



Brussels, 11.3.2019  
C(2019) 1805 final

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

**of 11.3.2019**

**supplementing Regulation (EU) 2017/1369 of the European Parliament and  
of the Council with regard to energy labelling of light sources**

**and repealing Commission Delegated Regulation (EU) No 874/2012**

(Text with EEA relevance)

## **EXPLANATORY MEMORANDUM**

### **1. CONTEXT OF THE DELEGATED ACT**

#### **Legal and political context of the proposal**

Regulation (EU) 2017/1369 of the European Parliament and of the Council<sup>1</sup> establishes a framework for adopting regulations on EU-wide energy labelling of energy-related products and repeals the previous framework set out in Directive 2010/30/EU. Energy labelling is a key EU policy instrument for informing consumers about the energy efficiency and other environmental performance aspects of energy-related products placed on the internal market. The energy label is recognised and used by 85 % of Europeans<sup>2</sup>.

Under this framework, the energy labelling measures applicable to lighting products are:

- Commission Delegated Regulation (EU) No 874/2012<sup>3</sup> of 12 July 2012 with regard to energy labelling of electrical lamps and luminaires;
- as amended by Commission Delegated Regulation (EU) No 518/2014<sup>4</sup> of 5 March 2014 with regard to labelling of energy-related products on the internet.

The revision of the energy labelling measure for lighting products follows Article 7 of Regulation (EU) No 874/2012. In particular, this review should assess verification tolerances.

In August 2017 the new Energy Labelling framework Regulation (EU) 2017/1369 entered into force, repealing Directive 2010/30/EU. Under the repealed Directive, energy labels were allowed to include A+ to A+++ classes to address the overpopulation of the top classes. Over time, due to technological development, also the A+ to A+++ class became overpopulated, thereby significantly reducing the effectiveness of the labels. To resolve this, the new framework regulation requires a rescaling of existing energy labels, back to the original A to G scale. Article 11 of the Energy Labelling Framework Regulation lists five priority product groups for which new delegated acts with rescaled energy labels must be adopted by 2 November 2018. Lighting is one of the priority product groups. Therefore, a new delegated act for the energy labelling of lighting products must be adopted so that products currently ranging from A++ to E can be rescaled from A to G to address the overpopulation of the top classes.

Finally, several new policy initiatives indicate that ecodesign and energy labelling policies are relevant in a broader political context. The main ones are the Energy Union Framework Strategy, which calls for a sustainable, low-carbon and climate-friendly economy, the Paris Agreement, which calls for a renewed effort in carbon emission abatement, the Gothenburg Protocol, which aims at controlling air pollution, the Circular Economy Initiative, which amongst others stresses the need to include reparability, recyclability and durability in ecodesign, the Emissions Trading Scheme (ETS), aiming at cost-effective greenhouse gas (GHG) emissions reductions and indirectly affected by the energy consumption of the electricity using products in the scope of ecodesign and energy labelling policies, and the Energy Security Strategy, which sets out a strategy to ensure a stable and abundant supply of energy. This act is developed in parallel with the proposed act for the ecodesign of lighting products.

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<sup>1</sup> OJ L 198, 28.7.2017, p. 1-23.

<sup>2</sup> [Study on the impact of the energy label — and potential changes to it — on consumer understanding and on purchase decisions — . LE London Economics and IPSOS, October 2014.](#)

<sup>3</sup> OJ L 258, 26.9.2012, p. 3.

<sup>4</sup> OJ L 147, 17.5.2014, p. 1-28.

## General context

In 2014 the Commission conducted an ‘Omnibus’ review<sup>5</sup> of several product groups that indicated that there is still a large untapped energy saving potential for lighting products. This made the acts on ecodesign and energy labelling eligible for revision. This was confirmed by the review studies, in particular the Lot 8/9/19 review study concluded in October 2015<sup>6</sup>, for which consultants developed MELISA, the ‘Model for European Light Sources Analysis’.

In the European Commission's 2016-2019 ecodesign working plan<sup>7</sup>, the revision of the implementing acts for lighting products is mentioned as one of the major energy saving opportunities, with 125 TWh of primary energy savings per year expected in 2030 (combined effect of ecodesign and energy labelling).

