



EUROPEAN COMMISSION

Brussels, 22.6.2011  
COM(2011) 370 final

2011/0172 (COD)

C7-0168/11 EN

Proposal for a

**DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**on energy efficiency and repealing Directives 2004/8/EC and 2006/32/EC**

{SEC(2011) 779 final}

{SEC(2011) 780 final}

## **EXPLANATORY MEMORANDUM**

### **1. CONTEXT OF THE PROPOSAL**

#### **1.1. Grounds for and objectives of the proposal**

The EU has set itself the objective of achieving 20% primary energy savings in 2020<sup>1</sup> and has made this objective one of the five headline targets of the Europe 2020 Strategy for smart, sustainable and inclusive growth<sup>2</sup>.

The Commission's latest estimations, which take into account the national energy efficiency targets for 2020 that Member States have set in the context of the Europe 2020 strategy, suggest that the EU will achieve only half of the 20% target in 2020<sup>3</sup>. The European Council<sup>4</sup> and the European Parliament<sup>5</sup> have urged the Commission to adopt a new ambitious strategy on energy efficiency for determined action to tap the considerable potential.

To give fresh momentum to energy efficiency, on 8 March 2011 the Commission put forward a new Energy Efficiency Plan (EEP) setting out measures to achieve further savings in energy supply and use.

This legislative proposal transforms certain aspects of the EEP into binding measures. The main purpose of the proposal is to make a significant contribution to meeting the EU's 2020 energy efficiency target. For it to be successful, the proposal must be promptly adopted and implemented in the Member States.

The proposal also looks beyond the 20% target and seeks to set a common framework to promote energy efficiency in the Union beyond 2020. The proposal is a strategic priority in the Commission Work Programme for 2011.

#### **1.2. General context**

Against a backdrop of rising EU imports of energy at rising prices, access to energy resources will in the medium term play a more important role with the potential to risk seriously compromising EU economic growth. This explains why energy efficiency is one of the main aspects of the Europe 2020 flagship initiative for a resource-efficient Europe<sup>6</sup>. Energy efficiency is the most cost-effective and fastest way to increase security of supply, and is an effective way to reduce the greenhouse gases emissions responsible for climate change. As outlined in the Commission Communication 'A Roadmap for moving to a competitive low carbon economy in 2050'<sup>7</sup>, energy efficiency can help the EU achieve and even outperform its greenhouse gas emission reduction target.

Making the EU economy more energy efficient will also have positive impacts in terms of economic growth and job creation. Energy savings free up financial resources that can be reinvested elsewhere in the economy and can help alleviate public budgets that are under strain. For individuals, energy efficiency means paying less on their energy bills. Energy poverty can be tackled strategically by taking energy efficiency improvement measures.

---

<sup>1</sup> 7224/1/07, REV 1.

<sup>2</sup> COM(2010)2020.

<sup>3</sup> SEC(2011)277.

<sup>4</sup> EUCO 2/1/11.

<sup>5</sup> 2010/2107(INI).

<sup>6</sup> COM(2011)21.

<sup>7</sup> COM(2011)112.

Finally, producing more with less energy should improve EU industries' competitiveness and give them the lead in the global markets for energy efficiency technologies. Energy efficiency and savings benefit the EU economy as a whole, the public sector, business and private individuals. For these reasons, the European Energy Strategy 2020 identified energy efficiency as one of the key priorities of EU energy policy for the following years.

### **1.3. Existing provisions**

The scope of two Directives: the Cogeneration Directive (2004/8/EC, CHP Directive) and the Energy Services Directive (2006/32/EC, ESD)<sup>8</sup> overlap with this Proposal. Both have failed to fully tap the energy saving potential. Therefore, it is proposed that these two Directives are repealed when the new Directive enters into force, except for Articles 4(1) to (4) and Annexes I, III and IV to the ESD. These provisions concern the achievement by 2017 of an indicative energy saving target of 9% of the final energy consumption of each Member State in the 5 years before the implementation of the ESD. This target – albeit different in scope and level of ambition - contributes to the realisation of the EU's 20% energy efficiency target by 2020, and should therefore remain applicable until 2017.

Other provisions overlapping with the provisions of the new Directive are Article 9(1) and (2) of Directive 2010/30/EU on energy labelling<sup>9</sup>, which will be repealed when the new Directive enters into force.

### **1.4. Consistency with other EU policies and objectives**

This proposal is anchored in the Europe 2020 Strategy for smart, sustainable and inclusive growth<sup>10</sup>, as the EU's 20% energy efficiency target is part of one of the five headline targets under this Strategy. It is one of the proposals planned for 2011 to deliver on one of the seven key initiatives of the Strategy, the Europe 2020 flagship initiative for a resource-efficient Europe. It is consistent and complementary with EU climate policy.

The decreased energy consumption aimed at by this proposal should also help Member States to reach their targets on the share of energy from renewable sources set by Directive 2009/28/EC on the promotion of the use of energy from renewable sources<sup>11</sup>.

## **2. CONSULTATION OF INTERESTED PARTIES AND IMPACT ASSESSMENT**

### **2.1. Consultation, data collection and use of expertise**

The proposal was developed on the basis of a broad range of contributions from Member States and interested parties provided on various occasions, including a general online public consultation<sup>12</sup>. Another broad consultation exercise was launched in January 2011 by the working groups of the Bucharest forum on sustainable energy (which include Member State representatives and stakeholders)<sup>13</sup>. A comprehensive analysis of the impact of the options proposed was carried out using the results of three models and numerous studies. The analysis studied the economic, social and environmental impact of the options, taking into account the subsidiarity and proportionality principles.

---

<sup>8</sup> OJ L 144, 27.4.2008, p. 64.

<sup>9</sup> OJ L 153, 18.6.2010, p. 1.

<sup>10</sup> EUCO 13/10.

<sup>11</sup> OJ L 140, 23.4.2009, p. 16.

<sup>12</sup> For more details, see section 1.2 of the accompanying IA and Annexes I and II.

<sup>13</sup> The draft reports available at: <http://ec.europa.eu/energy/efficiency/bucharest>.

## 2.2. Impact assessment

The impact assessment (IA) explores a number of options broken down into three levels:

- **First-level policy options** analyse ways to improve the current policy framework. This analysis focuses primarily on issues of whether the current approach of the ESD to target setting should be extended until 2020, whether national energy savings targets should be added to achieve the EU 20% target and if so, whether they should be binding or merely indicative.

The analysis concludes that the ESD targets should be maintained for end-use sectors until their deadline in 2016, but to reach the 20% energy efficiency target they need to be complemented with more ambitious energy savings targets under the Europe 2020 process. It indicates that such targets do not need to be binding at present and that binding measures can achieve the same or better results. These binding measures, together with the current policy framework, should be sufficient to reach the EU's 20% target in 2020. However, progress needs to be followed and appropriate corrective action taken early enough to ensure the 20% target is reached in 2020 if progress is, after all, inadequate.

- Second-level policy options explore different measures to tackle the remaining economic potential on the demand and supply side.

The IA looks at energy savings obligation schemes as a possible option for yielding energy savings in end-use sectors. It concludes that energy saving obligations have the scope to achieve significant savings but the existing provisions in the ESD (where such obligations are only one of the options provided to Member States to ensure that energy utilities achieve savings in end-use sectors) should be reinforced. The questions then raised are the level of energy savings required from energy utilities and whether the design of such obligation schemes should be completely left to the Member States or whether there should be some harmonisation of key design features. The IA suggests introducing national energy efficiency obligation schemes in all Member States with the aim of yielding an annual final energy reduction of 1.5%. While certain key features need to be harmonised at EU level (targeted sectors, level of ambition and counting methods), Member States should have the possibility to adjust the schemes to their national circumstances or retain their current schemes, to a large degree. The option of introducing a European system of tradable white certificates was also considered, but rejected for the same reasons as the option to completely harmonise all design features of the scheme.

Another set of policy options examine measures involving the public sector. The analysis concludes that two measures could be beneficial. Firstly, 3% of buildings owned by public bodies should be renovated annually to cost-optimal levels, a doubling of the current renovation rate. Secondly, public bodies should be required to purchase high energy performance products and buildings based on the available energy labels and certificates.

Other options with a considerable positive impact compared to their costs are those that aim to promote the energy services market, provide improved and more frequent information to households and companies on their actual energy consumption through billing and smart meters, and mandatory energy audits for large companies. The IA shows that all these measures are valuable in reducing the information gap that is one of the barriers to efficiency and could yield major energy savings. Other options to promote energy efficiency via voluntary measures are assessed as insufficient to tap all the available potential for savings.

The IA also analyses which measures could help tap energy efficiency potential in energy transformation and distribution. It rejects the options involving a continuation of the

provisions of the current CHP Directive, as they do not promote energy efficiency across the energy supply sector, but only in relation to cogeneration and without ensuring an actual deployment of CHP (Member States are only required to gather information and report to the Commission). The analysis suggests that establishing minimum performance requirements for energy generation (including on mandatory CHP and district heating/cooling requirements for new electricity generation installations and mandatory connection and priority access of high-efficiency cogeneration to the electricity grid) would significantly improve energy efficiency in generation. Establishing energy efficiency obligations for energy regulatory authorities would also be valuable in improving efficiency in energy transmission and distribution.

The IA examines options for national reporting and monitoring of implementation. To limit the administrative burden whilst ensuring proper monitoring of progress, it suggests a light form of annual reporting based on a selection of energy efficiency and savings indicators, which could be fed into the annual National Reform Programmes. This would be supplemented by more detailed information on energy efficiency measures and programmes that would only be required from Member States every three years.

- Third-level policy options assess the legal form of the selected first- and second-level measures. It concludes that, in order to reach the level of ambition of the EU 20% energy efficiency target, EU policies need to reap the energy saving potential in every sector, including in those sectors excluded from the scope of the ESD. This is why it is proposed to adopt a new legislative proposal that covers the scope of the two Directives and extends it to all sectors with energy saving potential. Merging the two Directives into a single legislative text was considered to be the best option to streamline the existing legal framework and provide better coherence.

The analysis was not as conclusive regarding the legal form. However, as the specific provisions of the legislative proposal have been fleshed out, it has become clear that, given the content and the need to adopt further implementing measures at national level, a Directive is the most appropriate legal form.

The modelling exercise to evaluate the overall impact of the selected policy options shows that for the EU27, the net effect of the proposed measures reaches the 20% primary energy saving objective. The IA also shows that the additional cost of achieving the overall 20% target through the set of selected measures is modest compared to the benefits. The overall economic, social and environmental impacts of these measures will make a strong positive contribution to EU policies and underpin the Europe 2020 Strategy.

Energy efficiency is one of the main vehicles to achieve the objectives of the 2050 Low Carbon Economy Roadmap. The price of ETS allowances is an important incentive to reduce greenhouse gas emissions. While the modelling exercises carried out in preparation of this proposal showed that its measures will certainly deliver additional greenhouse gas emissions reductions, they were not conclusive regarding possible impacts on the price of ETS allowances. 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 EU's emissions trading directive (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. In this respect, appropriate measures need to be considered, including recalibrating the emissions trading system by setting aside a corresponding number of allowances from the part to be auctioned during the period 2013 to 2020, should a corresponding political decision be taken.

### **3. LEGAL ELEMENTS OF THE PROPOSAL**

#### **3.1. Summary of proposed action**

The proposed Directive establishes a common framework for promoting energy efficiency in the Union to ensure the target of 20% primary energy savings by 2020 is met and to pave the way for further energy efficiency afterwards. It lays down rules designed to remove barriers and overcome some of the market failures that impede efficiency in the supply and use of energy.

For end-use sectors, the proposed Directive focuses on measures that lay down requirements on the public sector, both as regards renovating the buildings it owns and applying high energy efficiency standards to the purchase of buildings, products and services. The proposal requires Member States to establish national energy efficiency obligation schemes. It requires regular mandatory energy audits for large companies and lays down a series of requirements on energy companies regarding metering and billing.

For the energy supply sector, the proposal requires Member States to adopt national heating and cooling plans to develop the potential for high-efficiency generation and efficient district heating and cooling, and to ensure that spatial planning regulations are in line with these plans. Member States must adopt authorisation criteria that ensure that installations are located in sites close to heat demand points and that all new electricity generation installations and existing installations that are substantially refurbished are equipped with high-efficiency CHP units. Member States should however be able to lay down conditions for exemption from this obligation where certain conditions are met. The proposal also requires Member States to establish an inventory of energy efficiency data for installations undertaking the combustion of fuels or the refining of mineral oil and gas and sets requirements on priority/guaranteed access to the grid, priority dispatch of electricity from high-efficiency cogeneration and the connection of new industrial plants producing waste heat to district or cooling networks.

