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**COMMISSION REGULATION (EU) .../...**

**of **XXX****

**laying down ecodesign requirements for off mode, standby mode, and networked standby energy consumption of electrical and electronic household and office equipment pursuant to Directive 2009/125/EC of the European Parliament and of the Council**

(Text with EEA relevance)

*This draft has not been adopted or endorsed by the European Commission. Any views expressed are the preliminary views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission.*

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

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## **laying down ecodesign requirements for off mode, standby mode, and networked standby energy consumption of electrical and electronic household and office equipment pursuant to Directive 2009/125/EC of the European Parliament and of the Council**

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

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

Having regard to Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products<sup>1</sup>, and in particular Article 15(1) thereof,

Whereas:

- (1) Under Directive 2009/125/EC the Commission is to set ecodesign requirements for energy-related products which account for significant volumes of sales and trade in the EU, have a significant environmental impact and present significant potential for improvement through design in terms of their environmental impact, without entailing excessive costs.
- (2) Communication COM(2016) 773<sup>2</sup> (“ecodesign working plan”) sets out the working priorities under the ecodesign and energy labelling framework for 2016-2019. The ecodesign working plan sets out the energy-related product groups to be considered as priorities for undertaking preparatory studies and possibly adopting implementing measures, and provides for a review of Commission Regulation (EC) No 1275/2009<sup>3</sup>.
- (3) Measures from the ecodesign working plan have an estimated potential to deliver a total of over 260 TWh of annual final energy savings by 2030, equivalent to reducing greenhouse gas emissions by approximately 100 million tonnes of CO<sub>2</sub> equivalent per year in 2030. The energy consumption of electrical and electronic household and office equipment in off mode, standby mode and networked standby is one of the measures listed in the Communication, with an estimated 4 TWh of annual final energy savings by 2030, corresponding to reducing greenhouse gas emissions by 1.36 million tonnes of CO<sub>2</sub> equivalent.
- (4) The Commission established ecodesign requirements for off mode and standby mode energy consumption of electrical and electronic household and office equipment in Regulation (EC) No 1275/2008 and added requirements for networked standby energy

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<sup>1</sup> OJ L 285, 31.10.2009, p. 10.

<sup>2</sup> Communication from the Commission of 30 November 2016, Ecodesign working plan 2016-2019, COM(2016) 773 final,.

<sup>3</sup> Commission Regulation (EC) No 1275/2008 of 17 December 2008 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for standby and off mode, and networked standby, electric power consumption of electrical and electronic household and office equipment (OJ L 339, 18.12.2008, p. 45).

consumption in Commission Regulation (EU) No 801/2013<sup>4</sup>. Under those Regulations the Commission is to review the ecodesign requirements in the light of technological progress.

- (5) The Commission has reviewed Regulation (EC) No 1275/2008 and analysed the technical, environmental and economic aspects of energy consumption of electrical and electronic household and office equipment in off mode, standby mode, and networked standby, as well as real-life user behaviour. The review was carried out in close cooperation with stakeholders and interested parties from the Union and third countries. The results of the review were made public and presented to the Consultation Forum established by Article 18 of Directive 2009/125/EC.
- (6) The review shows the benefit of continued and improved requirements, adapted to technological progress, regarding the energy consumption of electrical and electronic household and office equipment in off mode, standby mode, and networked standby.
- (7) The annual energy consumption in off mode, standby mode and networked standby of products subject to this Regulation in the EU was estimated in the review at 59.4 TWh in 2015, corresponding to 23.8 million tonnes of CO<sub>2</sub> equivalent greenhouse gas emissions. In a business-as-usual scenario, that energy consumption is projected to decrease by 2030, mostly because of the gradual application of ecodesign requirements introduced by Regulation (EU) No 801/2013. However, that decrease is expected to slow down unless the applicable ecodesign requirements are updated.
- (8) The application of this Regulation should be limited to products corresponding to household and office equipment intended for use in the domestic environment, which, for information technology equipment, corresponds to class B equipment as set out in the EN 55022:2010 standard.
- (9) Operating modes not covered by this Regulation, such as the ACPI S3 mode of computers, should be considered in product-specific implementing measures under Directive 2009/125/EC.
- (10) Requirements on off mode, standby mode, and networked standby should be set out in product-specific implementing measures under Directive 2009/125/EC where possible, taking into account the specificities of each product group and the possibility to deliver additional energy and greenhouse gas emission savings.
- (11) Products equipped with low voltage external power supplies, which were exempted from the scope of Regulation (EC) No 1275/2008 by Commission Regulation (EC) No 278/2009<sup>5</sup>, are rapidly evolving in terms of their functionalities and are being placed on the EU market in increasing numbers. They should therefore be included in scope of this Regulation to ensure further energy savings and provide a level playing field for manufacturers.
- (12) Adjustable furniture operated by electric means and motor-operated building elements spend extensive amounts of time in off mode, standby mode, and networked standby