In 2015, around 1,7 billion light sources were sold in the 28 EU Member States, of which approximately 22 % based on LED technology. In the same year, around 11,4 billion light sources were operating in EU-28, of which 6,5 % LED. These light sources consumed a total of 336 TWh/a of electricity, covering 12,4 % of the total EU-28 electricity use. This corresponded to greenhouse gas emissions of 132 megatonnes of CO<sub>2</sub> equivalent per year (MtCO<sub>2</sub>eq/a), i.e. 2,8 % of the overall greenhouse gas emissions in EU-28.

Impact data from October 2017, based on the latest version of the MELISA model, estimates that this act on energy labelling of light sources will reduce the electricity consumption for lighting by 2030, reaching 11 TWh/y of electricity savings.<sup>8</sup>

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

### Consultation of interested parties

There was extensive consultation of stakeholders during the review studies and before and after the Consultation Forum meetings. Further external expertise was collected and analysed during this process.

Stakeholders (industry, Member States, NGOs) were consulted during the Lot 8/9/19 review study on two occasions. A first stakeholder meeting was held on 5 February 2015 on the MEERP<sup>(9)</sup> Task 0, 1, 2 and 3 reports; a second meeting was held on 17 June 2015 on the Task 4, 5 and 6 reports.

Study reports were updated to reflect stakeholders’ comments. Importantly, the future projections for LED prices and LED efficiencies used in the analysis of the MELISA model were agreed with industry. Stakeholder comments were also taken into account when preparing the Commission working document for the Ecodesign Consultation Forum (ECF) of 7 December 2015.

The comments on the 2015 working document showed a lack of consensus among stakeholders on the general approach, on the level of ambition and on many details, especially

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<sup>5</sup> ‘Omnibus’ Review Study on Cold Appliances, Washing Machines, Dishwashers, Washer-Driers, Lighting, Set-top Boxes and Pumps, consortium of VHK, VITO, Viegand Maagøe, Wuppertal Institut für Klima, Umwelt, Energie for the European Commission, DG ENER-C3, Brussels/Delft, April 2014.

<sup>6</sup> Preparatory Study on Light Sources for Ecodesign and/or Energy Labelling Requirements (‘Lot 8/9/19’), Task reports 0-7, VHK for the European Commission, October 2015. <http://ecodesign-lightsources.eu/documents>.

<sup>7</sup> COM(2016) 773 final, Brussels, November 2016.

<sup>8</sup> Which, altogether, are around 125 TWh of primary energy savings mentioned in the Working Plan 2016-2019, applying the primary energy factor for electricity generation from Directive 2012/27/EU.

<sup>9</sup> MEERP is the methodology that the European Commission applies to make studies for the ecodesign of energy-related products.

for the ecodesign part. To resolve this situation and address the different comments, additional stakeholder meetings were held after the 2015 ECF, between spring 2016 and spring 2017. The MELISA model was extensively discussed with industry experts and adapted accordingly.

A second ECF took place on 7 December 2017.

An online public consultation took place from 12 February to 7 May 2018 to collect stakeholders' views on issues such as the expected effect of potential legislative measures on business and on energy consumption trends.

The consultation contained a common part on ecodesign and energy labelling, followed by product-specific questions on (i) refrigerators, (ii) dishwashers, (iii) washing machines, (iv) televisions, (v) electronic displays and (vi) lighting.

1230 responses were received of which 67 % from consumers and 19 % from businesses (of which three quarters were SMEs and one quarter large companies). Non-governmental organisations made up 6 % of the respondents, and 7 % were 'other' categories. National or local governments accounted for less than 1 % of the respondents, and 0,25 % came from national market surveillance authorities.

The countries of residence of the participants were predominantly the UK (41 %) and Germany (26 %), with a second group residing in Austria, Belgium, France, the Netherlands and Spain and together comprising some 17 %. Nine other Member States comprised another 9,5 % of the replies, but residents in 12 EU Member States gave either zero or a negligible number of responses. Non-EU respondents comprised around 5 % of the replies.

