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<b>ENER</b>	<b>358</b>
<b>ENV</b>	<b>684</b>
<b>DELECT</b>	<b>128</b>

**COVER NOTE**

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from: Secretary-General of the European Commission,  
signed by Mr Jordi AYET PUIGARNAU, Director

date of receipt: 17 July 2014

to: Mr Uwe CORSEPIUS, Secretary-General of the Council of the European  
Union

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No Cion doc.: C(2014) 4653 final

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Subject: Commission Delegated Regulation (EU) No .../.. of 11.7.2014  
supplementing Directive 2010/30/EU of the European Parliament and of  
the Council with regard to energy labelling of residential ventilation units

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Delegations will find attached Commission document C(2014) 4653 final.

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Encl.: C(2014) 4653 final



Brussels, 11.7.2014  
C(2014) 4653 final

**COMMISSION DELEGATED REGULATION (EU) No .../..**

**of 11.7.2014**

**supplementing Directive 2010/30/EU of the European Parliament and of the Council  
with regard to energy labelling of residential ventilation units**

(Text with EEA relevance)

## EXPLANATORY MEMORANDUM

### CONTEXT OF THE DELEGATED ACT

#### Grounds for and objectives of the proposal

The aim of this Regulation is to introduce a harmonised scheme for the energy labelling of residential ventilation units according to their energy efficiency and providing standard product information for consumers. The labelling requirements also provide a dynamic incentive for manufacturers to improve energy efficiency of residential ventilation units placed on the market, and to accelerate the market take-up of energy-efficient products.

The Regulation complements a proposed Commission Regulation laying down ecodesign requirements for both, residential and non-residential ventilation units.

#### General context

The majority of building stock in the EU could benefit from optimised mechanical ventilation, with demand side control, heat recovery ventilation or both. The market failed to achieve a larger penetration of energy efficient ventilation units and an increased use of mechanical ventilation units instead of natural ventilation. Regulations regarding energy performance of buildings (EPBD<sup>1</sup>) are a major driver in this market at the system level, but they fail to fully remedy the market barriers and they miss out on considerable savings by insufficiently addressing the product level. Also in the field of test and calculation standards there is still quite a challenge to come to robust, harmonised standards that would guide the market and authorities towards optimal solutions. In this situation a combination of minimum ecodesign requirements, mandatory product information and, energy labelling for residential units, seems the most appropriate.

This policy will contribute to the EU 2020 goal to reach a 20% energy and carbon saving. A combined technical, economic and environmental analysis has shown that ventilation units offer an energy saving potential at no excessive costs. Ventilation units are energy-using but also energy-related products with an untapped potential to reduce their own electricity consumption, but also in terms of savings on space heating. If all the ventilation units would be replaced by the Best Available Technology, savings of more than 60-70% are possible. A tentative qualitative indication estimates that the combined effect of the proposed new ecodesign requirements and the new labelling scheme set out in this proposal could lead by 2025 to around 1300 PJ per year primary energy extra savings (2030: 1460 PJ).

The energy labelling proposal for residential ventilation units aims to introduce the widely known A+-G scale to cover the various types of residential ventilation units. Standardised product information will be made available to consumers in the form of 'fiches' (i.e. information notices), on the internet and in advertisements.

#### Consistency with the other EU policies and objectives

The ventilation proposal complements recent ecodesign and energy labelling measures for different types of boilers<sup>2</sup> and air-conditioning<sup>3</sup>. Ventilation is thus the last and third element

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<sup>1</sup> OJ L 153, 18.6.2010, p. 13.

<sup>2</sup> Ecodesign and Energy Labelling Regulations for space and water heaters (EU) No 811, 812, 813, 814/2013, OJ L 239, 6.9.2013; Ecodesign and Energy Labelling Regulations for solid fuel boilers, and local space heaters being adopted.

<sup>3</sup> Ecodesign Regulation (EU) No 206/2012, OJ L 72, 10.3.2012, p. 7-27, and Energy Labelling Regulation (EU) No 626/2011, OJ L 178, 6.7.2011, p. 1-72.

completing ‘HVAC’ (Heating, Ventilation and Air Conditioning) technical products for buildings. It is product related and therefore complementary to the EPBD approach setting the frame for Member States to address this market at system level, and as recommended in EPBD recital 12.