Other measures proposed include efficiency requirements for national energy regulatory authorities, information and awareness-raising actions, requirements concerning the availability of certification schemes, action to promote the development of energy services, and an obligation for Member States to remove obstacles to energy efficiency, notably the split of incentives between the owner and tenant of a building or among building owners.

Finally, the proposal provides for the establishment of national energy efficiency targets for 2020 and requires the Commission to assess in 2014 whether the Union can achieve its target of 20% primary energy savings by 2020. The Commission is required to submit its assessment to the European Parliament and the Council, followed, if appropriate, by a legislative proposal laying down mandatory national targets.

#### **3.2. Legal basis**

The proposal is based on Article 194(2) of the Treaty on the Functioning of the European Union. According to Article 194(1), 'in the context of the establishment and functioning of the internal market and with regard for the need to preserve and improve the environment, Union policy on energy shall aim, in a spirit of solidarity between Member States, to (...) c) promote energy efficiency and energy saving and the development of new and renewable forms of energy'. The aim of this proposal is precisely to establish a common framework to promote energy efficiency in the Union.

### **3.3. Subsidiarity principle**

The subsidiarity principle applies to this proposal insofar as energy policy does not fall under the exclusive competence of the Union.

The EU has set itself the target of achieving 20% primary energy savings in 2020 and has made it one of the five headline targets of the Europe 2020 Strategy. The current energy efficiency framework, in particular the ESD and CHP Directives, have not managed to tap existing energy saving potential. Measures currently adopted at Member States level are also insufficient to overcome the remaining market and regulatory barriers.

The energy challenges addressed by this proposal (security of energy supply, sustainability and climate change, as well as EU competitiveness) are concerns shared by the EU as a whole. A collective response at EU level is necessary to ensure action is coordinated and the shared objectives are achieved more effectively.

The measures proposed by the new Directive will contribute to ensuring that all Member States make an appropriate contribution to the efforts needed to achieve the 20% target and a level playing field for all market actors, notably by setting minimum energy performance requirements (for instance on access to public markets, energy audit obligations on companies, energy saving obligations on energy utilities and access to the grid for cogeneration producers). The proposal gives investors certainty as regards the achievement of the EU target and support for energy efficiency improvement measures such as high-efficiency cogeneration and district heating and cooling.

### **3.4. Proportionality principle and choice of legal instrument**

The proposal does not go beyond what is necessary to achieve the energy efficiency target. It sets strict energy efficiency requirements in a number of areas, but Member States keep a high degree of discretion to favour energy efficiency improvement measures in the way that suits their national circumstances best.

The instrument chosen is a Directive to be transposed into national law by the Member States. A Directive defines the final result to be achieved and the general requirements, while leaving sufficient flexibility to Member States to adapt implementation to their national specificities. In this particular case, a Directive is sufficient to achieve the objectives of the proposal. The level of constraint is thus proportionate to the objective.

## **4. BUDGETARY IMPLICATION**

As specified in the financial statement accompanying this Directive, the Directive will be implemented using the existing budget and will not have an impact on the multi-annual financial framework.

## **5. ADDITIONAL INFORMATION**

### **5.1. Simplification of the ‘*acquis*’**

The proposal contributes to the simplification of the ‘*acquis*’, although it is not included in the list of measures of the simplification work plan. As a result of adopting this proposal, the ESD and CHP Directives will be replaced by a single Directive, giving a more integrated approach to energy efficiency and savings. Some administrative simplification should also result from the need to transpose only one Directive instead of two.

Reporting obligations are currently laid down in both Directives. They will be replaced with a single set of annual reports (in-depth every three years), building on the reporting process under the Europe 2020 strategy.

Furthermore, this proposal simplifies the energy saving measurement requirements contained in the existing ESD. In this sense, it should help achieve a significant reduction in the administrative burden currently faced by Member States.

## **5.2. Repeal of existing legislation**

Adoption of the proposal will lead to the repeal of existing legislation. This concerns Article 9(1) and (2) of Directive 2010/30/EU; Directive 2004/8/EC and Directive 2006/32/EC. Article 4(1) to (4) and Annexes I, III and IV of Directive 2006/32/EC will only be repealed with effect from 1 January 2017.

## **5.3. Review/revision/sunset clause**

The proposal includes several review clauses.

## **5.4. Recasting**

The proposal does not involve recasting.

## **5.5. Correlation table**

Member States are required to communicate to the Commission the text of national provisions transposing the Directive, and a correlation table between those provisions and the Directive.

## **5.6. European Economic Area (EEA)**

The Proposal concerns an EEA matter and should therefore be applicable to it.



Proposal for a

**DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**on energy efficiency and repealing Directives 2004/8/EC and 2006/32/EC**

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 194(2) thereof,

Having regard to the proposal from the European Commission<sup>14</sup>,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee<sup>15</sup>,

Having regard to the opinion of the Committee of the Regions<sup>16</sup>,

Acting in accordance with the ordinary legislative procedure,

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 Presidency Conclusions of the European Council of 8 and 9 March 2007 emphasized 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. This amounts to a reduction of the Union's primary energy consumption of 368 Mtoe in 2020<sup>17</sup>.

---

<sup>14</sup> OJ C , , p. .

<sup>15</sup> OJ C , , p. .

<sup>16</sup> OJ C , , p. .

<sup>17</sup> Projections made in 2007 showed a primary energy consumption in 2020 of 1842 Mtoe. A 20% reduction results in 1474 Mtoe in 2020, i.e. a reduction of 368 Mtoe as compared to projections.

- (3) The Presidency 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 on Energy 2020<sup>18</sup> places energy efficiency at the core of the EU 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<sup>19</sup>, 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 EU energy efficiency objective in 2020.
- (6) One of the flagship initiatives of the Europe 2020 Strategy is the resource-efficient Europe flagship adopted by the Commission on 26 January 2011<sup>20</sup>. This identifies energy efficiency as a major element in ensuring the sustainability of the use of energy resources.
- (7) The Presidency Conclusions of the European Council of 4 February 2011 acknowledged that the EU 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.
- (8) On 8 March 2011, the Commission adopted the Energy Efficiency Plan 2011<sup>21</sup>. This confirmed that the Union is not on track to achieve its energy efficiency target. To remedy this, it spelled out a series of energy efficiency policies and measures covering the full energy chain, including energy generation, transmission 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<sup>22</sup>. In particular, Initiative 26 of the White Paper calls for appropriate standards for CO<sub>2</sub> 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<sup>23</sup>, identifying the need from this perspective for more focus on energy efficiency.

---

<sup>18</sup> COM/2010/0639 final.

<sup>19</sup> 2010/2107(INI).

<sup>20</sup> COM(2011)21.

<sup>21</sup> COM(2011) 109 final.

<sup>22</sup> COM(2011) 144 final.

<sup>23</sup> COM(2011) 112 final

- (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 this end, it 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) The Effort Sharing Decision (No 406/2009/EC)<sup>24</sup> requires the Commission to assess and report by 2012 on the progress of the Community 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 Community'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, notably by reducing greenhouse gas emissions from the energy sector, and to achieving zero emission electricity production by 2050.
- (12) An integrated approach must 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 on promotion of cogeneration based on a useful heat demand in the internal energy market<sup>25</sup> and Directive 2006/32/EC on energy end-use efficiency and energy services<sup>26</sup> 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. If that approach does not succeed, it would however be necessary to reinforce the policy framework by adding a system of binding targets. In a first stage, therefore, Member States should be required to set national energy efficiency targets, schemes and programmes. It should be for them to decide whether these targets should be binding or indicative in their territory. In a second stage, 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. If this assessment shows that the overall Union target is unlikely to be achieved, then the Commission should propose mandatory national targets for 2020, taking into account the individual starting points of Member States, their economic performance and early action taken.
- (14) 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

---

<sup>24</sup> OJ L 140, 5.6.2009, p.136.

<sup>25</sup> OJ L 52, 21.2.2004, p. 50.

<sup>26</sup> OJ L 144, 27.4.2008, p. 64.

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.

- (15) 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 EU 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 all buildings owned by public bodies 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<sup>27</sup>. The obligation to renovate public buildings complements the provisions of 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.
- (16) 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 concerned public bodies 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.
- (17) With regards to the purchase of certain products and services and the purchase and rent of buildings, public bodies which conclude public works, supply or service contracts should lead by example and make energy efficient purchasing decisions. The provisions of the EU public procurement directives should not however be affected.
- (18) 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 latter objective can better be achieved, at least at this stage, by means of national energy efficiency obligation schemes or other alternative measures that achieve the same amount of energy savings. The Commission should however define, by a delegated act, the conditions under which a Member State could in future recognise the energy

---

<sup>27</sup> OJ L 153, 18.6.2010, p. 13.

savings achieved in another Member State. 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 full account of 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, notably in order to ensure that vulnerable customers have access to the benefits of higher energy efficiency. It should also allow Member States to exempt small companies from the energy efficiency obligation. The Commission Communication "Small Business Act"<sup>28</sup> sets out principles that should be taken into account by Member States that decide to abstain from applying this possibility.

- (19) To tap the energy savings potential in certain market segments where energy audits are generally not offered commercially (such as households or small and medium-sized enterprises), Member States should ensure that energy audits are available. Energy audits should be mandatory and regular for large enterprises, as energy savings can be significant.
- (20) These audits should be carried out in an independent and cost-effective manner. The requirement for independence allows the audits to be carried out by in-house experts, provided that these are qualified or accredited, that they are not directly engaged in the activity audited, and that the Member State has put in place a scheme to assure and check their quality and to impose sanctions if needed.
- (21) 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. To maximise the saving benefits of these innovations, final customers should be able to visualise indicators of cost and consumption and have regular individual billing based on actual consumption.
- (22) 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 provisions of the Treaty on the Functioning of the European Union.
- (23) High-efficiency cogeneration (CHP) and district heating and cooling has significant potential for saving primary energy which is largely untapped in the Union. Member States should draw up national plans to develop high-efficiency CHP and district heating and cooling. These plans should cover a sufficiently long period 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 be equipped with high-efficient CHP units to recover waste

---

<sup>28</sup> COM(2008)394 Final.

heat stemming from the production of electricity. This waste heat could then be transported where it is needed through district heating networks. To this end, Member States should adopt authorisation criteria to ensure the location of installations in sites close to heat demand points. Member States should however be able to lay down conditions for exemption from these obligations where certain conditions are met.

- (24) 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 not prejudge the use of different definitions in national legislation for purposes other than those of the Union legislation. To maximise energy savings and avoid energy saving opportunities being missed, the greatest attention should be paid to the operating conditions of cogeneration units.
- (25) 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.
- (26) 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.
- (27) Most EU businesses are small and medium-sized enterprises (SMEs). They represent an enormous energy saving potential for the EU. To help them adopt energy efficiency measures, Member States should establish a favourable framework aimed at providing SMEs with technical assistance and targeted information.
- (28) Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions<sup>29</sup> 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 of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community<sup>30</sup>. To ensure that significant energy efficiency improvements are achieved in electricity and heat generation installations and mineral oil and gas refineries, actual energy efficiency levels should be monitored and compared with the relevant energy efficiency levels associated with the application of the Best Available Techniques. The Commission

---

<sup>29</sup> OJ L 334, 17.12.2010, p.17.

<sup>30</sup> OJ L 275, 25.10.2003, p. 32.

should compare energy efficiency levels and consider proposing additional measures if significant discrepancies exist between the actual energy efficiency levels and the levels associated with the application of the Best Available Techniques. The information collected on the actual energy efficiency values should also be used in reviewing the harmonised efficiency reference values for separate production of heat and electricity set out in Commission Decision 2007/74/EC of 21 December 2006<sup>31</sup>.

- (29) 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 repealing Regulation (EC) No 1228/2003<sup>32</sup> and Regulation (EC) 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005<sup>33</sup>. Producers of electricity generated from high-efficiency cogeneration should be allowed to issue a call for tender for the connection work. Access to the the grid system for electricity produced from high-efficiency cogeneration, especially for small scale and micro-cogeneration units, should be facilitated.
- (30) 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.
- (31) It is necessary to continue developing the market for energy services to ensure the availability of both the demand and the supply of energy services. Transparency, for example by means of lists of energy services providers, can contribute to this. Model contracts 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.
- (32) 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 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 concerned actors should also be tackled at national level.

---

<sup>31</sup> OJ L 32, 6.2.2007, p. 183.

<sup>32</sup> OJ L 211, 14.8.2009, p. 15.

<sup>33</sup> OJ L 309, 24.11.2009, p. 87.

