

Text: Calibri regular 10 pt, capitals, 100% black

6 A-G scale:

- Arrow: height: 7 mm, gap: 1,3 mm – colours:

Highest class: X-00-X-00,

Second class: 70-00-X-00,

Third class: 30-00-X-00,

Fourth class: 00-00-X-00,

Fifth class: 00-30-X-00,

Sixth class: 00-70-X-00,

Last class(es): 00-X-X-00.

- Text: Calibri bold 18 pt, capitals, white;

Calibri bold 7 pt, white.

7 Energy efficiency class:

- Arrow: Width: 20 mm, height: 15 mm, 100% black;

- Text: Calibri bold 30 pt, capitals, white;

Calibri bold 14 pt, capitals, white.

8 Energy:

- Text: Calibri regular 8 pt, capitals, 100% black.

9 'Minutes'-translation:

- Text: Calibri regular 7 pt, 100% black.

- 10 Rated capacity in kW:
 - Text 'kW': Calibri regular 14 pt, 100% black.
 - Value 'XY,Z': Calibri bold 22 pt, 100% black.
- 11 COP value, rounded up to one decimal:
 - Text 'COP': Calibri regular 14 pt, capitals, 100% black.
 - Value 'X,Y': Calibri bold 22 pt, 100% black.
- 12 Hourly energy consumption in kWh/60 minutes:
 - Text 'kWh/60min*': Calibri regular 14 pt, 100% black.
 - Value 'XY': Calibri bold 22 pt, 100% black.
- 13 Noise emissions:
 - Border: 2 pt – colour: cyan 100% – round corners: 3,5 mm.
 - Value: Calibri bold 22 pt, 100% black.
 - Text: Calibri regular 14 pt, 100% black.
- 14 Supplier's name or trademark.
- 15 Supplier's model identifier:

The suppliers' name or trade mark and model identifier should fit in a space of 82 × 10,5 mm.
- 16 Reference period:
 - Text: Calibri bold 10 pt.

ANNEX IV

Product fiche

1. The information in the product fiche shall be given in the order specified below:

- (a) supplier's name or trade mark;
- (b) model identifier of the indoor air conditioner or of the indoor and outdoor elements of the air conditioner;
- (c) without prejudice to any requirements under the Union eco-label scheme, where a model has been granted a 'European Union eco-label' under Regulation (EC) No 66/2010, a copy of the eco-label may be added;
- (d) inside and outside sound power levels at standard rating conditions, on cooling and/or heating modes;
- (e) the name and GWP of the refrigerant used and a standard text as follows:

'Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atmosphere. This appliance contains a refrigerant fluid with a GWP equal to [xxx]. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be [xxx] times higher than 1 kg of CO₂, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional.'

2. Additionally, the following information shall be included in the product fiche on air conditioners on the cooling mode, when efficiency is declared on the basis of the seasonal energy efficiency ratio (SEER):

- (a) the SEER and the energy efficiency class of the model (model of a unit or of a combination of units) determined in accordance with definitions and test procedures in Annex I and VII for the cooling mode as well as with the class limits defined in Annex II;
- (b) the indicative annual electricity consumption Q_{CE} in kWh/a during the cooling season, determined in accordance with definitions and test procedures in Annex I and VII, respectively. It shall be described as: 'Energy consumption "XYZ" kWh per year, based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.';
- (c) the design load $P_{designc}$ in kW of the appliance in cooling mode determined in accordance with definitions and test procedures in Annex I and VII, respectively;

3. Additionally, the following notes define the information to be included in the fiche on the heating mode, when efficiency is declared on the basis of seasonal coefficient of performance (SCOP):

- (a) the SCOP and the energy efficiency class of the model, or combination, in heating mode determined in accordance with definitions and test procedures in Annex I and VII, respectively, as well as with the class limits defined in Annex II;
- (b) the indicative annual electricity consumption for an average heating season Q_{HE} in kWh/a, determined in accordance with definitions and test procedures in Annex I and VII, respectively. It shall be described as: 'Energy consumption "XYZ" kWh per year, based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.';

(c) other designated heating seasons for which the unit is declared fit for purpose, with options of warmer (optional) or colder (optional) seasons, as defined in Annex I;

(d) the design load P_{designh} in kW of the appliance in heating mode determined in accordance with definitions and test procedures in Annex I and VII;

(e) the declared capacity and an indication of the back up heating capacity assumed for the calculation of SCOP at reference design conditions.

4. Additionally, the following notes define the information to be included in the fiche of air conditioners, when efficiency is declared on the basis of energy efficiency ratio (EER_{rated}) or coefficient of performance (COP_{rated}):

(a) the energy efficiency class of the model, determined in accordance with definitions and test procedures in Annex I and VII, as well as the class limits defined in Annex II;

(b) for double ducts, the indicative hourly electricity consumption Q_{DD} in kWh/60 minutes determined in accordance with definitions and test procedures in Annex I and VII. It shall be described as: 'Energy consumption "X,Y" kWh per 60 minutes, based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.';

(c) for single ducts, the indicative hourly electricity consumption Q_{SD} in kWh/60 minutes determined in accordance with definitions and test procedures in Annex I and VII. It shall be described as: 'Energy consumption "X,Y" kWh per 60 minutes, based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.';

(d) the cooling capacity P_{rated} in kW of the appliance determined in accordance with definitions and test procedures in Annex I and VII;

(e) the heating capacity P_{rated} in kW of the appliance determined in accordance with definitions and test procedures in Annex I and VII.

5. One fiche may cover a number of appliance models supplied by the same supplier.

6. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in points 1-4 not already displayed on the label shall also be provided.

ANNEX V

Technical documentation

The technical documentation referred to in Article 3 (1)(c) shall include at least the following items:

- (a) the name and address of the supplier;
- (b) a general description of the appliance model, sufficient for it to be unequivocally and easily identified. Single ducts shall be referred to as 'local air conditioners';
- (c) where appropriate, the references for the harmonised standards applied;
- (d) where appropriate, the other calculation methods, measurement standards and specifications used;
- (e) identification and signature of the person empowered to bind the supplier;
- (f) where appropriate the technical parameters for measurements, established in accordance with Annex VII:
 - (i) overall dimensions;
 - (ii) specification of the type of the air conditioner;
 - (iii) specification whether the appliance is designed for cooling or heating only or for both;
 - (iv) the energy efficiency class of the model as defined in Annex II;
 - (v) The energy efficiency ratio (EER rated) and coefficient of performance (COP rated) for single and double duct air conditioners or seasonal energy efficiency ratio (SEER) and seasonal coefficient of performance (SCOP) for other air conditioners;
 - (vi) The heating season for which the appliance is declared fit for purpose;
 - (vii) Sound power levels expressed in dB(A) re1 pW, rounded to the nearest integer;
 - (viii) the name and GWP of refrigerant used.
- (g) the results of calculations performed in accordance with Annex VII.

Suppliers may include additional information at the end of the above list.

Where the information included in the technical documentation file for a particular air conditioner model has been obtained by calculation on the basis of design, or extrapolation from other equivalent appliances, or both, the documentation shall include details of such calculations or extrapolations, or both, and of tests undertaken by suppliers to verify the accuracy of the calculations undertaken. The information shall also include a list of all other equivalent appliance models where the information was obtained on the same basis.

ANNEX VI

Information to be provided in the cases where end-users Cannot be expected to see the product displayed

1. The information referred to in Article 4(b) shall be provided in the following order:
 - (a) The energy efficiency class of the model as defined in Annex II;
 - (b) for air conditioners other than single ducts and double ducts:
 - (i) the seasonal energy efficiency ratio (SEER) and/or seasonal coefficient of performance (SCOP);
 - (ii) the design load (in kW);
 - (iii) the annual electricity consumption;
 - (iv) the cooling and/or each heating ('Average, Colder, Warmer') season the appliance is declared fit for purpose;
 - (c) for single duct and double duct air conditioners:
 - (i) the energy efficiency ratio (EER) and/or coefficient of performance (COP);
 - (ii) the rated capacity (kW);
 - (iii) for double ducts, the hourly electricity consumption for cooling and/or heating;
 - (iv) for single ducts, the hourly electricity consumption for cooling and/or heating;
 - (d) Sound power levels expressed in dB(A) re1 pW, rounded to the nearest integer;
 - (e) Name and GWP of refrigerant used.
2. Where other information contained in the product information fiche is also provided, it shall be in the form and order specified in Annex IV.
3. The size and font in which all the information referred in this Annex is printed or shown shall be legible.

ANNEX VII

Measurements and calculations

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using harmonised standards the reference numbers of which have been published in the Official Journal of European Union, or other reliable, accurate and reproducible method, which takes into account the generally recognised state of the art methods, and whose results are deemed to be of low uncertainty.
2. The determination of the seasonal energy consumption and seasonal energy efficiency ratio (SEER) and seasonal coefficient of performance (SCOP) shall take into account:
 - (a) European seasonal conditions, as defined in Table 1 of this Annex;
 - (b) Reference design conditions, as defined in Table 3 of this Annex;
 - (c) Electric energy consumption for all relevant modes of operation, using time periods as defined in Table 4 of this Annex;
 - (d) Effects of the degradation of the energy efficiency caused by on/off cycling (if applicable) depending on the type of control of the cooling and/or heating capacity;
 - (e) Corrections on the seasonal coefficients of performance in conditions where the heating load can not be met by the heating capacity;
 - (f) The contribution of a back-up heater (if applicable) in the calculation of the seasonal efficiency of a unit in heating mode.
3. Where the information relating to a specific model, being a combination of indoor and outdoor unit(s), has been obtained by calculation on the basis of design, and/or extrapolation from other combinations, the documentation should include details of such calculations and/or extrapolations, and of tests undertaken to verify the accuracy of the calculations undertaken (including details of the mathematical model for calculating performance of such combinations, and of measurements taken to verify this model).
4. The energy efficiency ratio (EER_{rated}) and, when applicable, coefficient of performance (COP_{rated}) for double ducts and single ducts shall be established at the standard rating conditions as defined in Table 2 of this Annex.
5. The calculation of electricity consumption for cooling and/or heating shall take into account electric energy consumption of all relevant modes of operation, when appropriate, using time periods as defined in Table 4 of this Annex.

Table 1

Bin number (j), outdoor temperature (Tj) in °C and number of hours per bin (hj) for the cooling season and for heating seasons 'average', 'warmer' and 'colder'. 'db' = dry bulb temperature

Cooling season			Heating season				
j	Tj	hj	j	Tj	Average	Warmer	Colder
#	°C	h	#	°C	hjA	hjW	hjC
	db			db	h	h	h
1	17	205	1 to 8	-30 to -23	0	0	0
2	18	227	9	-22	0	0	1
3	19	225	10	-21	0	0	6
4	20	225	11	-20	0	0	13
5	21	216	12	-19	0	0	17
6	22	215	13	-18	0	0	19
7	23	218	14	-17	0	0	26
8	24	197	15	-16	0	0	39
9	25	178	16	-15	0	0	41
10	26	158	17	-14	0	0	35
11	27	137	18	-13	0	0	52
12	28	109	19	-12	0	0	37
13	29	88	20	-11	0	0	41
14	30	63	21	-10	1	0	43
15	31	39	22	-9	25	0	54
16	32	31	23	-8	23	0	90
17	33	24	24	-7	24	0	125
18	34	17	25	-6	27	0	169
19	35	13	26	-5	68	0	195
20	36	9	27	-4	91	0	278
21	37	4	28	-3	98	0	306
22	38	3	29	-2	165	0	454
23	39	1	30	-1	173	0	385
24	40	0	31	0	240	0	490
			32	1	280	0	533
			33	2	320	3	380
			34	3	357	22	228
			35	4	356	63	261
			36	5	303	63	279
			37	6	330	175	229
			38	7	326	162	269
			39	8	348	259	233
			40	9	335	360	230
			41	10	315	428	243
			42	11	215	430	191
			43	12	169	503	146
			44	13	151	444	150
			45	14	105	384	97
			46	15	74	294	61
Total		2602			4910	3590	6446

Table 2

Standard rating conditions, temperatures in 'dry bulb' air temperature ('wet bulb' indicated in brackets)

Appliance	Function	Indoor air temperature (°C)	Outdoor air temperature (°C)
air conditioners, excluding single duct	cooling	27 (19)	35 (24)
	heating	20 (max. 15)	7(6)
single duct	cooling	35 (24)	35 (24) (*)
	heating	20 (12)	20 (12) (*)

(*) In case of single ducts, the condensor (evaporator) when cooling (heating), is not supplied with outdoor air, but indoor air.

Table 3

Reference design conditions, temperatures in 'dry bulb' air temperature ('wet bulb' indicated in brackets)

Function / season	Indoor air temperature (°C)	Outdoor air temperature (°C)	Bivalent temperature (°C)	Operating limit temperature (°C)
	T_{in}	$T_{designc}/T_{designh}$	T_{biv}	T_{ol}
cooling	27 (19)	$T_{designc} = 35$ (24)	n.a.	n.a.
heating / Average	20 (15)	$T_{designh} = -10$ (-11)	max. 2	max. -7
heating / Warmer		$T_{designh} = 2$ (1)	max. 7	max. 2
heating / Colder		$T_{designh} = -22$ (-23)	max. -7	max. -15

Table 4

Operational hours per type of appliance per functional mode to be used for calculation of electricity consumption

Type of appliance / functionality (if applicable)	Unit	Heating season	On mode	Thermostat off mode	Standby mode	Off mode	Crank-case heater mode
			cooling: H_{CE} heating: H_{HE}	H_{TO}	H_{SB}	H_{OFF}	H_{CK}
Air conditioners, except double ducts and single duct							
Cooling mode, if appliance offers cooling only	h/annum		350	221	2142	5088	7760
Cooling mode	h/annum		350	221	2142	0	2672
Cooling and heating modes, if appliance offers both modes	Heating mode	Average	1400	179	0	0	179
		Warmer	1400	755	0	0	755
		Colder	2100	131	0	0	131
Heating mode, if appliance offers heating only	h/annum	Average	1400	179	0	3672	3851
		Warmer	1400	755	0	4345	4476
		Colder	2100	131	0	2189	2944
Double duct air conditioner			cooling: H_{CE} heating: H_{HE}	H_{TO}	H_{SB}	H_{OFF}	H_{CK}
Cooling mode, if appliance offers cooling only	h/60 min		1	n/a	n/a	n/a	n/a
Cooling and heating modes, if appliance offers both modes	Cooling mode	h/60 min	1	n/a	n/a	n/a	n/a
	Heating mode	h/60 min	1	n/a	n/a	n/a	n/a
Heating mode, if appliance offers heating only	h/60 min		1	n/a	n/a	n/a	n/a
Single duct air conditioner			cooling: H_{CE} heating: H_{HE}				
Cooling mode	h/60 min		1	n/a	n/a	n/a	n/a
Heating mode	h/60 min		1	n/a	n/a	n/a	n/a

ANNEX VIII

Verification procedure for market surveillance purposes

When performing the market surveillance checks referred to in Article 3 (2) of Directive 2009/125/EC, the authorities of the **Contracting Parties** shall apply the following verification procedure for the requirements set out in Annex II.

1. The authorities of the **Contracting Party** shall test one single unit.

2. The model of the air conditioner, except single and double ducts, shall be considered to comply with the provisions set out in Annex I, as applicable, to this Regulation, if its seasonal energy efficiency ratio (SEER), or seasonal coefficient of performance (SCOP), if applicable, is not less than the declared value minus 8%. The SEER and SCOP values shall be established in accordance with Annex II.

The model of a single and double duct air conditioner shall be considered to comply with the provisions set out in Annex I, as applicable, to this Regulation, if the results for off-mode and standby-mode conditions do not exceed the limit values by more than 10%, and if the energy efficiency ratio (EER_{rated}), or coefficient for performance (COP_{rated}), if applicable, is not less than the declared value minus 10%. The EER and COP values shall be established in accordance with Annex II.

The model of the air conditioner shall be considered to comply with the provisions set out in this Regulation, as applicable, if the maximum sound power level does not exceed more than 2 dB(A) of the declared value.

3. If the result referred to in point 2 is not achieved, the market surveillance authority shall randomly select three additional units of the same model for testing.

4. The model of the air conditioner, except single and double ducts, shall be considered to comply with the provisions set out in Annex I, as applicable, to this Regulation, if the average of the three units for the seasonal energy efficiency ratio (SEER), or seasonal coefficient of performance (SCOP), if applicable, is not less than the declared value minus 8%. The SEER and SCOP values shall be established in accordance with Annex II.

The model of a single and double duct air conditioner shall be considered to comply with the provisions set out in Annex I, as applicable, to this Regulation, if the average of the results of the three units for off-mode and standby-mode conditions do not exceed the limit values by more than 10%, and if the average of the energy efficiency ratio (EER_{rated}), or coefficient of performance (COP_{rated}), is not less than the declared value minus 10%. The EER and COP values shall be established in accordance with Annex II.

The model of the air conditioner shall be considered to comply with the provisions set out in this Regulation, as applicable, if the average of the results of the three units for sound power level does not exceed more than 2 dB(A) of the declared value.

5. If the results referred to in point 4 are not achieved, the model shall be considered not to comply with this Regulation.

For the purposes of compliance and verification of compliance with the requirements of this Regulation, **Contracting Parties** shall apply the procedures referred to in Annex II and harmonised standards the reference numbers of which have been published in the Official Journal of European Union, or other reliable, accurate and reproducible calculation and measurement methods, which take into account the generally recognised state of the art.



Delegated Regulation (EU) 1062/2010 of 28 September 2010 supplementing Directive 2010/30/EU with regard to energy labelling of televisions

Incorporated and adapted by Ministerial Council Decision 2011/03/MC-EnC of 6 October 2011 on adopting certain Delegated Regulations on energy related products.

*The adaptations made by Ministerial Council Decision 2011/03/MC-EnC are highlighted in **bold and blue**.*

Whereas:

(1) Directive 2010/30/EU requires the Commission to adopt delegated acts as regards the labelling of energy related products representing significant potential for energy savings and having a wide disparity in performance levels with equivalent functionality.

(2) The electricity used by televisions accounts for a significant share of total household electricity demand in the Union and televisions with equivalent functionality have a wide disparity in terms of energy efficiency. The energy efficiency of televisions can be significantly improved. Televisions should therefore be covered by requirements on energy labelling.

(3) Harmonised provisions for indicating the energy efficiency and consumption of televisions by labelling and standard product information should be established in order to provide incentives for manufacturers to improve the energy efficiency of televisions, encourage end-users to purchase energy-efficient models, reduce the electricity consumption of these products, and contribute to the functioning of the internal market.

(4) The combined effect of the provisions set out in this Regulation and in Commission Regulation (EC) No 642/2009 of 22 July 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for televisions could amount to annual electricity savings of 43 TWh by 2020, compared to the situation if no measures were taken.

(5) The information provided on the label should be obtained through reliable, accurate and reproducible measurement procedures that take into account the recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations and of rules on Information Society services.

(6) This Regulation should specify a uniform design and content for the label for televisions.

(7) In addition, this Regulation should specify requirements as to the technical documentation and the fiche for televisions.

(8) Moreover, this Regulation should specify requirements as to the information to be provided for any form of distance selling, advertisements and technical promotional material of televisions.

(9) In order to encourage the manufacturing of energy efficient televisions suppliers wishing to place on the market televisions that can meet the requirements for higher energy efficiency classes should be allowed to provide labels showing those classes in advance of the date for mandatory display of such classes.

(10) Provision should be made for a review of this Regulation taking into account technological progress,

Article 1

Subject matter

This Regulation establishes requirements for the labelling and the provision of supplementary product information for televisions.

Article 2

Definitions

In addition to the definitions laid down in Article 2 of Directive 2010/30/EU, the following definitions shall apply:

- (1) "television" means a television set or a television monitor;
- (2) "television set" means a product designed primarily for the display and reception of audiovisual signals which is placed on the market under one model or system designation, and which consists of:
 - (a) a display;
 - (b) one or more tuner(s)/receiver(s) and optional additional functions for data storage and/or display such as digital versatile disc (DVD), hard disk drive (HDD) or videocassette recorder (VCR), either in a single unit combined with the display, or in one or more separate units;
- (3) "television monitor" means a product designed to display on an integrated screen a video signal from a variety of sources, including television broadcast signals, which optionally controls and reproduces audio signals from an external source device, which is linked through standardised video signal paths including cinch (component, composite), SCART, HDMI, and future wireless standards (but excluding non-standardised video signal paths like DVI and SDI), but cannot receive and process broadcast signals;
- (4) "on-mode" means the condition where the television is connected to the mains power source and produces sound and picture;
- (5) "home-mode" means the television setting which is recommended by the manufacturer for normal home use;
- (6) "standby-mode(s)" means a condition where the equipment is connected to the mains power source, depends on energy input from the mains power source to function properly and offers the following functions only, which may persist for an indefinite time:
 - (a) reactivation function, or reactivation function and only an indication of enabled reactivation function; and/or
 - (b) information or status display;
- (7) "off-mode" means a condition in which the equipment is connected to the mains power source and is not providing any function; the following shall also be considered as off-mode:
 - (a) conditions providing only an indication of off-mode condition;
 - (b) conditions providing only functionalities intended to ensure electromagnetic compatibility pursuant to Directive 2004/108/EC of the European Parliament and of the Council;
- (8) "reactivation function" means a function facilitating the activation of other modes, including

on-mode, by remote switch including remote control, internal sensor, timer to a condition providing additional functions, including on-mode;

(9) “information or status display” means a continuous function providing information or indicating the status of the equipment on a display, including clocks;

(10) “forced menu” means a set of television settings, pre-defined by the manufacturer, of which the user of the television must select a particular setting upon initial start-up of the television;

(11) “peak luminance ratio” means the ratio of the peak luminance of the home-mode condition or of the on-mode condition of the television as set by the supplier, as applicable, and the peak luminance of the brightest on-mode condition;

(12) “point of sale” means a location where televisions are displayed or offered for sale, hire or hire purchase;

(13) “end-user” means a consumer buying or expected to buy a television.

Article 3

Responsibilities of suppliers

1. Suppliers shall ensure that:

(a) each television is supplied with a printed label in the format and containing information as set out in Annex V;

(b) a product fiche, as set out in Annex III, is made available;

(c) the technical documentation, as set out in Annex IV, is made available on request to the authorities of **Contracting Parties** and to the **Secretariat**;

(d) any advertisement for a specific television model contains the energy efficiency class, if the advertisement discloses energy-related or price information;

(e) any technical promotional material concerning a specific television model, which describes its specific technical parameters, includes the energy efficiency class of that model.

2. The energy efficiency classes shall be based on the Energy Efficiency Index calculated in accordance with Annex II.

3. The format of the label set out in Annex V shall be applied according to the following timetable:

(a) for televisions placed on the market from 30 November 2011, labels for televisions with energy efficiency classes:

(i) A, B, C, D, E, F, G shall be in accordance with point 1 of Annex V or, where suppliers deem appropriate, with point 2 of that Annex;

(ii) A+ shall be in accordance with point 2 of Annex V;

(iii) A++ shall be in accordance with point 3 of Annex V;

(iv) A+++ shall be in accordance with point 4 of Annex V;

(b) for televisions placed on the market from 1 January 2014 with energy efficiency classes A+, A, B, C, D, E, F, labels shall be in accordance with point 2 of Annex V or, where suppliers deem appropriate, with point 3 of that Annex;

(c) for televisions placed on the market from 1 January 2017 with energy efficiency classes A++, A+, A, B, C, D, E, labels shall be in accordance with point 3 of Annex V or, where suppliers deem appropriate, with point 4 of that Annex;

(d) for televisions placed on the market from 1 January 2020 with energy efficiency classes A+++, A++, A+, A, B, C, D labels shall be in accordance with point 4 of Annex V.

Article 4

Responsibilities of dealers

Dealers shall ensure that:

(a) each television, at the point of sale, bears the label provided by suppliers in accordance with Article 3(1) on the front of the television, in such a way as to be clearly visible;

(b) televisions offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the television displayed, are marketed with the information to be provided by the suppliers in accordance with Annex VI;

(c) any advertisement for a specific television model contains the energy efficiency class, if the advertisement discloses energy-related or price information;

(d) any technical promotional material concerning a specific television model, which describes its specific technical parameters, includes the energy efficiency class of that model.

Article 5

Measurement methods

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement procedures, which take into account the recognised state-of-the-art measurement methods, as set out in Annex VII.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure laid down in Annex VIII when assessing the conformity of the declared energy efficiency class.

Article 7

Revision

...

Article 8

Transitional provision

Article 3(1)(d) and (e) and Article 4(b), (c) and (d) shall not apply to printed advertisement and printed technical promotional material published before **30 April 2013**.

Article 9

Entry into force

This Decision [2011/03/MC-EnC] enters into force upon its adoption ...¹.

It shall apply from **31 December 2012**. However, Article 3(1)(d) and (e) and Article 4(b), (c) and (d) shall apply from **30 April 2013**.

This Regulation shall be binding in its entirety and directly applicable in all Contracting Parties.

Article 2(5) of Decision 2011/03/MC-EnC

The Secretariat shall monitor and review the implementation of [this] Delegated Regulation ... and shall submit a progress report to the Permanent High Level Group by 1 October 2013.

¹ The text displayed here corresponds to Article 3(1) of Decision 2011/03/MC-EnC.

ANNEX I

Energy efficiency class

The energy efficiency class of a television shall be determined on the basis of its Energy Efficiency Index (EEI) as set out in Table 1. The Energy Efficiency Index of a television shall be determined in accordance with point 1 of Annex II.

Table 1

Energy efficiency class of a television

Energy efficiency class	Energy Efficiency Index
A+++ (most efficient)	$EEI < 0.10$
A++	$0.10 \leq EEI < 0.16$
A+	$0.16 \leq EEI < 0.23$
A	$0.23 \leq EEI < 0.30$
B	$0.30 \leq EEI < 0.42$
C	$0.42 \leq EEI < 0.60$
D	$0.60 \leq EEI < 0.80$
E	$0.80 \leq EEI < 0.90$
F	$0.90 \leq EEI < 1.00$
G (least efficient)	$1.00 \leq EEI$

ANNEX II

Method for calculating the energy efficiency index and the Annual on-mode energy consumption

1. The Energy Efficiency Index (EEI) is calculated as $EEI = P/P_{ref}(A)$, where:

- $P_{ref}(A) = P_{basic} + A \times 4.3224 \text{ Watts/dm}^2$,
- $P_{basic} = 20 \text{ Watts}$ for television sets with one tuner/receiver and no hard disc,
- $P_{basic} = 24 \text{ Watts}$ for television sets with hard disc(s),
- $P_{basic} = 24 \text{ Watts}$ for television sets with two or more tuners/receivers,
- $P_{basic} = 28 \text{ Watts}$ for television sets with hard disc(s) and two or more tuners/receivers,
- $P_{basic} = 15 \text{ Watts}$ for television monitors,
- A is the visible screen area expressed in dm^2 ,
- P is the on-mode power consumption of the television in Watts measured in accordance with Annex VII, rounded to one decimal place.

2. The annual on-mode energy consumption E in kWh is calculated as $E = 1,46 \times P$.

3. Televisions with automatic brightness control

For the purposes of calculating the Energy Efficiency Index and the annual on-mode energy consumption referred to in points 1 and 2, the on-mode power consumption as established according to the procedure set out in Annex VII is reduced by 5% if the following conditions are fulfilled when the television is placed on the market:

- (a) the luminance of the television in the home-mode or the on-mode condition as set by the supplier, is automatically reduced between an ambient light intensity of at least 20 lux and 0 lux;
- (b) the automatic brightness control is activated in the home-mode condition or the on-mode condition of the television as set by the supplier.