At component level, the proposal complements the Ecodesign Motor Regulation (EC) 640/2009<sup>4</sup>, limited to those applications use specific AC motors >750 W, and the Ecodesign Fan Regulation (EU) 327/2011<sup>5</sup> on Fans >125 W, tuned to a general application and not considering the high operating hours and the specific requirements of ventilation units.

## CONSULTATIONS OF INTERESTED PARTIES AND IMPACT ASSESSMENT

EU and international stakeholders and Member State experts were consulted from the very beginning of the process. For residential ventilation units (RVUs), a preparatory study (ENER Lot 10) was carried out between November 2007 and February 2009, and for non-residential ventilation units (NRVUs) another study (ENTR Lot 6) during the period January 2010 to June 2012. The preparatory studies were developed in an open process, taking into account input from relevant stakeholders including manufacturers and their associations, environmental NGOs, consumer organisations, and EU Member State experts. During each of the preparatory studies 3 stakeholder meetings and several bilateral encounters with stakeholders took place. The European Commission consulted SMEs, companies working in the ventilation sector, and other interested parties about possible future EU requirements for ventilation products. A specific information and consultation document was prepared in 6 languages (EN FR DE IT ES PL). It was widely distributed via the Enterprise Europe Network, trade associations, public webpages, and CIRCA. The consultation was launched in October 2012 and open for more than 12 weeks. Replies were received from a couple of SMEs from different Member States until end of February 2013, and their comments taken into account.

A formal consultation of stakeholders was carried out for residential and non-residential ventilation units through the Ecodesign Consultation Forum, consisting of a balanced participation of Member States’ representatives and all interested parties concerned with the product group in question. The meeting of the Ecodesign Consultation Forum took place on 6 November 2012. Building on the results of the preparatory studies, the Commission services presented a Working Document suggesting ecodesign requirements based on scenarios developed under the preparatory studies.

The draft regulation was notified to the World Trade Organisation on 10 October 2013 in accordance with the Agreement on Technical Trade Barriers.

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

The **Member States** supported in general the design of the energy label measures for RVUs. They also supported in general the setting up of ecodesign minimum requirements measures both for RVUs and NRVUs. As regards RVUs, various Member States advocated that the ecodesign requirements should use the same approach and holistic calculation method as for the label. Sweden asked the Commission to consider whether the ‘A’ class limit could not be raised, as their research showed that already several models could meet that requirement. Italy stressed that smaller unidirectional ventilation units, which are used in a large variety of applications and typically operated intermittently, should not be included in the scope.

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<sup>4</sup> OJ L 191, 23.7.2009, p. 26.

<sup>5</sup> OJ L 90, 6.4.2011, p. 8.

**Environmental NGO's and consumer associations** supported the requirements in the Commission proposal, but they also favour the use of SFP to regulate the electrical efficiency of NRVUs.

**Industry** associations largely supported the ecodesign and energy labelling measures proposed by the Commission, especially for balanced units. Regarding unidirectional units, there was initially strong opposition to the ambition level proposed by the Commission.

In the period following the Consultation Forum, the Commission Services studied the comments and tried to accommodate the various concerns in their proposals or, through bilateral meetings and additional analysis, have tried to reach compromise solutions. The proposed ecodesign and labelling measures considers the results of the consultations. Smaller unidirectional ventilation units < 30 W have been excluded following the comments from Italy, and an A+ label has been added following the comments from Sweden. The concern by some companies about one labelling approach comprising both unidirectional and bidirectional units has been remedied by including a specific symbol on the label allowing differentiating them.

### **Collection and use of expertise**

#### *Input from scientific expertise*

External expertise was mainly gathered through the preparatory studies providing technical, environmental and economic analysis, which was carried out by external consultants on behalf of the Commission's Directorates General for Energy and Enterprise and Industry.

#### *Main organisations/experts consulted*

The preparatory studies were conducted in an open process, taking into account input from relevant stakeholders, including manufacturers, installers, retailers and their associations, environmental NGOs, consumer organisations and experts.