- (33) 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 reduction of fuel poverty in households, and therefore has 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.
- (34) 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 EU's emissions trading directive (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.
- (35) 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.
- (36) Although this Directive repeals Directive 2006/32/EC, Article 4 of Directive 2006/32/EC should continue to apply until the deadline for the achievement of the 9% target.
- (37) Since the objective of this Directive, which is to achieve the Union's energy efficiency target of 20% primary energy savings by 2020 and pave the way towards further energy efficiency improvements beyond 2020, is not on track to be 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.
- (38) 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 certain matters. It will be of particular importance that the Commission carry out consultations during its preparatory work, including at expert level.
- (39) All substantive provisions of Directive 2004/8/EC and Directive 2006/32/EC, except as regards Articles 4(1) to (4) and Annexes I, III and IV of the latter, should be immediately repealed. Articles 9(1) and (2) of 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<sup>34</sup>, which foresees an obligation for Member States only to endeavour to procure products having the highest energy efficiency class, should also be repealed.

- (40) 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.
- (41) 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.

HAVE ADOPTED THIS DIRECTIVE:

## **CHAPTER I**

### **Subject matter, scope, definitions and energy efficiency targets**

#### *Article 1*

##### ***Subject matter and scope***

1. This Directive establishes a common framework for the promotion of energy efficiency within the Union in order to ensure the achievement of the Union's target of 20% primary energy savings by 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 national energy efficiency targets for 2020.

2. The requirements laid down in this Directive are minimum requirements and shall not prevent any Member State from maintaining or introducing more stringent measures. Such measures shall be compatible with the Union's legislation. National legislation foreseeing more stringent measures shall be notified to the Commission.

#### *Article 2*

##### ***Definitions***

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

1. 'energy' means all forms of energy products, as defined in Regulation (EC) No 1099/2008<sup>35</sup>;
2. 'primary energy consumption' means gross inland consumption, excluding non-energy uses;

---

<sup>34</sup> OJ L 153, 18.6.2010, p. 1.

<sup>35</sup> OJ L 304, 14.11.2008, p. 1.

3. '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;
4. 'public bodies' means 'contracting authorities' as defined in Directive 2004/18/EC;
5. '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;
6. 'obligated parties' means the energy distributors or retail energy sales companies that are bound by the national energy efficiency obligation schemes referred to in Article 6;
7. '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;
8. 'distribution system operator' means 'distribution system operator' as defined in Directive 2009/72/EC and Directive 2009/73/EC;
9. 'retail energy sales company' means a natural or legal person who sells energy to final customers;
10. 'final customer' means a natural or legal person who purchases energy for his or her own end use;
11. '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;
12. 'energy audit' means a systematic procedure to obtain 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, identify and quantify cost-effective energy savings opportunities, and report the findings;
13. 'energy performance contracting' means a contractual arrangement between the beneficiary and the provider of an energy efficiency improvement measure, according to which the payment for the investment made by the provider is in relation to a contractually agreed level of energy efficiency improvement or other agreed energy performance criterion, such as financial savings;
14. 'transmission system operator' means 'transmission system operator' as defined in Directive 2009/72/EC<sup>36</sup> and Directive 2009/73/EC<sup>37</sup>;

---

<sup>36</sup> OJ L 211, 14.8.2009, p. 55.

<sup>37</sup> OJ L 211, 14.8.2009, p. 94.

15. 'cogeneration' means the simultaneous generation in one process of thermal energy and electrical or mechanical energy;
16. 'economically justifiable demand' means demand that does not exceed the needs for heat or cooling and which would otherwise be satisfied at market conditions by energy generation processes other than cogeneration;
17. 'useful heat' means heat produced in a cogeneration process to satisfy economically justifiable demand for heating or cooling;
18. '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;
19. 'high-efficiency cogeneration' means cogeneration meeting the criteria laid down in Annex II;
20. '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;
21. 'power to heat ratio' means the ratio between electricity from cogeneration and useful heat when operating in full cogeneration mode using operational data of the specific unit;
22. 'cogeneration unit' means a unit that can operate in cogeneration mode;
23. 'small scale cogeneration unit' means a cogeneration unit with installed capacity below  $1\text{MW}_e$ ;
24. 'micro-cogeneration unit' means a cogeneration unit with a maximum capacity below  $50\text{ kW}_e$ ;
25. 'plot ratio' means the ratio between the land area and the building floor area in a given territory;
26. 'efficient district heating and cooling' means a district heating or cooling system using at least 50% renewable, waste or cogenerated heat or a combination thereof and having a primary energy factor, as referred to in Directive 2010/31/EU, of at least 0.8;
27. 'substantial refurbishment' means a refurbishment whose cost exceeds 50% of the investment cost for a new comparable unit in accordance with Decision 2007/74/EC or which requires the update of the permit granted under Directive 2010/75/EU.

*Article 3*  
***Energy efficiency targets***

1. Member States shall set a national energy efficiency target expressed as an absolute level of primary energy consumption in 2020. When setting these targets, they shall take into account the Union's target of 20% energy savings, the measures provided

for in this Directive, the measures adopted to reach the national energy saving targets adopted pursuant to Article 4(1) of Directive 2006/32/EC and other measures to promote energy efficiency within Member States and at Union level.

2. By 30 June 2014, the Commission shall assess whether the Union is likely to achieve its target of 20% primary energy savings by 2020, requiring a reduction of EU primary energy consumption of 368 Mtoe in 2020, taking into account the sum of the national targets referred to in paragraph 1 and the evaluation referred to in Article 19(4).

## **CHAPTER II**

### **Efficiency in energy use**

#### *Article 4*

#### **Public bodies**

1. Without prejudice to Article 7 of Directive 2010/31/EU, Member States shall ensure that as from 1 January 2014, 3% of the total floor area owned by their public bodies is renovated each year to meet at least the minimum energy performance requirements set by the Member State concerned in application of Article 4 of Directive 2010/31/EU. The 3% rate shall be calculated on the total floor area of buildings with a total useful floor area over 250 m<sup>2</sup> owned by the public bodies of the Member State concerned that, on 1 January of each year, does not meet the national minimum energy performance requirements set in application of Article 4 of Directive 2010/31/EU.
2. Member States may allow their public bodies to count towards their annual renovation rate the excess of renovated building floor area in a given year as if it has instead been renovated in any of the two previous or following years.
3. For the purposes of paragraph 1, by 1 January 2014, Member States shall establish and make publicly available an inventory of buildings owned by their public bodies indicating:
  - (a) the floor area in m<sup>2</sup>; and
  - (b) the energy performance of each building.
4. Member States shall encourage public bodies to:
  - (a) adopt an energy efficiency plan, freestanding or as part of a broader climate or environmental plan, containing specific energy saving objectives, with a view to continuously improving the body's energy efficiency;
  - (b) put in place an energy management system as part of the implementation of their plan.

*Article 5*  
***Purchasing by public bodies***

Member States shall ensure that public bodies purchase only products, services and buildings with high energy efficiency performance, as referred to in Annex III.

*Article 6*  
***Energy efficiency obligation schemes***

1. Each Member State shall set up an energy efficiency obligation scheme. This scheme shall ensure that either all energy distributors or all retail energy sales companies operating on the Member State's territory achieve annual energy savings equal to 1.5% of their energy sales, by volume, in the previous year in that Member State excluding energy used in transport. This amount of energy savings shall be achieved by the obligated parties among final customers.
2. Member States shall express the amount of energy savings required from 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 in Annex IV shall apply.
3. Measures that target short-term savings, as defined in Annex V(1), shall not account for more than 10% of the amount of energy savings required from each obligated party and shall only be eligible to count towards the obligation laid down in paragraph 1 if combined with measures to which longer-term savings are attributed.
4. Member States shall ensure that the savings claimed by obligated parties are calculated in accordance with Annex V(2). They shall put in place control systems under which at least a statistically significant proportion of the energy efficiency improvement measures put in place by the obligated parties is independently verified.
5. Within the energy efficiency obligation scheme, Member States may:
  - (a) include requirements with a social aim in the saving obligations they impose, including by requiring measures to be implemented 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; in this case they shall establish an accreditation process that is clear, transparent and open to all market actors, and that 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 two previous or two following years.
6. Member States shall publish the energy savings achieved by each obligated party and data on the annual trend of energy savings under the scheme. For the purposes of publishing and verifying the energy savings achieved, Member States shall require obligated parties to submit to them at least the following data:

- a) the energy savings achieved;
  - b) aggregated statistical information on their final customers (identifying significant changes to previously submitted information); and
  - c) 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 European Union legislation.
7. Member States shall ensure that market actors 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 energy services or other energy efficiency improvement measures, including foreclosing the market for competitors or abusing dominant positions.
  8. Member States may exempt small energy distributors and small retail energy sales companies, namely those that distribute or sell less than the equivalent of 75 GWh of energy per year, employ fewer than 10 persons or have an annual turnover or annual balance sheet total that does not exceed EUR 2 000 000, from the application of this Article. Energy produced for self use shall not count towards these thresholds.
  9. As an alternative to paragraph 1, Member States may opt to take other measures to achieve energy savings among final customers. The annual amount of energy savings achieved through this approach shall be equivalent to the amount of energy savings required in paragraph 1.

Member States opting for this option shall notify to the Commission, by 1 January 2013 at the latest, the alternative measures that they plan to adopt, including the rules on penalties referred to in Article 9, and demonstrating how they would achieve the required amount of savings. The Commission may refuse such measures or make suggestions for modifications in the 3 months following notification. In such cases, the alternative approach shall not be applied by the Member State concerned until the Commission expressly accepts the resubmitted or modified draft measures.

10. If appropriate, the Commission shall establish, by means of a delegated act in accordance with Article 18, a system of mutual recognition of energy savings achieved under national energy efficiency obligation schemes. Such a system shall allow obligated parties to count energy savings achieved and certified in a given Member State towards their obligations in another Member State.

#### *Article 7* ***Energy audits and energy management systems***

1. Member States shall promote the availability to all final customers of energy audits which are affordable and carried out in an independent manner by qualified or accredited experts.

Member States shall develop programmes to encourage households and small and medium-sized enterprises to undergo energy audits.

Member States shall bring to the attention of small and medium-sized enterprises concrete examples of how energy management systems could help their business.

2. Member States shall ensure that enterprises not included in the second subparagraph of paragraph 1 are subject to an energy audit carried out in an independent and cost-effective manner by qualified or accredited experts at the latest by 30 June 2014 and every three years from the date of the previous energy audit.
3. Energy audits carried out in an independent manner resulting from energy management systems or implemented under voluntary agreements concluded between organisations of stakeholders and an appointed body and supervised by the Member State concerned or by the Commission, shall be considered as fulfilling the requirements of paragraph 2.
4. Energy audits may stand alone or be part of a broader environmental audit.

#### *Article 8*

#### ***Metering and informative billing***

1. Member States shall ensure that final customers for electricity, natural gas, district heating or cooling and district-supplied domestic hot water are provided with individual meters that accurately measure and allow to make available their actual energy consumption and provide information on actual time of use, in accordance with Annex VI.

When Member States put in place the roll-out of smart meters foreseen by Directives 2009/72/EC and 2009/73/EC concerning electricity and gas markets, they shall ensure that the objectives of energy efficiency and final customer benefits are fully taken into account when establishing the minimum functionalities of the meters and obligations imposed on market participants.

In the case of electricity and on request of the final customer, meter operators shall ensure that the meter can account for electricity produced on the final customer's premises and exported to the grid. Member States shall ensure that if final customers request it, metering data on their real-time production or consumption is made available to a third party acting on behalf of the final customer.

In case of heating and cooling, where a building is supplied from a district heating network, a heat meter shall be installed at the building entry. In multi-apartment buildings, individual heat consumption meters shall also be installed to measure the consumption of heat or cooling for each apartment. Where the use of individual heat consumption meters is not technically feasible, individual heat cost allocators, in accordance with the specifications in Annex VI(1.2), shall be used for measuring heat consumption at each radiator.

Member States shall introduce rules on cost allocation of heat consumption in multi-apartment buildings supplied with centralised heat or cooling. Such rules shall include guidelines on correction factors to reflect building characteristics such as heat transfers between apartments.

2. In addition to the obligations resulting from Directive 2009/72/EC and Directive 2009/73/EC with regard to billing, Member States shall ensure, not later than 1 January 2015, that billing is accurate and based on actual consumption, for all the sectors covered by the present Directive, including energy distributors, distribution system operators and retail energy sales companies, in accordance with the minimum frequency set out in Annex VI(2.1). Appropriate information shall be made available with the bill to provide final customers with a comprehensive account of current energy costs, in accordance with Annex VI(2.2).