All the respondents except one (1229 out of 1230) answered the questions on lighting products. 719 participants (58 %) replied only to lighting.

### **Impact assessment**

An impact assessment is required when the expected economic, environmental or social impacts of EU action are likely to be significant. The impact assessment for the review of Regulations (EC) No 874/2012 and No 244/2009, No 245/2009 and No 1194/2012 was carried out between May 2017 and March 2018.

The data collected in the review studies served as a basis for the impact assessment. Additional data and information were collected and discussed by the impact assessment study team with industry, experts and other stakeholders, including Member States. During this process, several meetings were organised with industry and Member State experts. The additional data and information collection focused on:

- additional market data on energy efficiency for 2015-2017;
- an update on lighting catalogues for the availability of LED replacements;
- fine-tuning of the requirements;
- fine-tuning of definitions;
- investigation of various options for the phase-out of T8 lamps;
- sensitivity analysis of electricity tariffs;
- extended information on SMEs, possible impacts;
- extended information on specific sectors using T8 lamps.

The impact assessment report was submitted to the Regulatory Scrutiny Board (RSB) on 16 May 2018. Following a meeting on 13 June 2018, on 18 June 2018 the RSB delivered a

positive opinion with reservations. The draft impact assessment was subsequently improved, based on the RSB's Opinion<sup>10</sup> and the horizontal and specific technical comments that the RSB sent prior to the meeting of 13 June 2018. The main consideration for energy labelling was that the report should better explain the value added for consumers of maintaining an energy label. Text was added to better explain that the overall effect at 2030 for consumers (considering acquisition costs and electricity costs) is positive for all the assessed options.

In addition, inception impact assessments for the regulatory measures on the review of ecodesign and energy labelling requirements for this product group were published on 26 January 2018 for feedback by 23 February 2018. In total, 17 comments were received for the ecodesign measure and 16 for the energy labelling measure.

In general, all stakeholders are in favour of ecodesign and energy labelling requirements for lighting products. The feedback commented among other things on the strictness of ecodesign requirements, the quality of light, the blue light content and requirements that would make light sources easily replaceable//repairable in products that contain light sources (so-called 'containing products').

### **Feedback**

As part of the [better regulation agenda](#), a feedback period ran from 9 October 2018 to 6 November 2018 with the aim of gathering additional views from citizens and stakeholders on the draft regulation.

A total of 51 feedbacks were received, with 33 from companies/business associations (8 large companies and 25 SMEs), 11 from NGOs and 7 from individual citizens (respectively 65 %, 21 %, and 14 % of the feedbacks).

The comments originated from 13 Member States: Germany (28 %), Italy (16 %), France and Belgium (14 %) and 8 other Member States (in order of importance): the United Kingdom, Spain, Romania, Austria, the Netherlands, Czech Republic, Poland and Denmark. One comment was received from outside the EU, i.e. Switzerland.

NGOs (consumer and environmental organisations) were mainly concerned about:

- the delayed application dates, which should in their view be 2020;
- the scope, which should be slightly expanded through wider x and y coordinates;
- the need to display the full label in shops;
- information to consumers when light sources are not replaceable by the consumer.

Industry was mainly concerned about:

- the requirements for the number of light source models to be added to the product database;
- the requirements for relabelling and selling-off of products with old labels;
- the need to have a grey, horizontal and fully scalable label;
- the number of information requirements;
- the need to exempt emergency lighting from labelling.

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<sup>10</sup> Ref. Ares(2018)3220771 - 18/06/2018

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

#### 1. Scope

The scope of the measures is light sources. Light sources as defined by this act are always in the scope, even when they are parts of ‘containing products’, such as luminaires, mirrors, fridges or shelves. However, the containing products themselves are not in the scope of this act (but they may be in the scope of other energy labelling acts). As a result, this act no longer requires an energy label for luminaires.

The scope covers all lighting technologies, including incandescent, halogen, fluorescent, high-intensity discharge and light-emitting diodes (both inorganic LED and organic OLED).