#### *Summary of advice received and used*

No potentially serious risks with irreversible consequences were mentioned.

### **Impact assessment**

An impact assessment of the possible policy measures was carried out pursuant to Article 15(4)(b) of Directive 2009/125/EC. Several policy options for bringing about market transformation to achieve the appropriate level of ambition were considered, including the 'business-as-usual' case, self-regulation, energy labelling only, ecodesign regulation only, and a combination of the latter.

Given the clear legislative mandate to establish ecodesign requirements and energy labelling for ventilation units, the focus was on the assessment of the proposed implementing regulations and their level of ambition, rather than on other options.

The impacts of policy options for introducing energy labels were assessed against the 'business as usual' scenario. Based on an assessment of costs and benefits, the preferred policy option for realising the improvement potential of ventilation units is a Commission Regulation setting Ecodesign requirements for all products in question, combined with an Energy Labelling delegated Regulation on residential units, to guide customers towards the most efficient appliances. The Ecodesign requirements would be set in 2 tiers applicable 2 and 4 years after entry into force of the measures respectively. The labelling requirements on RVUs would enter into application at the same time.

This option will ensure that:

- The least energy efficient ventilation units will be removed from the market, increasing competition on energy efficiency instead of price and additional features;
- on-going energy improvements are fostered by setting a transparent legislative framework that will provide the industry with the long-term security needed to invest in innovative technology;
- information on product differentiation provides residential consumers with an effective and reliable tool to compare energy consumption of products in an economic setting demand for energy efficient appliances;
- cost-effective potentials to reduce the electricity consumption of ventilation units are quickly realised leading to significant increase in average efficiency;
- by 2030 the net primary energy saving from ventilation units will increase by 1460 PJ due only to the measures proposed here and CO<sub>2</sub> emissions will be reduced by 81 Mt CO<sub>2</sub> in 2030;
- the accumulative energy and CO<sub>2</sub> savings amount to almost 16 EJ and 0.76 Gt CO<sub>2</sub> equivalent respectively over the 2011-2030 period;
- this can be achieved at no extra consumer expense over product life and also no negative impact on other aspects (health, safety, competitiveness, etc.) is anticipated;
- there is a clear legal framework for product design which leaves flexibility for manufacturers to achieve the efficiency levels; and gives them a level playing field, ensuring fair competition and free circulation of products;
- requirements for ventilation units are harmonised in the Community leading to a minimisation of administrative burdens and costs for the economic operators;
- market failures are corrected and the internal market is functioning properly;
- the specific mandate of the Legislator is respected;
- costs for re-design and re-assessment upon introduction of the regulation are limited in absolute terms and not significant in relative terms (per product);
- disproportionate burdens for manufacturers are avoided due to transitional periods which duly take into account redesign cycles;
- there are no significant impacts on the competitiveness of industry, and in particular SMEs;
- there is a positive impact on employment, in particular for SMEs.

## **LEGAL ELEMENTS OF THE DELEGATED ACT**

### **Summary of the proposed action**

The proposed measure sets out new mandatory labelling and product information requirements for suppliers placing residential ventilation units on the market. The scope of the measure is aligned with the scope of a proposed ecodesign implementing measure setting ecodesign requirements for these units.

The Ecodesign Regulation includes in addition requirements for non-residential units. Due to their specific boundary conditions, and due to different sets of standards, it was not possible to propose a single set of harmonised requirements for both RVUs and NRVUs.

For residential units a combination of labelling and minimum efficiency requirements is proposed. Its rationale is to combine the advantages of the two options, i.e. the ‘market pull’ of labelling and the ‘market push’ of ecodesign. Both regulations relate to a holistic, single Specific Energy Consumption (SEC) for ventilation per m<sup>2</sup> heated floor area of a dwelling or building in [kWh/m<sup>2</sup>.a] that is calculated with a formula comprising the parameters. The SEC approach gives manufacturers the freedom to optimise either the ventilation efficiency, or the controls, or the heat recovery, or all.