Member States shall ensure that final customers are offered a choice of either electronic or hard copy billing and the possibility of easy access to complementary information allowing detailed self-checks on historical consumption as laid down in Annex VI(1.1).

Member States shall require that if requested by final customers, information on their energy billing and historical consumption is made available to an energy service provider designated by the final customer.

3. Information from metering and billing of individual consumption of energy as well as the other information mentioned in paragraphs 1, 2, 3 and Annex VI shall be provided to final customers free of charge.

#### *Article 9* **Penalties**

Member States shall lay down rules on penalties applicable in case of non-compliance with the national provisions adopted pursuant to Articles 6 to 8 and shall take the necessary measures to ensure that they are implemented. The penalties provided must be effective, proportionate and dissuasive. Member States shall communicate those provisions to the Commission by [12 months after entry into force of this Directive] at the latest and shall notify it without delay of any subsequent amendment affecting them.

### **CHAPTER III** **Efficiency in energy supply**

#### *Article 10* **Promotion of efficiency in heating and cooling**

1. By 1 January 2014, Member States shall establish and notify to the Commission a national heating and cooling plan for developing the potential for the application of high-efficiency cogeneration and efficient district heating and cooling, containing the information set out in Annex VII. The plans shall be updated and notified to the Commission every five years. Member States shall ensure by means of their regulatory framework that national heating and cooling plans are taken into account in local and regional development plans, including urban and rural spatial plans, and fulfil the design criteria in Annex VII.
2. Member States shall take the necessary measures to 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 in accordance with paragraphs 1, 3, 6 and 7. When developing district



heating and cooling, they shall to the extent possible opt for high-efficiency cogeneration rather than heat-only generation.

3. Member States shall ensure that all new thermal electricity generation installations with a total thermal input exceeding 20 MW:
  - a) are provided with equipment allowing for the recovery of waste heat by means of a high-efficiency cogeneration unit; and
  - b) are sited in a location where waste heat can be used by heat demand points.

Member States shall adopt authorisation criteria as referred to in Article 7 of Directive 2009/72/EC, or equivalent permit criteria, to ensure that the provisions of the first subparagraph are met. They shall in particular ensure that the location of new installations takes into account the availability of suitable heat loads for cogeneration in accordance with Annex VIII.

4. Member States may lay down conditions for exemption from the provisions of paragraph 3 when:
  - a) the threshold conditions related to the availability of heat load set out in point 1 of Annex VIII are not met;
  - b) the requirement in point (b) of paragraph 3 related to the location of the installation cannot be met due to the need to locate an installation close to a geological storage site permitted under Directive 2009/31/EC; or
  - c) a cost-benefit analysis shows that the costs outweigh the benefits in comparison with the full life-cycle costs, including infrastructure investment, of providing the same amount of electricity and heat with separate heating or cooling.

Member States shall notify such conditions for exemption to the Commission by 1 January 2014. The Commission may refuse those conditions or make suggestions for modifications in the 6 months following notification. In such cases, the conditions for exemption shall not be applied by the Member State concerned until the Commission expressly accepts the resubmitted or modified conditions.

5. Member States shall ensure that national regulations on urban and rural spatial planning are adapted to the authorisation criteria referred to in paragraph 3 and are in line with the national heating and cooling plans referred to in paragraph 1.
6. Member States shall ensure that, whenever an existing electricity generation installation with a total rated thermal input exceeding 20 MW is substantially refurbished or when, in accordance with Article 21 of Directive 2010/75/EC, its permit is updated, conversion to allow its operation as a high-efficiency cogeneration installation is set as a condition in the new or updated permit or licence, provided that the installation is sited in a location where the waste heat can be used by heat demand points in accordance with point 1 of Annex VIII.

The equipment of electricity generation installations with carbon capture or storage facilities shall not be considered as refurbishment for the purpose of these provisions.

7. Member States may lay down conditions for exemption from the provisions of paragraph 6 when:
- a) the threshold conditions related to the availability of heat load set out in point 1 of Annex VIII are not met; or
  - b) a cost-benefit analysis shows that the costs outweigh the benefits in comparison with the full life-cycle costs, including infrastructure investment, of providing the same amount of electricity and heat with separate heating or cooling.

Member States shall notify such conditions for exemption to the Commission by 1 January 2014. The Commission may refuse those conditions or make suggestions for modifications in the 6 months following notification. In such cases, the conditions for exemption shall not be applied by the Member State concerned until the Commission expressly accepts the resubmitted or modified conditions.

8. Member States shall adopt authorisation or equivalent permitting criteria to ensure that industrial installations with a total thermal input exceeding 20 MW generating waste heat that are built or substantially refurbished after [the entry into force of this Directive] capture and make use of their waste heat.

Member States shall establish mechanisms to ensure the connection of these installations to district heating and cooling networks. They may require these installations to bear the connection charges and the cost of developing the district heating and cooling networks necessary to transport their waste heat to consumers.

Member States may lay down conditions for exemption from the provisions in the first sub-paragraph when:

- a) the threshold conditions related to the availability of heat load set out in point 2 of Annex VIII are not met; or
- b) a cost-benefit analysis shows that the costs outweigh the benefits in comparison with the full life-cycle costs, including infrastructure investment, of providing the same amount of heat with separate heating or cooling.

Member States shall notify such conditions for exemption to the Commission by 1 January 2014. The Commission may refuse those conditions or make suggestions for modifications in the 6 months following notification. In such cases, the conditions for exemption shall not be applied by the Member State concerned until the Commission expressly accepts the resubmitted or modified conditions.

9. The Commission shall establish by 1 January 2013 by means of a delegated act in accordance with Article 18 a methodology for the cost-benefit analysis referred to in paragraphs 4 (c), 7 (b) and 8(b).
10. On the basis of the harmonised efficiency reference values referred to in Annex II (f), Member States 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 Member State. They shall ensure that

this guarantee of origin complies with the requirements and contains at least the information specified in Annex IX.

Member States 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. Member States shall notify the Commission 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, particularly 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 18, the harmonised efficiency reference values laid down in Commission Decision [the number of the Decision] on the basis of Directive 2004/8/EC for the first time by 1 January 2015, and every ten years thereafter.

11. Member States 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. They shall not differentiate between electricity consumed on site and electricity exported to the grid. Public support to cogeneration and district heating generation and networks is subject to State aid rules, where applicable.

#### *Article 11*

#### ***Energy transformation***

Member States shall draw up an inventory of data in accordance with Annex X for all installations undertaking the combustion of fuels with total rated thermal input of 50 MW or more and installations undertaking the refining of mineral oil and gas within their territory. This shall be updated every three years. The annual installation-specific data contained in these inventories shall be made available to the Commission upon request. Member States shall include a non-confidential summary containing aggregated information of the inventories in the reports referred to in Article 19(2).

#### *Article 12*

#### ***Energy transmission and distribution***

1. Member States shall ensure that national energy regulatory authorities pay due regard to energy efficiency in their decisions on the operation of the gas and electricity infrastructure. They shall in particular ensure that network tariffs and regulations provide incentives for grid operators to offer system services to network users permitting them to implement energy efficiency improvement measures in the context of the continuing deployment of smart grids.

Member States shall ensure that network regulation, and network tariffs set or approved by energy regulatory authorities, fulfil the criteria in Annex XI, taking into account guidelines and codes developed pursuant to Regulation 714/2009 and Regulation 715/2009.

2. Member States shall, by 30 June 2013, adopt plans:
  - a) assessing the energy efficiency potentials of their gas, electricity and district heating and cooling infrastructure, notably regarding transmission, distribution, load management and interoperability, and connection to energy generating installations;
  - b) identifying concrete measures and investments for the introduction of cost-effective energy efficiency improvements in the network infrastructure, with a detailed timetable for their introduction.
3. Member States 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. Member States 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 2009/72/EC and Article 3(2) of Directive 2009/73/EC, Member States may impose public service obligations relating to energy efficiency on undertakings operating in the electricity and gas sectors.
5. Member States 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 defined by the competent national authorities, transmission system operators and distribution system operators 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 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.

Member States may particularly facilitate the connection to the grid system of electricity produced from high-efficiency cogeneration from small scale and micro cogeneration units.

6. Member States shall take the appropriate steps to ensure that high-efficiency cogeneration operators can offer balancing services and other operational services at the level of transmission system operators or distribution system operators where this is consistent with the mode of operation of the high-efficiency cogeneration installation. Transmission system operators and distribution system operators shall ensure that such services are part of a services bidding process which is transparent and open to scrutiny.

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

7. Member States 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.

#### ***CHAPTER IV*** ***Horizontal provisions***

##### *Article 13* ***Availability of certification schemes***

1. With a view to achieving a high level of technical competence, objectivity and reliability, Member States shall ensure that, by 1 January 2014, certification schemes or equivalent qualification schemes are available for providers of energy services, energy audits and energy efficiency improvement measures, including for installers of building elements as defined in Article 2(9) of Directive 2010/31/EU.
2. Member States shall make publicly available the certification schemes or equivalent qualification schemes referred to in paragraph 1 and shall cooperate among themselves and with the Commission on comparisons between and recognition of the schemes.

##### *Article 14* ***Energy services***

Member States shall promote the energy services market and access for small and medium-sized enterprises to this market by:

- a) making publicly available, checking and regularly updating a list of available energy service providers and the energy services they offer;
- b) providing model contracts for energy performance contracting in the public sector; these shall at least include the items listed in Annex XIII;
- c) disseminating information on available energy service contracts and clauses that should be included in such contracts to guarantee energy savings and final customers' rights;
- d) encouraging the development of voluntary quality labels;
- e) disseminating information on financial instruments, incentives, grants and loans to support energy service projects.

*Article 15*  
***Other measures to promote energy efficiency***

1. Member States shall evaluate and take appropriate measures to remove regulatory and non-regulatory barriers to energy efficiency, notably 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;
  - 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 efficiency-improving investments.

These measures to remove barriers may include providing incentives, repealing or amending legal or regulatory provisions, or adopting guidelines and interpretative communications. These 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 in the first supplementary report referred to in Article 19(2).

*Article 16*  
***Conversion factors***

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

***CHAPTER V***  
***Final provisions***

*Article 17*  
***Delegated acts and adaptation of annexes***

1. The Commission shall be empowered to adopt a delegated act in accordance with Article 18 to establish the system of mutual recognition of energy savings achieved under the national energy efficiency obligation schemes referred to in Article 6(9).

The Commission shall be empowered to adopt a delegated act in accordance with Article 18 to establish the methodology for cost-benefit analysis referred to in Article 10(9).

The Commission shall be empowered to adopt delegated act in accordance with Article 18 to review the harmonised efficiency reference values referred to in Article 10(10) third indent.

2. The Commission shall be empowered to adopt delegated acts in accordance with Article 18 to adapt to technical progress the values, calculation methods, default primary energy coefficient and requirements in Annexes I to XV and to adapt to competitive conditions the performance requirements in Annex III.

#### *Article 18*

##### ***Exercise of the delegation***

1. The powers to adopt delegated acts are conferred on the Commission subject to the conditions laid down in this Article.
2. The delegation of power referred to in Article 17 shall be conferred on the Commission for an indeterminate period of time from [the date of entry into force of this Directive].
3. The delegation of power referred to in Article 17 may be revoked at any time by the European Parliament or by the Council. A decision of revocation shall put an end to the delegation of the power specified in that decision. It shall take effect the day following the publication of the decision in the *Official Journal of the European Union* or at a later date specified therein. It shall not affect the validity of any delegated acts already in force.
4. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.
5. A delegated act adopted pursuant to Article 17 shall enter into force only if no objection has been expressed either by the European Parliament or the Council within a period of 2 months of notification of that act to the European Parliament and the Council or if, before the expiry of that period, the European Parliament and the Council have both informed the Commission that they will not object. That period shall be extended by 2 months at the initiative of the European Parliament or the Council.

#### *Article 19*

##### ***Review and monitoring of implementation***

1. By 30 April each year, Member States shall report on the progress achieved towards national energy efficiency targets, in accordance with Annex XIV(1).
2. By 30 April 2014, and every three years thereafter, Member State shall submit supplementary reports with information on national energy efficiency policies, action plans, programmes and measures implemented or planned at national, regional and local level to improve energy efficiency in view of achieving the national energy efficiency targets referred to in Article 3(1). The reports 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 Annex XIV(1).

The Commission shall, not later than 1 January 2014, provide a template as guidance for the supplementary reports. This template shall be adopted in accordance with the advisory procedure referred to in Article 20(2). The supplementary reports shall in any case include the information specified in Annex XIV.