ANNEX III

Product fiche

1. The information in the product fiche of the television shall be provided in the following order, and shall be included in the product brochure or other literature provided with the product:

(a) supplier's name or trade mark;

(b) supplier's model identifier; where model identifier means the code, usually alphanumeric, which distinguishes a specific television model from other models of the same trade mark or supplier's name;

(c) the energy efficiency class of the model in accordance with Annex I, Table 1; where the television has been awarded an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council²,

this information may be included;

(d) the visible screen diagonal in centimetres and in inches;

(e) the on-mode power consumption measured in accordance with the procedure set out in Annex VII;

(f) the annual energy consumption calculated in accordance with Annex II in kWh per year, rounded to the first integer; it shall be described as: 'Energy consumption XYZ kWh per year, based on the power consumption of the television operating 4 hours per day for 365 days. The actual energy consumption will depend on how the television is used.';

(g) the standby and off-mode power consumption or both measured in accordance with the procedure set out in Annex VII;

(h) the screen resolution in physical horizontal and vertical pixel count.

2. One fiche may cover a number of television models supplied by the same supplier.

3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1 not already displayed on the label must also be provided.

² OJ L 27, 30.1.2010, p. 1.

ANNEX IV

Technical documentation

The technical documentation referred to in Article 3(1)(c) shall include:

- (a) the name and address of the supplier;
- (b) a general description of the television model, sufficient for it to be unequivocally and easily identified;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) identification and signature of the person empowered to bind the supplier;
- (f) test parameters for measurements:
 - (i) ambient temperature;
 - (ii) test voltage in V and frequency in Hz;
 - (iii) total harmonic distortion of the electricity supply system;
 - (iv) the input terminal for the audio and video test signals;
 - (v) information and documentation on the instrumentation, set-up and circuits used for electrical testing;
- (g) on-mode parameters:
 - (i) the power consumption data in Watts rounded to the first decimal place for power measurements up to 100 Watts, and to the first integer for power measurements above 100 Watts;
 - (ii) the characteristics of the dynamic broadcast-content video signal representing typical broadcast TV content;
 - (iii) the sequence of steps for achieving a stable condition with respect to power consumption;
 - (iv) for televisions with a forced menu, the ratio of the peak luminance of the home-mode and the peak luminance of the brightest on-mode condition provided by the television, expressed as a percentage;
 - (v) for television monitors, a description of the relevant characteristics of the tuner used for measurements;
- (h) for each standby or off-mode:
 - (i) the power consumption data in Watts rounded to the second decimal place;
 - (ii) the measurement method used;
 - (iii) description of how the mode was selected or programmed;
 - (iv) sequence of events to reach the mode where the television automatically changes modes.

ANNEX V Label

1. LABEL 1



(a) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier, where 'model identifier' means the code, usually alphanumeric, which distinguishes a specific television model from other models of the same trade mark or supplier's name;

III. the energy efficiency class of the television, determined in accordance with Annex I. The head of the arrow containing the energy efficiency class of the television shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

IV. on-mode power consumption in Watts, rounded to the first integer;

V. annual on-mode energy consumption calculated in accordance with point 2 of Annex II, in kWh, rounded to the first integer;

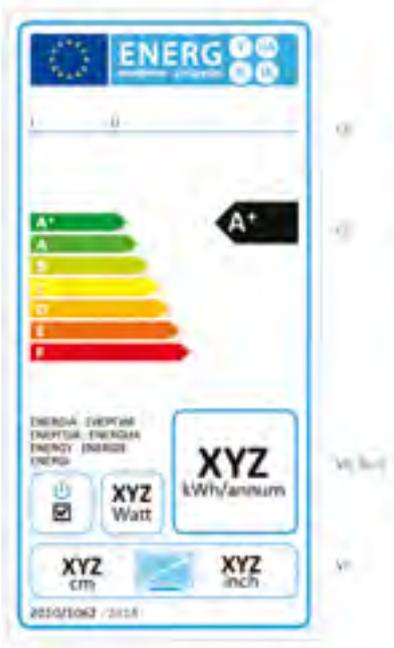
VI. visible screen diagonal in inches and centimetres.

For televisions with an easily visible switch, which puts the television in a condition with power consumption not exceeding 0,01 Watts when operated to the off position, the symbol defined in point 8 of point 5 may be added.

Where a model has been granted a 'European Union Ecolabel' under Regulation (EC) No 66/2010, a copy of the EU Ecolabel may be added.

(b) The design aspects of the label shall be in accordance with point 5.

2. LABEL 2



(a) The information listed in point 1(a) shall be included in the label.

3. LABEL 3



- (a) The information listed in point 1(a) shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 5.

4. LABEL 4

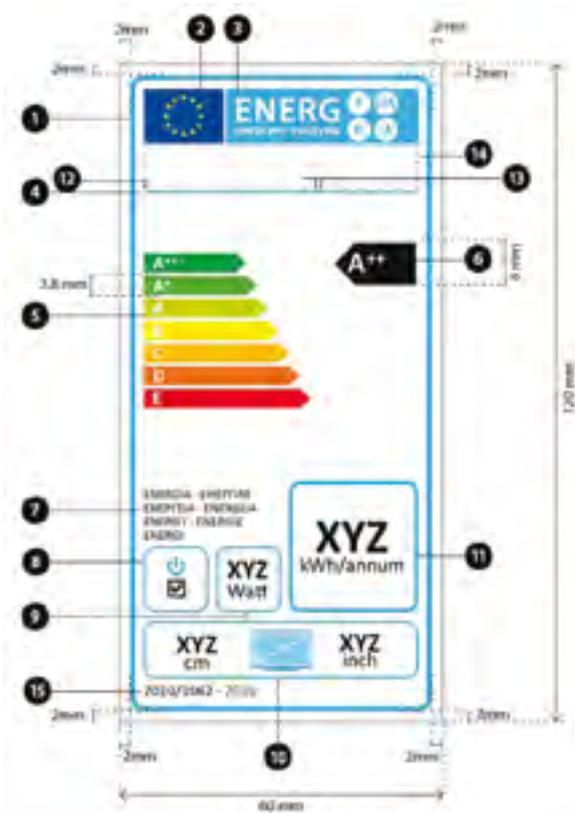


- (a) The information listed in point 1(a) shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 5.

5. The design of the label shall be the following:

Whereby:

- (a) The label shall be at least 60 mm wide and 120 mm high. Where the label is printed in a larger format, its content must nevertheless remain proportionate to the specifications above.
- (b) For televisions with screen area above 29 dm² the background shall be white. For televisions with screen area of 29 dm² or below the background shall be white or transparent.
- (c) Colours are CMYK - cyan, magenta, yellow and black and are given following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.
- (d) The label shall fulfil all of the following requirements (numbers refer to the figure above):



- 1 Border stroke: 3 pt - colour: Cyan 100% - round corners: 3,5 mm.
- 2 EU logo - colours: X-80-00-00 and 00-00-X-00.
- 3 Label logos:
colour: X-00-00-00
Pictogram as depicted; EU logo and label logo (combined): width: 51 mm, height: 9 mm.

- 4 Sub-logos border: 1 pt - colour: Cyan 100 % - length: 51 mm.
- 5 A-G scale
 - Arrow: height: 3,8 mm, gap: 0,75 mm - colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00.
 - Text: Calibri bold 10 pt, capitals, white; '+' symbols: Calibri bold 7 pt, capitals, white.
- 6 Energy efficiency class
 - Arrow: width: 26 mm, height: 8 mm, 100 % black.
 - Text: Calibri bold 15 pt, capitals, white; '+' symbols: Calibri bold 10 pt, capitals, white.
- 7 Energy
 - Text: Calibri regular 7pt, capitals, 100 % black.
- 8 Switch logo:
 - Pictogram as depicted, Border: 1 pt - colour: Cyan 100 % - round corners: 3,5 mm.
- 9 Text related to on-mode power consumption:
 - Border: 1 pt - colour: Cyan 100 % - round corners: 3,5 mm.
 - Value: Calibri bold 14 pt, 100 % black.
 - Second line: Calibri regular 11 pt, 100 % black.
- 10 Television screen diagonal size:
 - Pictogram as depicted
 - Border: 1 pt - colour: Cyan 100 % - round corners: 3,5 mm.
 - Value: Calibri bold 14 pt, 100 % black. Calibri regular 11pt, 100 % black.
- 11 Text related to annual energy consumption:
 - Border: 2 pt - colour: Cyan 100 % - round corners: 3,5 mm.
 - Value: Calibri bold 25 pt, 100 % black.
 - Second line: Calibri regular 11 pt, 100 % black.
- 12 Supplier's name or trade mark
- 13 Supplier's model identifier

- 14 The supplier's name or trade mark and model information should fit in a space of 51 × 8 mm.
- 15 Reference period
 - Text: Calibri bold 8 pt
 - Text: Calibri light 9 pt.

ANNEX VI

Information to be provided in the cases where end-users cannot be expected to see the product displayed

1. The information referred to in Article 4(b) shall be provided in the following order:
 - (a) the energy efficiency class of the model as defined in Annex I;
 - (b) the on-mode power consumption as referred to in point 1 of Annex II;
 - (c) the annual power consumption in accordance with point 2 of Annex II;
 - (d) the visible screen diagonal.
2. Where other information contained in the product information fiche is also provided, it shall be in the form and order specified in Annex III.
3. The size and font in which all the information referred in this Annex is printed or shown shall be legible.

ANNEX VII

Measurements

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements shall be made using a reliable, accurate and reproducible measurement procedure that takes into account the generally recognised state-of-the-art measurement methods, including methods set out in documents the reference numbers of which have been published for that purpose in the Official Journal of the European Union.

2. Measurements of on-mode power consumption referred to in point 1 of Annex II

(a) General conditions:

(i) measurements shall be made at an ambient temperature of $23\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$;

(ii) measurements shall be made using a dynamic broadcast-content video signal representing typical broadcast TV content; The measurement shall be the average power consumed over ten consecutive minutes;

(iii) measurements shall be made after the television has been in the off-mode for a minimum of 1 hour immediately followed by a minimum of 1 hour in the on-mode and shall be completed before a maximum of 3 hours in on-mode. The relevant video signal shall be displayed during the entire on-mode duration. For televisions that are known to stabilise within 1 hour, these durations may be reduced if the resulting measurement can be shown to be within 2 % of the results that would otherwise be achieved using the durations described here;

(iv) measurements shall be made with an uncertainty of less than or equal to 2 % at the 95 % confidence level;

(v) measurements shall be made with the Automatic Brightness Control function, if such a function exists, made inactive. If the Automatic Brightness Control function exists and cannot be made inactive, then the measurements shall be performed with the light entering directly into the ambient light sensor at a level of 300 lux, or more.

(b) Conditions for measuring the on-mode power consumption of televisions:

(i) television sets without forced menu: The power consumption shall be measured in the on-mode condition of the television as delivered by the manufacturer, that is, the brightness controls of the television shall be in the position adjusted by the manufacturer for the end user;

(ii) television sets with forced menu: The power consumption shall be measured in the 'home-mode' condition;

(iii) television monitors without forced menu: The television monitor shall be connected to an appropriate tuner. The power consumption shall be measured in the on-mode condition of the television as delivered by the manufacturer, that is, the brightness controls of the television monitor shall be in the position adjusted by the manufacturer for the end user. The power consumption of the tuner is not relevant for the measurements of on-mode power consumption of the television monitor;

(iv) television monitors with forced menu: The television monitor shall be connected to an appropriate tuner. The power consumption shall be measured in the 'home-mode' condition.

3. Measurements of standby/off-mode power consumption referred to in point 1(g) of Annex III

Measurements of power of 0,50 Watts or greater shall be made with an uncertainty of less than or equal to 2 % at the 95 % confidence level. Measurements of power of less than 0,50 Watts shall be made with an uncertainty of less than or equal to 0,01 Watts at the 95 % confidence level.

4. Measurements of peak luminance referred to in point 2(c) Annex VIII

(a) Measurements of peak luminance shall be made with a luminance meter, detecting that portion of the screen exhibiting a full (100 %) white image, which is part of a 'full screen test' test pattern that does not exceed the average picture level (APL) point where any power limiting occurs in the display luminance drive system.

(b) Measurements of luminance ratio shall be made without disturbing the luminance meter's detection point on the display whilst switching between the home-mode condition or the on-mode condition of the television as set by the supplier, as applicable, and the brightest on-mode condition.

ANNEX VIII

Verification procedure for market surveillance purposes

For the purposes of checking conformity with the requirements laid down in Articles 3 and 4, **Contracting Party** authorities shall apply the following verification procedure for the on-mode power consumption referred to in point 1 of Annex II and the standby/off-mode power consumption referred to in point 1(g) of Annex III.

1. **Contracting Party** authorities shall test one single unit.
2. The model shall be considered to comply with the declared value of the on-mode power consumption and the declared values for standby and/or off-mode power consumption, if:
 - (a) the result for on-mode power consumption does not exceed the declared power consumption value by more than 7%; and
 - (b) the results for standby and off-mode power consumption values, as applicable, do not exceed the declared power consumption values by more than 0.10 Watts; and
 - (c) the result for the peak luminance ratio is above 60%.
3. If the results referred to in point (2)(a) or (b) or (c) are not achieved, three additional units of the same model shall be tested.
4. After three additional units of the same model have been tested, the model shall be considered to comply with the declared value of the on-mode power consumption and the declared values for standby and off-mode power consumption, if:
 - (a) the average of the results for the latter three units for on-mode power consumption does not exceed the declared power consumption value by more than 7%; and
 - (b) the average of the results for the latter three units for standby and off-mode conditions, as applicable, does not exceed the declared power consumption values by more than 0.10 Watts; and
 - (c) the average of the results for the latter three units for the peak luminance ratio is above 60%.
5. If the results referred to in point (4)(a) or (b) or (c) are not achieved, the model shall be considered not to comply with the requirements.



Delegated Regulation (EU) 1061/2010 of 28 September 2010 supplementing Directive 2010/30/EU with regard to energy labelling of household washing machines

Incorporated and adapted by Ministerial Council Decision 2011/03/MC-EnC of 6 October 2011 on adopting certain Delegated Regulations on energy related products.

*The adaptations made by Ministerial Council Decision 2011/03/MC-EnC are highlighted in **bold and blue**.*

Whereas:

(1) Directive 2010/30/EU requires the Commission to adopt delegated acts as regards the labelling of energy-related products representing significant potential for energy savings and having a wide disparity in performance levels with equivalent functionality.

(2) Provisions on the energy labelling of household washing machines were established by Commission Directive 95/12/EC of 23 May 1995 implementing Council Directive 92/75/EEC with regard to energy labelling of household electric washing machines.

(3) The electricity used by household washing machines accounts for a significant share of total household electricity demand in the Union. In addition to the energy efficiency improvements already achieved, the scope for further reducing the energy consumption of household washing machines is substantial.

(4) Directive 95/12/EC should be repealed and new provisions should be laid down by this Regulation in order to ensure that the energy label provides dynamic incentives for suppliers to further improve the energy efficiency of household washing machines and to accelerate the market transformation towards energy-efficient technologies.

(5) Household combined washer-driers fall within the scope of Commission Directive 96/60/EC of 19 September 1996 implementing Council Directive 92/75/EEC with regard to energy labelling of household combined washer-driers and should therefore be excluded from the scope of this Regulation. However, considering that they offer similar functionalities to household washing machines, a revision of Directive 96/60/EC should take place as soon as possible.

(6) The information provided on the label should be obtained through reliable, accurate and reproducible measurement procedures, which take into account the recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations and of rules on Information Society services.

(7) This Regulation should specify a uniform design and content for the label for household washing machines.

(8) In addition, this Regulation should specify requirements as to the technical documentation and the fiche for household washing machines.

(9) Moreover, this Regulation should specify requirements as to the information to be provided for any form of distance selling, advertisements and technical promotional materials for household washing machines.

(10) It is appropriate to provide for a review of the provisions of this Regulation taking into account technological progress.

(11) In order to facilitate the transition from Directive 95/12/EC to this Regulation, provisions should be made that household washing machines labelled in accordance with this Regulation should be considered as compliant with Directive 95/12/EC.

(12) Directive 95/12/EC should therefore be repealed,

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the labelling of and the provision of supplementary product information on electric mains-operated household washing machines and electric mains-operated household washing machines that can also be powered by batteries, including those sold for non-household use and built-in household washing machines.

2. This Regulation shall not apply to household combined washer-driers.

Article 2

Definitions

In addition to the definitions laid down in Article 2 of Directive 2010/30/EU, the following definitions shall apply for the purposes of this Regulation:

(1) “household washing machine” means an automatic washing machine which cleans and rinses textiles using water, which also has a spin extraction function and which is designed to be used principally for non-professional purposes;

(2) “built-in household washing machine” means a household washing machine intended to be installed in a cabinet, a prepared recess in a wall or a similar location, requiring furniture finishing;

(3) “automatic washing machine” means a washing machine where the load is fully treated by the machine without the need for user intervention at any point during the programme;

(4) “household combined washer-drier” means a household washing machine which includes both a spin extraction function and also a means for drying the textiles, usually by heating and tumbling;

(5) “programme” means a series of operations that are pre-defined and which are declared by the supplier as suitable for washing certain types of textile;

(6) “cycle” means a complete washing, rinsing and spinning process, as defined for the selected programme;

(7) “programme time” means the time that elapses from the initiation of the programme until the completion of the programme excluding any end-user programmed delay;

(8) “rated capacity” means the maximum mass in kilograms stated by the supplier at 0.5 kg intervals of dry textiles of a particular type, which can be treated in a household washing machine on the selected programme, when loaded in accordance with the supplier’s instructions;

(9) “partial load” means half of the rated capacity of a household washing machine for a given

programme;

(10) “remaining moisture content” means the amount of moisture contained in the load at the end of the spinning phase;

(11) “off-mode” means a condition where the household washing machine is switched off using appliance controls or switches accessible to and intended for operation by the end-user during normal use to attain the lowest power consumption that may persist for an indefinite time while the household washing machine is connected to a power source and used in accordance with the supplier’s instructions; where there is no control or switch accessible to the end-user, “off-mode” means the condition reached after the household washing machine reverts to a steady-state power consumption on its own;

(12) “left-on mode” means the lowest power consumption mode that may persist for an indefinite time after completion of the programme without any further intervention by the end-user besides unloading of the household washing machine;

(13) “equivalent household washing machine” means a model of household washing machine placed on the market with the same rated capacity, technical and performance characteristics, energy and water consumption and airborne acoustical noise emissions during washing and spinning as another model of household washing machine placed on the market under a different commercial code number by the same supplier;

(14) “end-user” means a consumer buying or expected to buy a household washing machine;

(15) “point of sale” means a location where household washing machines are displayed or offered for sale, hire or hire-purchase.

Article 3

Responsibilities of suppliers

Suppliers shall ensure that:

(a) each household washing machine, is supplied with a printed label in the format and containing information as set out in Annex I;

(b) a product fiche, as set out in Annex II, is made available;

(c) the technical documentation as set out in Annex III is made available on request to the authorities of the **Contracting Parties** and to the **Secretariat**;

(d) any advertisement for a specific model of household washing machine contains the energy efficiency class, if the advertisement discloses energy-related or price information;

(e) any technical promotional material concerning a specific model of household washing machine which describes its specific technical parameters includes the energy efficiency class of that model.

Article 4

Responsibilities of dealers

Dealers shall ensure that:

- (a) each household washing machine, at the point of sale, bears the label provided by suppliers in accordance with Article 3(a) on the outside of the front or top of the household washing machine, in such a way as to be clearly visible;
- (b) household washing machines offered for sale, hire or hire-purchase where the end-user cannot be expected to see the product displayed are marketed with the information to be provided by suppliers in accordance with Annex IV;
- (c) any advertisement for a specific model of household washing machine contains a reference to its energy efficiency class, if the advertisement discloses energy-related or price information;
- (d) any technical promotional material concerning a specific model of household washing machine, which describes its specific technical parameters includes a reference to the energy efficiency class of that model.

Article 5

Measurement methods

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement procedures, which take into account the recognised state-of-the-art measurement methods.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure laid down in Annex V when assessing the conformity of the declared energy efficiency class, the annual energy consumption, annual water consumption, spin-drying efficiency class, power consumption in off-mode and left-on mode, duration of the left-on mode, remaining moisture content, spin speed and airborne acoustical noise emissions.

Article 7

Revision

...

Article 8

Repeal

...

Article 9

Transitional provisions

1. Articles 3(d), (e), 4(b), (c) and (d) shall not apply to printed advertisements and printed technical promotional material published before **30 April 2013**.
2. Household washing machines placed on the market before **31 December 2012** shall comply with the provisions set out in Directive 95/12/EC.
3. ...

Article 10

Entry into force and application

1. **This Decision [2011/03/MC-EnC] enters into force upon its adoption**¹
2. It shall apply from **31 December 2012**. However, Articles 3(d), (e), 4(b), (c) and (d) shall apply from **30 April 2013**.

This Regulation shall be binding in its entirety and directly applicable in all **Contracting Parties**.

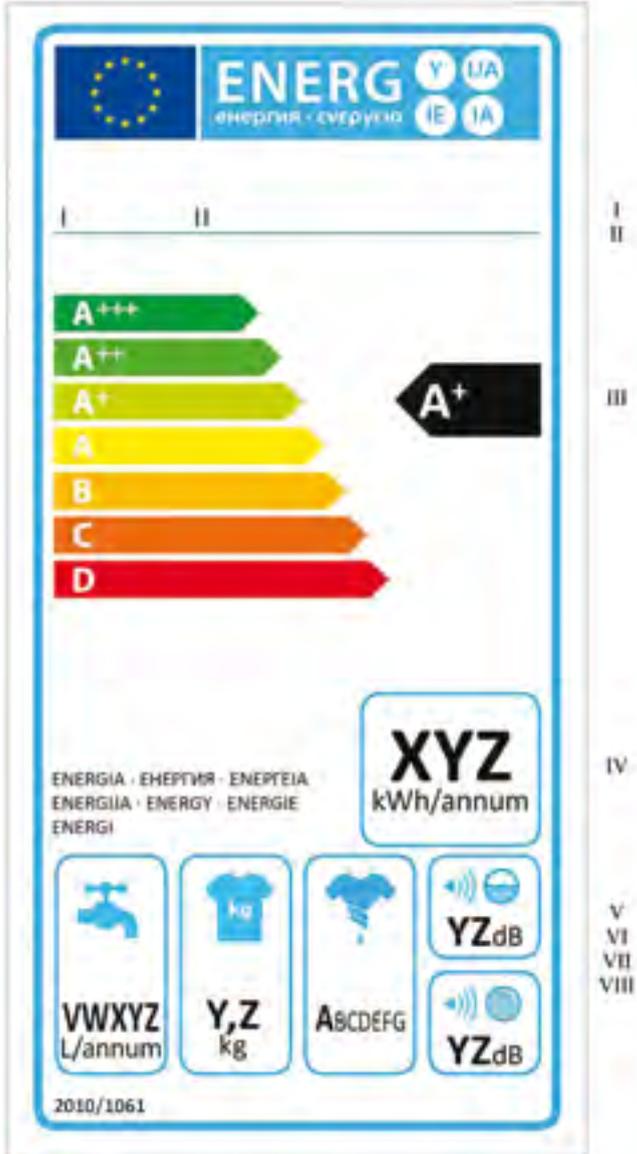
Article 2(5) of Decision 2011/03/MC-EnC

The Secretariat shall monitor and review the implementation of [this] Delegated Regulation ... and shall submit a progress report to the Permanent High Level Group by 1 October 2013.

¹ The text displayed here corresponds to Article 3(1) of Decision 2011/03/MC-EnC.

ANNEX I Label

1. LABEL



(1) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier, meaning the code, usually alphanumeric, which distinguishes a specific household washing machine model from other models with the same trade mark or supplier's name;

III. the energy efficiency class determined in accordance with point 1 of Annex VI; the head of the arrow containing the energy efficiency class of the household washing machine shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

IV. weighted annual energy consumption (AE_c) in kWh per year, rounded up to the nearest integer in accordance with Annex VII;

V. weighted annual water consumption (AW_c), in litres per year, rounded up to the nearest integer in accordance with Annex VII;

VI. rated capacity, in kg, for the standard 60 °C cotton programme at full load or the standard 40 °C cotton programme at full load, whichever is the lower;

VII. the spin-drying efficiency class as set out in point 2 of Annex VI;

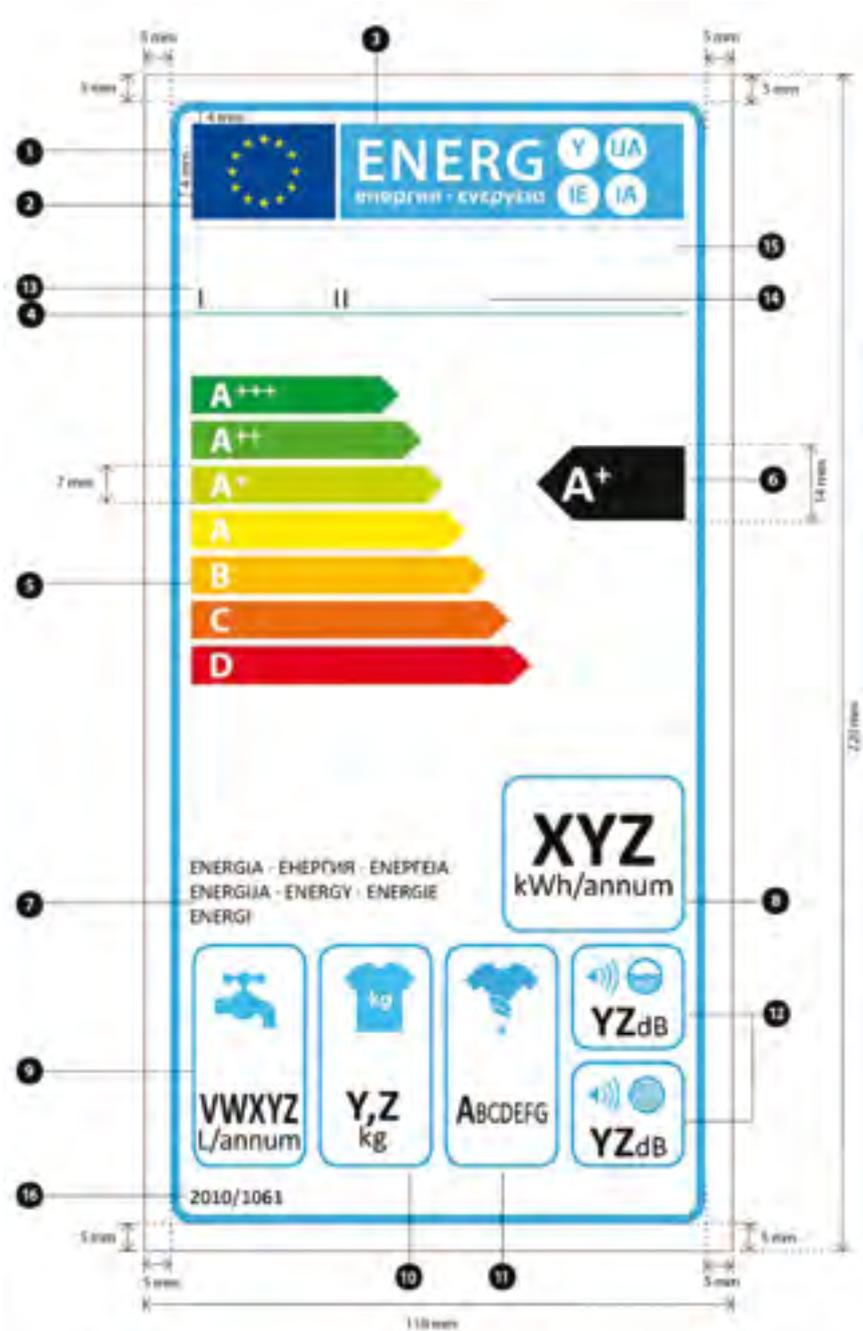
VIII. airborne acoustical noise emissions, during the washing and spinning phases, for the standard 60 °C cotton programme at full load, expressed in dB(A) re 1 pW, rounded to the nearest integer.