The labelling with A+ to G labelling classes shall enter into force by 2016; simultaneously with the first ecodesign tier cutting out the worst performing class G; and by 2018 the second ecodesign tier will cut out the two worst performing classes E and F.

The ecodesign and the efficiency requirements are supported by further technical specifications. Finally, the regulation includes noise requirements for residential units.

For non-residential units, the market is very heterogeneous. As with all professional products, the level of knowledge with the buyers is much higher than in the residential sector. The conclusion is that ‘energy labelling’ is not appropriate for non-residential units. Therefore only ecodesign requirements have been set ambitiously.

Furthermore, standardised product information will be introduced for ventilation units, such as a product fiche and technical documentation, and requirements will be set for information to be provided in any form of distance selling and in any advertisements and technical promotional material for them. The proposed labels and standardised product information will help overcome the lack of information for people buying ventilation units and the split incentives for building owners, architects and planners. The measurement methods and the verification procedure for market surveillance in this Regulation are aligned with those in the proposed ecodesign implementing measure.

### **Legal basis**

The Delegated Regulation implements Directive 2010/30/EU, in particular its Article 10.

### **Subsidiarity principle**

The Regulation implements Directive 2010/30/EU in line with its Article 10.

### **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 implementing 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 implementing legislation into national legislation.

### **Choice of instrument**

Proposed instrument: Delegated Regulation.

### **Budgetary implication**

The proposal has no direct implications for the EU budget.

### **ADDITIONAL INFORMATION**

#### **Review/revision/sunset clause**

The draft includes a review clause.

#### **European Economic Area**

The proposed act concerns an EEA matter and should therefore extend to the European Economic Area.



**COMMISSION DELEGATED REGULATION (EU) No .../..**

**of 11.7.2014**

**supplementing Directive 2010/30/EU of the European Parliament and of the Council  
with regard to energy labelling of residential ventilation units**

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

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

Having regard to Directive 2010/30/EU of the European Parliament and of the Council of 19 May 2010 on the indication by labelling and standard product information of the consumption of energy and other resources by energy related products<sup>6</sup>, and in particular Article 10 thereof,

Whereas:

- (1) Directive 2010/30/EU requires the Commission to adopt delegated acts for the labelling of energy-related products. The delegated acts are to be adopted where products represent a significant potential for energy savings and present a wide disparity in performance levels although having an equivalent functionality and no other Union legislation or self-regulation is expected to achieve the policy objectives more quickly or at lesser expense than mandatory requirements.
- (2) The Commission has assessed the technical, environmental and economic aspects of residential ventilation units. The assessment showed that the energy used by residential ventilation units accounts for a significant part of total household energy demand in the Union. Improvements have already been achieved in the energy efficiency of those products, but there is substantial scope for further reducing the energy consumption of such units. The assessment also confirmed a wide disparity in performance levels, and found no self-regulation or voluntary agreements which could achieve the policy objectives.
- (3) Small ventilation units with an electric power input of less than 30 W per air stream should be exempted from the scope of this Regulation. Those units are designed for many different applications, predominantly working intermittently and with supplementary functions only, for example in bathrooms. Including those ventilation units would represent a considerable administrative burden in terms of market surveillance due to large sales numbers, while contributing only to a small share of the energy saving potential. However, considering that they offer similar functionalities to other ventilation units, their possible inclusion should be similarly addressed in the review of this Regulation. Non-residential ventilation units NRVUs should be excluded from labelling as these products are chosen by planners and architects and largely independent from consumer and market behaviour. Ventilation units specifically designed to operate exclusively for emergency purposes or in exceptional or hazardous environments should also be exempted, as they are used rarely and for a

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<sup>6</sup> OJ L 153, 18.6.2010, p. 13.

short time. The exemptions also clarify that multifunctional units which predominantly heat or cool and kitchen range hoods are excluded. Harmonised provisions on labelling and standard product information regarding the specific energy consumption of residential ventilation units should be laid down in order to provide incentives for manufacturers to improve the energy efficiency of these units, encourage end-users to purchase energy-efficient products and contribute to the functioning of the internal market.

