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## **COVER NOTE**

From:	Secretary-General of the European Commission, signed by Mr Jordi AYET PUIGARNAU, Director
date of receipt:	12 October 2015
То:	Mr Jeppe TRANHOLM-MIKKELSEN, Secretary-General of the Council of the European Union
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Subject:	COMMISSION DELEGATED REGULATION (EU)/ of 12.10.2015 reviewing harmonised efficiency reference values for separate production of electricity and heat in application of Directive 2012/27/EU of the European Parliament and of the Council and repealing Commission Implementing Decision 2011/877/EU

Delegations will find attached document C(2015) 6863 final.

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## COMMISSION DELEGATED REGULATION (EU) .../...

of 12.10.2015

reviewing harmonised efficiency reference values for separate production of electricity and heat in application of Directive 2012/27/EU of the European Parliament and of the Council and repealing Commission Implementing Decision 2011/877/EU

## EXPLANATORY MEMORANDUM

#### 1. CONTEXT OF THE DELEGATED ACT

## Grounds and objectives of the proposal

Under Directive 2012/27/EU on energy efficiency<sup>1</sup> (EED), combined heat and power (CHP) plants must provide primary energy savings (PES) of more than 10% for schemes that are 1MWe or greater (greater than 0% for small schemes with capacity of less than 1 MWe) in order to be considered as high efficiency CHP plants, when compared with separate generation of electricity and heat.

The calculation of the PES requires reference efficiency values for the separate generation of heat and electricity. Under Directive 2004/8/EC on the promotion of cogeneration based on a useful heat demand in the internal energy market<sup>2</sup> (Cogeneration Directive), the Commission is responsible for commissioning work to estimate these values based on operational data. The empowerment of the Commission to review these reference values is also emphasised in Article 22(2) of the Energy Efficiency Directive, which replaced the Cogeneration Directive in June 2014.

In 2007, the Commission released the first set of harmonised efficiency reference values for the separate production of electricity and heat in Decision 2007/74/EC<sup>3</sup>. Harmonised values make it possible to compare the impacts of Member States' cogeneration policies.

In order to account for technological developments and changes in the distribution of energy sources, these harmonised efficiency reference values for the separate production of electricity and heat should be revised every 4 years. They were revised for the first time in February 2011 when Decision 2011/877/EU<sup>4</sup> was published.

The Cogeneration Directive required the harmonisation of reference efficiency values for electricity and heat so that the reference value for a given fuel and given year of construction applies to all Member States across the EU. This requirement is maintained under Annex II of the EED.

In addition, reference values must be based on operational data under realistic conditions for plants built by the market, not on information provided by manufacturers, design data or research projects. Experience shows that there can be significant differences between design data and actual operational data due to a number of factors, such as fluctuations in load profile and degradation of performance over time.

## 2. CONSULTATIONS PRIOR TO THE ADOPTION OF THE ACT

## **Consultation of interested parties**

A study was launched in July 2014 to review the reference values for the separate production of heat and electricity. Member States, through the Energy Efficiency Directive Expert Group,

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OJ L 315, 14.11.2012, p. 1.

OJ L 52, 21.2.2004, p. 50.

OJ L 32, 6.2.2007, p. 183.

<sup>&</sup>lt;sup>4</sup> OJ L 343, 23.12.2011, p. 91.

and stakeholders were invited to participate and provide information. Two stakeholder workshops were organised during the study, on 25 September 2014 and on 10 February 2015.

Member State experts and stakeholders were consulted through an ad-hoc Consultation Forum under the Energy Efficiency Directive held on 4 May 2015.

## Summary of responses and how they have been taken into account

Member States and stakeholders recognised the need to update the current set of reference values. Several suggestions were made during the Consultation Forum:

- The description of the fuel categories covering biomass solid fuels should be updated in order to better reflect the market and provide more clarity about how different fuels should be classified.
- Some Member States and stakeholders claimed that the reference value for the separate electricity production from biomass is too high; other Member States considered the value proposed adequate.
- Some Member States and stakeholders pointed out that grid losses might differ among Member States, affecting the correction factor for grid losses.