(2) The design of the label shall be in accordance with point 2. By way of derogation, where a model has been awarded an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council¹, a copy of the EU Ecolabel may be added.

¹ OJ L 27, 30.1.2010, p. 1.

2. LABEL DESIGN

The design of the label shall be as in the figure below.



Whereby:

(a) The label must be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content must nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours shall be CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- ❶ Border stroke: 5 pt - colour: Cyan 100% - round corners: 3,5 mm.
- ❷ EU logo - colours: X-80-00-00 and 00-00-X-00.
- ❸ Energy logo: colour: X-00-00-00.
Pictogram as depicted: EU logo and energy logo (combined): width: 92 mm, height: 17 mm.
- ❹ Sub-logos border: 1 pt - colour: Cyan 100% - length: 92,5 mm.
- ❺ A-G scale
 - Arrow: height: 7 mm, gap: 0,75 mm - colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00.
 - Text: Calibri bold 18 pt, capitals and white; '+' symbols: Calibri bold 12 pt, capitals, white, aligned on a single row.
- ❻ Energy efficiency class
 - Arrow: width: 26 mm, height: 14 mm, 100% black.
 - Text: Calibri bold 29 pt, capitals and white; '+' symbols: Calibri bold 18 pt, capitals, white, aligned on a single row.
- ❼ Energy: text: Calibri regular 11 pt, capitals, 100% black.
- ❽ Weighted annual energy consumption
 - Border: 2 pt - colour: Cyan 100% - round corners: 3,5 mm.
 - Value: Calibri bold 42 pt, 100% black; and Calibri regular 17 pt, 100% black.

- 9 Weighted annual water consumption
 - Pictogram as depicted
 - Border: 2 pt - colour: Cyan 100% - round corners: 3,5 mm.
 - Value: Calibri bold 24 pt, 100% black; and Calibri regular 16 pt, 100% black.
- 10 Rated capacity
 - Pictogram as depicted
 - Border: 2 pt - colour: Cyan 100% - round corners: 3,5 mm.
 - Value: Calibri bold 24 pt, 100% black; and Calibri regular 16 pt, 100% black.
- 11 Spin-drying efficiency class
 - Pictogram as depicted
 - Border: 2 pt - colour: Cyan 100% - round corners: 3,5 mm.
 - Value: Calibri regular 16 pt, horizontal scale 75%, 100% black and Calibri Bold 22 pt, horizontal scale 75%, 100% black.
- 12 Airborne acoustical noise emissions
 - Pictograms as depicted
 - Border: 2 pt - colour: Cyan 100% - round corners: 3,5 mm.
 - Value: Calibri bold 24 pt, 100% black; and Calibri regular 16 pt, 100% black.
- 13 Supplier's name or trade mark
- 14 Supplier's model identifier
- 15 The supplier's name or trademark and model identifier should fit in a space of 92 × 15 mm.
- 16 Numbering of the Regulation: Calibri bold 12 pt, 100% black.

ANNEX II

Product fiche

1. The information in the product fiche of the household washing machine shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trade mark;
- (b) supplier's model identifier, meaning the code, usually alphanumeric, which distinguishes a specific household washing machine model from other models with the same trade mark or supplier's name;
- (c) rated capacity in kg of cotton for the standard 60 °C cotton programme at full load or the 40 °C cotton programme at full load, whichever is the lower;
- (d) energy efficiency class in accordance with point 1 of Annex VI;
- (e) where the household washing machine has been awarded an 'EU Ecolabel award' under Regulation (EC) No 66/2010, this information may be included;
- (f) weighted annual energy consumption (AE_c) in kWh per year, rounded up to the nearest integer; it shall be described as: 'Energy consumption "X" kWh per year, based on 220 standard washing cycles for cotton programmes at 60 °C and 40 °C at full and partial load, and the consumption of the low-power modes. Actual energy consumption will depend on how the appliance is used.';
- (g) the energy consumption ($E_{t,60}$, $E_{t,60\frac{1}{2}}$, $E_{t,40\frac{1}{2}}$) of the standard 60 °C cotton programme at full load and partial load and of the standard 40 °C cotton programme at partial load;
- (h) weighted power consumption of the off-mode and of the left-on mode;
- (i) weighted annual water consumption (AW_c) in litres per year, rounded up to the nearest integer; it shall be described as: 'Water consumption "X" litres per year, based on 220 standard washing cycles for cotton programmes at 60 °C and 40 °C at full and partial load. Actual water consumption will depend on how the appliance is used.';
- (j) spin-drying efficiency class determined in accordance with point 2 of Annex VI, expressed as 'spin-drying efficiency class "X" on a scale from G (least efficient) to A (most efficient)'; this may be expressed by other means provided it is clear that the scale is from G (least efficient) to A (most efficient);
- (k) maximum spin speed attained for the standard 60 °C cotton programme at full load or the standard 40 °C cotton programme at partial load, whichever is the lower, and remaining moisture content attained for the standard 60 °C cotton programme at full load or the standard 40 °C cotton programme at partial load, whichever is the greater;
- (l) indication that the 'standard 60 °C cotton programme' and the 'standard 40 °C cotton programme' are the standard washing programmes to which the information in the label and the fiche relates, that these programmes are suitable to clean normally soiled cotton laundry and that they are the most efficient programmes in terms of combined energy and water consumption;
- (m) the programme time of the 'standard 60 °C cotton programme' at full and partial load and of the 'standard 40 °C cotton programme' at partial load in minutes and rounded to the nearest minute;
- (n) the duration of the left-on mode (T) if the household washing machine is equipped with a power management system;

(o) airborne acoustical noise emissions expressed in dB(A) re 1 pW and rounded to the nearest integer during the washing and spinning phases for the standard 60 °C cotton programme at full load;

(p) if the household washing machine is intended to be built-in, an indication to this effect.

2. One fiche may cover a number of household washing machine models supplied by the same supplier.

3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1 not already displayed on the label shall also be provided.

ANNEX III

Technical documentation

1. The technical documentation referred to in Article 3(c) shall include:

- (a) the name and address of the supplier;
- (b) a general description of the washing machine model, sufficient for it to be unequivocally and easily identified;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) identification and signature of the person empowered to bind the supplier;
- (f) an indication stating whether the household washing machine model releases or not silver ions during the washing cycle as follows: 'This product releases/does not release silver ions during the washing cycle.';
- (g) technical parameters for measurements as follows:
 - (i) energy consumption;
 - (ii) programme time;
 - (iii) water consumption;
 - (iv) power consumption in 'off-mode';
 - (v) power consumption in 'left-on mode';
 - (vi) 'left-on mode' duration;
 - (vii) remaining moisture content;
 - (viii) airborne acoustical noise emissions;
 - (ix) maximum spin speed;
- (h) the results of calculations performed in accordance with Annex VII.

2. Where the information included in the technical documentation file for a particular household washing machine model has been obtained by calculation on the basis of design, or extrapolation from other equivalent household washing machines or both, the documentation shall include details of such calculations or extrapolations, or both, and of tests undertaken by suppliers to verify the accuracy of the calculations undertaken. The information shall also include a list of all other equivalent household washing machine models where the information was obtained on the same basis.

ANNEX IV

Information to be provided in the cases where end-users cannot be expected to see the product displayed

1. The information referred to in Article 4(b) shall be provided in the following order:
 - (a) the rated capacity in kg of cotton, for the standard 60 °C cotton programme at full load or the standard 40 °C cotton programme at full load, whichever is the lower;
 - (b) the energy efficiency class as defined in point 1 of Annex VI;
 - (c) the weighted annual energy consumption in kWh per year, rounded up to the nearest integer and calculated in accordance with point 1(c) of Annex VII;
 - (d) the weighted annual water consumption in litres per year, rounded up to the nearest integer and calculated in accordance with point 2(a) of Annex VII;
 - (e) the spin-drying efficiency class in accordance with point 2 of Annex VI;
 - (f) the maximum spin speed attained for the standard 60 °C cotton programme at full load or the standard 40 °C cotton programme at partial load, whichever is the lower, and the remaining moisture content attained for the standard 60 °C cotton programme at full load or the standard 40 °C cotton programme at partial load, whichever is the greater;
 - (g) airborne acoustical noise emissions during the washing and spinning phases, for the standard 60 °C cotton programme at full load, expressed in dB(A) re 1 pW and rounded to the nearest integer;
 - (h) if the household washing machine is produced in order to be built-in, an indication to this effect.
2. Where other information contained in the product fiche is also provided, it shall be in the form and order specified in Annex II.
3. The size and font, in which all the information referred in this Annex is printed or shown, shall be legible.

ANNEX V

Verification procedure for market surveillance purposes

For the purposes of checking conformity with the requirements laid down in Articles 3 and 4, **Contracting Party** authorities shall test a single household washing machine. If the measured parameters do not meet the values declared by the supplier within the ranges set out in Table 1, the measurements shall be carried out on three more household washing machines. The arithmetic mean of the measured values of these three household washing machines shall meet the values declared by the supplier within the range defined in Table 1, except for the energy consumption, where the measured value shall not be greater than the rated value of E_t by more than 6%.

Otherwise, the model and all other equivalent household washing machines models shall be considered not to comply with the requirements laid down in Articles 3 and 4.

Contracting Party authorities shall use reliable, accurate and reproducible measurement procedures, which take into account the generally recognised state-of-the-art measurement methods, including methods set out in documents the reference numbers of which have been published for that purpose in the Official Journal of the European Union.

Table 1

Measured parameter	Verification tolerances
Annual energy consumption	The measured value shall not be greater than the rated value (*) of AE_c by more than 10%.
Energy consumption	The measured value shall not be greater than the rated value of E_t by more than 10%.
Programme time	The measured value shall not be longer than the rated values T_t by more than 10%.
Water consumption	The measured value shall not be greater than the rated value of W_t by more than 10%.
Remaining moisture content	The measured value shall not be greater than the rated value of D by more than 10%.
Spin speed	The measured value shall not be less than the rated value by more than 10%.
Power consumption in off-mode and left-on mode	The measured value of power consumption P_o and P_l of more than 1.00 W shall not be greater than the rated value by more than 10%. The measured value of power consumption P_o and P_l of less than or equal to 1,00 W shall not be greater than the rated value by more than 0.10 W.
Duration of the left-on mode	The measured value shall not be longer than the rated value of T_l by more than 10%.
Airborne acoustical noise emissions	The measured value shall meet the rated value.

(*) 'Rated value' means a value that is declared by the supplier.

ANNEX VI

Energy efficiency classes and spin-drying efficiency classes

1. ENERGY EFFICIENCY CLASSES

The energy efficiency class of a household washing machine shall be determined on the basis of its Energy Efficiency Index (EEI) as set out in Table 1.

The Energy Efficiency Index (EEI) of a household washing machine shall be determined in accordance with point 1 of Annex VII.

Table 1

Energy efficiency classes

Energy efficiency class	Energy Efficiency Index
A+++ (most efficient)	$EEI < 46$
A++	$46 \leq EEI < 52$
A+	$52 \leq EEI < 59$
A	$59 \leq EEI < 68$
B	$68 \leq EEI < 77$
C	$77 \leq EEI < 87$
D (least efficient)	$EEI \geq 87$

2. SPIN-DRYING EFFICIENCY CLASSES

The spin-drying efficiency class of a household washing machine shall be determined on the basis of the remaining moisture content (D) as set out in Table 2.

The remaining moisture content (D) of a household washing machine shall be determined in accordance with point 3 of Annex VII.

Table 2

Spin-drying efficiency classes

Spin-drying efficiency class	Remaining moisture content (%)
A (most efficient)	$D < 45$
B	$45 \leq D < 54$
C	$54 \leq D < 63$
D	$63 \leq D < 72$
E	$72 \leq D < 81$
F	$81 \leq D < 90$
G (least efficient)	$D \geq 90$

ANNEX VII

Method for calculating the energy efficiency index, annual water consumption and remaining moisture content

1. CALCULATION OF THE ENERGY EFFICIENCY INDEX

For the calculation of the Energy Efficiency Index (EEI) of a household washing machine model, the weighted annual energy consumption of a household washing machine for the standard 60 °C cotton programme at full and partial load and for the standard 40 °C cotton programme at partial load is compared to its standard annual energy consumption.

(a) The Energy Efficiency Index (EEI) is calculated as follows and rounded to one decimal place:

$$\text{where:} \quad EEI = \frac{AE_c}{SAE_c} \times 100$$

AE_c = annual energy consumption of the household washing machine;

SAE_c = standard annual energy consumption of the household washing machine.

(b) The standard annual energy consumption (SAE_c) is calculated in kWh/year as follows and rounded to two decimal places:

$$SAE_c = 47,0 \times c + 51,7$$

where:

c = rated capacity of the household washing machine for the standard 60 °C cotton programme at full load or the standard 40 °C cotton programme at full load, whichever is the lower.

(c) The weighted annual energy consumption (AE_c) is calculated in kWh/year as follows and is rounded to two decimal places:

$$AE_c = E_t \times 220 + \frac{\left[P_o \times \frac{525\,600 - (T_t \times 200)}{2} + P_l \times \frac{525\,600 - (T_t \times 200)}{2} \right]}{60 \times 1\,000}$$

where:

E_t = weighted energy consumption;

P_o = weighted power in 'off-mode';

P_l = weighted power in the 'left-on mode';

T_t = weighted programme time;

220 = total number of standard washing cycles per year.

(ii) Where the household washing machine is equipped with a power management system, with the household washing machine reverting automatically to 'off-mode' after the end of the programme, the weighted annual energy consumption (AE_c) is calculated taking into consideration the effective duration of 'left-on mode', according to the following formula:

$$AE_c = E_t \times 220 + \frac{\{(P_l \times T_l \times 220) + P_o \times [525\,600 - (T_l \times 200) - (T_l \times 200)]\}}{60 \times 1\,000}$$

where:

T_l = time in 'left-on mode'.

(d) The weighted energy consumption (E_t) is calculated in kWh as follows and rounded to three decimal places:

$$E_t = [3 \times E_{t,60} + 2 \times E_{t,60\frac{1}{2}} + 2 \times E_{t,40\frac{1}{2}}]/7$$

where:

$E_{t,60}$ = energy consumption of the standard 60 °C cotton programme at full load;

$E_{t,60\frac{1}{2}}$ = energy consumption of the standard 60 °C cotton programme at partial load;

$E_{t,40\frac{1}{2}}$ = energy consumption of the standard 40 °C cotton programme at partial load.

(e) The weighted power in 'off-mode' (P_o) is calculated in W as follows and rounded to two decimal places:

$$P_o = (3 \times P_{o,60} + 2 \times P_{o,60\frac{1}{2}} + 2 \times P_{o,40\frac{1}{2}})/7$$

where:

$P_{o,60}$ = power in 'off-mode' of the standard 60 °C cotton programme at full load;

$P_{o,60\frac{1}{2}}$ = power in 'off-mode' of the standard 60 °C cotton programme at partial load;

$P_{o,40\frac{1}{2}}$ = power in 'off-mode' of the standard 40 °C cotton programme at partial load.

(f) The weighted power in the 'left-on mode' (P_l) is calculated in W as follows and rounded to two decimal places:

$$P_l = (3 \times P_{l,60} + 2 \times P_{l,60\frac{1}{2}} + 2 \times P_{l,40\frac{1}{2}})/7$$

where:

$P_{l,60}$ = power in 'left-on mode' of the standard 60 °C cotton programme at full load;

$P_{l,60\frac{1}{2}}$ = power in 'left-on mode' of the standard 60 °C cotton programme at partial load;

$P_{l,40\frac{1}{2}}$ = power in 'left-on mode' of the standard 40 °C cotton programme at partial load.

(g) The weighted programme time (T_t) is calculated in minutes as follows and rounded to the nearest minute:

$$T_t = (3 \times T_{t,60} + 2 \times T_{t,60\frac{1}{2}} + 2 \times T_{t,40\frac{1}{2}})/7$$

where:

$T_{t,60}$ = programme time of the standard 60 °C cotton programme at full load;

$T_{t,60\frac{1}{2}}$ = programme time of the standard 60 °C cotton programme at partial load;

$T_{t,40\frac{1}{2}}$ = programme time of the standard 40 °C cotton programme at partial load.

(h) The weighted time in 'left-on mode' (T_l) is calculated in minutes as follows and rounded to the nearest minute:

$$T_l = (3 \times T_{l,60} + 2 \times T_{l,60\frac{1}{2}} + 2 \times T_{l,40\frac{1}{2}})/7$$

where:

$T_{l,60}$ = time in 'left-on mode' of the standard 60 °C cotton programme at full load;

$T_{l,60\frac{1}{2}}$ = time in 'left-on mode' of the standard 60 °C cotton programme at partial load;

$T_{l,40\frac{1}{2}}$ = time in 'left-on mode' of the standard 40 °C cotton programme at partial load.

2. CALCULATION OF THE WEIGHTED ANNUAL WATER CONSUMPTION

(a) The weighted annual water consumption (AW_c) of a household washing machine is calculated in litres as follows and rounded up to the integer:

$$AW_c = W_t \times 220$$

where:

W_t = weighted water consumption;

220 = total number of standard washing cycles per year.

(b) The weighted water consumption (W_t) is calculated in litres as follows and rounded up to the integer

$$W_t = (3 \times W_{t,60} + 2 \times W_{t,60\frac{1}{2}} + 2 \times W_{t,40\frac{1}{2}})/7$$

where:

$W_{t,60}$ = water consumption of the standard 60 °C cotton programme at full load;

$W_{t,60\frac{1}{2}}$ = water consumption of the standard 60 °C cotton programme at partial load;

$W_{t,40\frac{1}{2}}$ = water consumption of the standard 40 °C cotton programme at partial load.

3. CALCULATION OF THE WEIGHTED REMAINING MOISTURE CONTENT

The weighted remaining moisture content (D) of a household washing machine is calculated in percentage as follows and rounded to the nearest whole percent:

$$D = (3 \times D_{60} + 2 \times D_{60\frac{1}{2}} + 2 \times D_{40\frac{1}{2}}) / 7$$

where:

D_{60} is the residual moisture content for the standard 60 °C cotton programme at full load, in percentage and rounded to the nearest whole per cent;

$D_{60\frac{1}{2}}$ is the residual moisture content for the standard 60 °C cotton programme at partial load, in percentage and rounded to the nearest whole per cent;

$D_{40\frac{1}{2}}$ is the residual moisture content for the standard 40 °C cotton programme at partial load, in percentage and rounded to the nearest whole per cent.



Delegated Regulation (EU) 1060/2010 of 28 September 2010 supplementing Directive 2010/30/EU with regard to energy labelling of household refrigerating appliances

Incorporated and adapted by Ministerial Council Decision 2011/03/MC-EnC of 6 October 2011 on adopting certain Delegated Regulations on energy related products.

*The adaptations made by Ministerial Council Decision 2011/03/MC-EnC are highlighted in **bold and blue**.*

Whereas:

(1) Directive 2010/30/EU requires the Commission to adopt delegated acts as regards the labelling of energy-related products representing significant potential for energy savings and having a wide disparity in performance levels with equivalent functionality.

(2) Provisions on the energy labelling of household refrigerating appliances were established by Commission Directive 94/2/EC of 21 January 1994 implementing Council Directive 92/75/EEC with regard to energy labelling of household electric refrigerators, freezers and their combinations.

(3) The electricity used by household refrigerating appliances accounts for a significant share of total household electricity demand in the Union. In addition to the energy efficiency improvements already achieved, the scope for further reducing the energy consumption of household refrigerating appliances is substantial.

(4) Directive 94/2/EC should be repealed and new provisions should be laid down by this Regulation in order to ensure that the energy label provides dynamic incentives for manufacturers to further improve the energy efficiency of household refrigerating appliances and to accelerate the market transformation towards energy-efficient technologies.

(5) The combined effect of the provisions set out in this Regulation, and in Commission Regulation (EC) No 643/2009 of 22 July 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for household refrigerating appliances¹, could amount to annual electricity savings of 6 TWh by 2020², compared to the situation if no measures were taken.

(6) There is also an opportunity for energy savings for products in the growing markets of absorption-type refrigerating appliances and wine storage appliances. Those appliances should therefore be included in the scope of this Regulation.

(7) Absorption-type refrigerating appliances are noiseless, but consume significantly more energy than compression-type appliances. In order for end-users to make an informed decision, information on airborne acoustical noise emissions of household refrigerating appliances should be included on the label.

(8) The information provided on the label should be obtained through reliable, accurate and reproducible measurement procedures that take into account the recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Directive 98/34/EC of the European Parliament and of the

¹ OJ L 191, 23.7.2009, p. 53.

² When measured according to Cenelec standard EN 153, February 2006/EN ISO 15502, October 2005.

Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations and of rules on Information Society services³.

(9) This Regulation should specify a uniform design and content for the label for household refrigerating appliances.

(10) In addition, this Regulation should specify requirements as to the technical documentation and the fiche for household refrigerating appliances.

(11) Moreover, this Regulation should specify requirements as to the information to be provided for any form of distance selling, advertisements and technical promotional materials for household refrigerating appliances.

(12) It is appropriate to provide for a review of the provisions of this Regulation taking into account technological progress.

(13) In order to facilitate the transition from Directive 94/2/EC to this Regulation, household refrigerating appliances labelled in accordance with this Regulation should be considered compliant with Directive 94/2/EC.

(14) Directive 94/2/EC should therefore be repealed,

Article 1

Subject matter and scope

1. This Regulation establishes requirements for the labelling of and the provision of supplementary product information on electric mains-operated household refrigerating appliances with a storage volume between 10 and 1500 litres.

2. This Regulation shall apply to electric mains-operated household refrigerating appliances, including those sold for non-household use or for the refrigeration of items other than foodstuffs and including built-in appliances.

It shall also apply to electric mains-operated household refrigerating appliances that can be battery-operated.

3. This Regulation shall not apply to:

(a) refrigerating appliances that are primarily powered by energy sources other than electricity, such as liquefied petroleum gas (LPG), kerosene and bio-diesel fuels;

(b) battery-operated refrigerating appliances that can be connected to the mains through an AC/DC converter, purchased separately;

(c) custom-made refrigerating appliances, made on a one-off basis and not equivalent to other refrigerating appliance models;

(d) refrigerating appliances for tertiary sector application where the removal of refrigerated foodstuffs is electronically sensed and that information can be automatically transmitted through a network connection to a remote control system for accounting;

(e) appliances where the primary function is not the storage of foodstuffs through refrigeration, such as stand-alone ice-makers or chilled drinks dispensers.

³ OJ L 204, 21.7.1998, p. 37.

Article 2

Definitions

In addition to the definitions laid down in Article 2 of Directive 2010/30/EU, the following definitions shall apply:

- (1) “foodstuffs” means food, ingredients, beverages including wine, and other items primarily intended for consumption which require refrigeration at specified temperatures;
- (2) “household refrigerating appliance” means an insulated cabinet, with one or more compartments, intended for refrigerating or freezing foodstuffs, or for the storage of refrigerated or frozen foodstuffs for non-professional purposes, cooled by one or more energy-consuming processes, including appliances sold as building kits to be assembled by the end-user;
- (3) “built-in appliance” means a fixed refrigerating appliance intended to be installed in a cabinet, in a prepared recess in a wall or similar location, and requiring furniture finishing;
- (4) “refrigerator” means a refrigerating appliance intended for the preservation of foodstuffs with at least one compartment suitable for the storage of fresh food and/or beverages, including wine;
- (5) “compression-type refrigerating appliance” means a refrigerating appliance in which refrigeration is effected by means of a motor-driven compressor;
- (6) “absorption-type refrigerating appliance” means a refrigerating appliance in which refrigeration is effected by an absorption process using heat as the energy source;
- (7) “refrigerator-freezer” means a refrigerating appliance with at least one fresh-food storage compartment and at least one compartment suitable for the freezing of fresh food and the storage of frozen foodstuffs under three-star storage conditions (the food-freezer compartment);
- (8) “frozen-food storage cabinet” means a refrigerating appliance with one or more compartments suitable for the storage of frozen foodstuffs;
- (9) “food freezer” means a refrigerating appliance with one or more compartments suitable for freezing foodstuffs with temperatures ranging from ambient temperature down to – 18 °C, and which is also suitable for the storage of frozen foodstuffs under three-star storage conditions; a food freezer may also include two-star sections and/or compartments within the compartment or cabinet;
- (10) “wine storage appliance” means a refrigerating appliance that has no compartment other than one or more wine storage compartments;
- (11) “multi-use appliance” means a refrigerating appliance that has no compartment other than one or more multi-use compartments;
- (12) “equivalent household refrigerating appliance” means a household refrigerating appliance model placed on the market with the same gross and storage volumes, same technical, efficiency and performance characteristics, and same compartment types as another household refrigerating appliance model placed on the market under a different commercial code number by the same manufacturer;
- (13) “end-user” means a consumer buying or expected to buy a household refrigerating appliance;
- (14) “point of sale” means a location where household refrigerating appliances are displayed or offered for sale, hire or hire-purchase.

The definitions set out in Annex I shall also apply.

Article 3

Responsibilities of suppliers

Suppliers shall ensure that:

- (a) each household refrigerating appliance is supplied with a printed label in the format and containing information as set out in Annex II;
- (b) a product fiche, as set out in Annex III, is made available;
- (c) the technical documentation as set out in Annex IV is made available on request to the authorities of **Contracting Parties** and to the **Secretariat**;
- (d) any advertisement for a specific model of household refrigerating appliance contains the energy efficiency class, if the advertisement discloses energy-related or price information;
- (e) any technical promotional material concerning a specific model of household refrigerating appliance which describes its specific technical parameters includes the energy efficiency class of that model.

Article 4

Responsibilities of dealers

Dealers shall ensure that:

- (a) each household refrigerating appliance at the point of sale bears the label provided by suppliers in accordance with Article 3(a) on the outside of the front or top of the appliance, in such a way as to be clearly visible;
- (b) household refrigerating appliances offered for sale, hire or hire purchase where the end-user cannot be expected to see the product displayed, are marketed with the information to be provided by the suppliers in accordance with Annex V;
- (c) any advertisement for a specific model of household refrigerating appliance contains its energy efficiency class, if the advertisement discloses energy-related or price information;
- (d) any technical promotional material concerning a specific model of household refrigerating appliance, which describes its specific technical parameters, includes the energy efficiency class of that model.

Article 5

Measurement methods

The information to be provided pursuant to Article 3 shall be obtained by reliable, accurate and reproducible measurement procedures, which take into account the recognised state-of-the-art measurement methods, as set out in Annex VI.

Article 6**Verification procedure for market surveillance purposes**

Contracting Parties shall apply the procedure laid down in Annex VII when assessing the conformity of the declared energy efficiency class, the annual energy consumption, the fresh and frozen food volumes, the freezing capacity and the airborne acoustical noise emissions.

Article 7**Revision**

...

Article 8**Repeal**

...

Article 9**Transitional provisions**

1. Articles 3(d), (e), 4(b), (c) and (d) shall not apply to printed advertisement and printed technical promotional material published before **30 April 2013**.
2. Household refrigerating appliances placed on the market before **31 December 2012** shall comply with the provisions set out in Directive 94/2/EC.
3. Household refrigerating appliances which comply with the provisions of this Regulation and which are placed on the market or offered for sale, hire or hire-purchase before **31 December 2012** shall be regarded as complying with the requirements of Directive 94/2/EC.

Article 10**Entry into force and application**

1. **This Decision [2011/03/MC-EnC] enters into force upon its adoption**⁴
2. It shall apply from **31 December 2012**. However, Articles 3(d), (e), 4(b), (c) and (d) shall apply from **30 April 2013**.