- (4) As the sound power level of a residential ventilation unit can be an important consideration for consumers, information on this should be included on the label.
- (5) The combined effect of this Regulation and Commission Regulation (EU) No ... of ...<sup>7</sup> is expected to raise the aggregated saving by 1 300 PJ (45 %) to 4 130 PJ in 2025.
- (6) The information provided on the label should be obtained through reliable, accurate and reproducible methods which take into account recognised ‘state of the art’ measurement and calculation methods, including, where available, harmonised standards adopted by the European standardisation bodies in accordance with the procedures laid down in Regulation (EU) No 1025/2012 of the European Parliament and of the Council<sup>8</sup>,
- (7) This Regulation should specify requirements as to the uniform design and content for the label, the technical documentation and the fiche. Requirements should also be laid down as regards the information to be provided in the case of any form of distance selling, advertisements and technical promotional materials for ventilation units, as the importance of information displayed to end-users via the internet is increasing.

HAS ADOPTED THIS REGULATION:

#### *Article 1*

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

1. This Regulation establishes energy labelling requirements for residential ventilation units.
2. This Regulation shall not apply to residential ventilation units which:
  - (a) are unidirectional (exhaust or supply) with an electric power input of less than 30 W;
  - (b) are exclusively specified as operating in a potentially explosive atmosphere as defined in Directive 94/9/EC of the European Parliament and of the Council<sup>9</sup>;
  - (c) are exclusively specified as operating for emergency use, for short periods of time, and which comply with the basic requirements for construction works

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<sup>7</sup> Commission Regulation (EU) No ... of ... laying down ecodesign requirements for ventilation units (OJ [...] [...], [...], [...]).

<sup>8</sup> Regulation (EU) 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardisation (OJ L 316, 14.11.2012, p. 12).

<sup>9</sup> Directive 94/9/EC of the European Parliament and the Council of 23 March 1994 on the approximation of the laws of the Member States concerning equipment and protective systems intended for use in potentially explosive atmospheres (OJ L 100, 19.4.1994, p. 1).

with regard to safety in case of fire as set out in Regulation (EU) No 305/2011 of the European Parliament and of the Council<sup>10</sup>;

- (d) are exclusively specified as operating:
  - (i) where operating temperatures of the air being moved exceed 100 °C;
  - (ii) where the operating ambient temperature for the motor, if located outside the air stream, driving the fan exceeds 65 °C;
  - (iii) where the temperature of the air being moved or the operating ambient temperature for the motor, if located outside the air stream, are lower than -40 °C;
  - (iv) where the supply voltage exceeds 1 000 V AC or 1 500 V DC;
  - (v) in toxic, highly corrosive or flammable environments or in environments with abrasive substances;
- (e) include a heat exchanger and a heat pump for heat recovery, or allowing heat transfer or extraction being additional to that of the heat recovery system, except heat transfer for frost protection or defrosting;
- (f) are classified as range hoods covered by Commission Delegated Regulation (EU) No 65/2014 of 1 October 2013 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to the energy labelling of domestic ovens and range hoods<sup>11</sup>

## *Article 2* **Definitions**

For the purposes of this Regulation the following definitions shall apply:

- (1) ‘ventilation unit (VU)’ means an electricity driven appliance equipped with at least one impeller, one motor and a casing and intended to replace utilised air by outdoor air in a building or a part of a building;
- (2) ‘residential ventilation unit’ (RVU) means a ventilation unit where:
  - (a) the maximum flow rate does not exceed 250 m<sup>3</sup>/h;
  - (b) the maximum flow rate is between 250 and 1 000 m<sup>3</sup>/h, and the manufacturer declares its intended use as being exclusively for a residential ventilation application;
- (3) ‘maximum flow rate’ is the declared maximum air volume flow rate of a ventilation unit that can be achieved with integrated or separately co-supplied controls at standard air conditions (20 °C) and 101 325 Pa, where the unit is installed complete (e.g. including clean filters) and according to the manufacturer’s instructions, for ducted RVUs the maximum flow is related to the air flow at 100 Pa of external static pressure difference, and for non-ducted RVUs to the air flow at the lowest achievable total pressure difference to be chosen from a set of values of 10 (minimum)-20-50-

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<sup>10</sup> Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC (OJ L 88, 4.4.2011, p. 5).