As a result of these suggestions:

- The definition of the biomass categories has been updated, in order to provide more clarity.
- The reference value for the separate production of electricity from biomass has been increased as the data collected during the preparatory study points in the direction of it being higher than the current values.
- The correction factor for grid losses has been updated. The total influence of this value is limited and differentiating on it per Member State could lead to a lack of clarity in the market.

### 3. LEGAL ELEMENTS OF THE DELEGATED ACT

## Summary of the proposed action

The proposed measure provides a new set of reference values for the separate production of heat and electricity, to be used as of 1 January 2016.

It is proposed that the correction factor for ambient temperature is used only for the electricity production reference value of installations that burn gas.

The correction factor for grid losses has been reassessed and the relevant table has been updated.

### Legal basis

The Commission is empowered to adopt this Delegated Regulation by Article 14(10) and Article 22 of the Energy Efficiency Directive.

## **Proportionality principle**

In accordance with the principle of proportionality, this measure does not go beyond what is necessary to achieve its objective.

The form of the delegated measure is a Regulation, which is directly applicable in all Member States. This ensures that national and EU administrations will not incur any costs for transposing the legislation into national legislation.

### **Choice of instrument**

Proposed instrument: Delegated Regulation.

## **Budgetary implication**

The proposal has no implications for the EU budget.

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## THE EUROPEAN COMMISSION,

Having regard to the Treaty on the functioning of the European Union,

Having regard to Directive 2012/27/EU of the European Parliament and of the Council on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC<sup>5</sup>, and in particular the second subparagraph of Article 14(10) thereof,

### Whereas:

- (1) Pursuant to Article 4(1) of Directive 2004/8/EC the Commission set out in its Implementing Decision 2011/877/EU<sup>6</sup> harmonised efficiency reference values for the separate production of electricity and heat, as a matrix of values differentiated by relevant factors, including year of construction and types of fuel. These values are applicable until 31 December 2015.
- (2) The Commission has reviewed the harmonised efficiency reference values for the separate production of electricity and heat taking into account data from operational use under realistic conditions, provided by Member States and by stakeholders. As a result of developments in the best available and economically justifiable technology, observed during the review period 2011 to 2015 the distinction drawn in Commission Decision 2011/877/EU relating to the year of construction of a cogeneration unit should be maintained in relation to the harmonised efficiency reference values for separate production of electricity.
- (3) The review of the harmonised efficieny reference values confirmed that on the basis of recent experience and analysis, correction factors relating to the climatic situation, as set out in Decision 2011/877/EU, should apply only to plants using gaseous fuels.
- (4) That review confirmed, based on recent experience and analysis, that the application of correction factors for avoided grid losses set out in Decision 2011/877/EU should continue. In order to better reflect the avoided losses the voltage limits used and the value of the correction factors need to be updated.

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OJ L 315, 14.11.2012, p. 1.

<sup>&</sup>lt;sup>6</sup> OJ L 343, 23.12.2011, p. 91.