This Regulation shall be binding in its entirety and directly applicable in all **Contracting Parties**.

⁴ The text displayed here corresponds to Article 3(1) of Decision 2011/03/MC-EnC.

Article 2(5) of Decision 2011/03/MC-EnC

The Secretariat shall monitor and review the implementation of [this] Delegated Regulation ... and shall submit a progress report to the Permanent High Level Group by 1 October 2013.

ANNEX I

Definitions applicable for the purposes of Annexes II to IX

For the purposes of Annexes II to IX, the following definitions shall apply:

- (a) 'frost-free system' means a system automatically operated to prevent the permanent formation of frost, where cooling is provided by forced air circulation, the evaporator or evaporators are defrosted by an automatic defrost system, and the water from defrosting is disposed of automatically;
- (b) 'frost-free compartment' means any compartment defrosted by a frost-free system;
- (c) 'refrigerator-cellar' means a refrigerating appliance where at least one fresh-food storage compartment and one cellar compartment, but no frozen-food storage, chill or ice-making compartments, are present;
- (d) 'cellar' means a refrigerating appliance where only one or more cellar compartments are present;
- (e) 'refrigerator-chiller' means a refrigerating appliance where at least a fresh-food storage compartment and a chill compartment, but no frozen-food storage compartments, are present;
- (f) 'compartments' means any of the compartments listed in points (g) to (n);
- (g) 'fresh-food storage compartment' means a compartment designed for the storage of unfrozen foodstuffs, which may itself be divided into sub-compartments;
- (h) 'cellar compartment' means a compartment intended for the storage of particular foodstuffs or beverages at a temperature warmer than that of a fresh-food storage compartment;
- (i) 'chill compartment' means a compartment intended specifically for the storage of highly perishable foodstuffs; (j) 'ice-making compartment' means a low-temperature compartment intended specifically for the freezing and storage of ice;
- (k) 'frozen-food storage compartment' means a low-temperature compartment intended specifically for the storage of frozen foodstuffs and classified according to temperature as follows:
 - (i) 'one-star compartment': a frozen-food storage compartment in which the temperature is not warmer than $-6\text{ }^{\circ}\text{C}$;
 - (ii) 'two-star compartment': a frozen-food storage compartment in which the temperature is not warmer than $-12\text{ }^{\circ}\text{C}$;
 - (iii) 'three-star compartment': a frozen-food storage compartment in which the temperature is not warmer than $-18\text{ }^{\circ}\text{C}$;
 - (iv) 'food freezer compartment' (or 'four-star compartment'): a compartment suitable for freezing at least 4,5 kg of foodstuffs per 100 l of storage volume, and in no case less than 2 kg, from ambient temperature down to $-18\text{ }^{\circ}\text{C}$ over a period of 24 hours, which is also suitable for the storage of frozen food under three-star storage conditions, and may include two-star sections within the compartment;
 - (v) '0-star compartment': a frozen-food storage compartment in which the temperature is $< 0\text{ }^{\circ}\text{C}$ and which can also be used for the freezing and storage of ice but is not intended for the storage of highly perishable foodstuffs;

(l) 'wine storage compartment' means a compartment exclusively designed either for short-term wine storage to bring wines to the ideal drinking temperature or for long-term wine storage to allow wine to mature, with the following features:

(i) continuous storage temperature, either pre-set or set manually according to the manufacturer's instructions, in the range from + 5 °C to + 20 °C;

(ii) storage temperature(s) within a variation over time of less than 0,5 K at each declared ambient temperature specified by the climate class for household refrigerating appliances;

(iii) active or passive control of the compartment humidity in the range from 50% to 80%;

(iv) constructed to reduce the transmission of vibration to the compartment, whether from the refrigerator compressor or from any external source;

(m) 'multi-use compartment' means a compartment intended for use at two or more of the temperatures of the compartment types and capable of being set by the end-user to continuously maintain the operating temperature range applicable to each compartment type according to the manufacturer's instructions; however, where a feature can shift temperatures in a compartment to a different operating temperature range for a period of limited duration only (such as a fast-freeze facility), the compartment is not a 'multi-use compartment' as defined by this Regulation;

(n) 'other compartment' means a compartment, other than a wine storage compartment, intended for the storage of particular foodstuffs at a temperature warmer than + 14 °C;

(o) 'two-star section' means part of a food-freezer, a food-freezer compartment, a three-star compartment or a three-star frozen-food storage cabinet which does not have its own individual access door or lid and in which the temperature is not warmer than – 12 °C;

(p) 'chest freezer', means a food freezer in which the compartment(s) is (are) accessible from the top of the appliance or which has both top-opening type and upright type compartments but where the gross volume of the top-opening type compartment(s) exceeds 75% of the total gross volume of the appliance;

(q) 'top-opening type' or 'chest type' means a refrigerating appliance with its compartment(s) accessible from the top of the appliance;

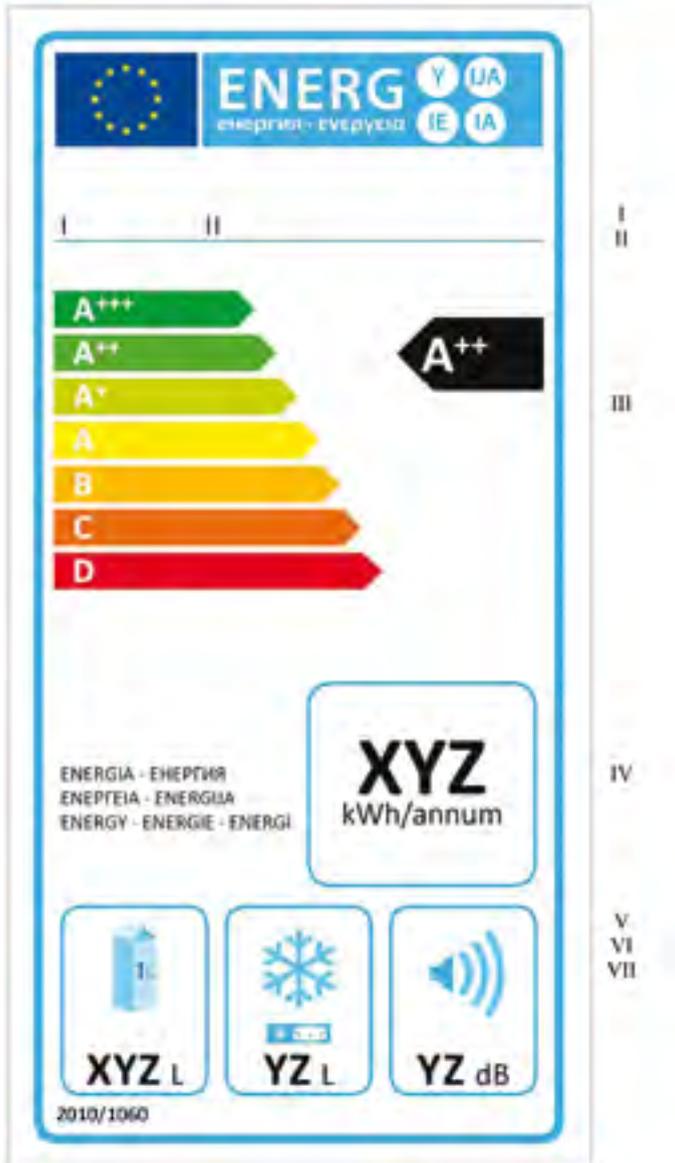
(r) 'upright type' means a refrigerating appliance with its compartment(s) accessible from the front of the appliance;

(s) 'fast freeze' means a reversible feature to be activated by the end-user according to the manufacturer's instructions, which decreases the storage temperature of the freezer or freezer compartment to achieve faster freezing of unfrozen foodstuffs;

(t) 'model identifier' means the code, usually alphanumeric, which distinguishes a specific refrigerating appliance model from other models with the same trade mark or supplier's name.

ANNEX II Label

1. LABEL FOR HOUSEHOLD REFRIGERATING APPLIANCES CLASSIFIED IN ENERGY EFFICIENCY CLASSES A+++ TO C



(1) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier;

III. the energy efficiency class determined in accordance with Annex IX; the head of the arrow containing the energy efficiency class of the household refrigerating appliance shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

IV. annual energy consumption (AE C) in kWh per year, rounded up to the nearest integer and calculated in accordance with point 3(2) of Annex VIII;

V. sum of the storage volumes of all compartments that do not merit a star rating (i.e. operating temperature > -6 °C), rounded to the nearest integer;

VI. sum of the storage volumes of all frozen-food storage compartments that merit a star rating (i.e. operating temperature ≤ -6 °C), rounded to the nearest integer and star rating of the compartment with the highest share of that sum; where the household refrigerating appliances has no frozen-food storage compartment(s) the supplier shall declare '- L' instead of a value and leave the position for star rating blank;

VII. airborne acoustical noise emissions expressed in dB(A) re1 pW, rounded to the nearest integer.

However, for wine storage appliances, points V and VI are replaced by the rated capacity in number of standard bottles of 75 centilitres that may be fitted in the appliance in accordance with the manufacturer's instructions.

(2) The design of the label shall be in accordance with point 3(1) of this Annex. By way of derogation, where a model has been awarded an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council⁵, a copy of the EU Ecolabel may be added.

⁵ OJ L 27, 30.1.2010, p. 1.

2. LABEL FOR HOUSEHOLD REFRIGERATING APPLIANCES CLASSIFIED IN ENERGY EFFICIENCY CLASSES D TO G

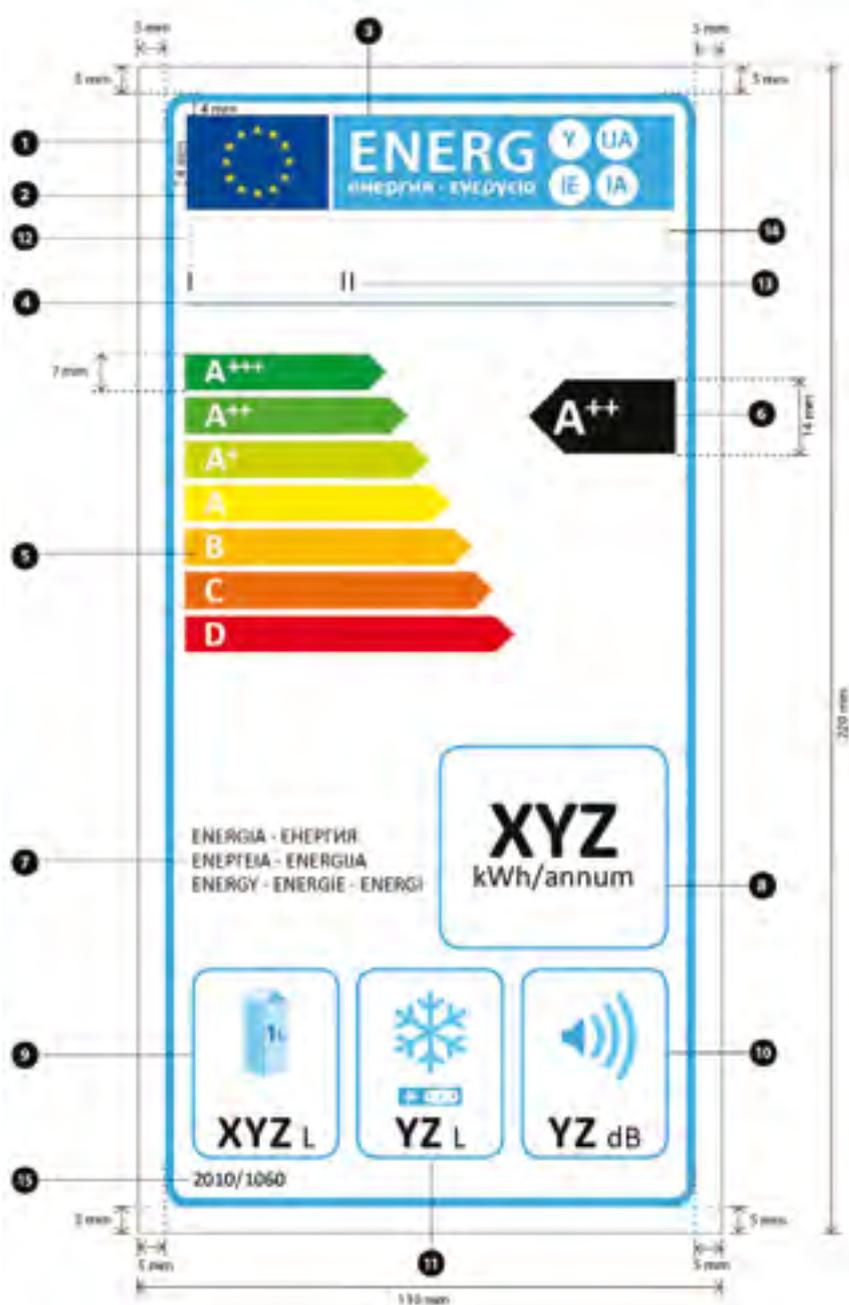


(1) The information listed in point 1(1) shall be included in this label.

(2) The design of the label shall be in accordance with point 3(2) of this Annex. By way of derogation, where a model has been awarded an 'EU Ecolabel' under Regulation (EC) No 66/2010, a copy of the EU Ecolabel may be added.

3. LABEL DESIGN

(1) For household refrigerating appliances classified in energy efficiency classes A+++ to C, except for wine storage appliances, the design of the label shall be as the following:



Whereby:

(a) The label shall be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background of the label shall be white.

(c) Colours shall be CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

① EU label border stroke: 5 pt - colour: Cyan 100% – round corners: 3,5 mm.

② EU logo - colours: X-80-00-00 and 00-00-X-00.

③ Energy label: colour: X-00-00-00.

Pictogram as depicted: EU logo + energy label: width: 92 mm, height: 17 mm.

④ Sub-logos border: 1 pt - colour: Cyan 100% – length: 92,5 mm.

⑤ A-G scale

- Arrow: height: 7 mm, gap: 0,75 mm - colours:

Highest class: X-00-X-00,

Second class: 70-00-X-00,

Third class: 30-00-X-00,

Fourth class: 00-00-X-00,

Fifth class: 00-30-X-00,

Sixth class: 00-70-X-00,

Last class: 00-X-X-00.

- Text: Calibri bold 19 pt, capitals and white; '+' symbols: Calibri bold 13 pt, capitals, white, aligned on a single row.

⑥ Energy efficiency class

- Arrow: width: 26 mm, height: 14 mm, 100% black;

- Text: Calibri bold 29 pt, capitals and white; '+' symbols: Calibri bold 18 pt, capitals, white and aligned on a single row.

⑦ Energy

- Text: Calibri regular 11 pt, capitals, black.

⑧ Annual energy consumption:

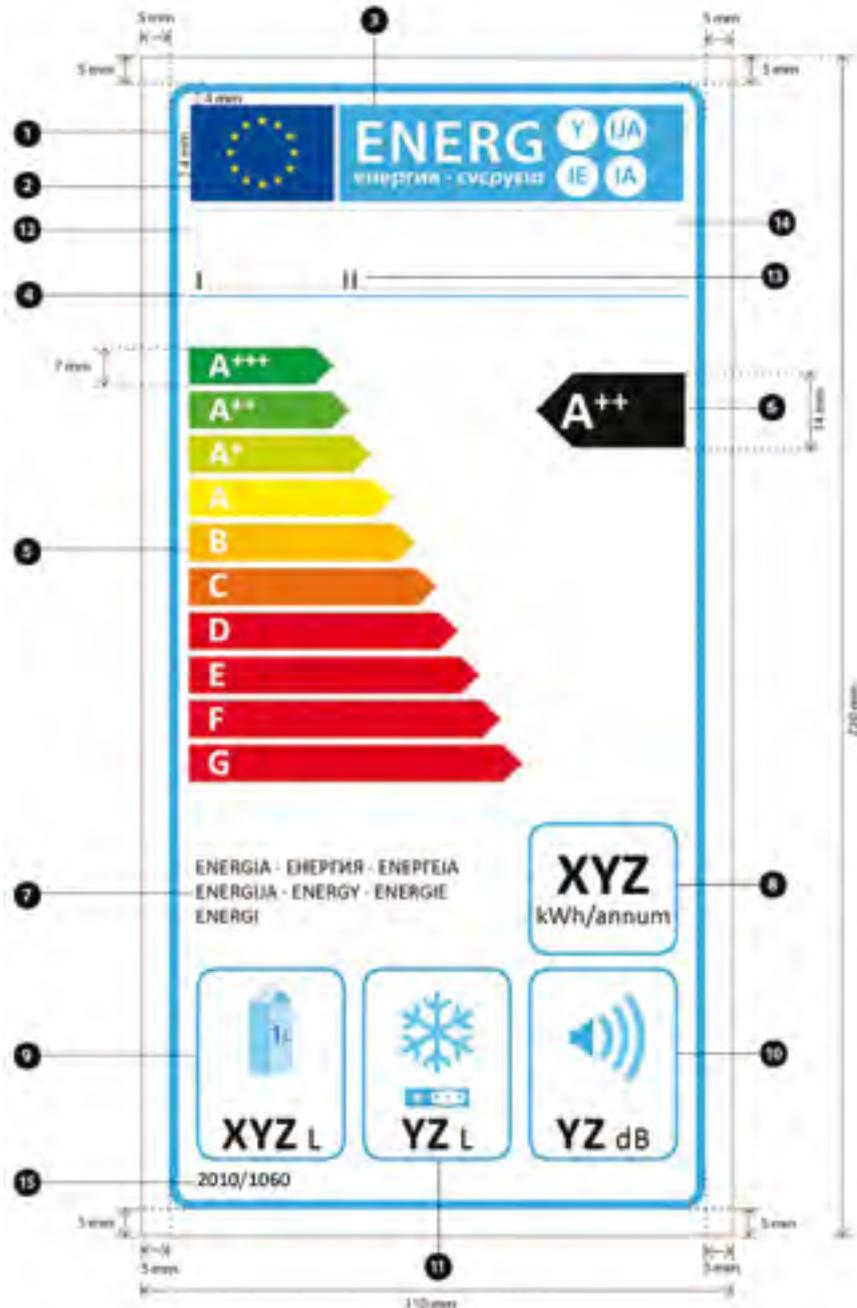
- Border: 3 pt - colour: Cyan 100% - round corners: 3,5 mm.

- Value: Calibri bold 45 pt, 100% black.

- Second line: Calibri regular 17 pt, 100% black.

- 9 Storage volumes of all compartments that do not merit a star rating:
- Border: 3 pt - colour: Cyan 100% - round corners: 3,5 mm.
 - Value: Calibri bold 25 pt, 100% black. Calibri regular 17 pt, 100% black.
- 10 Airborne acoustical noise emissions:
- Border: 3 pt - colour: Cyan 100% - round corners: 3,5 mm.
 - Value: Calibri bold 25 pt, 100% black.
Calibri regular 17 pt, 100% black.
- 11 Storage volumes of all frozen-food storage compartments that merit a star rating:
- Border: 3 pt - colour: Cyan 100% - round corners: 3,5 mm.
 - Value: Calibri bold 25 pt, 100% black.
Calibri regular 17 pt, 100% black.
- 12 Supplier's name or trademark
- 13 Supplier's model identifier
- 14 The supplier's name or trademark and model identifier should fit in a space of 90 x 15 mm.
- 15 Numbering of the Regulation:
Text: Calibri bold 11 pt.

(2) For household refrigerating appliances classified in energy efficiency classes D to G, except for wine storage appliances, the design of the label shall be the following:

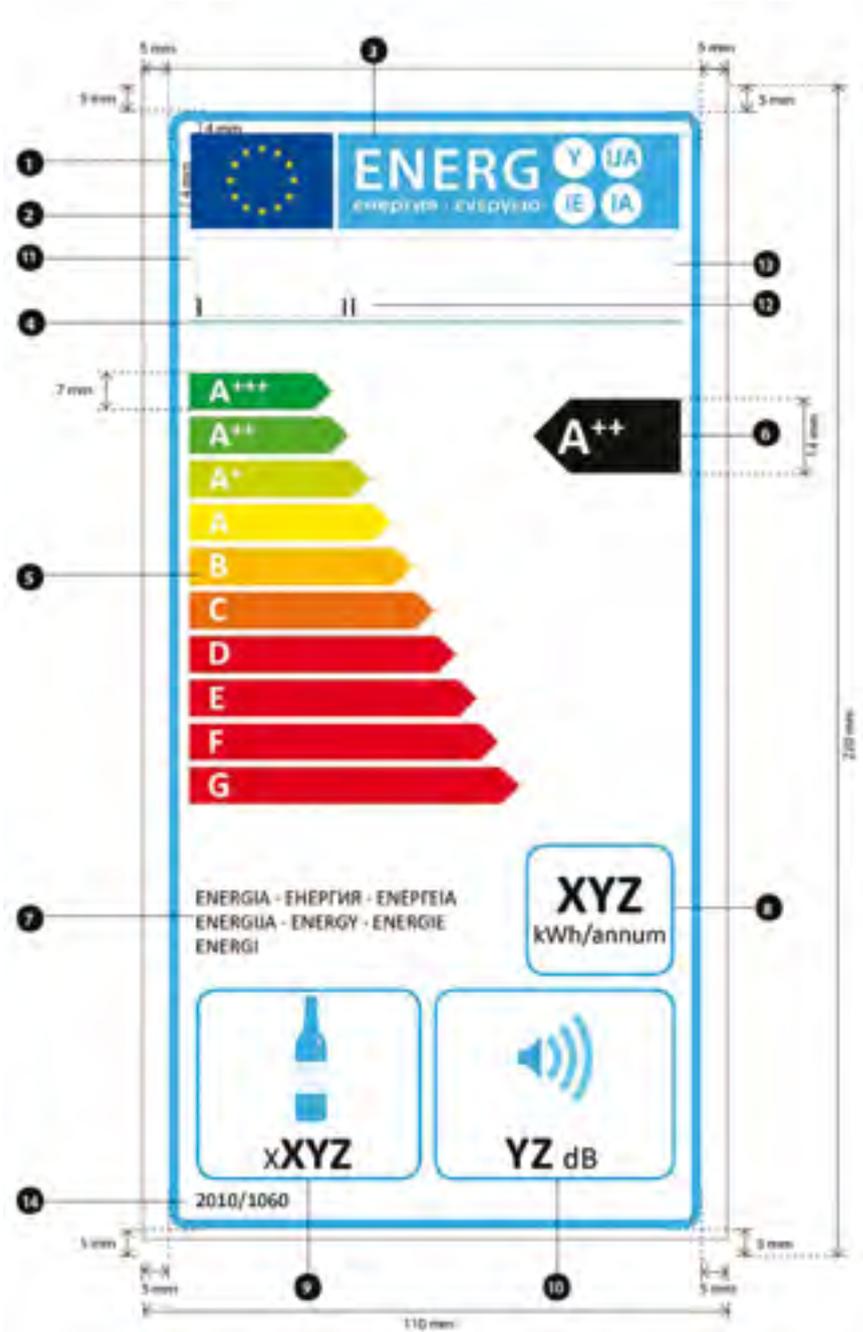


Whereby:

The design of the label shall be in accordance with point 3(1) of this Annex except for Number 8 where the following applies:

- ⑧ Annual energy consumption:
 - Border: 3 pt - colour: Cyan 100% - round corners: 3,5 mm.
 - Value: Calibri bold 32 pt, 100% black.
 - Second line: Calibri regular 14 pt, 100% black.

(3) For wine storage appliances, the design of the label shall be the following:



Whereby:

(a) The label shall be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

(b) The background of the label shall be white.

(c) Colours shall be CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- 1 EU label border stroke: 5 pt - colour: Cyan 100% – round corners: 3,5 mm.
- 2 EU logo - colours: X-80-00-00 and 00-00-X-00.
- 3 Energy label: colour: X-00-00-00.
Pictogram as depicted: EU logo + energy label: width: 92 mm, height: 17 mm.
- 4 Sub-logos border: 1 pt - colour: Cyan 100% - length: 92,5 mm.
- 5 A-G scale
 - Arrow: height: 7 mm, gap: 0,75 mm - colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class(es): 00-X-X-00.
 - Text: Calibri bold 19 pt, capitals and white; '+' symbols: Calibri bold 13 pt, capitals, white, aligned on a single row.
- 6 Energy efficiency class
 - Arrow: width: 26 mm, height: 14 mm, 100% black;
 - Text: Calibri bold 29 pt, capitals, white; '+' symbols: Calibri bold 18 pt, capitals, white, aligned on a single row.
- 7 Energy
 - Text: Calibri regular 11 pt, capitals, black.
- 8 Annual energy consumption:
 - Border: 2 pt - colour: Cyan 100% - round corners: 3,5 mm.
 - Value: Calibri bold 30 pt, 100% black.
 - Second line: Calibri regular 14 pt, 100% black.

- 9 Rated capacity in number of standard wine bottles:
 - Border: 2 pt - colour: Cyan 100% - round corners: 3,5 mm.
 - Value: Calibri bold 28 pt, 100% black.
 - Calibri regular 15 pt, 100% black.
- 10 Airborne acoustical noise emissions:
 - Border: 2 pt - colour: Cyan 100% - round corners: 3,5 mm.
 - Value: Calibri bold 25 pt, 100% black.
 - Calibri regular 17 pt, 100% black.
- 11 Supplier's name or trademark
- 12 Supplier's model identifier
- 13 The suppliers' name or trade mark and model identifier should fit in a space of 90 × 15 mm
- 14 Numbering of the Regulation:
 - Text: Calibri bold 11 pt.

ANNEX III

Product fiche

1. The information in the product fiche shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trade mark;
- (b) supplier's model identifier as defined in Annex I, point (t);
- (c) category of the household refrigerating appliance model in accordance with point 1 of Annex VIII;
- (d) energy efficiency class of the model in accordance with Annex IX;
- (e) where the model has been awarded an 'EU Ecolabel award' under Regulation (EC) No 66/2010, this information may be included;
- (f) annual energy consumption (AE_c) in kWh per year, rounded up to the nearest integer and calculated in accordance with point 3(2) of Annex VIII. It shall be described as: 'Energy consumption "XYZ" kWh per year, based on standard test results for 24 hours. Actual energy consumption will depend on how the appliance is used and where it is located';
- (g) storage volume of each compartment and applicable star rating in accordance with point 1(1)(VI) of Annex II, if any;
- (h) the design temperature of 'other compartments' within the meaning of point (n) of Annex I. For wine storage compartments, the coldest storage temperature, either pre-set in the compartment or capable of being set by an end-user and capable of being maintained continuously according to the manufacturer's instructions, shall be given;
- (i) the mention 'frost-free' for the relevant compartment(s), as defined in point (b) of Annex I;
- (j) 'power cut safe "X" h' defined as 'temperature rise time';
- (k) 'freezing capacity' in kg/24 h;
- (l) 'climate class' in accordance with point 1, Table 3 of Annex VIII, and expressed as: 'Climate class: W [climate class]. This appliance is intended to be used at an ambient temperature between "X" [lowest temperature] °C and "X" [highest temperature] °C';
- (m) airborne acoustical noise emissions expressed in dB(A) re1 pW, rounded to the nearest integer;
- (n) if the model is intended to be a built-in appliance, an indication to this effect;
- (o) for wine storage appliances, the following information: 'This appliance is intended to be used exclusively for the storage of wine'. This point shall not apply to household refrigerating appliances that are not specifically designed for wine storage but may nevertheless be used for this purpose, nor to household refrigerating appliances that have a wine storage compartment combined with any other compartment type.