3. The reports referred to in paragraph 1 may form part of the National Reform Programmes referred to in Council Recommendation 2010/410/EU.
4. The Commission shall evaluate the annual reports and supplementary reports and assess the extent to which Member States 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 the Commission may issue recommendations to Member States.
5. The Commission's assessment of the first supplementary report shall include an assessment of the energy efficiency levels of existing and new installations undertaking the combustion of fuels with a total rated thermal input of 50 MW or more and installations undertaking the refining of mineral oil and gas, in the light of the relevant best available techniques as developed in accordance with Directive 2010/75/EU and Directive 2008/1/EC. Where this assessment identifies significant discrepancies between the actual energy efficiency levels of such installations and energy efficiency levels associated with the application of the relevant best available techniques, the Commission shall propose, if appropriate, requirements to improve the energy efficiency levels achieved by such installations or that the use of such techniques shall in future be a condition for the permitting of new installations and for the periodic review of the permits for existing installations.

The Commission shall also monitor the impact of implementing this Directive on Directive 2003/87/EC, Directive 2009/28/EC as well as Directive 2010/31/EC.

6. Member States shall submit to the Commission before 30 November 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 capacities. 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 capacities. Member States 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 2014 the Commission shall submit the assessment referred to in Article 3(2) to the European Parliament and to the Council, followed, if appropriate, by a legislative proposal laying down mandatory national targets.
8. By 30 June 2018, the Commission shall report to the European Parliament and the Council on the implementation of Article 6. That report shall be followed, if appropriate, by a legislative proposal for one or more of the following purposes:
  - a) to change the saving rate laid down in Article 6(1);



- b) to establish additional common requirements, in particular as regards the matters referred to in Article 6(5).
9. By 30 June 2018, the Commission shall assess the progress made by Member States in removing the regulatory and non-regulatory barriers referred to in Article 15(1); this assessment shall be followed, if appropriate, by a legislative proposal.
10. The Commission shall make the reports referred to in paragraphs 1 and 2 publicly available.

#### *Article 20*

##### ***Committee procedure***

1. The Commission shall be assisted by a Committee.
2. Where reference is made to this paragraph, Articles 3, 4 and 9 of the Regulation 182/2011/EU shall apply, having regard to the provisions of Article 11 thereof.

#### *Article 21*

##### ***Repeal***

Directive 2006/32/EC is repealed from [the date of time-limit for transposition of this Directive], except its Article 4 (1) to (4) and Annexes I, III and IV, without prejudice to the obligations of the Member States relating to the time limit for its transposition into national law. Articles 4 (1) to (4) and Annexes I, III and IV of Directive 2006/32/EC shall be repealed with effect from 1 January 2017.

Directive 2004/8/EC is repealed from [the date of time-limit for transposition of this Directive], without prejudice to the obligations of the Member States relating to the time limit for its transposition into national law.

Article 9(1) and (2) of Directive 2010/30/EU is repealed from [the date of time-limit for transposition of this Directive].

References to Directive 2006/32/EC and Directive 2004/8/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 22*

##### ***Transposition***

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by [12 months after the entry into force of this Directive] at the latest. They shall forthwith communicate to the Commission the text of those provisions and a correlation table between those provisions and this Directive.

When Member States 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. Member States shall determine how such reference is to be made.

2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

*Article 23*  
***Entry into force***

This Directive shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

*Article 24*  
***Addressees***

This Directive is addressed to the Member States.

Done at Brussels,

*For the European Parliament*  
*The President*

*For the Council*  
*The President*

## 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 type (b), (d), (e), (f), (g) and (h) referred to in Part II with an annual overall efficiency set by Member States at a level of at least 75%, and
  - (ii) in cogeneration units of type (a) and (c) referred to in Part II with an annual overall efficiency set by Member States at a level of at least 80%.
- (b) In cogeneration units with an annual overall efficiency below the value referred to in paragraph (a) (i) (cogeneration units of type (b), (d), (e), (f), (g), and (h) referred to in Part II) or with an annual overall efficiency below the value referred to in paragraph (a) (ii) (cogeneration units of type (a) and (c) referred to in Part II) cogeneration is calculated according to the following formula:

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

where:

$E_{\text{CHP}}$  is the amount of electricity from cogeneration

$C$  is the power to heat ratio

$H_{\text{CHP}}$  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, notably for statistical purposes, for units of type (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 Member States introduce default values for power to heat ratios for units of type (f), (g), (h), (i), (j) and (k) referred to in Part II, such default values shall be published and shall be notified to the Commission.

- (d) 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 paragraphs (a) and (b).
- (e) Member States may determine the power to heat ratio as the ratio between electricity and useful heat when operating in cogeneration mode at a lower capacity using operational data of the specific unit.
- (f) Member States may use other reporting periods than one year for the purpose of the calculations according to paragraphs (a) and (b).

## **PART II. Cogeneration technologies covered by this Directive**

- (a) Combined cycle gas turbine with heat recovery
- (b) Steam backpressure 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 (19).

### **PART III. Detailed principles**

When implementing and applying the general principles for the calculation of electricity from cogeneration, Member States shall use the detailed Guidelines established by Decision 2008/952/EC<sup>38</sup>.

---

<sup>38</sup> OJ L 338, 17.12.2008, p. 55.

**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 $\eta$  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 $\eta$  is the efficiency reference value for separate heat production.

CHP E $\eta$  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 will not create a right to issue guarantees of origin in accordance with Article 10(10).

Ref  $E_{\eta}$  is the efficiency reference value for separate electricity production.

(c) *Calculations of energy savings using alternative calculation*

Member States may calculate primary energy savings from a production of heat and electricity and mechanical energy as below without using 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 above the primary energy savings shall be calculated using the formula in point (b) of this Annex replacing: 'CHP  $H_{\eta}$ ' with ' $H_{\eta}$ ' and 'CHP  $E_{\eta}$ ' with ' $E_{\eta}$ ', where:

$H_{\eta}$  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.

$E_{\eta}$  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 maybe 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 10(10).

(d) Member States 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 paragraph (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 as defined in Article 2(24) 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 Member States.



**ANNEX III**  
**Energy efficiency requirements for purchasing products, services and buildings by public bodies**

Public bodies that purchase products, services or buildings shall:

- a) where a product is covered by a delegated act adopted under Directive 2010/30/EU or Commission Directive implementing Directive 92/75/EEC, purchase only the products that comply with the criterion of belonging to the highest energy efficiency class while taking into account cost-effectiveness, economical feasibility and technical suitability, as well as sufficient competition;
- b) where a product not covered under point a) is covered by an implementing measure under Directive 2009/125/EC adopted after the entry into force of this Directive, purchase only products that comply with energy efficiency benchmarks specified in that implementing measure;
- c) purchase office equipment products covered by Council Decision [2006/1005/EC<sup>39</sup>] that comply with energy efficiency requirements not less demanding than those listed in Annex C of the Agreement attached to that Decision;
- d) purchase only tyres that comply with the criterion of having the highest fuel energy efficiency class, as defined by Regulation (EC) No 1222/2009<sup>40</sup>. This requirement shall not prevent public bodies from purchasing tyres with the highest wet grip class or external rolling noise class where justified by safety or public health reasons;
- 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;
- f) purchase or rent only buildings that comply at least with the minimum energy performance requirements referred to in Article 4(1). Compliance with these requirements shall be verified by means of the energy performance certificates referred to in Article 11 of Directive 2010/31/EU.

---

<sup>39</sup> OJ L 381, 28.12.2006, p. 24.

<sup>40</sup> OJ L 342, 22.12.2009, p. 46.

**ANNEX IV**  
**Energy content of selected fuels for end use –conversion table<sup>41</sup>**

Energy commodity	kJ (NCV)	kgoe (NCV)	kWh (NCV)
1 kg coke	28500	0,676	7,917
1 kg hard coal	17200 — 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 oil (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 <sup>[1]</sup>	47200	1,126	13,10
1 kg liquefied natural gas	45190	1,079	12,553
1 kg wood (25 % humidity) <sup>[2]</sup>	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 MJ derived heat	1000	0,024	0,278
1 kWh electrical energy	3600	0,086	1 <sup>[3]</sup>

Source: Eurostat.

[1] 93 % methane.

[2] Member States may apply other values depending on the type of wood most used in the respective Member State.

[3] Applicable when energy savings are calculated in primary energy terms using a bottom-up approach based on final energy consumption. For savings in kWh electricity Member States may apply a default coefficient of 2,5. Member States may apply a different coefficient provided they can justify it.

---

<sup>41</sup> Member States may apply different conversion factors if these can be justified.

**ANNEX V**  
**Energy efficiency obligation schemes**

**1. Measures that target short-term savings**

The following measures shall be considered as targeting short-term savings :

- a) distribution or installation of energy efficient compact fluorescent light bulbs;
- b) distribution or installation of energy efficient shower heads;
- c) energy audits;
- d) information campaigns.

**2. Calculation of energy savings**

The calculation of energy savings in national energy efficiency obligation schemes shall take into account the lifetime of measures. Where no national values for lifetimes are fixed the default values in point 4 shall apply.

Obligated parties may use one or more of the following methods for calculating energy savings for the purposes of Article 6(2):

- a) engineering estimates;
- b) metering;
- c) standard values and lifetimes that Member States have adopted on a clear and sound basis. Such values shall be notified to the Commission. The Commission may request that such values are modified, where they are likely to distort competition or where they show less ambition than the default values and lifetimes in points 3 and 4.
- d) the default values and lifetimes in points 3 and 4 where no national standard values and lifetimes have been established;

**3. European default values according to equipment type**

**3.1. Household appliances**

**a. FREEZERS AND REFRIGERATOR-FREEZERS DISTINGUISHED**

	refrigerator-freezers	Freezers
*Class A+ Deemed savings (kWh/year)	64	62
**Class A+ Deemed savings (kWh/year)	76	73

Class A++ Deemed savings (kWh/year)	129	123
Class A+++ Deemed savings (kWh/year)	193	185

#### **b. FREEZERS AND REFRIGERATOR-FREEZERS NOT DISTINGUISHED**

	refrigerator-freezers and freezers	
*Class A+ Deemed savings (kWh/year)	64	
**Class A+ Deemed savings (kWh/year)	75	
Class A++ Deemed savings (kWh/year)	128	
Class A+++ Deemed savings (kWh/year)	191	

#### **c. DOMESTIC WASHING MACHINES**

**\*Until 30 November**

**2013**

Class A+ deemed savings (kWh/year)	26
Class A++ deemed savings (kWh/year)	46
Class A+++ deemed savings (kWh/year)	63

**\*From 1 December 2013**

Class A++ deemed savings (kWh/year)	20
Class A+++ deemed savings (kWh/year)	37

\*From 1 December 2013 for household washing machines with a rated capacity equal to or higher than 4 kg, the Energy Efficiency Index (EEI) shall be less than 59 (See Annex I of Commission Regulation (EU) No 1015/2010).

#### **d. DOMESTIC DISHWASHERS**

**Until 30 November 2013\*\***

Class A+ deemed savings (kWh/year)	37
Class A++ deemed savings (kWh/year)	69

Class A+++ deemed savings (kWh/year)	97
<b>**From 1 December 2013</b>	
Class A++ deemed savings (kWh/year)	32
Class A+++ deemed savings (kWh/year)	60

\*\*From 1 December 2013 For household dishwashers with a rated capacity equal to or higher than 11 place settings and household dishwashers with a rated capacity of 10 place settings and a width higher than 45 cm, the Energy Efficiency Index (EEI) shall be less than 63 (see COMMISSION REGULATION (EU) No 1016/2010 Annex I)

### 3.2. Residential Lighting

Unitary energy savings GLS<sup>42</sup> to CFL 16 kWh/year

Unitary energy savings GLS<sup>43</sup> to LED 17 kWh/year

### 4. Default lifetimes

Energy efficiency improvement measure through replacement of component	Default lifetime in years
Boiler - condensing	20
Boiler – direct evacuation	20
Burners, oil and gas	10
Control equipment	15-20
Control system – central	15-25
Control system – room control	15-25
Heating control: Control valves, automatic	10
Meters	10

<sup>42</sup> General Lighting Service or tungsten filament lamps

<sup>43</sup> General Lighting Service or tungsten filament lamps

## ANNEX VI

### Minimum requirements for metering of individual energy consumption and the frequency of billing based on actual consumption

#### **1. Minimum requirements for metering of individual energy consumption**

##### **1.1. Individual meters**

When an individual meter is installed, Member States shall ensure that it is connected to an interface which provides secure communication to the final customer, enabling the meter to export private metrological data to the final customer or a third party designated by the final customer.

The interface shall provide private information enabling final customers to better control their energy consumption and use the information for further potential analysis. Such information shall at least indicate the current rate of consumption (e.g. kWh, kJ, m<sup>3</sup>) and related costs and be communicated in a format that promotes consumer action in energy efficiency.