- (5) The review has produced evidence to indicate that the harmonised efficiency reference values for the separate production of heat should be modified in some cases. In order to avoid retroactive changes for existing schemes, the new set of reference values only applies from 2016, while the current set of values is kept for plants constructed before that date. No correction factors relating to the climatic situation were required because the thermodynamics of generating heat from fuel do not significantly depend on ambient temperature. In addition, correction factors for heat grid losses are not required as heat is always used near the site of production.
- (6) That review has produced evidence indicating that the reference values for the energy efficiency of boilers that produce steam or hot water should be differentiated.
- (7) Data from operational use under realistic conditions has demonstrated a statistically significant improvement of the actual performance of state-of-the-art plants using certain types of fuels in the period under review.
- (8) Stable conditions for investment in cogeneration and continued investor confidence are needed, therefore it is appropriate to fix harmonised reference values for electricity and heat.
- (9) The reference values for the separate production of heat and electricity established in Decision 2011/877/EU are applicable until 31 December 2015, new reference values need to be applied from 1 January 2016. In order to ensure the applicability of the new set of reference values by that date the current Regulation shall enter into force on the first day following its publication.
- (10) Articles 14, 22 and 23 of Directive 2012/27/EU empower the Commission to adopt delegated acts updating the harmonised reference values for the separate production of electricity and heat. The delegation of power is conferred on the Commission for a period of five years from 4 December 2012. In order to avoid a situation where there was no extension of the delegation of power beyond 4 December 2017, the reference values laid down in this Regulation will continue to be of application. If new delegated powers were given to the Commission in the intervening period, it is the intention of the Commission to review the reference values laid down in this Regulation four years after its entry into force at latest.
- (11) Directive 2012/27/EU aims at promoting cogeneration in order to save energy, therefore there should be an incentive for retrofitting older cogeneration units in order to improve their energy efficiency. For those reasons, and in consistency with the requirement for the harmonised efficiency reference values which should be based on the principles mentioned in Annex II (f) of Directive 2012/27/EU, the efficiency reference values for electricity applicable to a cogeneration unit should increase from the eleventh year after the year of its construction.

## HAS ADOPTED THIS REGULATION:

#### Article 1

## Establishment of the harmonised efficiency reference values

The harmonised efficiency reference values for separate production of electricity and heat shall be those set out in Annexes I and II respectively.

#### Article 2

# Correction factors for the harmonised efficiency reference values for separate production of electricity

- 1. Member States shall apply the correction factors set out in Annex III in order to adapt the harmonised efficiency reference values set out in Annex I to the average climatic situation in each Member State.
  - If on the territory of a Member State official meteorological data show differences in the annual ambient temperature of 5 °C or more, that Member State may, subject to notification to the Commission, use several climate zones for the purpose of the first subparagraph using the method set out in Annex III.
- 2. Member States shall apply the correction factors set out in Annex IV in order to adapt the harmonised efficiency reference values set out in Annex I to avoided grid losses.
- 3. If a Member State applies both the correction factors set out in Annex III and those set out in Annex IV, it shall apply Annex III before applying Annex IV.

#### Article 3

# Application of the harmonised efficiency reference values for the separate production of electricity

- 1. Member States shall apply the harmonised efficiency reference values set out in Annex I relating to the year of construction of a cogeneration unit. Those harmonised efficiency reference values are applicable for 10 years from a cogeneration unit's year of construction.
- 2. From the eleventh year following the year of construction of a cogeneration unit, Member States shall apply the harmonised efficiency reference values which by virtue of paragraph 1 apply to a cogeneration unit of 10 years of age. These harmonised efficiency reference values are applicable for one year.
- 3. For the purposes of this Article, a cogeneration unit's year of construction is the calendar year during which the unit first produces electricity.

#### Article 4

# Application of the harmonised efficiency reference values for the separate production of heat

- 1. Member States shall apply the harmonised reference values set out in Annex II relating to the year of construction of a cogeneration unit.
- 2. For the purposes of this Article, a cogeneration's unit year of construction is the year of construction for the purpose of Article 3.

### Article 5

## Retrofitting of a cogeneration unit

If the investment cost relating to the retrofitting of a cogeneration unit exceeds 50% of the investment cost for a new comparable cogeneration unit, the calendar year during which the retrofitted cogeneration unit first produces electricity shall be considered as' the year of construction of the retrofitted cogeneration unit for the purpose of Articles 3 and 4.

Article 6
Fuel mix

If the cogeneration unit is operated with more than one kind of fuel, the harmonised efficiency reference values for separate production shall be applied proportionally to the weighted mean of the energy input of the various fuels.

Article 7
Repeal

Decision 2011/877/EU is repealed.

#### Article 8

## Entry into force and application

This Regulation shall enter into force on the first day following that of its publication in the Official Journal of the European Union.

This Regulation shall apply from 1 January 2016.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 12.10.2015

For the Commission The President Jean-Claude JUNCKER