2. One fiche may cover a number of refrigerating appliances models supplied by the same supplier.

3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1 not already

ANNEX IV

Technical documentation

1. The technical documentation referred to in Article 3(c) shall include:

- (a) the name and address of the supplier;
- (b) a general description of the refrigerating appliance model, sufficient for it to be unequivocally and easily identified;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) identification and signature of the person empowered to bind the supplier;
- (f) technical parameters for measurements, established in accordance with Annex VIII:
 - (i) overall dimensions;
 - (ii) overall space required in use;
 - (iii) total gross volumes(s);
 - (iv) storage volume(s) and total storage volume(s);
 - (v) star rating(s) of the frozen-food storage compartment(s);
 - (vi) defrosting type;
 - (vii) storage temperature;
 - (viii) energy consumption;
 - (ix) temperature rise time;
 - (x) freezing capacity;
 - (xi) power consumption;
 - (xii) wine storage compartment humidity;
 - (xiii) airborne acoustical noise emissions;
- (g) the results of calculations performed in accordance with Annex VIII.

2. Where the information included in the technical documentation file for a particular household refrigerating appliance model has been obtained by calculation on the basis of design, or extrapolation from other equivalent refrigerating appliances, or both, the documentation shall include details of such calculations or extrapolations, or both, and of tests undertaken by suppliers to verify the accuracy of the calculations undertaken. The information shall also include a list of all other equivalent household refrigerating appliance models where the information was obtained on the same basis.

ANNEX V

Information to be provided in the cases where end-users cannot be expected to see the product displayed

1. The information referred to in Article 4(b) shall be provided in the following order:
 - (a) the energy efficiency class of the model as defined in Annex IX;
 - (b) the annual energy consumption in kWh per year, rounded up to the nearest integer and calculated in accordance with point 3(2) of Annex VIII;
 - (c) the storage volume of each compartment and applicable star rating in accordance with point 1(1) VI of Annex II, if any;
 - (d) the 'climate class' in accordance with point 1, Table 3 of Annex VIII;
 - (e) airborne acoustical noise emissions expressed in dB(A) re1 pW, rounded to the nearest integer;
 - (f) if the model is intended to be built-in, an indication to this effect;
 - (g) for wine storage appliances the following information: 'This appliance is intended to be used exclusively for the storage of wine'. This point shall not apply to household refrigerating appliances that are not specifically designed for wine storage but may nevertheless be used for this purpose, nor to household refrigerating appliances that have a wine storage compartment combined with any other compartment type.
2. Where other information contained in the product fiche is also provided, it shall be in the form and order specified in Annex III.
3. The size and font in which all the information referred in this Annex is printed or shown shall be legible.

ANNEX VI

Measurements

1. For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements shall be made using a reliable, accurate and reproducible measurement procedure that takes into account the generally recognised state-of-the-art measurement methods, including methods set out in documents the reference numbers of which have been published for that purpose in the Official Journal of the European Union.

2. GENERAL CONDITIONS FOR TESTING

The following general conditions for testing apply:

- (1) if anti-condensation heaters that can be switched on and off by the end-user are provided, they shall be switched on and - if adjustable - set at maximum heating;
- (2) if 'through-the-door devices' (such as ice or chilled water/drinks dispensers) which can be switched on and off by the end-user are provided, they shall be switched on during the energy consumption measurement but not operated;
- (3) for multi-use appliances and compartments, the storage temperature during the measurement of energy consumption shall be the nominal temperature of the coldest compartment type as claimed for continuous normal use according to the manufacturer's instructions;
- (4) the energy consumption of a household refrigerating appliance shall be determined in the coldest configuration, according to the manufacturer's instructions for continuous normal use for any 'other compartment' as defined in Annex VIII, Table 5.

3. TECHNICAL PARAMETERS

The following parameters shall be established:

- (a) 'overall dimensions', which are measured to the nearest millimetre;
- (b) 'overall space required in use', which is measured to the nearest millimetre;
- (c) 'total gross volume(s)', which is measured to the nearest whole number of cubic decimetres or litres;
- (d) 'storage volume(s) and total storage volume(s)', which is measured to the nearest whole number of cubic decimetres or of litres;
- (e) 'defrosting type';
- (f) 'storage temperature';
- (g) 'energy consumption' which is expressed in kilowatt hours per 24 hours (kWh/24h), to three decimal places;
- (h) 'temperature rise time';
- (i) 'freezing capacity';
- (j) 'wine storage compartment humidity', which is expressed as a percentage rounded to the nearest integer; and
- (k) 'airborne acoustical noise emissions'.

ANNEX VII

Verification procedure for market surveillance purposes

For the purposes of checking conformity with the requirements laid down in Articles 3 and 4, **Contracting Party** authorities shall test a single household refrigerating appliance. If the measured parameters do not meet the values declared by the supplier within the ranges defined in Table 1, the measurements shall be made on three more household refrigerating appliances. The arithmetical mean of the measured values of these three household refrigerating appliances shall meet the requirements within the ranges defined in Table 1.

Otherwise, the model and all other equivalent household refrigerating appliance models shall be considered not to comply.

In addition to the procedure set out in Annex VI, **Contracting Party** authorities shall use reliable, accurate and reproducible measurement procedures, which take into account the generally recognised state-of-the-art, including methods set out in documents the reference numbers of which have been published for that purpose in the Official Journal of the European Union.

Table 1

Measured parameter	Verification tolerances
Rated gross volume	The measured value shall not be less than the rated value (*) by more than 3% or 1 l, whichever is the greater value.
Rated storage volume	The measured value shall not be less than the rated value by more than 3% or 1 l, whichever is the greater value. Where the volumes of the cellar compartment and fresh food storage compartment are adjustable, relative to one another by the user, this measurement uncertainty applies when the cellar compartment is adjusted to its minimum volume.
Freezing capacity	The measured value shall not be less than the rated value by more than 10%.
Energy consumption	The measured value shall not be greater than the rated value (E_{24h}) by more than 10%.
Wine storage appliances	The value measured for the relative humidity shall not exceed the nominal range by more than 10%.
Airborne acoustical noise emissions	The measured value shall meet the rated value.

(*) 'Rated value' means a value that is declared by the manufacturer.

ANNEX VIII

Classification of household refrigerating appliances, method for calculating the equivalent volume and the energy efficiency index

1. CLASSIFICATION OF HOUSEHOLD REFRIGERATING APPLIANCES

Household refrigerating appliances are classified into categories as listed in Table 1.

Each category is defined by the specific compartment composition as specified in Table 2 and is independent of the number of doors and/or drawers.

Table 1

Household refrigerating appliances categories

Category	Designation
1	Refrigerator with one or more fresh-food storage compartments
2	Refrigerator-cellar, Cellar and Wine storage appliances
3	Refrigerator-chiller and Refrigerator with a 0-star compartment
4	Refrigerator with a one-star compartment
5	Refrigerator with a two-star compartment
6	Refrigerator with a three-star compartment
7	Refrigerator-freezer
8	Upright freezer
9	Chest freezer
10	Multi-use and other refrigerating appliances

Household refrigerating appliances that cannot be classified in categories 1 to 9 because of compartment temperature are classified in category 10.

Table 2
Household refrigerating appliance classification and relevant compartment composition

Nominal temperature (for the EEL) (°C)	Design T	+ 12	Wine storage	+ 12	Cellar	+ 5	Fresh food storage	0	Chill	0	0-star/ice making	- 6	one-star	- 12	two-star	- 18	three-star	- 18	four-star	Category (number)
REFRIGERATOR WITH ONE OR MORE FRESH-FOOD STORAGE COMPARTMENTS	N	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1
	O	O	O	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	2
	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	3
REFRIGERATOR-CHILLER and REFRIGERATOR WITH A 0-STAR COMPARTMENT	O	O	O	Y	O	Y	O	Y	O	O	Y	N	Y	N	N	N	N	N	N	4
	O	O	O	O	O	Y	O	O	O	O	O	Y	O	Y	N	N	N	N	N	5
REFRIGERATOR WITH A ONE-STAR COMPARTMENT	O	O	O	O	O	Y	O	O	O	O	O	O	O	O	Y	N	N	N	N	6
REFRIGERATOR WITH A TWO-STAR COMPARTMENT	O	O	O	O	O	Y	O	O	O	O	O	O	O	O	O	Y	N	N	N	7
REFRIGERATOR WITH A THREE-STAR COMPARTMENT	O	O	O	O	O	Y	O	O	O	O	O	O	O	O	O	Y	N	N	N	8
REFRIGERATOR-FREEZER	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	9
UPRIGHT FREEZER	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	10
CHEST FREEZER	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	10
MULTI-USE AND OTHER APPLIANCES	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	10

Notes: Y = the compartment is present; N = the compartment is not present; O = the presence of the compartment is optional;

(*) also includes three-star frozen-food cabinets.

Household refrigerating appliances are classified in one or more climate classes as specified in Table 3.

Table 3

Climate classes

Class	Symbol	Ambient average temperature °C
Extended temperate	SN	+ 10 to + 32
Temperate	N	+ 16 to + 32
Subtropical	ST	+ 16 to + 38
Tropical	T	+ 16 to + 43

The refrigerating appliance shall be capable of maintaining the required storage temperatures in the different compartments simultaneously and within the permitted temperature deviations (during the defrost cycle) as specified in Table 4 for the different types of household refrigerating appliances and for the appropriate climate classes.

Multi-use appliances and compartments shall be capable of maintaining the required storage temperatures of the different compartment types where these temperatures can be set by the end-user according to the manufacturer's instructions.

Table 4

Storage temperatures

Storage temperatures (°C)							
Other compartment	Wine storage compartment	Cellar compartment	Fresh-food storage compartment	Chill compartment	One-star compartment	Two-star compartment/section	Food freezer and three-star compartment/cabinet
t_{om}	t_{wma}	t_{cm}	$t_{1m'}$ $t_{2m'}$ $t_{3m'}$ t_{ma}	t_{cc}	t^*	t^{**}	t^{***}
$> + 14$	$+ 5 \leq$ $t_{wma} \leq + 20$	$+ 8 \leq$ $t_{cm} \leq + 14$	$0 \leq t_{1m'}$ $t_{2m'}$ $t_{3m'} \leq + 8;$ $t_{ma} \leq + 4$	$- 2 \leq t_{cc} \leq + 3$	$\leq - 6$	$\leq - 12$ ^(a)	$\leq - 18$ ^(a)

Notes:

- t_{om} : storage temperature of the other compartment.
- t_{wma} : storage temperature of the wine storage compartment with a variation of 0.5 K.
- t_{cm} : storage temperature of the cellar compartment.
- $t_{1m'}$, $t_{2m'}$, $t_{3m'}$: storage temperatures of the fresh-food compartment.
- t_{ma} : average storage temperature of the fresh-food compartment.
- t_{cc} : instantaneous storage temperature of the chill compartment.
- t^* , t^{**} , t^{***} : maximum temperatures of the frozen-food storage compartments.
- storage temperature for the ice-making compartment and for the '0-star' compartment is below 0 °C.

(^a) for frost-free household refrigerating appliances during the defrost cycle, a temperature deviation of no more than 3 K during a period of 4 hours or 20% of the duration of the operating cycle, whichever is the shorter, is allowed.

2. CALCULATION OF THE EQUIVALENT VOLUME

The equivalent volume of a household refrigerating appliance is the sum of the equivalent volumes of all compartments. It is calculated in litres and rounded to the nearest integer as:

$$V_{eq} = \left[\sum_{c=1}^{c=n} V_c \times \frac{(25 - T_c)}{20} \times FF_c \right] \times CC \times BI$$

where:

- n is the number of compartments,
- V_c is the storage volume of the compartment(s),
- T_c is the nominal temperature of the compartment(s) as set out in Table 2,
- $\frac{25 - T_c}{20}$ is the thermodynamic factor as set in Table 5,
- FF_c , CC and BI are volume correction factors as set out in Table 6.

The thermodynamic correction factor $\frac{25 - T_c}{20}$ is the temperature difference between the nominal temperature of a compartment T_c (defined in Table 2) and the ambient temperature under standard test conditions at + 25 °C, expressed as a ratio of the same difference for a fresh-food compartment at + 5 °C.

The thermodynamic factors for the compartments described in Annex I, points (g) to (n), are set out in Table 5.

Table 5

Thermodynamic factors for refrigerating appliance compartments

Compartment	Nominal temperature	$(25 - T_c)/20$
Other compartment	Design temperature	$\frac{25 - T_c}{20}$
Cellar compartment/Wine storage compartment	+ 12 °C	0.65
Fresh-food storage compartment	+ 5 °C	1.00
Chill compartment	0 °C	1.25
Ice-making compartment and 0-star compartment	0 °C	1.25
One-star compartment	- 6 °C	1.55
Two-star compartment	- 12 °C	1.85
Three-star compartment	- 18 °C	2.15
Food freezer compartment (four-star compartment)	- 18 °C	2.15

Notes:

- (i) for multi-use compartments, the thermodynamic factor is determined by the nominal temperature as given in Table 2 of the coldest compartment type capable of being set by the end-user and maintained continuously according to the manufacturer's instructions;
- (ii) for any two-star section (within a freezer) the thermodynamic factor is determined at $T_c = -12\text{ °C}$;
- (iii) for other compartments the thermodynamic factor is determined by the coldest design temperature capable of being set by the end-user and maintained continuously according to the manufacturer's instructions.

Table 6

Value of the correction factors

Correction factor	Value	Conditions
FF (frost-free)	1.2	For frost-free frozen-food storage compartments
	1	Otherwise
CC (climate class)	1.2	For T class (tropical) appliances
	1.1	For ST class (subtropical) appliances
	1	Otherwise
BI (built-in)	1.2	For built-in appliances under 58 cm in width
	1	Otherwise

Notes:

- (i) FF is the volume correction factor for frost-free compartments;
- (ii) CC is the volume correction factor for a given climate class. If a refrigerating appliance is classified in more than one climate class, the climate class with the highest correction factor is used for the calculation of the equivalent volume;
- (iii) BI is the volume correction factor for built-in appliances.

3. CALCULATION OF THE ENERGY EFFICIENCY INDEX

For the calculation of the Energy Efficiency Index (EEI) of a household refrigerating appliance model, the annual energy consumption of the household refrigerating appliance is compared to its standard annual energy consumption.

(1) The Energy Efficiency Index (EEI) is calculated and rounded to the first decimal place, as:

$$EEI = \frac{AE_c}{SAE_c} \times 100$$

where:

AE_c = annual energy consumption of the household refrigerating appliance

SAE_c = standard annual energy consumption of the household refrigerating appliance.

(2) The annual energy consumption (AE_C) is calculated in kWh/year and rounded to two decimal places, as:

$$AE_C = E_{24h} \times 365$$

where:

E_{24h} is the energy consumption of the household refrigerating appliance in kWh/24h and rounded to three decimal places.

(3) The standard annual energy consumption (SAE_C) is calculated in kWh/year and rounded to two decimal places, as:

$$SAE_C = V_{eq} \times M + N + CH$$

where:

V_{eq} is the equivalent volume of the household refrigerating appliance

CH is equal to 50 kWh/year for household refrigerating appliances with a chill compartment with a storage volume of at least 15 litres

the M and N values are given in Table 7 for each household refrigerating appliance category.

Table 7

M and N values by household refrigerating appliance category

Category	M	N
1	0.233	245
2	0.233	245
3	0.233	245
4	0.643	191
5	0.450	245
6	0.777	303
7	0.777	303
8	0.539	315
9	0.472	286
10	(*)	(*)

(*) Note: for Category 10 household refrigerating appliances the M and N values depend on the temperature and star rating of the compartment with the lowest storage temperature capable of being set by the end-user and maintained continuously according to the manufacturer's instructions. When only an 'other compartment' as defined in Table 2 and Annex I, point (n), is present, the M and N values for Category 1 are used. Appliances with three-star compartments or food-freezer compartments are considered to be refrigerator-freezers.

ANNEX IX

Energy efficiency classes

The energy efficiency class of a household refrigerating appliance shall be determined on the basis of its Energy Efficiency Index (EEI) as set out in Table 1 from 20 December 2011 until 30 June 2014 and Table 2 from 1 July 2014.

The Energy Efficiency Index of a household refrigerating appliance shall be determined in accordance with point 3 of Annex VIII.

Table 1

Energy efficiency classes until 30 June 2014

Energy efficiency class	Energy Efficiency Index
A+++ (most efficient)	$EEI < 22$
A++	$22 \leq EEI < 33$
A+	$33 \leq EEI < 44$
A	$44 \leq EEI < 55$
B	$55 \leq EEI < 75$
C	$75 \leq EEI < 95$
D	$95 \leq EEI < 110$
E	$110 \leq EEI < 125$
F	$125 \leq EEI < 150$
G (least efficient)	$EEI \geq 150$

Table 2

Energy efficiency classes from 1 July 2014

Energy efficiency class	Energy Efficiency Index
A+++ (most efficient)	$EEI < 22$
A++	$22 \leq EEI < 33$
A+	$33 \leq EEI < 42$
A	$42 \leq EEI < 55$
B	$55 \leq EEI < 75$
C	$75 \leq EEI < 95$
D	$95 \leq EEI < 110$
E	$110 \leq EEI < 125$
F	$125 \leq EEI < 150$
G (least efficient)	$EEI \geq 150$



Delegated Regulation (EU) 1059/2010 of 28 September 2010 supplementing Directive 2010/30/EU with regard to energy labelling of household dishwashers

Incorporated and adapted by Ministerial Council Decision 2011/03/MC-EnC of 6 October 2011 on adopting certain Delegated Regulations on energy related products.

*The adaptations made by Ministerial Council Decision 2011/03/MC-EnC are highlighted in **bold and blue**.*

Whereas:

(1) Directive 2010/30/EU requires the Commission to adopt delegated acts as regards the labelling of energy-related products representing significant potential for energy savings and having a wide disparity in performance levels with equivalent functionality.

(2) Provisions on the energy labelling of household dishwashers were established by Commission Directive 97/17/EC of 16 April 1997 implementing Council Directive 92/75/EEC with regard to energy labelling of household dishwashers.

(3) The electricity used by household dishwashers accounts for a significant share of total household electricity demand in the Union. In addition to the energy efficiency improvements already achieved, the scope for further reducing the energy consumption of household dishwashers is substantial.

(4) Directive 97/17/EC should be repealed and new provisions should be laid down by this Regulation in order to ensure that the energy label provides dynamic incentives for suppliers to further improve the energy efficiency of household dishwashers and to accelerate the market transformation towards energy-efficient technologies.

(5) The information provided on the label should be obtained through reliable, accurate and reproducible measurement procedures, which take into account the recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations and of rules on Information Society services.

(6) This Regulation should specify a uniform design and content for the label for household dishwashers.

(7) In addition, this Regulation should specify requirements as to the technical documentation and the fiche for household dishwashers.

(8) Moreover, this Regulation should specify requirements as to the information to be provided for any form of distance selling, advertisements and technical promotional materials for household dishwashers.

(9) It is appropriate to provide for a review of the provisions of this Regulation taking into account technological progress.

(10) In order to facilitate the transition from Directive 97/17/EC to this Regulation, it is appropriate to provide that household dishwashers labelled in accordance with this Regulation are to be considered compliant with Directive 97/17/EC.

(11) Directive 97/17/EC should therefore be repealed,

Article 1

Subject matter and scope

This Regulation establishes requirements for the labelling of and the provision of supplementary product information on electric mains-operated household dishwashers and electric mains-operated dishwashers that can also be powered by batteries, including those sold for non-household use and built-in household dishwashers.

Article 2

Definitions

In addition to the definitions laid down in Article 2 of Directive 2010/30/EU, the following definitions shall apply for the purpose of this Regulation:

- (1) "household dishwasher" means a machine which cleans, rinses, and dries dishware, glassware, cutlery and cooking utensils by chemical, mechanical, thermal, and electric means and which is designed to be used principally for non-professional purposes;
- (2) "built-in household dishwasher" means a household dishwasher intended to be installed in a cabinet, a prepared recess in a wall or a similar location, requiring furniture finishing;
- (3) "place settings" means a defined set of crockery, glass and cutlery for use by one person;
- (4) "rated capacity" means the maximum number of place settings together with the serving pieces, as stated by the supplier, which can be treated in a household dishwasher on the programme selected, when loaded in accordance with the supplier's instructions;
- (5) "programme" means a series of operations that are pre-defined and are declared as suitable by the supplier for specified levels of soil or type of load, or both, and together form a complete cycle;
- (6) "programme time" means the time that elapses from the initiation of the programme until the completion of the programme, excluding any end-user-programmed delay;
- (7) "cycle" means a complete cleaning, rinsing, and drying process, as defined for the selected programme;
- (8) "off-mode" means a condition where the household dishwasher is switched off using appliance controls or switches accessible to and intended for operation by the end-user during normal use to attain the lowest power consumption that may persist for an indefinite time while the household dishwasher is connected to a power source and used in accordance with the supplier's instructions; where there is no control or switch accessible to the end-user, "off-mode" means the condition reached after the household dishwasher reverts to a steady-state power consumption on its own;
- (9) "left-on mode" means the lowest power consumption mode that may persist for an indefinite time after completion of the programme and unloading of the household dishwasher without any further intervention by the end-user;
- (10) "equivalent household dishwasher" means a model of household dishwasher placed on the market with the same rated capacity, technical and performance characteristics, energy and water consumption and airborne acoustical noise emissions as another model of household dishwasher placed on the market under a different commercial code number by the same supplier;
- (11) "end-user" means a consumer buying or expected to buy a household dishwasher;

(12) "point of sale" means a location where household dishwashers are displayed or offered for sale, hire or hire-purchase.

Article 3

Responsibilities of suppliers

Suppliers shall ensure that:

- (a) each household dishwasher is supplied with a printed label in the format and containing information as set out in Annex I;
- (b) a product fiche, as set out in Annex II, is made available;
- (c) the technical documentation as set out in Annex III is made available on request to the authorities of the **Contracting Parties** and to the **Secretariat**;
- (d) any advertisement for a specific model of household dishwasher contains the energy efficiency class, if the advertisement discloses energy-related or price information;
- (e) any technical promotional material concerning a specific model of household dishwasher which describes its specific technical parameters includes the energy efficiency class of that model.

Article 4

Responsibilities of dealers

Dealers shall ensure that:

- (a) each household dishwasher, at the point of sale, bears the label provided by suppliers in accordance with Article 3(a) on the outside of the front or top of the household dishwasher, in such a way as to be clearly visible;
- (b) household dishwashers offered for sale, hire or hire-purchase where the end-user cannot be expected to see the household dishwasher displayed, are marketed with the information provided by suppliers in accordance with Annex IV;
- (c) any advertisement for a specific model of household dishwasher contains a reference to its energy efficiency class, if the advertisement discloses energy-related or price information;
- (d) any technical promotional material concerning a specific model of household dishwasher which describes its specific technical parameters includes a reference to the energy efficiency class of that model.

Article 5

Measurement methods

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement methods, which take into account the recognised state-of-the-art measurement methods.

Article 6

Verification procedure for market surveillance purposes

Contracting Parties shall apply the procedure laid down in Annex V when assessing the conformity of the declared energy efficiency class, the annual energy consumption, annual water consumption, drying efficiency index, programme time, power consumption in off-mode and left-on mode, duration of the left-on mode and airborne acoustical noise emissions.

Article 7

Revision

...

Article 8

Repeal

...

Article 9

Transitional provisions

1. Articles 3(d), (e), 4(b), (c) and (d) shall not apply to printed advertisement and printed technical promotional material published before **30 April 2013**.
2. Household dishwashers placed on the market before **31 December 2012** shall comply with the provisions set out in Directive 97/17/EC.
3. ...

Article 10

Entry into force and application

This Decision [2011/03/MC-EnC] enters into force upon its adoption¹

It shall apply from **31 December 2012**. However, Articles 3(d), (e), 4(b), (c) and (d) shall apply from 30 April 2013.

This Regulation shall be binding in its entirety and directly applicable in all **Contracting Parties**.

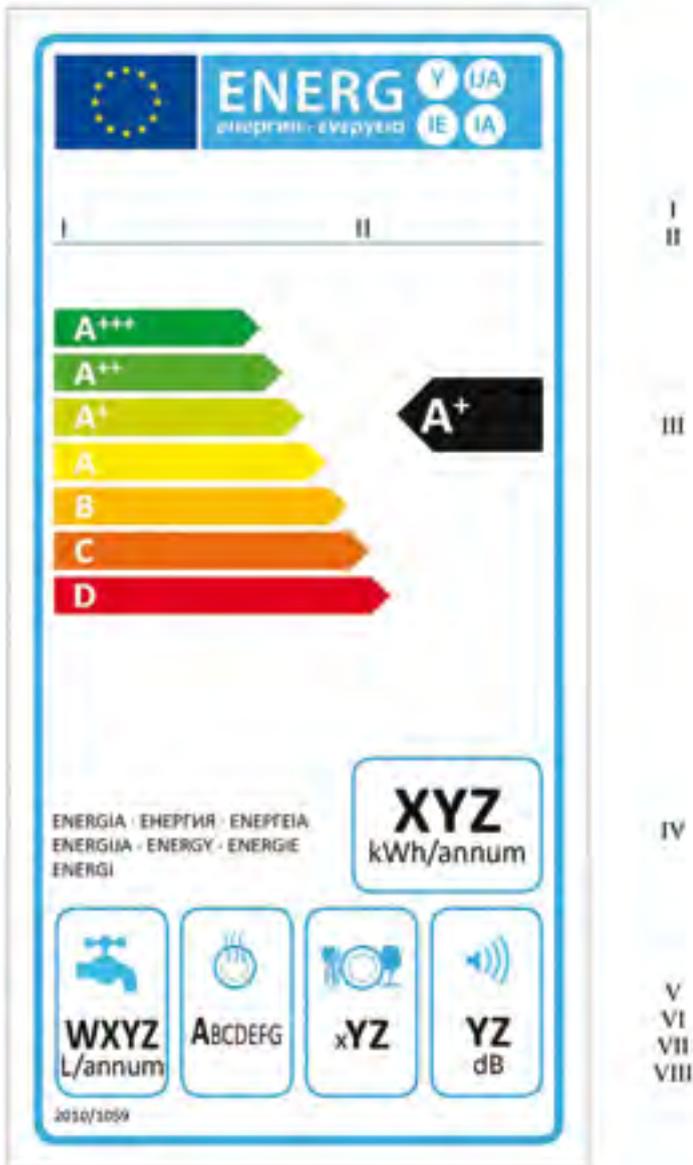
Article 2(5) of Decision 2011/03/MC-EnC

The Secretariat shall monitor and review the implementation of [this] Delegated Regulation ... and shall submit a progress report to the Permanent High Level Group by 1 October 2013.

¹ The text displayed here corresponds to Article 3(1) of Decision 2011/03/MC-EnC.