The National Regulatory Authority shall ensure that the interface also provides public data that allows the final customer to consult and use the applicable time-of-use tariffs with real-time pricing, peak time pricing and peak time rebates.

The private data exported through the interface shall offer the final customer a possibility to consult his/her historic consumption levels (in local currency and in kWh, kJ or m<sup>3</sup>):

- a) in the last seven days, day by day;
- b) in the last complete week;
- c) in the last complete month;
- d) in the same complete month the previous year;
- e) in the last complete year.

The historic periods shall match the billing periods for consistency with household bills.

Complementary information on historical consumption (any day, week, month, year from the start-up of intelligent metering) and other useful information allowing for more detailed self-checks by the consumer (e.g. graphic evolutions of individual consumption; benchmarking information, cumulative consumption/savings/spendings from the beginning of each contract, proportion of the individual consumption from renewable sources of energy and related CO<sub>2</sub> savings, etc) shall be made easily accessible either directly through the interface or via the internet.

## **1.2. Heat cost allocators**

Heat cost allocators shall be equipped with clearly legible displays allowing the final customer to consult the current rate of consumption as well as historic consumption levels. The historic periods displayed by the heat cost allocator shall match the billing periods.

## **2. Minimum requirements for billing**

### **2.1 Frequency of billing based on actual consumption**

In order to enable final customers to regulate their own energy consumption, billing on the basis of actual consumption shall be performed with the following frequency:

- a) On a monthly basis for electricity consumption.
- b) At least every two months for the consumption of natural gas. Where gas is used for individual heating, billing shall be provided on a monthly basis.
- c) With centralised heating and cooling, billing shall be provided on a monthly basis during the heating/cooling season.
- d) At least every two months for hot water billing.

Billing based on the measurement of heat consumption using heat cost allocators shall be accompanied with explanations of the numbers available through displays of heat cost allocators, taking into account the standard characteristics of heat cost allocators (EN 834)<sup>44</sup>.

### **2.2. Minimum information contained in the bill**

Member States shall ensure that 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) comparisons with an average normalised or benchmarked final customer in the same user category;
- (d) 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.

### **2.3 Advice on energy efficiency accompanying bills and other feedback to final customers**

---

<sup>44</sup> EN 834 Standard on heat cost allocators for the determination of the consumption of room heating radiators - appliances with electrical energy supply.

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 VII**  
**Planning for efficiency in heating and cooling**

1. The national heating and cooling plans referred to in Article 10(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:
    - (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, classified according to Annex VII, 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) measures to be adopted up to 2020 and up to 2030 to realise the potential in (e) in order to meet the demand in (d), including:
    - (i) measures to increase the share of cogeneration in heating and cooling production and in electricity production; and
    - (ii) measures to 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;

- (g) the share of high efficiency cogeneration and the potential established and progress achieved under Directive 2004/8/EC.
  - (h) an estimate of the primary energy to be saved;
  - (i) 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 plan may be made up of an assembly of regional or local plans.
3. Urban spatial plans shall be designed to ensure that:
- a) new thermal electricity generation installations and industrial plants producing waste heat are located in sites where a maximum amount of the available waste heat will be recovered to meet existing or forecasted heat and cooling demand;
  - b) new residential zones or new industrial plants which consume heat in their production processes are located in sites where a maximum amount of their heat demand will be met by the available waste heat, as identified in national heating and cooling plans. To ensure an optimal matching between demand and supply for heat and cooling, spatial plans shall favour the clustering of a number of industrial plants in the same location;
  - c) thermal electricity generating installations, industrial plants producing waste heat, waste incineration plants and other waste-to-energy plants are connected to the local district heating or cooling network;
  - d) residential zones and industrial plants which consume heat in their production processes are connected to the local district heating or cooling network.

## ANNEX VIII

### Guidelines for siting of thermal electricity installations and industrial installations

#### 1. Siting of thermal electricity generation installations as referred in Article 10(3) and (6)

Where a heat demand point of the capacity given in the column C exists or there is a potential heat demand point, the power plant must be located at less than the corresponding distance in column A. A potential heat demand point is defined as one where it can be shown that one can reasonably be created, for example by constructing a district heating network. For example, using standard estimation techniques, if an aggregate heat load in excess of 15 MW / km<sup>2</sup> can be shown to exist, this is deemed to be a heat demand point. The total sum of such connectible km square loads shall be deemed to be the demand capacity of such heat demand points.

Distance A is a pipeline route, not a straight line, along which it is considered feasible by engineering experts using standard estimating techniques such as quantity surveying, to construct a water carrying pipeline of the corresponding size at moderate cost. This excludes obstacles such as mountain ranges, city centres, difficult river or sea crossings etc.

A	B	C
Maximum distance between proposed electricity installation and heat demand point	Power station electrical Capacity	Heat demand point estimated annual consumption
< 100 km	> 1999* MWe	> 7500 TJ/year
< 65 km	>500	>1875 TJ/year
< 15 km	> 20 MW	> 50 TJ/year

\* New plant will operate typically at 90% load factor.

2. Siting of industrial waste heat sources referred to in Article 10(8).

A	B	C
Maximum distance between proposed industrial installations and heat demand point	Capacity	Heat demand point estimated annual consumption
< 75 km	> 75 MW (at 60-70% load)	> 1600 TJ/year
< 60 km	> 50 MW at 60% load factor	>1000 TJ/year
< 25 km	> 50 MW (> 85% load factor )	> 400 TJ/year
< 15 km	> 20 MW	> 100 TJ/year

## ANNEX IX

### Guarantee of origin for electricity produced from high efficiency cogeneration

- a) Member States 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 10(7) shall contain at least the following information:
- the identity, location, type and capacity (thermal and electrical) of the installation where the energy was produced;
  - the dates and places of production;
  - the lower calorific value of the fuel source from which the electricity was produced;
  - the quantity and the use of the heat generated together with the electricity;
  - the quantity of electricity from high efficiency cogeneration in accordance with Annex II that the guarantee represents;
  - the primary energy savings calculated in accordance with Annex II based on the harmonised efficiency reference values indicated in Annex II paragraph (f);
  - the nominal electric and thermal efficiency of the plant;
  - whether and to what extent the installation has benefited from investment support;
  - whether and to what extent the unit of energy has benefited in any other way from a national support scheme, and the type of support scheme;
  - the date on which the installation became operational; and
  - 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 X**  
**Inventory of energy efficiency data of energy transformation installations**

The inventories referred to in Article 11 shall include:

- a) a non-nominative list of electricity only generation installations with a rated thermal input of 50 MW or more, indicating for each:
- annual average installation electrical output ( $MW_e$ ) and total rated thermal input ( $MW_{th}$ );
  - annual average primary fuel and fuel mix (if applicable);
  - plant type and technology employed at the installation;
  - design efficiency and its conditions;
  - operation start date;
  - date of last substantial refurbishment;
  - the number of annual average operating hours;
  - annual average net operational efficiency.
- b) a non-nominative list of heat only installations with a rated thermal input of 50 MW or more, indicating for each:
- annual average installation thermal output and total rated thermal input ( $MW_{th}$ );
  - annual average primary fuel and fuel mix (if applicable);
  - plant type and technology employed at the installation;
  - design efficiency and its conditions;
  - heat load configuration;
  - operation start date;
  - date of last substantial refurbishment;
  - the number of annual average operating hours;
  - annual average net operational efficiency;
- c) a non-nominative list of cogeneration installations with a rated thermal input of 50 MW or more, indicating for each:
- annual average installations electrical and thermal output ( $MW_e$  and  $MW_{th}$ ) and total rated thermal input ( $MW_{th}$ );

- annual average primary fuel and fuel mix in accordance with Decision 2007/74/EC on harmonised reference values, if applicable;
- plant type and technology employed at the installation in accordance with Annex VII;
- design efficiency and its conditions;
- the designed electricity-only and heat-only efficiencies;
- annual average power to heat ratio;
- operation start date;
- date of last substantial refurbishment;
- the number of annual average operating hours;
- annual average net operational efficiency.

d) a non-nominative list of installations undertaking the refining of mineral oil and gas, indicating for each:

- annual average installation energy input ( $MW_{th}$ );
- annual average installation energy output (energy content of the fuel mix,  $MW_{th}$ );
- annual average feedstock;
- plant type and technology employed at the installation;
- design efficiency (theoretical);
- operation start date;
- date of last substantial refurbishment;
- the number of annual average operating hours;
- annual average net operational efficiency.

## ANNEX XI

### Energy efficiency criteria for energy network regulation and for network tariffs set or approved by energy regulatory authorities

1. Network tariffs shall accurately reflect electricity and 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 allow network operators to offer system services and system tariffs 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 tariffs shall be available that support dynamic pricing for demand response measures by final customers, including:
  - 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 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 12 months.
- (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 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**

- Clear and transparent list of the efficiency measures to be implemented
- 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 and 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 third parties (subcontracting).
- 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.

**ANNEX XIV**  
**General framework for reporting**

**PART 1. General framework for annual reports**

The annual reports referred to in Article 19(1) provide a basis for the monitoring of the progress towards national 2020 targets. Member States shall ensure that the reports include the following minimum information:

- a) an estimate of following indicators in the previous year:
  - (i) primary energy consumption as defined in Article 2(2)
  - (ii) total final energy consumption
  - (iii) final energy consumption by sector
    - industry
    - transport (split between passenger and freight transport)
    - 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) heat generation from thermal power generation
  - (ix) fuel input for thermal power generation
  - (x) passenger kilometers (pkm)
  - (xi) tonne kilometers (tkm)
  - (xii) population

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

- 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 250 m<sup>2</sup> owned by its public bodies that, on 1 January of the year in which the report is due, did not meet the energy performance requirements referred to in Article 4(1);
- d) the total building floor area owned by the Member States' public bodies that was renovated in the previous year.
- e) energy savings achieved through the national energy efficiency obligation schemes referred to in Article 6(1) or the alternative measures adopted in application of Article 6(9).

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

## **PART 2. General framework for supplementary reports**

The reports referred to in Article 19(2) shall provide a framework for the development of national energy efficiency strategies.

The reports 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. Member States shall ensure that the reports include the following minimum information:

### **1. Targets and strategies**

- The 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;
- Other existing energy efficiency targets addressing the whole economy or specific sectors.

### **2. Measures and energy savings**

The reports 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 reports 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 supplementary report 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. 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 reports shall also include the measurement and/or calculation methodology used for calculating the energy savings. If the "recommended methodology"<sup>45</sup> is applied, the report should provide references to this.

### **3. Specific information related to provisions of this Directive**

#### ***3.1. Public bodies (Article 4)***

Supplementary reports shall include the list of public bodies having developed an energy efficiency plan in accordance with Article 4(3).

#### ***3.2. Energy efficiency obligations (Article 6)***

Supplementary reports shall include the national coefficients chosen in accordance with Annex IV.

The first supplementary report shall include a short description of the national scheme referred to in Article 6(1) or the alternative measures adopted in application of Article 6(9).

#### ***3.3. Energy audits and management systems (Article 7)***

Supplementary reports shall include:

- a) the number of energy audits carried out in the previous 3-year period;
- b) the number of energy audits carried out in large enterprises in the previous 3-year period;
- c) the number of large companies in their territory, with an indication of the number of those to which Article 7(3) is applicable.

#### ***3.4. Promotion of efficient heating and cooling (Article 10)***

Supplementary reports shall include an assessment of the progress achieved in implementing the national heating and cooling plan referred to in Article 10(1).

#### ***3.5. Energy transformation (Article 11)***

- Supplementary reports shall include a non-confidential summary of the inventories of data referred to in Article 11, in accordance with the requirements set in Annex X.

#### ***3.6. Energy transmission and distribution (Article 12)***

- The first supplementary report and the subsequent reports due every 10 years thereafter shall include the plans for energy efficiency potentials of gas and electricity infrastructure referred to in Article 12(2).

#### ***3.7. Availability of certification schemes (Article 13)***

---

<sup>45</sup> Recommendations on Measurement and Verification Methods in the framework of the Directive 2006/32/EC on Energy End-Use Efficiency and Energy Services.

Supplementary reports shall include information on the available national certification schemes or equivalent qualification schemes for the providers of energy services, energy audits and energy efficiency improvement measures.

**3.8. *Energy Services (Article 14)***

Supplementary reports shall include an internet link to the website where the national lists and registers of energy services providers referred to in Article 14 can be accessible.

**3.9. *Other measures to promote energy efficiency (Article 15)***

The first supplementary report shall include a list of the measures referred to in Article 15(2).