<sup>11</sup> OJ L29 of 31.1.2014, p.1

100-150-200-250 Pa, whichever is equal or just below the measured pressure difference value);

- (4) ‘unidirectional ventilation unit (UVU)’ means a ventilation unit producing an air flow in one direction only, either from indoors to outdoors (exhaust) or from outdoors to indoors (supply), where the mechanically produced air flow is balanced by natural air supply or exhaust;
- (5) ‘bidirectional ventilation unit (BVU)’ means a ventilation unit producing an air flow between indoors and outdoors and which is equipped with both exhaust and supply fans;
- (6) ‘equivalent ventilation unit model’ means a ventilation unit with the same technical characteristics according to the applicable product information requirements, but placed on the market as a different ventilation unit model by the same manufacturer, authorized representative or importer.

For the purposes of Annexes II to IX, additional definitions are set out in Annex I.

### *Article 3*

#### **Responsibilities of suppliers**

1. Suppliers placing residential ventilation units on the market shall ensure that from 1 January 2016 the following requirements are fulfilled:
  - (a) each residential ventilation unit is accompanied by a printed label in the format and containing the information set out in Annex III, the label must be provided at least in the packaging of the unit. For each model of residential ventilation units an electronic label in the format and containing the information set out in Annex III shall be made available to dealers;
  - (b) a product fiche, as set out in Annex IV, is made available. The fiche must be provided at least in the packaging of the unit. For each model of residential ventilation units an electronic product fiche, as set out in Annex IV, shall be made available to dealers, and on free access websites;
  - (c) technical documentation, as set out in Annex V, is made available on request to the Member State authorities and the Commission;
  - (d) instructions for use are made available;
  - (e) any advertisement for a specific model of residential ventilation units that discloses energy-related or price information contains the specific energy consumption class of that model;
  - (f) any technical promotional material concerning a specific model of residential ventilation unit which describes its specific technical parameters states the specific energy consumption class of that model.
2. From 1 January 2016 residential ventilation units placed on the market shall be provided with a label in the format set out in Annex III, point 1, if they are unidirectional residential ventilation units, and with a label in the format set out in Annex III, point 2, if they are bidirectional ventilation units.

*Article 4*  
**Responsibilities of dealers**

Dealers shall ensure that:

- (a) each residential ventilation unit, at the point of sale, bears the label provided by suppliers in accordance with Article 3(1)(a) on the outside of the front or top of the appliance in such a way as to be clearly visible;
- (b) residential ventilation units offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the product displayed, are marketed with the information provided by suppliers in accordance with Annex VI, except where the offer is made on the internet, in which case the provisions of Annex VII shall apply;
- (c) any advertisement for a specific model of residential ventilation unit that discloses energy-related or price information contains a reference to the specific energy consumption class of the unit;
- (d) any technical promotional material concerning a specific model which describes the technical parameters of a residential ventilation unit includes the specific energy consumption class of the model and the instructions for use provided by the supplier.

*Article 5*  
**Measurement methods**

For the purposes of information to be provided under Articles 3 and 4, the specific energy consumption class shall be determined in accordance with the table set out in Annex II. The specific energy consumption, the annual electricity consumption, the annual heating saved, the maximum flow rate and the sound power level shall be determined in accordance with measurement and calculation methods as set out in Annex VIII, and take into account recognised state-of-the-art measurement and calculation methods.

*Article 6*  
**Verification procedure for market surveillance purposes**

When assessing the conformity of the ventilation unit, Member States shall apply the procedure laid down in Annex IX.

*Article 7*  
**Review**

The Commission shall review this Regulation in the light of technological progress and present the results of this review to the Consultation Forum no later than later than 1 January 2020.

The review shall assess in particular the possible inclusion of other ventilation units, notably of non-residential units, units with a total electric power input smaller than 30 W, and the specific energy consumption calculation and classes for demand controlled unidirectional and bidirectional ventilation units.

*Article 8*  
**Entry into force**

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

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

Done at Brussels, 11.7.2014

*For the Commission  
The President  
José Manuel BARROSO*