ANNEX I Label

1. LABEL



(1) The following information shall be included in the label:

I. supplier's name or trade mark;

II. supplier's model identifier, where 'model identifier' means the code, usually alphanumeric, which distinguishes a specific household dishwasher model from other models with the same trade mark or supplier's name;

III. the energy efficiency class determined in accordance with point 1 of Annex VI; the head of the arrow containing the energy efficiency class of the household dishwasher shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

IV. annual energy consumption (AE_c) in kWh per year, rounded up to the nearest integer and calculated in accordance with point 1(b) of Annex VII;

V. annual water consumption (AW_c) in litres per year, rounded up to the nearest integer and calculated in accordance with point 3 of Annex VII;

VI. the drying efficiency class determined in accordance with point 2 of Annex VI;

VII. rated capacity in standard place settings, for the standard cleaning cycle;

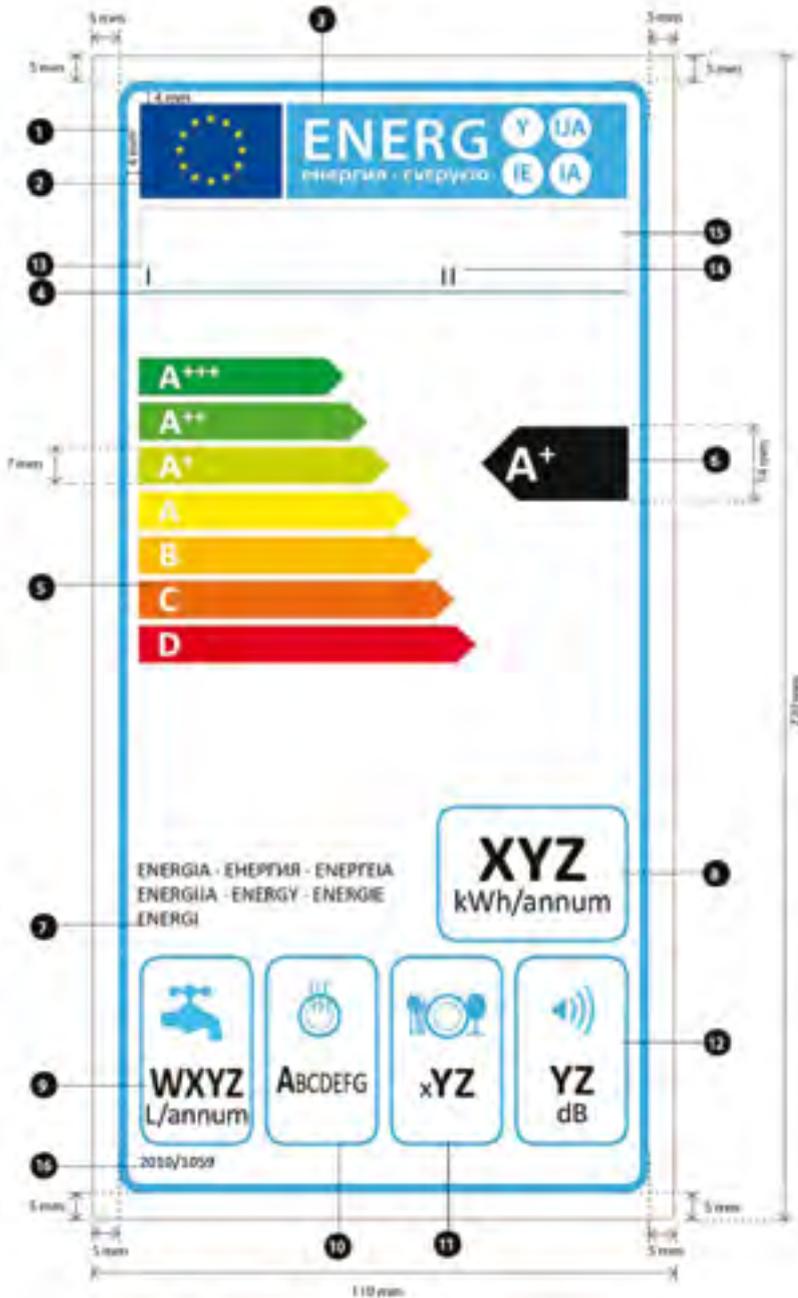
VIII. airborne acoustical noise emissions expressed in dB(A) re 1 pW and rounded to the nearest integer.

(2) The design of the label shall be in accordance with point 2. By way of derogation, where a model has been granted an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council², a copy of the EU Ecolabel may be added.

² OJ L 27, 30.1.2010, p. 1.

2. LABEL DESIGN

The design of the label shall be as in the figure below.



Whereby

(a) The label shall be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content must nevertheless remain proportionate to the specifications above.

(b) The background shall be white.

(c) Colours shall be CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.

(d) The label shall fulfil all of the following requirements (numbers refer to the figure above):

- 1 Border stroke: 5 pt - colour: Cyan 100% - round corners: 3,5 mm.
- 2 EU logo - colours: X-80-00-00 and 00-00-X-00.
- 3 Energy logo: colour: X-00-00-00. Pictogram as depicted; EU logo and energy logo (combined): width: 92 mm, height: 17 mm.
- 4 Sub-logos border: 1 pt - colour: Cyan 100% - length: 92,5 mm.
- 5 A-G scale
 - Arrow: height: 7 mm, gap: 0,75 mm - colours:
 - Highest class: X-00-X-00,
 - Second class: 70-00-X-00,
 - Third class: 30-00-X-00,
 - Fourth class: 00-00-X-00,
 - Fifth class: 00-30-X-00,
 - Sixth class: 00-70-X-00,
 - Last class: 00-X-X-00.
 - Text: Calibri bold 18 pt, capitals and white; '+' symbols: Calibri bold 12 pt, capitals, white, aligned on a single row.
- 6 Energy efficiency class
 - Arrow: width: 26 mm, height: 14 mm, 100% black.
 - Text: Calibri bold 29 pt, capitals and white; '+' symbols: Calibri bold 18 pt, capitals, white, aligned on a single row.
- 7 Energy
 - Text: Calibri regular 11 pt, capitals, 100% black.
- 8 Annual energy consumption
 - Border: 2 pt - colour: Cyan 100% - round corners: 3,5 mm.
 - Value: Calibri bold 37 pt, 100% black.
 - Second line: Calibri regular 17 pt, 100% black.

- 9 Annual water consumption:
- Pictogram as depicted
 - Border: 2 pt - colour: Cyan 100% - round corners: 3,5 mm.
 - Value: Calibri bold 24 pt, 100% black; and Calibri regular 16 pt, 100% black.
- 10 Drying efficiency class:
- Pictogram as depicted
 - Border: 2 pt - colour: Cyan 100% - round corners: 3,5 mm.
 - Value: Calibri regular 16 pt, horizontal scale 75%, 100% black; and Calibri bold 22 pt, horizontal scale 75%, 100% black.
- 11 Rated capacity:
- Pictogram as depicted
 - Border: 2 pt - colour: Cyan 100% - round corners: 3,5 mm.
 - Value: Calibri bold 24 pt, 100% black; and Calibri regular 16 pt, 100% black.
- 12 Noise emissions:
- Pictogram as depicted
 - Border: 2 pt - colour: Cyan 100% - round corners: 3,5 mm.
 - Value: Calibri bold 24 pt, 100% black; and Calibri regular 16 pt, 100% black.
- 13 Supplier's name or trade mark
- 14 Supplier's model identifier
- 15 The supplier's name or trademark and model identifier should fit in a space of 92 × 15 mm.
- 16 Numbering of the Regulation: Calibri bold 9 pt, 100% black.

ANNEX II

Product fiche

1. The information in the product fiche of the household dishwasher shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:

- (a) supplier's name or trade mark;
- (b) supplier's model identifier, meaning the code, usually alphanumeric, which distinguishes a specific household dishwasher model from other models with the same trade mark or supplier's name;
- (c) rated capacity, in standard place settings, for the standard cleaning cycle;
- (d) energy efficiency class, in accordance with point 1 of Annex VI;
- (e) where the household dishwasher has been awarded an 'EU Ecolabel' under Regulation (EC) No 66/2010, this information may be included;
- (f) annual energy consumption (AE_c) in kWh per year, rounded up to the nearest integer and calculated in accordance with point 1(b) of Annex VII. It shall be described as 'Energy consumption "X" kWh per year, based on 280 standard cleaning cycles using cold water fill and the consumption of the low power modes. Actual energy consumption will depend on how the appliance is used.';
- (g) the energy consumption (E_{\downarrow}) of the standard cleaning cycle;
- (h) the power consumption in off-mode and left-on mode (P_o and P_l);
- (i) annual water consumption (AW_c), in litres per year, rounded up to the nearest integer and calculated in accordance with point 3 of Annex VII; it shall be described as: 'Water consumption "X" litres per year, based on 280 standard cleaning cycles. Actual water consumption will depend on how the appliance is used.';
- (j) drying efficiency class determined in accordance with point 2 of Annex VI expressed as 'Drying efficiency class "X" on a scale from G (least efficient) to A (most efficient)'. Where this information is provided in a table, this may be expressed by other means provided it is clear that the scale is from G (least efficient) to A (most efficient);
- (k) indication that the 'standard programme' is the standard cleaning cycle to which the information in the label and the fiche relates, that this programme is suitable to clean normally soiled tableware, and that it is the most efficient programme in terms of combined energy and water consumption;
- (l) programme time for the standard cleaning cycle, in minutes and rounded to the nearest integer;
- (m) the duration of the left-on mode (T_l) if the household dishwasher is equipped with a power management system;
- (n) airborne acoustical noise emissions expressed in dB(A) re 1 pW and rounded to the nearest integer;
- (o) if the household dishwasher is intended to be built-in, an indication to this effect.

2. One fiche may cover a number of household dishwasher models supplied by the same supplier.

3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1 not already displayed on the label shall also be provided.

ANNEX III

Technical documentation

1. The technical documentation referred to in Article 3(c) shall include:

- (a) the name and address of the supplier;
- (b) a general description of the dishwasher model, sufficient for it to be unequivocally and easily identified;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) identification and signature of the person empowered to bind the supplier;
- (f) technical parameters for measurements as follows:
 - (i) energy consumption;
 - (ii) water consumption;
 - (iii) programme time;
 - (iv) drying efficiency;
 - (v) power consumption in 'off-mode';
 - (vi) power consumption in 'left-on mode';
 - (vii) 'left-on mode' duration;
 - (viii) airborne acoustical noise emissions;
- (g) the results of calculations performed in accordance with Annex VII.

2. Where the information included in the technical documentation file for a particular household dishwasher model has been obtained by calculation on the basis of design, or extrapolation from other equivalent household dishwashers, or both, the documentation shall include details of such calculations or extrapolations, or both, and of tests undertaken by suppliers to verify the accuracy of the calculations undertaken. The information shall also include a list of all other equivalent household dishwasher models where the information was obtained on the same basis.

ANNEX IV

Information to be provided in the cases where end-users cannot be expected to see the product displayed

1. The information referred to in Article 4(b) shall be provided in the following order:
 - (a) the energy efficiency class, as defined in point 1 of Annex VI;
 - (b) the rated capacity in standard place settings for the standard cleaning cycle;
 - (c) the annual energy consumption (AE_c) in kWh per year, rounded up to the nearest integer and calculated in accordance with point 1(b) of Annex VII;
 - (d) the annual water consumption (AW_c) in litres per year, rounded up to the nearest integer and calculated in accordance with point 3 of Annex VII;
 - (e) the drying efficiency class in accordance with point 2 of Annex VI;
 - (f) airborne acoustical noise emissions in dB(A) re 1 pW and rounded to the nearest integer;
 - (g) if the model is intended to be built-in, an indication to this effect.
2. Where other information contained in the product fiche is also provided, it shall be in the form and order specified in Annex II.
3. The size and font in which all the information referred in this Annex is printed or shown shall be legible.

ANNEX V

Verification procedure for market surveillance purposes

For the purposes of checking conformity with the requirements laid down in Articles 3 and 4, **Contracting Party** authorities shall test a single household dishwasher. If the measured parameters do not meet the values declared by the supplier within the ranges set out in Table 1, the measurements shall be made on three more household dishwashers. The arithmetic mean of the measured values of these three household dishwashers shall meet the values declared by the supplier within the range defined in Table 1, except for the energy consumption, where the measured value shall not be greater than the rated value of E_t by more than 6%.

Otherwise, the model and all other equivalent household dishwasher models shall be considered not to comply with the requirements laid down in Articles 3 and 4.

Contracting Party authorities shall use reliable, accurate and reproducible measurement procedures, which take into account the generally recognised state-of-the-art measurement methods, including methods set out in documents, the reference numbers of which have been published for that purpose in the Official Journal of the European Union.

Table 1

Measured parameter	Verification tolerances
Annual energy consumption	The measured value shall not be greater than the rated value (*) of AE_c by more than 10%.
Water consumption	The measured value shall not be greater than the rated value of W_t by more than 10%.
Drying efficiency index	The measured value shall not be less than the rated value of I_D by more than 19%.
Energy consumption	The measured value shall not be greater than the rated value of E_t by more than 10%.
Programme time	The measured value shall not be longer than the rated values T_t by more than 10%.
Power consumption in off-mode and left-on mode	The measured value of power consumption P_o and P_l of more than 1.00 W shall not be greater than the rated value by more than 10%. The measured value of power consumption P_o and P_l of less than or equal to 1.00 W shall not be greater than the rated value by more than 0.10 W.
Duration of left-on mode	The value measured shall not be longer than the rated value of T_l by more than 10%.
Airborne acoustical noise emissions	The measured value shall meet the rated value.

(*) 'Rated value' means a value declared by the supplier.

ANNEX VI

Energy efficiency classes and drying efficiency classes

1. ENERGY EFFICIENCY CLASSES

The energy efficiency class of a household dishwasher shall be determined on the basis of its Energy Efficiency Index (EEI) as set out in Table 1.

The Energy Efficiency Index (EEI) of a household dishwasher shall be calculated in accordance with point 1 of Annex VII.

Table 1

Energy efficiency classes

Energy efficiency class	Energy Efficiency Index
A+++ (most efficient)	$EEI < 50$
A++	$50 \leq EEI < 56$
A+	$56 \leq EEI < 63$
A	$63 \leq EEI < 71$
B	$71 \leq EEI < 80$
C	$80 \leq EEI < 90$
D (least efficient)	$EEI \geq 90$

2. DRYING EFFICIENCY CLASSES

The drying efficiency class of a household dishwasher shall be determined on the basis of its Drying Efficiency Index (I_D) as set out in Table 2.

The Drying Efficiency Index (I_D) shall be calculated in accordance with point 2 of Annex VII.

Table 2

Drying efficiency classes

Drying efficiency class	Drying Efficiency Index
A	$I_D > 1.08$
B	$1.08 \geq I_D > 0.86$
C	$0.86 \geq I_D > 0.69$
D	$0.69 \geq I_D > 0.55$
E	$0.55 \geq I_D > 0.44$
F	$0.44 \geq I_D > 0.33$
G (least efficient)	$0.33 \geq I_D$

ANNEX VII

Method for calculating the energy efficiency index, the drying efficiency index and water consumption

1. CALCULATION OF THE ENERGY EFFICIENCY INDEX

For the calculation of the Energy Efficiency Index (EEI) of a household dishwasher model, the annual energy consumption of the household dishwasher is compared to its standard annual energy consumption.

(a) The Energy Efficiency Index (EEI) is calculated as follows and rounded to one decimal place:

$$EEI = \frac{AE_C}{SAE_C} \times 100$$

where:

AE_C = annual energy consumption of the household dishwasher;

SAE_C = standard annual energy consumption of the household dishwasher.

(b) The annual energy consumption (AE_C) is calculated in kWh/year as follows and rounded to two decimal places:

(i)

$$AE_C = E_t \times 280 + \frac{\left[P_o \times \frac{525\,600 - (T_t \times 280)}{2} + P_l \times \frac{525\,600 - (T_t \times 280)}{2} \right]}{60 \times 1\,000}$$

where:

E_t = energy consumption for the standard cycle, in kWh and rounded to three decimal places;

P_l = power in 'left-on mode' for the standard cleaning cycle, in W and rounded to two decimal places;

P_o = power in 'off-mode' for the standard cleaning cycle, in W and rounded to two decimal places;

T_t = programme time for the standard cleaning cycle, in minutes and rounded to the nearest minute;

280 = total number of standard cleaning cycles per year;

(ii) Where the household dishwasher is equipped with a power management system, with the household dishwasher reverting automatically to 'off-mode' after the end of the programme, AE_C is calculated taking into consideration the effective duration of 'left-on mode', according to the following formula:

$$AE_C = E_t \times 280 + \frac{\{(P_l \times T_t \times 280) + P_o \times [525\,600 - (T_t \times 280) - (T_t \times 280)]\}}{60 \times 1\,000}$$

where:

T_I = measured time in 'left-on mode' for the standard cleaning cycle, in minutes and rounded to the nearest minute;

280 = total number of standard cleaning cycles per year.

(c) The standard annual energy consumption (SAE_C) is calculated in kWh/year as follows and rounded to two decimal places:

(i) for household dishwashers with rated capacity $ps \geq 10$ and width > 50 cm:

$$SAE_C = 7,0 \times ps + 378$$

(ii) for household dishwashers with rated capacity $ps \leq 9$ and household dishwashers with rated capacity $9 < ps \leq 11$ and width ≤ 50 cm:

hold dishwashers with rated capacity $ps \leq 9$ and household dishwashers with width ≤ 50 cm:

$$SAE_C = 25,2 \times ps + 126$$

where:

ps = number of place settings.

2. CALCULATION OF THE DRYING EFFICIENCY INDEX

For the calculation of the Drying Efficiency Index (I_D) of a household dishwasher model, the drying efficiency of the household dishwasher is compared to the drying efficiency of a reference dishwasher, where the reference dishwasher shall have the characteristics indicated in the generally recognised state-of-the-art measurement methods, including methods set out in documents, the reference numbers of which have been published for that purpose in the Official Journal of the European Union.

(a) The Drying Efficiency Index (I_D) is calculated as follows and rounded to two decimal places:

$$\ln I_D = \frac{1}{n} \times \sum_{i=1}^n \ln \left(\frac{D_{T,i}}{D_{R,i}} \right)$$

$$I_D = \exp(\ln I_D)$$

where:

$D_{T,i}$ = drying efficiency of the household dishwasher under test for one test cycle (i);

$D_{R,i}$ = drying efficiency of the reference dishwasher for one test cycle (i);

n = number of test cycles, $n \geq 5$.

(b) The drying efficiency (D) is the average of the wet score of each load item after completion of a standard cleaning cycle. The wet score is calculated as shown in Table 1:

Table 1

Number of water traces (W_T) or wet streak (W_S)	Total wet area (A_w) in mm ²	Wet score
$W_T = 0$ and $W_S = 0$	Not applicable	2 (most efficient)
$1 < W_T \leq 2$ or $W_S = 1$	$A_w < 50$	0
$2 < W_T$ or $W_S = 2$ or $W_S = 1$ and $W_T = 1$	$A_w > 50$	0 (least efficient)

3. CALCULATION OF THE ANNUAL WATER CONSUMPTION

The annual water consumption (AW_C) of a household dishwasher is calculated, in litres and rounded up to the nearest integer, as:

$$AW_C = W_t \times 280$$

where:

W_t = water consumption for the standard cleaning cycle, in litres and rounded to one decimal place.



Directive 96/60/EC of 19 September 1996 implementing Directive 92/75/EEC with regard to energy labelling of household combined washer-driers

Incorporated and adapted by Ministerial Council Decision 2010/02/MC-EnC of 24 September 2010 amending decision 2009/05/MC-EnC of 18 December 2009 on the implementation of certain Directives on Energy Efficiency.

The adaptations made by Ministerial Council Decision 2010/02/MC-EnC are highlighted in bold and blue.

Whereas electricity use by combined washer-driers accounts for a significant part of total Community energy demand; whereas the scope for reduced energy use by these appliances is substantial;

Whereas a better washing performance often requires a higher consumption of water and energy; whereas information on the washing performance of an appliance is helpful in evaluating the information on its energy and water consumption; whereas this will help consumers make a choice of appliance which is consistent with the rational use of energy;

Whereas the Community, confirming its interest in an international standardization system capable of producing standards that are actually used by all partners in international trade and of meeting the requirements of Community policy, invites the European standards organizations to continue their cooperation with international standards organizations;

Whereas the European Committee for Standardization (CEN) and the European Committee for Electrotechnical Standardization (Cenelec) are the bodies recognized as competent to adopt harmonized standards in accordance with the general guidelines for cooperation between the Commission and these two bodies signed on 13 November 1984; whereas, within the meaning of this Directive, a harmonized standard is a technical specification (European standard or harmonization document) adopted by Cenelec, on the basis of a remit (mandate) from the Commission in accordance with the provisions of Council Directive 83/189/EEC of 28 March 1983 laying down a procedure for the provision of information in the field of technical standards and regulations, as last amended by Commission Decision 96/139/EEC, and on the basis of those general guidelines;

Whereas the measures provided for in this Directive are in accordance with the opinion of the committee set up under Article 10 of Directive 92/75/EEC,

Article 1

1. This Directive shall apply to electric mains operated household combined washer-driers. Appliances that can also use other energy sources are excluded.
2. The information required by this Directive shall be measured in accordance with harmonized standards, the reference numbers of which have been published in the Official Journal of the European Communities and for which **Contracting Parties** have published the reference numbers of the national standards transposing those harmonized standards. Throughout this Directive any provisions requiring the giving of information relating to noise shall apply only where that information is required pursuant to Article 3 of Council Directive 86/594/EEC (4). This information, where required, shall be measured in accordance with that Directive.

3. The harmonized standards referred to in paragraph 2 shall be drawn up under mandate from the Commission in accordance with Directive 83/189/EEC.

4. In this Directive, except where the context otherwise requires, expressions used have the same meaning as in Directive 92/75/EEC.

Article 2

1. The technical documentation referred to in Article 2 (3) of Directive 92/75/EEC shall include:

- the name and address of the supplier,
- a general description of the model, sufficient for it to be uniquely identified,
- information, including drawings as relevant, on the main design features of the model and in particular items which appreciably affect its energy consumption,
- reports of relevant measurement tests carried out on the model under the test procedures of the harmonized standards referred to in Article 1 (2) of this Directive,
- operating instructions, if any.

2. The label referred to in Article 2 (1) of Directive 92/75/EEC shall be as specified in Annex I to this Directive. The label shall be placed on the outside of the front or top of the appliance, in such a way as to be clearly visible and not obscured.

3. The content and format of the fiche referred to in Article 2 (1) of Directive 92/75/EEC shall be as specified in Annex II to this Directive.

4. In the circumstances covered by Article 5 of Directive 92/75/EEC, and where the offer for sale, hire or hire purchase is provided by means of a printed communication, such as a mail order catalogue, then that printed communication shall include all the information specified in Annex III to this Directive.

5. The energy efficiency class of an appliance, and its washing performance class, shall be as determined in accordance with Annex IV.

Article 3

Contracting Parties shall take all necessary measures to ensure that all suppliers and dealers established in their territory fulfil their obligations under this Directive.

Article 4

1. The Contracting Parties shall implement this Directive by 31 December 2011.

However, **Contracting Parties** shall, until **30 June 2012**, permit:

- the placing on the market, the commercialization and/or the display of products and
- the distribution of printed communications referred to in Article 2 (4) which do not conform with this Directive.

When **Contracting Parties** adopt these provisions, these shall contain a reference to this Directive or shall be accompanied by such reference at the time of their official publication. The procedure for such reference shall be adopted by **Contracting Parties**.

2. **Contracting Parties** shall communicate to the **Secretariat** the text of the provisions of national law which they adopt in the field covered by this Directive.

Article 5 and 6¹

This Decision [2010/02/MC-EnC] enters into force upon its adoption and is addressed to the Contracting Parties.

Article 2(5) of Decision 2010/02/MC-EnC

The Secretariat shall monitor and review the implementation of [this] Directive ... and shall submit a progress report to the Permanent High Level Group by 30 June 2012.

This Directive will be repealed and new provisions laid down by Delegated Regulation, upon proposal by European Commission and adoption by Ministerial Council of the Energy Community

¹ The text displayed here corresponds to Article 3 of Decision 2010/02/MC-EnC.

ANNEX I The label

Label design

1. The label shall be the appropriate language version, chosen from the following illustration

Energy		Washer-drier	
Manufacturer		g o g o	I
Model		ABC 123	II
More efficient			
	A		
	B		III
	C		
	D		
	E		
	F		IV
	G		
Less efficient			
Energy consumption kWh <small>(to wash and dry a full capacity wash load at 60 °C)</small>		X.YZ	V
Washing (only) kWh <small>Actual energy consumption will depend on how the appliance is used</small>		X.YZ	VI
Washing performance <small>A: higher G: lower</small>		A B C D E F G	VII
Spin speed (rpm)		1 100	VIII
Capacity (cotton) kg	Washing	y.z	IX
	Drying	y.z	X
Water consumption (total) l		yx	XI
Noise (dB(A) re 1 pW)	Washing	xyz	
	Spinning	xyz	
	Drying	xyz	XII
Further information is contained in product brochures			
<small>Norm EN 50229 Washer-drier Label Directive No 96/60/EC</small>			

Notes concerning the label

2. The following notes define the information to be included:

Note:

I. Supplier's name or trade mark.

II. Supplier's model identifier.

III. The energy efficiency class of the model, determined in accordance with Annex IV. This indicator letter shall be placed at the same level as the relevant arrow.

IV. Without prejudice to any requirements under the Community Eco-label scheme, where a model has been granted a 'Community Eco-label' pursuant to Council Regulation (EEC) No 880/9¹, a copy of the Eco-label may be added here. The 'washer-drier label design guide' referred to below, explains how the Eco-label may be included in the label.

V. Energy consumption in kWh per complete operating (washing, spinning and drying) cycle using standard 60° C cotton cycle, and 'dry cotton' drying cycle, determined in accordance with the test procedures of the harmonized standards referred to in Article 1 (2).

VI. Energy consumption in kWh per washing (washing and spinning only) cycle using standard 60° C cotton cycle, determined in accordance with the test procedures of the harmonized standards referred to in Article 1 (2).

VII. Washing performance class determined in accordance with Annex IV.

VIII. Maximum spin speed attained for standard 60° C cotton cycle, determined in accordance with the test procedures of the harmonized standards referred to in Article 1 (2).

IX. Capacity (in kg) of appliance for standard 60° C cotton cycle (without drying), determined in accordance with the harmonized standards referred to in Article 1 (2).

X. Capacity (in kg) of appliance for 'dry cotton' (drying) cycle, determined in accordance with the harmonized standards referred to in Article 1 (2).

XI. Water consumption, in litres, per complete operating (washing, spinning and drying) cycle using standard 60° C cotton washing cycle and 'dry cotton' drying cycle, determined in accordance with the test procedures of the harmonized standards referred to in Article 1 (2).

XII. Where applicable, noise during washing, spinning and drying cycles using standard 60° C cotton washing cycle and 'dry cotton' drying cycle, determined in accordance with Council Directive 86/594/EEC².

Note:

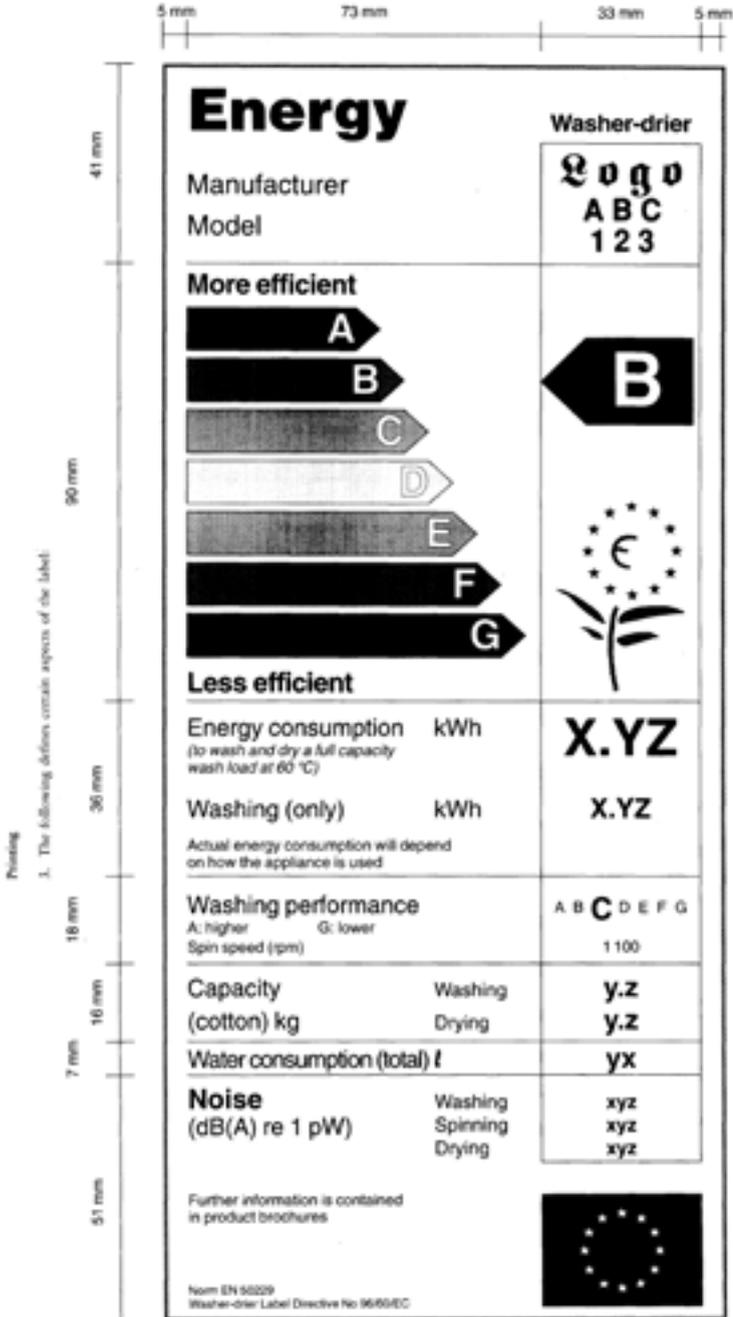
The equivalent terms in other languages to those given above are set out in Annex V.