**ANNEX XV**  
**Correlation table**

Directive 2006/32/EC	This Directive
Article 1	Article 1
Article 2	Article 1
Article 3, point (a)	Article 1, point (1)
Article 3, point (b)	--
Article 3, point (c)	--
Article 3, point (d)	--
--	Article 2, point (2)
Article 3 point (e)	Article 2, point (3)
Article 3, point (f)	--
Article 3, point (g)	--
Article 3, point (h)	--
Article 3, point (i)	--
--	Article 2, point (4)
--	Article 2, point (5)
--	Article 2, point (6)
Article 3, point (j)	Article 2, point (13)
Article 3, point (k)	--
Article 3, point (l)	Article 2, point (12)
Article 3, point (m)	--
Article 3, point (n)	Article 2, point (10)
Article 3, point (o)	Article 2, point (7)
Article 3, point (p)	Article 2, point (8)

Article 3, point (q)	Article 2, point (9)
Article 3, point (r)	--
Article 3, point (s)	--
--	Article 2, point (11)
--	Article 2, point (14)
--	Article 3
Article 4	--
Article 5	Article 4, Article 5
Article 6(1)(a)	Article 6 (6) points (b) and (c)
Article 6 (1)(b)	Article 6 (7)
Article 6 (2)	Article 6(1), (2), (3), (4), (5), (6) point (a), (8), (9) and (10)
Article 7(1)	--
Article 7(2)	Article 15 (1) last indent
Article 7(3)	--
Article 8	Article 13(1)
--	Article 13(2)
Article 9(1)	--
Article 9(2)	Article 14 points (b), (c) and (e)
Article 10(1)	Article 12(4)
Article 10(2)	Article 12(3)
Article 11	--
Article 12(1)	Article 7(1)
Article 12(2)	--
--	Article 7(2)
Article 12(3)	Article 7(3)
Article 13(1)	Article 8(1)



Article 13(2)	Article 8(2)
--	Article 9
--	Article 11
--	Article 12 (1) and (2)
--	Article 14, points (a) and (d)
--	Article 15(1), point (a) and (b)
--	Article 15(2)
--	Article 16
Article 14 (1) and (2)	Article 19(1), (2), (3)
Article 14 (3)	--
Article 14 (4) and (5)	Article 19(4) and (5)
--	Article 17(1)
Article 15(1)	Article 17(2)
Article 15(2)	--
Article 15(3)	--
Article 15(4)	--
--	Article 18
--	Article 19(7)
--	Article 19(8)
--	Article 19(9)
--	Article 19(10)
Article 16	Article 20
Article 17	Article 21
Article 18	Article 22
Article 19	Article 23
Article 20	Article 24
Annex I	--

Annex II	Annex IV
Annex III	--
Annex IV	--
Annex V	--
Annex VI	Annex III
--	Annex V
--	Annex VI
--	Annex VII
--	Annex VIII
--	Annex IX
--	Annex X
--	Annex XI
--	Annex XII
--	Annex XIII
--	Annex XIV
--	Annex XV
<b>Directive 2004/8/EC</b>	<b>This Directive</b>
Article 1	Article 1
Article 2	Article 1
Article 3, point (a)	Article 2, point (15)
Article 3, point (b)	Article 2, point (17)
Article 3, point (c)	Article 2, point (16)
Article 3, point (d)	Article 2, point (18)
Article 3, point (e)	--
Article 3, point (f)	--
Article 3, point (g)	Article 2, point (20)
Article 3, point (h)	--

Article 3, point (i)	Article 2, point (19)
Article 3, point (j)	--
Article 3, point (k)	Article 2, point (21)
Article 3, point (l)	Article 2, point (22)
Article 3, point (m)	Article 2, point (24)
Article 3, point (n)	Article 2, point (23)
Article 3, point (o)	--
--	Article 2, point (25)
--	Article 2, point (26)
--	Article 2, point (27)
Article 4(1)	Annex II, point (f) first indent
--	Article 10(1) to (9)
Article 4(2)	Article 10(10) third indent
Article 4(3)	--
Article 5	Article 10(10) first and second indent
Article 6	--
Article 7(1)	Article 10(11)
Article 7(2)	--
Article 7(3)	--
Article 8	Article 12(5)
--	Article 12(6)
--	Article 12(7)
Article 9	--
Article 10(1) and (2)	--
Article 10(3)	Article 19(6)
Article 11	--
Article 12	--

Article 13	Article 17(2)
Article 14	--
Article 15	Article 22
Article 16	--
Article 17	Article 23
Article 18	Article 24
Annex I	Annex I, Part II
Annex II	Annex I, Part I
--	Annex I, Part III
Annex III	Annex II
Annex IV	--

## LEGISLATIVE FINANCIAL STATEMENT FOR PROPOSALS

### 1. FRAMEWORK OF THE PROPOSAL/INITIATIVE

#### 1.1. Title of the proposal/initiative

Directive of the European Parliament and of the Council on energy efficiency repealing Directives 2004/8/EC and 2006/32/EC

#### 1.2. Policy area(s) concerned in the ABM/ABB structure<sup>46</sup>

ENERGY [32]

#### 1.3. Nature of the proposal/initiative

- The proposal/initiative relates to a **new action**
- The proposal/initiative relates to a **new action following a pilot project/preparatory action**<sup>47</sup>
- The proposal/initiative relates to **the extension of an existing action**
- The proposal/initiative relates to **an action redirected towards a new action.**

#### 1.4. Objectives

##### 1.4.1. *The Commission's multiannual strategic objective(s) targeted by the proposal/initiative*

This proposal is entrenched in the Europe 2020 Strategy for smart, sustainable and inclusive growth. It directly contributes to achieving one of the five headline targets set up by the Strategy, notably the realisation of 20% energy efficiency target in 2020.

##### 1.4.2. *Specific objective(s) and ABM/ABB activity(ies) concerned*

Specific objective No:

No 3: Realize 20 % reduction of the EU's energy consumption

No 4: To promote renewables and to increase the energy efficiency in transport, residential/tertiary and industry, through addressing the non-technological barriers (Intelligent Energy Europe programme)

ABM/ABB activities concerned:

No 3: 32 04 03

No 4: 32 04 06

---

<sup>46</sup> ABM: Activity-Based Management – ABB: Activity-Based Budgeting.  
<sup>47</sup> As referred to in Article 49(6)(a) or (b) of the Financial Regulation.

#### 1.4.3. *Expected result(s) and impact*

*Specify the effects which the proposal/initiative should have on the beneficiaries/groups targeted.*

The proposal will have positive effects regarding the security of supply in Europe, will contribute to climate change mitigation and will also have positive impacts in terms of economic growth and jobs creation. Energy savings free financial resources that could be reinvested elsewhere in the economy and can help alleviate public budgets that are under constraint. For individual citizens energy efficiency means paying less on their energy bills. It would also provide measures that would tackle the problem of fuel poverty. Finally, producing more with less energy should improve EU industries' competitiveness and place them in a leadership position in the global markets for energy efficiency technologies.

#### 1.4.4. *Indicators of results and impact*

*Specify the indicators for monitoring implementation of the proposal/initiative.*

Under this proposal Member States will have to annually report to the Commission on progress made in implementing the Directive using a number of indicators (e.g. primary energy consumption, activity indicators in a number of sectors such as industry, residential and tertiary, transport, energy supply, total building floor owned by public bodies and renovated in a year). Member States are also required to report, every three years, on various implementation indicators.

### **1.5. Grounds for the proposal/initiative**

#### 1.5.1. *Requirement(s) to be met in the short or long term*

The short-term objective of this Proposal is to significantly contribute to the EU energy efficiency objective for 2020 and the achievement of the EU 2020 Strategy. The proposal has also a long-term objective, namely the realisation of energy efficiency improvements within the EU beyond 2020.

#### 1.5.2. *Added value of EU involvement*

The EU has set itself the target of achieving 20 % primary energy savings in 2020 and has made it one of the five headline targets of the Europe 2020 Strategy. The current policy framework at EU and MS level have not managed to tap existing energy saving potential.

The energy challenges addressed by this proposal (security of energy supply, sustainability and climate change, as well as EU competitiveness) are concerns shared by the EU as a whole and thus a collective response at EU level is necessary to ensure action is coordinated and the shared objectives are achieved more effectively.

#### 1.5.3. *Lessons learned from similar experiences in the past*

The current energy efficiency framework that this proposal repeals, i.e. the Energy Services Directive and the Cogeneration Directive, because of their soft wording, has not managed to fully tap the existing energy saving potentials. This Proposal aims at remedying the drawbacks and insufficiencies of the two Directives, by reinforcing and improving the clarity of the text and setting clear obligations.

*1.5.4. Coherence and possible synergy with other relevant instruments*

The proposal is closely related to the Europe 2020 Strategy and the Europe 2020 flagship initiative for a resource-efficient Europe. It is consistent and complementary with the existing EU climate, energy and social policies.

## 1.6. Duration and financial impact

Proposal/initiative of **limited duration**

–  Proposal/initiative in effect from [DD/MM]YYYY to [DD/MM]YYYY

–  Financial impact from YYYY to YYYY

Proposal/initiative of **unlimited duration**

– Implementation will possibly start in 2012 depending on the progress with the legislative process

– followed by full-scale operation.

## 1.7. Management mode(s) envisaged<sup>48</sup>

**Centralised direct management** by the Commission

**Centralised indirect management** with the delegation of implementation tasks to:

–  executive agencies

–  bodies set up by the Communities<sup>49</sup>

–  national public-sector bodies/bodies with public-service mission

–  persons entrusted with the implementation of specific actions pursuant to Title V of the Treaty on European Union and identified in the relevant basic act within the meaning of Article 49 of the Financial Regulation

**Shared management** with the Member States

**Decentralised management** with third countries

**Joint management** with international organisations (*to be specified*)

*If more than one management mode is indicated, please provide details in the "Comments" section.*

### Comments

The main part of the implementation of this proposal will be for the Member States. The Commission will carry out a number of studies and assessments and will monitor and support (through a number of cooperation initiatives such as Concerted Action project) the implementation at national level.

<sup>48</sup> Details of management modes and references to the Financial Regulation may be found on the BudgWeb site: [http://www.cc.cec/budg/man/budgmanag/budgmanag\\_en.html](http://www.cc.cec/budg/man/budgmanag/budgmanag_en.html)

<sup>49</sup> As referred to in Article 185 of the Financial Regulation.



## **2. MANAGEMENT MEASURES**

### **2.1. Monitoring and reporting rules**

*Specify frequency and conditions.*

Member States have to provide: (i) annual report on a number of basic energy and implementation indicators; and (ii) three-year report on broader information on implementation of the Directive and national energy efficiency measures and strategies.

### **2.2. Management and control system**

#### *2.2.1. Risk(s) identified*

The risks related to the implementation of the Directive are identified in the implementation plan accompanying the proposal. They concern both risks in the transposition and in the implementation phase and internal and external risks.

#### *2.2.2. Control method(s) envisaged*

The implementation plan foresees remedial action to address the identified risks. This for example includes reinforced dialogue and cooperation with the Member States, including in the context of the Concerted Action and bilaterally, requirements of correlation tables, establishment of penalties for the non-compliance. An evaluation by the Commission of the national annual and three-annual reports is also foreseen. The Commission may also issue recommendations.

### **2.3. Measures to prevent fraud and irregularities**

*Specify existing or envisaged prevention and protection measures.*

This Proposal does not have an impact on the operational part of the EU budget. No risks identified.

### 3. ESTIMATED FINANCIAL IMPACT OF THE PROPOSAL/INITIATIVE

#### 3.1. Heading(s) of the multiannual financial framework and expenditure budget line(s) affected

- Existing expenditure budget lines

In order of multiannual financial framework headings and budget lines.

Heading of multiannual financial framework	Budget line	Type of expenditure	Contribution			
	Number [Description.....]	Diff./non-diff. <sup>(50)</sup>	from EFTA <sup>51</sup> countries	from candidate countries <sup>52</sup>	from third countries	within the meaning of Article 18(1)(aa) of the Financial Regulation
1A	32.04.03 [Support activities to the European energy policy and internal energy market]	Diff.	NO	NO	NO	NO
1A	32.04.06 [[Competitiveness and Innovation Framework Programme — ‘Intelligent Energy — Europe’ programme]	Diff.	YES	YES	NO	NO

- New budget lines requested – NO

In order of multiannual financial framework headings and budget lines.

Heading of multiannual financial framework	Budget line	Type of expenditure	Contribution			
	Number [Heading.....]	Diff./non-diff.	from EFTA countries	from candidate countries	from third countries	within the meaning of Article 18(1)(aa) of the Financial Regulation
	[XX.YY.YY.YY]		YES/NO	YES/NO	YES/NO	YES/NO

<sup>50</sup> Diff. = Differentiated appropriations / Non-Diff. = Non-differentiated appropriations

<sup>51</sup> EFTA: European Free Trade Association.