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<sup>4</sup> Commission Regulation (EU) No 801/2013 of 22 August 2013 amending Regulation (EC) No 1275/2008 with regard to ecodesign requirements for standby, off mode electric power consumption of electrical and electronic household and office equipment, and amending Regulation (EC) No 642/2009 with regard to ecodesign requirements for televisions (OJ L 225, 23.8.2013, p. 1).

<sup>5</sup> Commission Regulation (EC) No 278/2009 of 6 April 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for no-load condition electric power consumption and average active efficiency of external power supplies (OJ L 93, 7.4.2009, p. 3).

and so offer significant potential for improved energy consumption while in those modes. Therefore, they should also be included in scope of this Regulation.

- (13) Ecodesign requirements should align across the EU, levels of the energy consumption by electrical and electronic household and office equipment in off mode, standby mode, and networked standby. This will contribute to the functioning of the single market. It should also improve the environmental performance of electrical and electronic household and office equipment.
- (14) The relevant product parameters should be measured using reliable, accurate and reproducible methods. Those methods should take into account recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation organisations, listed in Annex I to Regulation (EU) No 1025/2012<sup>6</sup>.
- (15) In accordance with Article 8 of Directive 2009/125/EC, this Regulation should specify the applicable conformity assessment procedures.
- (16) In order to improve the effectiveness and credibility of this Regulation and protect consumers, products that automatically alter their performance in test conditions with the objective of reaching a more favourable level for any of the parameters specified in this Regulation should not be allowed to be placed on the market.
- (17) In addition to the requirements laid down in this Regulation, benchmarks for best available technologies should be identified to make information on products' environmental performance over their life cycle subject to this Regulation widely available and easily accessible, in accordance with point 2 of Part 3 of Annex I to Directive 2009/125/EC.
- (18) A review of this Regulation should assess the appropriateness and effectiveness of its provisions in achieving its goals.
- (19) In view of the scope of new and modified ecodesign requirements set out in this Regulation and in order to ensure better clarity, Regulation (EC) No 1275/2008 should be repealed.
- (20) The measures provided for in this Regulation are in accordance with the opinion of the Committee established by Article 19(1) of Directive 2009/125/EC,

HAS ADOPTED THIS REGULATION:

#### *Article 1*

#### **Subject matter**

This Regulation establishes ecodesign requirements related to off mode, standby mode, and networked standby energy consumption for the placing on the market and putting into service of electrical and electronic household and office equipment.

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<sup>6</sup> Regulation (EU) No 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardisation, amending Council Directives 89/686/EEC and 93/15/EEC and Directives 94/9/EC, 94/25/EC, 95/16/EC, 97/23/EC, 98/34/EC, 2004/22/EC, 2007/23/EC, 2009/23/EC and 2009/105/EC of the European Parliament and of the Council and repealing Council Decision 87/95/EEC and Decision No 1673/2006/EC of the European Parliament and of the Council (OJ L 316, 14.11.2012, p. 12).