¹ OJ No L99, 11.4.1992, p. 1.

² OJ No L 344, 6.12.1986, p. 24. The relevant noise measurement standards are EN 60704-2-4 for washing and spinning, and EN 60704-2-6 for drying and EN 60704-3.

Printing

3. The following defines certain aspects of the label:



Colours used:

CMYK cyan, magenta, yellow, black.

Ex. 07XO: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.

Arrows

- A: XOXO

- B: 7OXO

- C: 3OXO

- D: OOXO

- E: 03XO

- F: 07XO

- G: OXXO

Outline colour X070

All text is in black. The background is white.

Complete printing information is contained in a, Washer-drier energy label design guide', which is for information only, obtainable from:

The Secretary of the Committee on energy labelling and standard product information for household appliances,

Directorate-General Energy XVII,

European Commission,

Rue de la Loi/Wetstraat 200,

B-1049 Brussels.

ANNEX II

The fiche

The fiche shall contain the following information. The information may be given in the form of a table covering a number of models supplied by the same supplier. The information shall be given in the order specified below unless it is contained in a more general description of the appliance:

1. Supplier's trade mark.
2. Supplier's model identifier.
3. The energy efficiency class of the model determined in accordance with Annex IV. Expressed as 'Energy efficiency class ... on a scale of A (more efficient) to G (less efficient)'. Where this information is provided in a table this may be expressed by other means provides it is clear that the scale is from A (more efficient) to G (less efficient).
4. Where the information is provided in a table, and where some of the appliances listed in the table

have been granted a 'Community Eco-label' pursuant to Regulation (EEC) No 880/92, this information may be included here. In this case the row heading shall state 'Community Eco-label', and the entry shall consist of a copy of the Eco-label mark. This provision is without prejudice to any requirements under the EU Eco-label scheme.

5. Energy consumption for washing, spinning, and drying in kWh per complete operating cycle as defined in Annex I note V.

6. Energy consumption for washing and spinning only, in kWh per washing cycle as defined in Annex I note VI.

7. Washing performance class determined in accordance with Annex IV. Expressed as 'Washing performance class ... on a scale of A (higher) to G (lower)'. This may be expressed by other means provided it is clear that the scale is from A (higher) to G (lower).

8. Water extraction efficiency for a standard 60° C cotton washing cycle, determined in accordance with the test procedures of the harmonized standards referred to in Article 1 (2). Expressed as 'Water remaining after spin ... % (as a proportion of dry weight of wash)'.

9. Maximum spin speed attained as defined in Annex I note VIII.

10. Washing capacity of appliance for a standard 60° C cotton washing cycle, as defined in Annex I note IX.

11. Drying capacity of appliance for a standard 'dry cotton' drying cycle, as defined in Annex I note X.

12. Water consumption for washing, spinning and drying, in litres per complete operating cycle as defined in Annex I note XI.

13. Water consumption for washing and spinning only, in litres, per standard 60°C cotton washing (and spinning) cycle determined in accordance with the test procedures of the harmonized standards referred to in Article 1 (2).

14. Washing and drying time. Programme time for complete operating cycle (60° C cotton washing and 'dry cotton' drying), for rated washing capacity, determined in accordance with the test procedures of the harmonized standards referred to in Article 1 (2).

15. Suppliers may include information under points 5 to 14 above in respect of other wash and/or drying cycles.

16. The consumption of energy and water equal to 200 times the consumption expressed in points 5 (energy) and 12 (water). This shall be expressed as 'estimated annual consumption for a four-person household, always using the drier (200 cycles)'.

17. The consumption of energy and water equal to 200 times the consumption expressed in points 6 (energy) and 13 (water). This shall be expressed as 'estimated annual consuming for four-person household, never using the drier (200 cycles)'.

18. Where applicable, noise during washing, spinning and drying cycles using standard 60° C cotton washing cycle and 'dry cotton' drying cycle, in accordance with Directive 86/594/EEC.

The information on the label may be given in the form of a representation of the label in colour or in black and white.

Note:

The equivalent terms in other languages to those given above are set out in Annex V.

ANNEX III

Mail order and other distance selling

Mail order catalogues and other printed communications referred to in Article 2 (4) shall contain the following information, given in the order specified:

1. Energy efficiency class (Annex 11 point 3)
2. Energy consumption (washing, spinning and drying) (Annex 11 point 5)
3. Energy consumption (washing and spinning only) (Annex 11 point 6)
4. Washing performance class (Annex 11 point 7)
5. Water extraction efficiency (Annex 11 point 8)
6. Maximum spin speed (Annex 11 point 9)
7. Capacity (washing) (Annex 11 point 10)
8. Capacity (drying) (Annex 11 point 11)
9. Water consumption (washing, spinning and drying) (Annex 11 point 12)
10. Water consumption (washing and spinning only) (Annex 11 point 13)
11. Estimated annual consumption for a four-person household, always using the drier (200 cycles) (Annex 11 point 16)
12. Estimated annual consumption for a four-person household, never using the drier (200 cycles) (Annex 11 point 17)
13. Noise, where applicable (Annex 11 point 18)

Where other information contained in the fiche is provided, it shall be in the form specified in Annex 11 and shall be included in the above table in the order required for the fiche.

Note:

The equivalent terms in other languages to those given above are set out in Annex V.

ANNEX IV

Energy efficiency class

The energy efficiency class of an appliance shall be determined in accordance with Table 1:

Table 1

Energy Efficiency class	Energy consumption 'C' in kWh per kg complete operating (washing, spinning and drying) cycle using standard 60°C cotton cycle, and 'dry cotton' drying cycle, determined in accordance with the test procedures of the harmonized standards referred to in Article 1 (2)
A	$C \leq 0.68$
B	$0.68 < C \leq 0.81$
C	$0.81 < C \leq 0.93$
D	$0.93 < C \leq 1.05$
E	$1.05 < C \leq 1.17$
F	$1.17 < C \leq 1.29$
G	$1.29 < C$

The washing performance class of an appliance shall be determined in accordance with Table 2:

Table 2

Washing performance class	Washing standard index 'P' as defined in the harmonized standards referred in Article 1 (2), using a standard 60°C cotton cycle
A	$P > 1.03$
B	$1.03 \geq P > 1.00$
C	$1.00 \geq P > 0.97$
D	$0.97 \geq P > 0.94$
E	$0.94 \geq P > 0.91$
F	$0.91 \geq P > 0.88$
G	$0.88 \geq P$



PART II

MINISTERIAL COUNCIL DECISIONS ON ENERGY EFFICIENCY

DECISION OF THE MINISTERIAL COUNCIL OF THE ENERGY COMMUNITY

D/2009/05/MC-EnC of 18 December 2009 on the implementation of certain Directives on Energy Efficiency

Amended by:

- *Ministerial Council Decision 2010/02/MC-EnC of 24 September 2010 amending Decision 2009/05/MC-EnC of 18 December 2009 on the implementation of certain Directives on Energy Efficiency*
- *Ministerial Council Decision 2011/03/MC-EnC of 6 October 2011 on adopting certain Delegated Regulations on energy related products*
- *Ministerial Council Decision 2014/02/MC-EnC of 23 September 2014 adapting certain Delegated Regulations on energy related products*
- *Ministerial Council Decision 2015/08/MC-EnC of 16 October 2015 on the implementation of the Directive 2012/27/EU on energy efficiency*

*The amendments are highlighted in **bold and blue**.*

The Ministerial Council of the Energy Community,

Having regard to the Treaty establishing the Energy Community (“the Treaty”), and in particular Articles 2(d), 24, 100 (ii) thereof,

Whereas the Ministerial Council in December 2007 established a Task Force which, among other tasks, was requested to identify the pieces of EC legislation in the field of energy efficiency suitable and appropriate to be implemented in the Contracting Parties to the Energy Community,

Whereas this Task Force subsequently identified three pieces of legislation, namely Directive 2006/32/EC on energy end-use efficiency and energy services, Directive 2002/91/EC on the energy performance of buildings and Directive 92/75/EEC and the implementing Directives on the indication by labeling and standard product information of the consumption of energy and other resources by household appliances,

Whereas the Ministerial Council, at its meeting of 26 June 2009 requested the Secretariat to prepare the relevant decisions for the introduction in the framework of the Treaty of the above-mentioned Directives,

Whereas the Permanent High Level Group, at its meeting on 24 September 2009, elaborated and proposed to adopt the present Decision,

HAS ADOPTED THIS DECISION:

Article 1

1. Each Contracting Party shall implement Directive 2006/32/EC of the European Parliament and of the Council on energy end-use efficiency and energy services and repealing Council Directive 93/76/EEC ("Directive 2006/32/EC").

2. For the purpose of implementing Directive 2006/32/EC within the institutional framework of the Treaty,

- a. the term "Member States" shall read "Contracting Parties" throughout Directive 2006/32/EC;
- b. the term "Commission" in Article 4(2) subparagraph 2, Article 5(1) subparagraph 3, Article 7(3), Article 14(1), (2) subparagraph 1 and (5) subparagraph 1, Article 18(1) subparagraph 1 and (2) shall read "Secretariat";
- c. the term "in accordance with the procedure referred to in Article 16(2)" in Article 14(4) shall read "by the Secretariat";
- d. the term "the European Parliament and to the Council" in Article 14(5) subparagraph 3 shall read "the Ministerial Council";
- e. the term "and/or the Commission" in Article 14(5) subparagraph 2 shall not be applicable.

3. For the purpose of implementing Directive 2006/32/EC by the Contracting Parties to the Treaty the deadlines set in Article 18(1) subparagraph 1 of Directive 2006/32/EC shall be "31 December 2011" instead of "17 May 2008" and "31 December 2009" instead of "17 May 2006". The other deadlines set by Directive 2006/32/EC shall be adapted as follows:

- a. in Article 14(1): "30 June 2010";
- b. in Article 14(2) subparagraph 1: "30 June 2010" (first indent), "30 June 2013" (second indent), "30 June 2016" (third indent);
- c. in Article 14(4): "1 January 2011" (first indent), "1 January 2014" (second indent), "1 January 2017" (third indent);
- d. in Article 14(5) subparagraph 1: "1 January 2011" (first indent), "1 January 2014" (second indent), "1 January 2017" (third indent).

4. Further to the specific monitoring duties conferred on it by Directive 2006/32/EC as adapted, the Secretariat shall monitor and review the implementation of Directive 2006/32/EC in the Contracting Parties and shall submit a progress report to the Permanent High Level Group by 30 June 2012.

Article 3(36) (1) of Ministerial Council Decision 2015/08/MC-EnC

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.

Article 2¹

1. Each Contracting Party shall implement Directive 2010/31/EU of the European Parliament and of the Council on the energy performance of buildings, recasting and repealing Directive 2002/91/EC (“Directive 2010/31/EU”).

2. For the purpose of implementing Directive 2010/31/EU within the institutional framework of the Treaty,

- a. the term “Member States” shall read “Contracting Parties” throughout the provisions of and annexes to Directive 2010/31/EU;
- b. the term “Commission” in Article 1(3), Article 5(2), (3), and (4), Article 9(2), (4), (5) and (6), Article 10(2), (3), and (4), Article 14(4) and (5), Article 15(4) and (5), Article 20(2), Article 27, and Article 28(2) shall read “Secretariat”;
- c. in Article 1(1), the term “Union” shall read “Energy Community”;
- d. the last sentence of Article 9(4) shall read “Following its evaluation, the Secretariat may propose a recommendation to the Ministerial Council”. In Article 10(3), the term “or recommendations” shall not apply.
- e. In Article 23(3), the term “European Parliament and to the Council” shall be replaced with “Ministerial Council, who shall put it on the agenda of its next meeting”;
- f. Article 24 shall be replaced with the following: “The Ministerial Council may object to the application of a delegated act to the Contracting Parties of the Energy Community at the meeting following notification. If, at that meeting, the Ministerial Council has not objected to the delegated act, it shall become binding on the Contracting Parties, subject to possible adaptation. If the Ministerial Council objects to a delegated act, it shall not be applicable in the Energy Community. The Ministerial Council shall state the reasons for objecting to the delegated act.”

3. For the purpose of implementing Directive 2010/31/EU by the Contracting Parties to the Treaty, the following deadlines shall be adapted as follows:

- a. in Article 5(2) subparagraph 2: “30 June 2013”;

¹ As amended by Article 1 of Ministerial Council Decision 2010/02/MC-EnC

- b. in Article 9(1)(a): “30 June 2021”, Article 9(1)(b): “30 June 2019”, Article 9(5): “31 December 2013”;**
 - c. in Article 10(2): “30 June 2013”;**
 - d. in Article 12(1)(b) and in Article 13(1) subparagraph 2: “30 September 2015”**
 - e. in Article 14(4) subparagraph 2: and in Article 15(4) subparagraph 2: “30 June 2013”;**
 - f. in Article 27: “31 March 2013”;**
 - g. in Article 28(1) subparagraph 1: “30 September 2012”, in Article 28(1) subparagraph 2: “31 March 2013”; in Article 28(1) subparagraph 3: “31 March 2013” and “30 September 2013”, in Article 28(1) subparagraph 4: “31 March 2016”.**
- 4. The Secretariat shall monitor and review the implementation of Directive 2010/31/EU in the Contracting Parties and shall submit a progress report to the Permanent High Level Group by 31 March 2013.**

Article 3²

1. Each Contracting Party shall implement Directive 2010/30/EU on the indication by labeling and standard product information of the consumption of energy and other resources by energy-related products (“Directive 2010/30/EU”), as well as the following Directives:

- a. ...³**
- b. ...⁴**
- c. ...⁵**
- d. Commission Directive 96/60/EC implementing Council Directive 92/75/EEC with regard to energy labeling of household combined washer-driers (“Directive 96/60/EC”);**
- e. ...⁶**
- f. ...⁷**
- g. ...⁸**
- h. ...⁹**

2. For the purpose of implementing the Directives covered by paragraph 1 within the institutional framework of the Treaty,

- a. the term “Member States” shall read “Contracting Parties” throughout all Directives covered by paragraph 1;**
- b. the term “Commission” in Article 3(1)(d), (2), (3) and (4), Article 5(c), Article 15 and Article 16(1) and (2) of Directive 2010/30/EU, and in Article 4(2) of Directive 96/60/EC**

² As amended by Article 2 of Ministerial Council Decision 2010/02/MC-EnC

³ Deleted reference to Directive 94/2/EC (ceased to apply as of 31 December 2012)

⁴ Deleted reference to Directive 95/12/EC (ceased to apply as of 31 December 2012)

⁵ Deleted reference to Directive 95/13/EC (ceased to apply as of 1 January 2016)

⁶ Deleted reference to Directive 97/17/EC (ceased to apply as of 31 December 2012)

⁷ Deleted reference to Directive 98/11/EC (ceased to apply as of 1 July 2013)

⁸ Deleted reference to Directive 2002/31/EC (ceased to apply as of 1 July 2013)

⁹ Deleted reference to Directive 2002/40/EC (ceased to apply as of 1 January 2016)

- shall read “Secretariat”;
- c. the term “Union” in Article 2(a), (h), (i), and (j) of Directive 2010/30/EU shall read “Energy Community”;
 - d. the term “the European Parliament and the Council” in Article 3(4) of Directive 2010/30/EU shall read “the Ministerial Council”;
 - e. in Article 11(2) of Directive 2010/30/EU, the term “European Parliament and to the Council” shall be replaced with “Ministerial Council, who shall put it on the agenda of its next meeting”;
 - f. Article 13 of Directive 2010/30/EU shall be replaced with the following: “The Ministerial Council may object to the application of a delegated act to the Contracting Parties of the Energy Community at the meeting following notification. If, at that meeting, the Ministerial Council has not objected to the delegated act, it shall become binding on the Contracting Parties, subject to possible adaptation. If the Ministerial Council objects to a delegated act, it shall not be applicable in the Energy Community. The Ministerial Council shall state the reasons for objecting to the delegated act.”
3. For the purpose of implementing the Directives covered by paragraph 1 by the Contracting Parties to the Treaty,
- a. the deadlines stipulated in Directive 2010/31/EU shall be respectively replaced as follows:
 - i. in Article 15: “31 December 2011”,
 - ii. in Article 16(1): “31 December 2011”
 - iii. in Article 18: “31 December 2011”;
 - b. Article 4(1) subparagraph 1 of Directive 96/60/EC shall be replaced with the following: “The Contracting Parties shall implement this Directive by 31 December 2011.”;
 - c. the dates referred to in Article 4(1) subparagraph 2 of Directive 96/60/EC shall be replaced with “30 June 2012”.
4. Each Contracting Party shall prepare a label design based on the template annexed to the respective implementing Directives and translated into the official languages. The label design shall be submitted to the Permanent High Level Group not later than 31 December 2010 for approval.
5. The Secretariat shall monitor and review the implementation of the Directives referred to in paragraph 1 in the Contracting Parties and shall submit a progress report to the Permanent High Level Group by 30 June 2012.

Article 3(36) (2) of Ministerial Council Decision 2015/08/MC-EnC

Article 9(1) and (2) of Directive 2010/30/EU, as incorporated and adapted by Ministerial Council Decision 2010/02/MC-EnC shall cease to apply from 15 October 2017.

Article 4

This Decision enters into force upon its adoption and is addressed to the Contracting Parties.

Done in Zagreb, on 18 December 2009

For the Ministerial Council:

.....
(Presidency)

DECISION OF THE MINISTERIAL COUNCIL OF THE ENERGY COMMUNITY

D/2010/02/MC-EnC of 24 September 2010 amending Decision 2009/05/MC-EnC of 18 December 2009 on the implementation of certain Directives on Energy Efficiency

Amended by:

- *Ministerial Council Decision 2011/03/IMC-EnC of 6 October 2011 on adopting certain Delegated Regulations on energy related products*
- *Ministerial Council Decision 2014/02/MC-EnC of 23 September 2014 adapting certain Delegated Regulations on energy related products*
- *Ministerial Council Decision 2015/08/IMC-EnC of 16 October 2015 on the implementation of the Directive 2012/27/EU on energy efficiency*

*The amendments are highlighted in **bold and blue**.*

The Ministerial Council of the Energy Community,

Having regard to the Treaty establishing the Energy Community ("the Treaty"), and in particular Articles 2(d), 24 and 100(ii) thereof,

Whereas the Ministerial Council on 18 December 2009 adopted Decision 2009/05/MC-EnC incorporating Directive 2006/32/EC on energy end-use efficiency and energy services, Directive 2002/91/EC on the energy performance of buildings ("Directive 2002/91/EC") and Directive 92/75/EEC on the indication by labeling and standard product information of the consumption of energy and other resources by household appliances ("Directive 92/75/EEC"), as well as eight Implementing Directives, into the Energy Community *acquis*,

Whereas Directive 2010/31/EU of the European Parliament and of the Council on the energy performance of buildings, recasting and repealing Directive 2002/91/EC, and Directive 2010/30/EU of the European Parliament and of the Council on the indication by labeling and standard product information of the consumption of energy and other resources by energy-related products, recasting and repealing Directive 92/75/EEC, have been adopted on 19 May 2010 and published in Official Journal of the European Union on 18 June 2010,

Whereas Article 2(5) of Decision 2009/05/MC-EnC provides that in its meeting following the recast of Directive 2002/91/EC, the Ministerial Council shall take a Decision on its adoption within the Energy Community,

Whereas a similar approach is required with respect to the recast of Directive 92/75/EEC, which at the time of adoption of Decision 2009/05/MC-EnC was not yet as advanced as the recast of Directive

2002/91/EC,

Whereas the Permanent High Level Group, at its meeting on 29 June 2010, discussed the adoption of Directives 2010/30/EU and 2010/31/EU and elaborated and proposed to adopt the present Decision,

HAS ADOPTED THIS DECISION:

Article 1

Article 2 of Decision 2009/05/MC-EnC is replaced with the following text:

“1. Each Contracting Party shall implement Directive 2010/31/EU of the European Parliament and of the Council on the energy performance of buildings, recasting and repealing Directive 2002/91/EC (“Directive 2010/31/EU”).

2. For the purpose of implementing Directive 2010/31/EU within the institutional framework of the Treaty,

- a. the term “Member States” shall read “Contracting Parties” throughout the provisions of and annexes to Directive 2010/31/EU;
- b. the term “Commission” in Article 1(3), Article 5(2), (3), and (4), Article 9(2), (4), (5) and (6), Article 10(2), (3), and (4), Article 14(4) and (5), Article 15(4) and (5), Article 20(2), Article 27, and Article 28(2) shall read “Secretariat”;
- c. in Article 1(1), the term “Union” shall read “Energy Community”;
- d. the last sentence of Article 9(4) shall read “Following its evaluation, the Secretariat may propose a recommendation to the Ministerial Council”. In Article 10(3), the term “or recommendations” shall not apply.
- e. In Article 23(3), the term “European Parliament and to the Council” shall be replaced with “Ministerial Council, who shall put it on the agenda of its next meeting”;
- f. Article 24 shall be replaced with the following: “The Ministerial Council may object to the application of a delegated act to the Contracting Parties of the Energy Community at the meeting following notification. If, at that meeting, the Ministerial Council has not objected to the delegated act, it shall become binding on the Contracting Parties, subject to possible adaptation. If the Ministerial Council objects to a delegated act, it shall not be applicable in the Energy Community. The Ministerial Council shall state the reasons for objecting to the delegated act.”

3. For the purpose of implementing Directive 2010/31/EU by the Contracting Parties to the Treaty, the following deadlines shall be adapted as follows:

- a. in Article 5(2) subparagraph 2: “30 June 2013”;
- b. in Article 9(1)(a): “30 June 2021”, Article 9(1)(b): “30 June 2019”, Article 9(5): “31 December 2013”;
- c. in Article 10(2): “30 June 2013”;

- d. in Article 12(1)(b) and in Article 13(1) subparagraph 2: “30 September 2015”
 - e. in Article 14(4) subparagraph 2: and in Article 15(4) subparagraph 2: “30 June 2013”;
 - f. in Article 27: “31 March 2013”;
 - g. in Article 28(1) subparagraph 1: “30 September 2012”, in Article 28(1) subparagraph 2: “31 March 2013”; in Article 28(1) subparagraph 3: “31 March 2013” and “30 September 2013”, in Article 28(1) subparagraph 4: “31 March 2016”.
4. The Secretariat shall monitor and review the implementation of Directive 2010/31/EU in the Contracting Parties and shall submit a progress report to the Permanent High Level Group by 31 March 2013.”

Article 2

Article 3 of Decision 2009/05/MC-EnC is replaced with the following text:

“1. Each Contracting Party shall implement Directive 2010/30/EU on the indication by labeling and standard product information of the consumption of energy and other resources by energy-related products (“Directive 2010/30/EU”), as well as the following Directives:

- a. ...¹
- b. ...²
- c. ...³

Commission Directive 96/60/EC implementing Council Directive 92/75/EEC with regard to energy labeling of household combined washer-driers (“Directive 96/60/EC”);

- a. ...⁴
- b. ...⁵
- c. ...⁶
- d. ...⁷

2. For the purpose of implementing the Directives covered by paragraph 1 within the institutional framework of the Treaty,

- a. the term “Member States” shall read “Contracting Parties” throughout all Directives covered by paragraph 1;

¹ Deleted reference to Directive 94/2/EC (ceased to apply as of 31 December 2012)

² Deleted reference to Directive 95/12/EC (ceased to apply as of 31 December 2012)

³ Deleted reference to Directive 95/13/EC (ceased to apply as of 1 January 2016)

⁴ Deleted reference to Directive 97/17/EC (ceased to apply as of 31 December 2012)

⁵ Deleted reference to Directive 98/11/EC (ceased to apply as of 1 July 2013)

⁶ Deleted reference to Directive 2002/31/EC (ceased to apply as of 1 July 2013)

⁷ Deleted reference to Directive 2002/40/EC (ceased to apply as of 1 January 2016)

- b. the term "Commission" in Article 3(1)(d), (2), (3) and (4), Article 5(c), Article 15 and Article 16(1) and (2) of Directive 2010/30/EU, and in Article 4(2) of Directive 96/60/EC shall read "Secretariat";
 - c. the term "Union" in Article 2(a), (h), (i), and (j) of Directive 2010/30/EU shall read "Energy Community";
 - d. the term "the European Parliament and the Council" in Article 3(4) of Directive 2010/30/EU shall read "the Ministerial Council";
 - e. in Article 11(2) of Directive 2010/30/EU, the term "European Parliament and to the Council" shall be replaced with "Ministerial Council, who shall put it on the agenda of its next meeting";
 - f. Article 13 of Directive 2010/30/EU shall be replaced with the following: "The Ministerial Council may object to the application of a delegated act to the Contracting Parties of the Energy Community at the meeting following notification. If, at that meeting, the Ministerial Council has not objected to the delegated act, it shall become binding on the Contracting Parties, subject to possible adaptation. If the Ministerial Council objects to a delegated act, it shall not be applicable in the Energy Community. The Ministerial Council shall state the reasons for objecting to the delegated act."
3. For the purpose of implementing the Directives covered by paragraph 1 by the Contracting Parties to the Treaty,
- a. the deadlines stipulated in Directive 2010/31/EU shall be respectively replaced as follows:
 - i. in Article 15: "31 December 2011",
 - ii. in Article 16(1): "31 December 2011"
 - iii. in Article 18: "31 December 2011":
 - b. Article 4(1) subparagraph 1 of Directive 96/60/EC shall be replaced with the following: "The Contracting Parties shall implement this Directive by 31 December 2011.";
 - c. the dates referred to in Article 4(1)subparagraph 2 of Directive 96/60/EC shall be replaced with "30 June 2012".
4. Each Contracting Party shall prepare a label design based on the template annexed to the respective implementing Directives and translated into the official languages. The label design shall be submitted to the Permanent High Level Group not later than 31 December 2010 for approval.
5. The Secretariat shall monitor and review the implementation of the Directives referred to in paragraph 1 in the Contracting Parties and shall submit a progress report to the Permanent High Level Group by 30 June 2012."

Article 3(36) (2) of Ministerial Council Decision 2015/08/MC-EnC

Article 9(1) and (2) of Directive 2010/30/EU, as incorporated and adapted by Ministerial Council Decision 2010/02/MC-EnC shall cease to apply from 15 October 2017.

Article 3

This Decision enters into force upon its adoption and is addressed to the Contracting Parties.