<sup>52</sup> Candidate countries and, where applicable, potential candidate countries from the Western Balkans.

### 3.2. Estimated impact on expenditure

#### 3.2.1. Summary of estimated impact on expenditure

THE PROPOSAL WILL BE IMPLEMENTED USING THE EXISTING BUDGET AND WILL NOT HAVE AN IMPACT ON THE MULTIANNUAL FINANCIAL FRAMEWORK.

EUR million (to 3 decimal places)

<b>Heading of multiannual financial framework:</b>	Number	[Heading 1A]
--	--------	--------------

DG: <ENER>			Year N <sup>53</sup>	Year N+1	Year N+2	Year N+3	... enter as many years as necessary to show the duration of the impact (see point 1.6)			TOTAL
• Operational appropriations										
Number of budget line 32.04.03	Commitments	(1)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.4
	Payments	(2)	0.06	0.2	0.2	0.2	0.2	0.2	0.2	1.26
Number of budget line 32.04.06	Commitments	(1a)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	33.6
	Payments	(2a)	1.44	3.36	4.8	4.8	4.8	4.8	4.8	28.8
Appropriations of an administrative nature financed from the envelope for specific programmes <sup>54</sup>										
Number of budget line 32010406		(3)								
<b>TOTAL appropriations for DG &lt;ENER&gt;</b>	Commitments	=1+1a+3	5	5	5	5	5	5	5	35.0
	Payments	=2+2a	1.5	3.56	5	5	5	5	5	30.06

<sup>53</sup> Year N is the year in which implementation of the proposal/initiative starts.

<sup>54</sup> Technical and/or administrative assistance and expenditure in support of the implementation of EU programmes and/or actions (former "BA" lines), indirect research, direct research.

		+3								
• TOTAL operational appropriations	Commitments	(4)	5	5	5	5	5	5	5	35.0
	Payments	(5)	1.5	3.56	5	5	5	5	5	30.06
• TOTAL appropriations of an administrative nature financed from the envelope for specific programmes		(6)								
<b>TOTAL appropriations under HEADING &lt;1A&gt; of the multiannual financial framework</b>	Commitments	=4+ 6	5	5	5	5	5	5	5	35.0
	Payments	=5+ 6	1.5	3.56	5	5	5	5	5	30.06

**If more than one heading is affected by the proposal / initiative:**

• TOTAL operational appropriations	Commitments	(4)								
	Payments	(5)								
• TOTAL appropriations of an administrative nature financed from the envelope for specific programmes		(6)								
<b>TOTAL appropriations under HEADINGS 1 to 4 of the multiannual financial framework (Reference amount)</b>	Commitments	=4+ 6	5	5	5	5	5	5	5	35.0
	Payments	=5+ 6	1.5	3.56	5	5	5	5	5	30.06

<b>Heading of multiannual financial framework:</b>	<b>5</b>	" Administrative expenditure "
--	----------	--------------------------------

EUR million (to 3 decimal places)

		Year N	Year N+1	Year N+2	Year N+3	... enter as many years as necessary to show the duration of the impact (see point 1.6)			TOTAL
DG: <ENER>									
• Human resources		0.727	0.727	0.727	0.727	0.727	0.727	0.727	5.089
• Other administrative expenditure		0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.602
<b>TOTAL DG &lt;ENER&gt;</b>		<b>0.813</b>	<b>0.813</b>	<b>0.813</b>	<b>0.813</b>	<b>0.813</b>	<b>0.813</b>	<b>0.813</b>	<b>5.691</b>
		Appropriations							

<b>TOTAL appropriations under HEADING 5 of the multiannual financial framework</b>	(Total commitments = Total payments)	0.813	0.813	0.813	0.813	0.813	0.813	0.813	5.691
--	--------------------------------------	-------	-------	-------	-------	-------	-------	-------	-------

EUR million (to 3 decimal places)

		Year N <sup>55</sup>	Year N+1	Year N+2	Year N+3	... enter as many years as necessary to show the duration of the impact (see point 1.6)			TOTAL
<b>TOTAL appropriations under HEADINGS 1 to 5 of the multiannual financial framework</b>	Commitments	5,813	5,813	5,813	5,813	5,813	5,813	5,813	40,691
	Payments	2,313	4,373	5,813	5,813	5,813	5,813	5,813	35,751

<sup>55</sup> Year N is the year in which implementation of the proposal/initiative starts.

### 3.2.2. Estimated impact on operational appropriations

- The proposal/initiative does not require the use of new operational appropriations (the initiative is part of the current financial framework)
- The proposal/initiative requires the use of operational appropriations, as explained below:

Commitment appropriations in EUR million (to 3 decimal places)

Indicate objectives and outputs  ↓			Year N	Year N+1	Year N+2	Year N+3	... enter as many years as necessary to show the duration of the impact (see point 1.6)										TOTAL			
	OUTPUTS																			
	Type of output <sup>56</sup>	Average cost of the output	Number of outputs	Cost	Number of outputs	Cost	Number of outputs	Cost	Number of outputs	Cost	Number of outputs	Cost	Number of outputs	Cost	Number of outputs	Cost	Number of outputs	Cost	Total number of outputs	Total cost
SPECIFIC OBJECTIVE No 3 Realize 20 % reduction of the EU's energy consumption compared to PRIMES 2007 projections for 2020																				
- Output	study	1	1	0.2	1	0.2	1	0.2	1	0.2	1	0.2	1	0.2	1	0.2	1	0.2	7	1.4
Sub-total for specific objective N°3				0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	7	1.4
SPECIFIC OBJECTIVE No 4 To promote renewables and to increase the energy efficiency in transport, residential/tertiary and industry, through addressing the non-technological barriers (Intelligent Energy Europe programme)...																				
- Output	study	1.4	2	2.8	2	2.8	2	2.8	2	2.8	2	2.8	2	2.8	2	2.8	2	2.8	14	19.6
- Output	Concerted action	2	0.3	2	0.3	2	0.3	2	0.3	2	0.3	2	0.3	2	0.3	2	0.3	2	2.1	14
Sub-total for specific objective N°4			2.3	4.8	2.3	4.8	2.3	4.8	2.3	4.8	2.3	4.8	2.3	4.8	2.3	4.8	2.3	4.8	16.1	33.6
<b>TOTAL COST</b>				5		5		5		5		5		5		5		5		35

<sup>56</sup>

Outputs are products and services to be supplied (e.g.: number of student exchanges financed, number of km of roads built, etc.).

### 3.2.3. Estimated impact on appropriations of an administrative nature

#### 3.2.3.1. Summary

- The proposal/initiative does not require the use of administrative appropriations
- The proposal/initiative requires the use of administrative appropriations, as explained below: (the initiative is part of the current financial framework)

The needs for administrative appropriations shall be covered within the allocation already granted for managing this action and/or redeployed within the DG, complemented as the case may be by any additional allocation that might be granted to the managing DG in the framework of the annual allocation procedure in the light of budgetary constraints.

EUR million (to 3 decimal places)

	Year N <sup>57</sup>	Year N+1	Year N+2	Year N+3	... enter as many years as necessary to show the duration of the impact (see point 1.6)			TOTAL
<b>HEADING 5 of the multiannual financial framework</b>								
Human resources	0.727	0.727	0.727	0.727	0.727	0.727	0.727	<b>5.089</b>
Other administrative expenditure	0.086	0.086	0.086	0.086	0.086	0.086	0.086	<b>0.602</b>
<b>Subtotal HEADING 5 of the multiannual financial framework</b>	<b>0.813</b>	<b>0.813</b>	<b>0.813</b>	<b>0.813</b>	<b>0.813</b>	<b>0.813</b>	<b>0.813</b>	<b>5.691</b>
<b>Outside HEADING 5<sup>58</sup> of the multiannual financial framework</b>								
Human resources								
Other expenditure of an administrative nature								
<b>Subtotal outside HEADING 5 of the multiannual financial framework</b>								
<b>TOTAL</b>	<b>0.813</b>	<b>0.813</b>	<b>0.813</b>	<b>0.813</b>	<b>0.813</b>	<b>0.813</b>	<b>0.813</b>	<b>5.691</b>

<sup>57</sup>

Year N is the year in which implementation of the proposal/initiative starts.

<sup>58</sup>

Technical and/or administrative assistance and expenditure in support of the implementation of EU programmes and/or actions (former "BA" lines), indirect research, direct research.

### 3.2.3.2. Estimated requirements of human resources

- The proposal/initiative does not require the use of human resources
- The proposal/initiative requires the use of the currently allocated human resources, as explained below:

*Estimate to be expressed in full amounts (or at most to one decimal place)*

	Year N	Year N+1	Year N+2	Year N+3	... enter as many years as necessary to show the duration of the impact (see point 1.6)		
<b>• Establishment plan posts (officials and temporary agents)</b>							
XX 01 01 01 (Headquarters and Commission's Representation Offices)	0.727	0.727	0.727	0.727	0.727	0.727	0.727
XX 01 01 02 (Delegations)							
XX 01 05 01 (Indirect research)							
10 01 05 01 (Direct research)							
<b>• External personnel (in Full Time Equivalent unit: FTE)<sup>59</sup></b>							
XX 01 02 01 (CA, INT, SNE from the "global envelope")							
XX 01 02 02 (CA, INT, JED, LA and SNE in the delegations)							
<b>XX 01 04 yy<sup>60</sup></b>	- at Headquarters <sup>61</sup>						
	- in delegations						
<b>XX 01 05 02</b> (CA, INT, SNE - Indirect research)							
10 01 05 02 (CA, INT, SNE - Direct research)							
Other budget lines (specify)							
<b>TOTAL</b>	0.727	0.727	0.727	0.727	0.727	0.727	0.727

**XX** is the policy area or budget title concerned.

The human resources required will be met by staff from the DG who are already assigned to management of the action and/or have been redeployed within the DG, together if necessary with any additional allocation which may be granted to the managing DG under the annual allocation procedure and in the light of budgetary constraints.

Description of tasks to be carried out:

Officials and temporary agents	Take appropriate actions to implement the various requirements upon Commission (e.g. review MS reports, launch and supervise studies, carry out analysis, develop support programmes for its implementation, monitor implementation)
External personnel	

<sup>59</sup> CA= Contract Agent; INT= agency staff ("*Intérimaire*"); JED= "*Jeune Expert en Délégation*" (Young Experts in Delegations); LA= Local Agent; SNE= Seconded National Expert;

<sup>60</sup> Under the ceiling for external personnel from operational appropriations (former "BA" lines).

<sup>61</sup> Essentially for Structural Funds, European Agricultural Fund for Rural Development (EAFRD) and European Fisheries Fund (EFF).



3.2.4. *Compatibility with the current multiannual financial framework*

- Proposal/initiative is compatible the current multiannual financial framework.
- Proposal/initiative will entail reprogramming of the relevant heading in the multiannual financial framework.

Explain what reprogramming is required, specifying the budget lines concerned and the corresponding amounts.  
.....

- Proposal/initiative requires application of the flexibility instrument or revision of the multiannual financial framework<sup>62</sup>.

Explain what is required, specifying the headings and budget lines concerned and the corresponding amounts.  
.....

3.2.5. *Third-party contributions*

- The proposal/initiative does not provide for co-financing by third parties
- The proposal/initiative provides for the co-financing estimated below:

Appropriations in EUR million (to 3 decimal places)

	Year N	Year N+1	Year N+2	Year N+3	... enter as many years as necessary to show the duration of the impact (see point 1.6)			Total
Specify the co-financing body								
TOTAL appropriations cofinanced								

<sup>62</sup> See points 19 and 24 of the Interinstitutional Agreement.

### 3.3. Estimated impact on revenue

- Proposal/initiative has no financial impact on revenue.
- Proposal/initiative has the following financial impact:
  - on own resources
  - on miscellaneous revenue

EUR million (to 3 decimal places)

Budget revenue line:	Appropriations available for the ongoing budget year	Impact of the proposal/initiative <sup>63</sup>							
		Year N	Year N+1	Year N+2	Year N+3	... insert as many columns as necessary in order to reflect the duration of the impact (see point 1.6)			
Article .....									

For miscellaneous assigned revenue, specify the budget expenditure line(s) affected.

....

Specify the method for calculating the impact on revenue.

....

---

<sup>63</sup> As regards traditional own resources (customs duties, sugar levies), the amounts indicated must be net amounts, i.e. gross amounts after deduction of 25% for collection costs.