## *Article 2* **Definitions**

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

- (1) ‘electrical and electronic household and office equipment’ or ‘equipment’ means any energy-related product marketed for household, office, non-household or non-office use which fulfils the following conditions:
  - (a) it is made commercially available as a single functional unit and is intended for the end-user;
  - (b) it is listed in Annex I;
  - (c) it is dependent on energy input from the mains power source in order to work as intended;
  - (d) it is designed for use with a nominal voltage rating of 250 V or below;
- (2) ‘mains’ means the electricity supply from the grid of 230 ( $\pm 10$  %) volts of alternating current at 50 Hz;
- (3) ‘standby mode’ means a condition where the equipment is connected to the mains power source, depends on energy input from the mains power source to work as intended and provides only the following functions, jointly or separately, which may persist for an indefinite time:
  - (a) reactivation function;
  - (b) reactivation function and only an indication of enabled reactivation function;
  - (c) information or status display;
- (4) ‘reactivation function’ means a function that via a remote switch, a remote control, an internal sensor or timer provides a switch from standby mode to another mode, including active mode, providing additional functions;
- (5) ‘main function’ means a function delivering the main service(s) for which the equipment is designed and marketed for, and which corresponds to the intended use of the equipment;
- (6) ‘information or status display’ means a continuous function providing information or indicating the status of the equipment on a display, including clocks;
- (7) ‘active mode’ means a condition in which the equipment is connected to the mains power source and at least one of the main functions has been activated;
- (8) ‘off mode’ means a condition in which the equipment is connected to the mains power source and is not providing any function, or it is in a condition providing only:
  - (a) an indication of off-mode condition;
  - (b) functionalities intended to ensure electromagnetic compatibility under Directive 2014/30/EU<sup>7</sup>;
- (9) ‘information technology equipment’ means any electrical and electronic household and office equipment which has a main function of either entry, storage, display, retrieval, transmission, processing, switching, or control of data or

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<sup>7</sup> Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility (OJ L 96, 29.3.2014, p. 79).

- telecommunication messages, or a combination of those functions, and which can be equipped with one or more terminal ports typically operated for information transfer;
- (10) 'domestic environment' means an environment where the use of broadcast radio and television receivers may be expected within a distance of 10 m of the equipment concerned;
  - (11) 'low voltage external power supply' means an external power supply with a nameplate output voltage of less than 6 volts and a nameplate output current greater than or equal to 550 milliamperes;
  - (12) 'network' means a communication infrastructure with a topology of links, an architecture, including the physical components, organisational principles, communication procedures and formats (protocols);
  - (13) 'networked standby' means a condition in which the equipment is able to resume a function by way of a remotely initiated trigger from a network connection;
  - (14) 'remotely initiated trigger' means a signal that comes from outside the equipment via a network;
  - (15) 'network port' means a wired or wireless physical interface of the network connection located on the equipment through which the equipment can be remotely activated;
  - (16) 'logical network port' means the network technology running over a physical network port;
  - (17) 'physical network port' means the physical (hardware) medium of a network port. A physical network port can host two or more network technologies;
  - (18) 'network availability' means a capability of the equipment to resume functions after a remotely initiated trigger has been detected by a network port;
  - (19) 'networked equipment' means equipment that can connect to a network and has one or more network ports;
  - (20) 'networked equipment with high network availability' or 'HiNA equipment' means equipment with one or more of the following functionalities, but no other, as the main function(s): those of a router, network switch, wireless network access point, hub, modem, VoIP telephone, video phone;
  - (21) 'networked equipment with high network availability functionality' or 'equipment with HiNA functionality' means equipment that has the functionality of a router, network switch, wireless network access point or combination thereof included, but not being HiNA equipment;
  - (22) 'router' means a network device whose main function is to determine the optimal path along which network traffic should be forwarded. Routers forward packets of data from one network to another, based on network layer information (L3);
  - (23) 'network switch' means a network device whose main function is to filter, forward and distribute frames based on the destination address of each frame. All switches operate at least at the data link layer (L2);
  - (24) 'wireless network access point' means a network device whose main function is to provide IEEE 802.11 (Wi-Fi) connectivity to multiple clients;
  - (25) 'hub' means a network device that contains multiple ports and is used to connect segments of a Local Area Network;