Done in Skopje, on 24 September 2010

For the Ministerial Council:

.....
(Presidency)

DECISION OF THE MINISTERIAL COUNCIL OF THE ENERGY COMMUNITY

D/2011/03/MC-EnC: On adopting certain Delegated Regulations on energy related products

The Ministerial Council of the Energy Community,

Having regard to Article 3(2)(d) of Decision 2009/05/MC-EnC, as amended by Article 2 of Decision 2010/02/MC-EnC,

Whereas the Ministerial Council on 18 December 2009 adopted Decision 2009/05/MC-EnC incorporating, *inter alia*, Directive 92/75/EEC on the indication by labeling and standard product information of the consumption of energy and other resources by household appliances ("Directive 92/75/EEC"), as well as eight Implementing Directives, into the Energy Community *acquis*,

Whereas Decision 2009/05/MC-EnC was amended by Decision 2010/02/MC-EnC of the Ministerial Council on 24 September 2010, incorporating, *inter alia*, Directive 2010/30/EU of the European Parliament and of the Council on the indication by labeling and standard product information of the consumption of energy and other resources by energy-related products, recasting and repealing Directive 92/75/EEC,

Whereas Article 3(2)(d) of Decision 2009/05/MC-EnC, as amended, adapted Article 13 of Directive 2010/30/EU as follows: "*The Ministerial Council may object to the application of a delegated act to the Contracting Parties of the Energy Community at the meeting following notification. If, at that meeting, the Ministerial Council has not objected to the delegated act, it shall become binding on the Contracting Parties, subject to possible adaptation. If the Ministerial Council objects to a delegated act, it shall not be applicable in the Energy Community. The Ministerial Council shall state the reasons for objecting to the delegated act*",

Whereas the Permanent High Level Group, at its meetings on 29 June 2011 and 5 October 2011, discussed and proposed to adopt the present Decision,

HAS ADOPTED THIS DECISION:

Article 1

The Ministerial Council does not object, within the meaning of Article 13 of Directive 2010/30/EU, as incorporated into the Energy Community *acquis* and adapted under Decision 2010/02/MC-EnC. to Commission Delegated Regulation (EU) No 1059/2010 supplementing Directive 2010/30/EU with regard to energy labeling of household dishwashers ("Delegated Regulation 1059/2010"); Commis-

sion Delegated Regulation (EU) No 1060/2010 supplementing Directive 2010/30/EU with regard to energy labeling of household refrigerating appliances (“Delegated Regulation 1060/2010”), Commission Delegated Regulation (EU) No 1061/2010 supplementing Directive 2010/30/EU with regard to energy labeling of household washing machines (“Delegated Regulation 1061/2010”), Commission Delegated Regulation (EU) No 1062/2010 supplementing Directive 2010/30/EU with regard to energy labeling of televisions (“Delegated Regulation 1062/2010”) and Delegated Regulation (EU) No 626/2011 implementing Directive 2010/30/EU with regard to energy labeling of air conditioners (“Delegated Regulation 626/2011”).

Article 2

1. For the purpose of implementing the Delegated Regulations referred to in Article 1 within the institutional framework of the Treaty,

- a. the term “Member States” shall read “Contracting Parties” throughout all Delegated Regulations referred to in Article 1;
- b. the term “Commission” in Article 3(c) of Delegated Regulation 1059/2010, Article 3(c) of Delegated Regulation 1060/2010, Article 3(c) of Delegated Regulation 1061/2010, Article 3(c) of Delegated Regulation 1062/2010 and Article 3(c) of Delegated Regulation 626/2011 shall read “Secretariat”;
- c. Articles 7, 8, 9(3) and 10(1) of Delegated Regulation 1059/2010, Articles 7, 8 and 10(1) of Delegated Regulation 1060/2010, Articles 7, 8, 9(3) and 10(1) of Delegated Regulation 1061/2010, Articles 7 and 9(1) of Delegated Regulation 1062/2010 and Articles 7,8 and 10(1) of Delegated Regulation 626/2011 shall not apply.

3. For the purpose of implementing the Delegated Regulations referred to in Article 1 by the Contracting Parties to the Treaty,

- a. The deadlines stipulated in Delegated Regulation 1059/2010 shall be replaced as follows:
 - i. in Article 9(1): “30 April 2013”,
 - ii. in Article 9(2): “31 December 2012”
 - iii. in Article 10(2): “31 December 2012” instead of “20 December 2011” and “30 April 2013” instead of “20 April 2012”.
- b. The deadlines stipulated in Delegated Regulation 1060/2010 shall be replaced as follows:
 - i. in Article 9(1): “30 April 2013”,
 - ii. in Article 9(2) and (3): “31 December 2012”
 - iii. in Article 10(2): “31 December 2012” instead of “30 November 2011” and “30 April 2013” instead of “30 March 2012”.
- c. The deadlines stipulated in Delegated Regulation 1061/2010 shall be replaced as follows:
 - i. in Article 9(1): “30 April 2013”,
 - ii. in Article 9(2): “31 December 2012”
 - iii. in Article 10(2): “31 December 2012” instead of “20 December 2011” and “30 April 2013” instead of “20 April 2012”.

d. The deadlines stipulated in Delegated Regulation 1062/2010 shall be replaced as follows:

- i. in Article 8: "30 April 2013",
- ii. in Article 9(2): "31 December 2012" instead of "30 November 2011" and "30 April 2013" instead of "30 March 2012".

e. The deadlines stipulated in Delegated Regulation 626/2011 shall not be adapted.

4. Each Contracting Party shall prepare a label design based on the template annexed to the respective Delegated Regulation and translated into the official languages. The label design shall be submitted to the Permanent High Level Group not later than 30 June 2012 for approval.

5. The Secretariat shall monitor and review the implementation of the Delegated Regulations referred to in Article 1 in the Contracting Parties and shall submit a progress report to the Permanent High Level Group by 1 October 2013.

Article 3

1. This Decision enters into force upon its adoption and is addressed to the Contracting Parties.

2. All references in Decision 2009/05/MC-EnC, as amended by Decision 2010/02/MC-EnC, to Commission Directive 97/17/EC implementing Council Directive 92/75/EEC with regard to energy labeling of household dishwashers, as amended by Commission Directive 1999/9/EC, Commission Directive 94/2/EC implementing Council Directive 92/75/EEC with regard to energy labeling of household electric refrigerators, freezers and their combinations, as amended by Commission Directive 2003/66/EC, and Commission Directive 95/12/EC implementing Council Directive 92/75/EEC with regard to energy labeling of household washing machines, as amended by Commission Directive 96/89/EC shall cease to apply as of 31 December 2012. All references to Commission Directive 2002/31/EC implementing Council Directive 92/75/EEC with regard to energy labeling of household air-conditioners shall cease to apply as of 1 July 2013.

3. The Secretariat shall establish and publish a consolidated version of this Decision, Decision 2009/05/MC-EnC and Decision 2010/02/MC-EnC.

Done in Chisinau on 06th October 2011

For the Ministerial Council:

.....

(Presidency)



DECISION OF THE MINISTERIAL COUNCIL OF THE ENERGY COMMUNITY

D/2014/02/MC-EnC adapting certain Delegated Regulations on energy related products

The Ministerial Council of the Energy Community,

Having regard to Article 3(2)(d) of Decision 2009/05/MC-EnC, as amended by Article 2 of Decision 2010/02/MC-EnC,

Whereas the Ministerial Council on 18 December 2009 adopted Decision 2009/05/MC-EnC incorporating, *inter alia*, Directive 92/75/EEC on the indication by labeling and standard product information of the consumption of energy and other resources by household appliances ("Directive 92/75/EEC"), as well as eight Implementing Directives, into the Energy Community *acquis*,

Whereas Decision 2009/05/MC-EnC was amended by Decision 2010/02/MC-EnC of the Ministerial Council on 24 September 2010, incorporating, *inter alia*, Directive 2010/30/EU of the European Parliament and of the Council on the indication by labeling and standard product information of the consumption of energy and other resources by energy-related products, recasting and repealing Directive 92/75/EEC,

Whereas Article 3(2)(d) of Decision 2009/05/MC-EnC, as amended, adapted Article 13 of Directive 2010/30/EU as follows: "*The Ministerial Council may object to the application of a delegated act to the Contracting Parties of the Energy Community at the meeting following notification. If, at that meeting, the Ministerial Council has not objected to the delegated act, it shall become binding on the Contracting Parties, subject to possible adaptation. If the Ministerial Council objects to a delegated act, it shall not be applicable in the Energy Community. The Ministerial Council shall state the reasons for objecting to the delegated act*",

Whereas the Permanent High Level Group, at its meetings on 18 June 2014 and on 22 September 2014 discussed and proposed to adopt the present Decision,

HAS ADOPTED THE FOLLOWING DECISION:

Article 1

The Ministerial Council does not object, within the meaning of Article 13 of Directive 2010/30/EU, as incorporated into the Energy Community *acquis* and adapted under Decision 2010/02/MC-EnC to adopt Commission Delegated Regulation (EU) No 65/2014 of 1 October 2013 supplementing Directive 2010/30/EU with regard to energy labelling of domestic ovens and range hoods ("Delegated

Regulation 65/2014”) repealing Directive 2002/40/EC; Commission Delegated Regulation (EU) No 874/2012 of 12 July 2012 supplementing Directive 2010/30/EU with regard to energy labelling of electrical lamps and luminaries (“Delegated Regulation 874/2012”) repealing Directive 2002/40/EC, Commission Delegated Regulation (EU) No 392/2012 of 1 March 2012 supplementing Directive 2010/30/EU with regard to energy labelling of household tumble driers (“Delegated Regulation 392/2012”) repealing Directive 95/13/EC; Commission Delegated Regulation (EU) No 811/2013 of 18 February 2013 supplementing Directive 2010/30/EU with regard to energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device (“Delegated Regulation 811/2013”); Delegated Regulation (EU) No 812/2013 of 18 February 2013 supplementing Directive 2010/30/EU with regard to energy labelling of water heaters, hot water storage tanks and packages of water heater and solar device (“Delegated Regulation 812/2013”) and Delegated Regulation (EU) No 665/2013 of 3 May 2013 supplementing Directive 2010/30/EU with regard to energy labelling of vacuum cleaners (“Delegated Regulation 665/2013”).

Article 2

1. For the purpose of implementing the Delegated Regulations referred to in Article 1 within the institutional framework of the Treaty,

- a. the term “Member States” shall read “Contracting Parties” throughout all Delegated Regulations referred to in Article 1;
- b. Articles 7, 8 and 10(1) of Delegated Regulation 65/2014, Articles 7, 8 and 10(1) of Delegated Regulation 874/2012, Articles 7, 8 and 10(1) of Delegated Regulation 392/2012, Articles 7, 8 of Delegated Regulation 811/2013, Articles 7 and 8 of Delegated Regulation 812/2013, and Articles 7 and 9 of Delegated Regulation 665/2013 shall not apply.

2. For the purpose of implementing the Delegated Regulations referred to in Article 1 by the Contracting Parties to the Treaty,

- a. The following deadlines stipulated in Delegated Regulation 65/2014 shall be replaced as follows:
 - i. in Article 3(3)(a): “1 January 2016”,
 - ii. Article 3(3)(b)(i) shall not apply,
 - iii. in Article 9(1): “1 January 2016”,
 - iv. in Article 9(2): “from 1 January 2016 to 1 April 2016”,
 - v. in Article 9(3): “from 1 January 2016 to 1 April 2016”,
 - vi. in Article 10(2): “1 January 2016”, and in the case of Article 3(1)(a)(iv), and (v), Article 3(1)(b)(iv) and (v), Article 4(1)(b), (c) and (d), and Article 4(2)(b),(c) and (d), “1 April 2016”.
- b. The deadlines stipulated in Delegated Regulation 874/2012 shall be replaced as follows:
 - i. in Article 9(1) and (2): “1 July 2016”,
 - ii. in Article 9(3) and (4): “1 January 2016”,
 - iii. in Article 10(2): “1 January 2016”.

- c. The deadlines stipulated in Delegated Regulation 392/2012 shall be replaced as follows:
- i. in Article 9(1): "30 April 2016",
 - ii. in Article 9(2) and (3): "1 January 2016",
 - iii. in Article 10(2): "1 January 2016", and in the case of Article 3(d) and (e) and Article 4(b),(c) and (d), "30 April 2016".
- d. The deadlines stipulated in Delegated Regulation 811/2013 shall be replaced as follows:
- i. in Article 3 (1), first sentence: "1 January 2018" ,
 - ii. in Article 3 (2), first sentence: "1 January 2018",
 - iii. in Article 3(3), (4), (5) and (6): "1 January 2018".
- e. Article 8 referring to "Application": "This Regulation shall apply from 1 January 2016".
- f. The deadlines stipulated in Delegated Regulation 812/2013 shall be replaced as follows:
- i. in Article 3 (1): in part one, "1 January 2018", and in part two, "1 January 2018", the first sentence of Article 3(1)(a) shall not apply
 - ii. in Article 3 (2): in part one "1 January 2018", and in part two "1 January 2018", the first sentence of Article 3(2)(a) shall not apply
 - iii. in Article 3(3) and 3(4): "1 January 2018". Article 8 referring to the "Application": "This Regulation shall apply from 1 January 2016".
- g. The following deadlines stipulated in Delegated Regulation 665/2013 shall be replaced as follows:
- i. in Article 3(1) and 3(2)(a): "1 January 2016",
 - ii. in Article 4: "1 January 2016",
- h. Article 9: "This Regulation shall apply from 1 January 2016, except for the case specified in Article 8".

3. The Secretariat shall monitor and review the implementation of the Delegated Regulations referred to in Article 1 in the Contracting Parties. Contracting Parties shall communicate to the Energy Community Secretariat the text of the main provisions of national law which they adopt in the field covered by these Delegated Regulations, in the next year of the deadline for the overall implementation.

Article 3

1. This Decision enters into force upon its adoption and it is addressed to the Contracting Parties.
2. All references in Decision 2009/05/MC-EnC, as amended by Decision 2010/02/MC-EnC to Directive 2010/30/EU with regard to energy labeling of domestic ovens and range hoods, to energy labeling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device, to energy labeling of water heaters, hot water storage tanks and packages of water heater and solar device, to energy labeling of vacuum cleaners, with regard to energy labeling of household electric tumble driers, with regard to the energy labeling of electrical lamps and luminaries, shall cease to apply as of 1 January 2016.

3. The Secretariat shall establish and publish a consolidated version of this Decision, Decision 2009/05/MC-EnC and Decision 2010/02/MC-EnC.

Done in Kyiv, on 23 September 2014

For the Ministerial Council:

.....
(Presidency)

Commission Delegated Regulation (EU) No 65/2014 of 1 October 2013 supplementing Directive 2010/30/EU with regard to energy labeling of domestic ovens and range hoods

Article	EC	ECS
Enter into force	20.02.2014	24.09.2014
Article 3 (3) (a)	01.01.2015	01.01.2016
Article 3 (3) (b) (i)	01.01.2015	not applicable
Article 3 (3) (b) (ii)	01.01.2016	01.01.2016
Article 3 (3) (b) (iii)	01.01.2018	01.01.2018
Article 3 (3) (b) (iv)	01.01.2020	01.01.2020
Article 9 (1)	01.01.2015	01.01.2016
Article 9 (2)	01.01.2015 – 01.04.2015	01.01.2016 – 01.04.2016
Article 9 (3)	01.01.2015 – 01.04.2015	01.01.2016 – 01.04.2016
Article 10 (2)	01.01.2015	01.01.2016
Shall apply		
and in case of Article 3(1)(a)(iv) and (v), Article 3 (1) (b)(iv) and (v), Article 4 (1)(b), (c) and (d), and Article 4 (2)(b), (c) and (d)	01.04.2015	and in case of Article 3(1)(a)(iv) and (v), Article 3 (1) (b)(iv) and (v), Article 4 (1)(b), (c) and (d), and Article 4 (2)(b), (c) and (d) 01.04.2016

Commission Delegated Regulation (EU) No 874/2012 of 12 July 2012 supplementing Directive 2010/30/EU with regard to energy labeling of electrical lamps and luminaires

Article	EC	ECS
Enter into force	16.10.2012	24.09.2014
Article 9 (1)	01.03.2014	01.07.2016
Article 9 (2)	01.03.2014	01.07.2016
Article 9 (3)	01.09.2013	01.01.2016
Article 9 (4)	01.09.2013	01.01.2016
Article 10 (2)	01.09.2013	01.01.2016
Shall apply		

Commission Delegated Regulation (EU) No 392/2012 of 1 March 2012 supplementing Directive 2010/30/EU with regard to energy labeling of household tumble driers

Article	EC	ECS
Enter into force	29.05.2012	24.09.2014
Article 9 (1)	29.05.2012	30.04.2016
Article 9 (2)	29.05.2012	01.01.2016
Article 9 (3)	29.05.2012	01.01.2016
Article 10 (2)	29.05.2012	01.01.2016
Shall apply	29.09.2012	30.04.2016

Commission Delegated Regulation (EU) No 811/2013 of 18 February 2013 supplementing Directive 2010/30/EU with regard to energy labeling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device

Article	EC	ECS
Enter into force	26.09.2013	24.09.2014
Article 3 (1)	26.09.2015	01.01.2018
Article 3 (2)	26.09.2015	26.09.2019
Article 3 (3)	26.09.2015	01.01.2018
Article 3 (4)	26.09.2015	01.01.2018
Article 3 (5)	26.09.2015	01.01.2018
Article 3 (6)	26.09.2015	01.01.2018
Shall apply	26.09.2013	01.01.2016

Commission Delegated Regulation (EU) No 812/2013 of 18 February 2013 supplementing Directive 2010/30/EU with regard to energy labeling of water heaters, hot water storage tanks and packages of water heater and solar device

Article	EC	ECS
Enter into force	26.09.2013	24.09.2014
Article 3 (1)	26.09.2015	01.01.2018
Article 3 (2)	26.09.2015	01.01.2018
Article 3 (3)	26.09.2015	01.01.2018
Article 3 (4)	26.09.2015	01.01.2018
Shall apply	26.09.2013	01.01.2016

Commission Delegated Regulation (EU) No 665/2013 of 3 May 2013 supplementing Directive 2010/30/EU with regard to energy labelling of vacuum cleaners

Article	EC	ECS
Enter into force	02.08.2013	24.09.2014
Article 3 (1)	01.09.2014	01.01.2016
Article 3 (2) (a)	01.09.2014	01.01.2016
Article 3 (2) (b)	01.09.2017	01.09.2017
Article 4	01.09.2014	01.01.2016
Article 8	01.09.2017	01.09.2017
Shall apply	23.05.2013	01.01.2016



DECISION OF THE MINISTERIAL COUNCIL OF THE ENERGY COMMUNITY

D/2015/08/MC-EnC: On the implementation of the Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC

THE MINISTERIAL COUNCIL OF THE ENERGY COMMUNITY,

Having regard to the Treaty establishing the Energy Community ('the Treaty'), and in particular Articles 2(d), 24, 25, 79 and 81 thereof,

Having regard to the proposal from the European Commission,

Whereas:

1. The Ministerial Council of the Energy Community on 18 December 2009 adopted Decision 2009/05/MC-EnC incorporating Directive 2006/32/EC on energy end-use efficiency and energy services, Directive 2002/91/EC on the energy performance of buildings ('Directive 2002/91/EC') and Directive 92/75/EEC on the indication by labeling and standard product information of the consumption of energy and other resources by household appliances ('Directive 92/75/EEC'), as well as eight Implementing Directives, into the Energy Community *acquis*,
2. The Ministerial Council of the Energy Community on 24 September 2010 adopted Decision No 2010/02/MC-EnC amending Decision 2009/05/MC-EnC of 18 December 2009 on the implementation of certain Directives on Energy Efficiency, respectively Directive 2010/31/EU of the European Parliament and of the Council on the energy performance of buildings, recasting and repealing Directive 2002/91/EC, and Directive 2010/30/EU of the European Parliament and of the Council on the indication by labeling and standard product information of the consumption of energy and other resources by energy-related products, recasting and repealing Directive 92/75/EEC,
3. The Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC, was published in the Official Journal of the European Union L315/1 on 14.11.2012,
4. The Ministerial Council of the Energy Community adopted on 24 October 2013 a Recommendation R/2013/01/MC-EnC on energy efficiency
5. The Energy Community should adapt its *acquis* to the recent changes in the European Union law, taking into account its own institutional framework and the specific situation of each of its Contracting Parties.
6. While the European Council of October 2014 set an indicative target at the EU level of at least 27% for improving energy efficiency in 2030 compared to projections of future energy consumption based on the current criteria, this target will be reviewed by 2020, having in mind an EU level of 30%. Accordingly the Commission will propose an review of the Directive for the Energy Community

by 2020.

7. Whereas at its meeting on 24 June 2015, the Permanent High Level Group discussed the present proposal and endorsed it on 22 September 2015.

HAS ADOPTED THIS DECISION:

Article 1

Implementation of the acquis

Each Contracting Party shall transpose and implement Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC by 15 October 2017.

They shall forthwith inform the Energy Community Secretariat thereof.

Transposition shall be made without changes to the structure and text of Directive 2012/27/EU other than translation.

Article 2

General adaptations under Article 24 of the Energy Community Treaty

Save where otherwise stated in this Decision, the text of the Directive 2012/27/EU referred to in Article 1 shall be adapted to the Energy Community as follows:

- (a) the term 'Member States' shall be replaced by 'Contracting Parties';
- (b) references to the Official Journal of the European Union shall be replaced by the expression 'a dedicated section of the website of the Energy Community';
- (c) references to Directive 2010/31/EU, shall be replaced with 'Directive 2010/31/EU, as incorporated and adapted by the Ministerial Council Decision 2010/02/MC-EnC..'
- (d) references to Directives 2009/72/EC and 2009/73/EC, shall be replaced with 'Directives 2009/72/EC and 2009/73/EC as incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC':
- (e) references to Directive 2010/75/EU shall be replaced with 'Directive 2010/75/EU, as incorporated and adapted by the Ministerial Council decision 2013/06/MC-EnC';
- (f) references to Regulation (EC) No 714/2009 shall be replaced with 'Regulation (EC) No 714/2009, as incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC';

The adaptations referred to in Article 3 of this Decision shall apply in addition to the adaptations referred to in paragraph 1 of this Article.

Article 3

Ad hoc adaptations

1. Article 1(1) shall be replaced by the following:
 ‘This Directive establishes a common framework of measures for the promotion of energy efficiency within the Energy Community, to set a 20 % headline target on energy efficiency in the Energy Community in 2020 and to pave the way for further energy efficiency improvements beyond that date. It 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 for 2020.’
2. Article 2(21) shall be replaced by the following
 “distribution system operator” means ‘distribution system operator’ as defined in Directive 2009/72/EC and Directive 2009/73/EC respectively, as incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC’;
3. Article 2(29) shall be replaced by the following:
 “transmission system operator” means ‘transmission system operator’ as defined in Directive 2009/72/EC and Directive 2009/73/EC respectively, as incorporated and adapted by Ministerial Council Decision 2011/02/MC-EnC.’
3. Article 3(1)(a) shall be replaced by the following
 ‘that the Energy Community’s 2020 energy consumption has to be no more than 187 Mtoe of primary energy or no more than 133 Mtoe of final energy;’;
4. Article 3(2) shall be replaced by the following:
 ‘By 30 June 2018, the Energy Community Secretariat shall assess progress achieved and whether the Energy Community is likely to achieve energy consumption of no more than 187 Mtoe of primary energy and/or no more than 133 Mtoe of final energy in 2020.’;
5. Article 3(3)(d) shall be replaced by the following:
 ‘compare the results under points (a) to (c) with the energy consumption of no more than 187 Mtoe of primary energy and/or no more than 133 Mtoe of final energy in 2020’;
6. Article 4, last sentence shall be replaced by the following:
 ‘A first version of the strategy shall be published by 30 March 2017 and updated every three years thereafter and submitted to the Energy Community Secretariat as part of the National Energy Efficiency Action Plans.’;
7. In Article 5 the renovation rate shall be set at 1 %.
8. In Article 5(1) the date 1 January 2014 shall be replaced by 1 December 2017 and the date 9 July 2015 shall be replaced by of 1 January 2019.
9. In Articles 5(5) and 5(6) the date 31 December 2013 shall be replaced by the date 1 January 2017.
10. Paragraph 2 in Article 6(1) shall be replaced by the following:
 ‘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';

11. In Article 6(2), the second sentence 'The obligation shall not apply to contracts for the supply of military equipment as defined by Directive 2009/81/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of procedures for the award of certain works contracts, supply contracts and service contracts by contracting authorities or entities in the fields of defence and security' shall not be applicable.
12. Paragraph 2 in Article 7(1) shall be replaced by
'That target shall be at least equivalent to achieving new savings each year from 1 January 2017 to 31 December 2020 of 0,7 % of the annual energy sales to final customers of all energy distributors or all retail energy sales companies by volume, averaged over the most recent three-year period prior to 1 January 2016. The sales of energy, by volume, used in transport may be partially or fully excluded from this calculation.';
13. Article 7(2)(a) shall be replaced by
'carry out the calculation required by the second subparagraph of paragraph 1 using values of 0.5 % in 2017 and 2018; and 0.7 % in 2019 and 2020';
14. In Article 7(3) the date 5 June 2014 shall be replaced by the date 15 October 2017;
15. In last paragraph in Article 7(9) the date 5 December 2013 shall be replaced by the date 15 March 2017;
16. Article 7(10)(a) shall not be applicable;
17. In Article 8(4) the date 5 December 2015 shall be replaced by the date 5 November 2018;
18. In Article 9(3) the date 31 December 2016 shall be replaced by the date 30 November 2019;
19. In Article 10(1), the date 31 December 2014 shall be replaced by the date 30 November 2017;
20. In Article 13, the date 5 June 2014 shall be replaced by the date 15 October 2017;
21. In Article 14(1)
 - (a) the date 31 December 2015 shall be replaced by the date 30 November 2018,
 - (b) the second paragraph shall not be applicable;
22. In Article 14(5) the date 5 June 2014 shall be replaced by the date 15 October 2017;
23. In Article 14(6) the date 31 December 2013 shall be replaced by the date 15 October 2017;
24. In Article 15(2) the date 30 June 2015 shall be replaced with 15 October 2018;
25. In Article 16(1) the date 31 December 2014 shall be replaced with 31 December 2017;
26. Article 22 shall not be applicable;
27. Article 23 shall not be applicable;
28. Article 24(1) shall be replaced by the following
'By 30 June each year as from 2017, Contracting Parties shall report on the progress achieved towards national energy efficiency targets, in accordance with Part 1 of Annex XIV.';
29. In Article 24(2)
 - (a) the date 30 April 2014 shall be replaced with the date 30 April 2019

(b) second subparagraph shall be replaced by the wording

'The National Energy Efficiency Action Plans shall in any case include the information specified in Annex XIV.';

30. Article 24(4) shall not be applicable;

31. Article 24(7) shall be replaced by the following:

'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.';

32. Article 24(8) shall be replaced by the following:

'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.'

33. Article 24(9), first paragraph, shall be replaced by the following:

'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'

34. In Article 24(10) the date 30 June 2018 shall be replaced with the date 30 September 2020;

35. Article 26 shall not be applicable;

36. Article 27 shall be replaced by the following:

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

2. Article 9(1) and (2) of Directive 2010/30/EU, as incorporated and adapted by Ministerial Council Decision 2010/01/MC-EnC shall cease to apply from 15 October 2017.'

37. In Article 28 the date 5 June 2014 shall be replaced with 15 October 2017;

38. Article 29 shall be replaced by the following

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

39. Article 30 shall not be applicable;

40. Annex III (b)(c) and (d) shall not be applicable;

41. Annex V(2)(a) shall be deleted; Annex V(3)(a) shall not be applicable;

42. In Annex V(4) first paragraph the date 5 December 2013 shall be replaced with the date 15 November 2017;

43. In Annex XV in the correlation table rows relating to Directive 2004/8/EC shall not be applicable;

Article 4

This Decision enters into force upon its adoption and is addressed to the Contracting Parties.

Done in Tirana on 16 October 2015

For the Ministerial Council:

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(Presidency)

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