- (26) ‘modem’ means a network device whose main function is to transmit and receive digitally modulated analogue signals over a wired network;
- (27) ‘printing equipment’ means equipment that generates paper output from electronic input. Printing equipment can have additional functions and can be marketed as a multifunctional device or a multifunctional product;
- (28) ‘large format printing equipment’ means printing equipment designed for printing on A2 media and larger, including equipment designed to accommodate continuous-form media of at least 406 mm width;
- (29) ‘household coffee machine’ means a non-commercial equipment for brewing coffee;
- (30) ‘drip filter household coffee machine’ means a household coffee machine which uses percolation to extract the coffee;
- (31) ‘games console’ means equipment which is designed to provide video game playing as its principal function. A games console is typically designed to provide output to an external electronic display as the main game-play display and typically utilises handheld controllers or other interactive controllers as the primary input device. Games consoles typically include central processing unit(s), graphics processing unit(s), system memory, and internal data storage options. Handheld gaming devices, with an integrated display as the main game-play display, and which primarily operate on an integrated battery or other portable power source rather than via a direct connection to the mains, are considered to be a type of games console;
- (32) ‘adjustable furniture’ means furniture that includes motors, actuators, lifting columns or other electric means to adjust height, position or form. Those adjustments are controlled by the end-user through cabled and/or wireless controls or via a network;
- (33) ‘motor-operated building element’ means opening or comfort equipment in buildings, excluding ventilation equipment, that can move or rotate, or both, by using input from the mains power source. The motor-operated building element incorporates an electric motor or an actuator and a control unit, and is operated by the end-user through cabled and/or wireless control(s), via a network, or controlled automatically with the use of sensors;
- (34) ‘model identifier’ means a code, usually alphanumeric, which distinguishes a specific equipment model from other models with the same trade mark or the same supplier's name;
- (35) ‘equivalent model’ means an equipment model which has the same technical characteristics relevant for the technical information to be provided in accordance with Annex II, but which is placed on the market or put into service by the same supplier as another equipment model with a different model identifier;
- (36) ‘declared values’ means the values provided by the supplier for the stated, calculated or measured technical parameters in accordance with Article 4, for the verification of compliance by the Member State authorities.

### *Article 3*

#### **Ecodesign requirements**

The ecodesign requirements are set out in Annex II.

#### *Article 4*

#### **Conformity assessment**

1. The conformity assessment procedure referred to in Article 8 of Directive 2009/125/EC shall be the internal design control system set out in Annex IV to that Directive or the management system set out in Annex V to that Directive.
2. For the purposes of conformity assessment under Article 8 of Directive 2009/125/EC, the technical documentation shall contain the information set out in point 3(b) of Annex II to this Regulation and the details and results of the calculations made in accordance with Annex III to this Regulation.
3. The technical documentation for a model shall include the details and results of the calculations or extrapolations, the assessment made by the manufacturer to verify the accuracy of the calculations and, where appropriate, the declaration of identity between the models of different manufacturers. Where the information included in the technical documentation for that particular model has been obtained, alternatively:
  - (a) from a model that has the same technical characteristics relevant for the technical information to be provided in accordance with Annex II but is produced by a different manufacturer;
  - (b) by calculation on the basis of design or extrapolation from another model of the same or a different manufacturer, or both on the basis of design and extrapolation from another model of the same or a different manufacturer.

The technical documentation shall include a list of equivalent models referred to in the first and second subparagraph, including the model identifiers.

#### *Article 5*

#### **Verification procedure for market surveillance purposes**

Member States' authorities shall apply the verification procedure laid down in Annex IV to this Regulation where they perform the market surveillance checks referred to in Article 3(2) of Directive 2009/125/EC.

#### *Article 6*

#### **Circumvention**

The manufacturer, importer or authorised representative shall not place on the market equipment designed to be able to detect they are being tested, including by recognising the test conditions or test cycle, and to react specifically by automatically altering their performance during the test to reach a more favourable level for any of the parameters in the technical documentation or included in any of the documentation provided.

The energy consumption of the equipment and any of the other declared parameters shall not deteriorate after a software or firmware update where measured with the same test standard originally used for the declaration of conformity, unless the user explicitly consents to this before the update. No performance change shall occur as result of rejecting the update.

A software update shall not have the effect of changing the equipment's performance in a way that makes it non-compliant with the ecodesign requirements applicable for the declaration of conformity.



*Article 7*  
**Indicative benchmarks**

The indicative benchmarks for the best-performing equipment and technologies available on the market at the time of adopting this Regulation are set out in Annex V.

*Article 8*  
**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 *[OP please insert the date – 5 years after the entry into force of this Regulation]*.

The review shall in particular assess the appropriateness of:

- (a) the requirements for standby and off mode;
- (b) the requirements for networked standby for HiNA equipment and equipment with HiNA functionality;
- (c) including in the scope of this Regulation other fast-growing product groups.

*Article 9*  
**Repeal**

Regulation (EC) No 1275/2008 is repealed.

*Article 10*  
**Entry into force and application**

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

It shall apply from *[OP please insert the date – two years after the entry into force of this Regulation]*.

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

Done at Brussels,

*For the Commission*  
*The President*