The definition of light sources is the same as that in the proposed act for ecodesign. However, fewer products are exempt under energy labelling than in the ecodesign act. In the Ecodesign Regulation, it is important to avoid the risk that light sources with special characteristics are unintentionally removed from the market. However, energy labelling of these light sources is useful, because the label will indicate the price to be paid, in terms of lower energy efficiency, to have the special characteristics. Thus, there will be light sources which are exempt from ecodesign requirements but not from the energy labelling.

#### 2. Energy efficiency classes

A new formula for energy labelling is proposed that better reflects energy efficiency and is more intuitive in the calculation than the energy efficiency index set out in the current energy labelling regulation. In the new metrics, the limits for the energy efficiency classes have been defined directly in terms of light source efficiency, as a result of the total light output of a light source (in lumen, lm) divided by the mains (230 V) power input (in Watt, W) and expressed as lm/W. This change implies that to obtain a given energy efficiency class, light sources with high light output do not need a higher efficiency than light sources with low light output. This is reasonable, considering that when the new energy labelling requirements start to apply the label classes will mainly aim to differentiate between LEDs based on their respective efficiencies.

For directional light sources, where normally only the part of light output in a cone is taken into account, and for non-mains light sources (not taking 230 V as input), correction factors are applied to convert their efficacy to an efficacy comparable to the limits of the energy efficiency classes.

Class limits are proposed with a 25 lm/W difference between consecutive classes: all light sources above 210 lm/W are class A. All light sources below 85 lm/W are class G.

As of June 2018 there are no light sources on the market that can meet the efficiency limits of classes A and B (but there are at laboratory level). These classes would therefore be empty initially, as required by Regulation (EU) 2017/1369. The best LED light sources typically used by households on the market today would have the new label class E; the best LED light sources for professional use on the market today would be class D and by 2021 some would be expected to be class C. In 2021, when the new classes will start to apply, class A is still expected to be empty while there might already be some class B light sources on the market.

In the highly dynamic light sources market, it is not an easy task to predict the share of models that will fall in class A around 2030, but it is unlikely that an update of the classes would be necessary within 10 years of the introduction of the new requirements. Therefore, the requirements of Regulation (EU) 2017/1369 would be met.

#### 3. Energy label

The label is reviewed and updated following the new framework Regulation (EU) 2017/1369. The general principle is that the label has to be displayed on the side of the packaging facing the potential buyer at the point of sale (visibility objective). Light sources packages can be small. The tailor-made solution for small packages is to have the label on the rear of the packaging, with a coloured arrow with the energy efficiency class displayed on the front.

If the light source is sold inside a containing product (e.g. a luminaire), it would be confusing to attach a label for the light source to the packaging of the containing product. Hence, in this case, a label is not required, but the packaging of the containing product must display a text declaring the energy efficiency class of the contained light source.

Re-labelling of existing products is required only for those products which stay unsold with dealers for more than 18 months from the date of application of the new measures (with a sticker); otherwise those products cannot be sold anymore.

#### 4. Implementation of product information requirements

The delegated act specifies the list of lighting parameters and other information:

- to be displayed on the light source itself and on its packaging;
- to be entered in the public part of the product database established pursuant to Regulation (EU) 2017/1369 (this part can be printed as the product information sheet);
- to be entered in the compliance part of the product database established pursuant to Regulation (EU) 2017/1369 (this is a part of the technical documentation).

The list of parameters to be entered in the product database includes not only information strictly related to the energy label and its verification. The list also includes all information useful for end-users and for market surveillance authorities to verify compliance with the ecodesign regulation on light sources, which is developed in parallel.

#### 5. Verification procedure for market surveillance purposes

The procedure to be used by market surveillance authorities to verify the compliance of light sources with this Regulation is aligned with Commission Regulation (EU) 2016/2282<sup>11</sup> which is based on verification of parameter values declared by suppliers. In addition, the number of samples required has been reduced. This will facilitate market surveillance activities and remove some ambiguities.

For verification tolerances, the approach has been diversified, using different tolerances for different parameters and depending on the sample size.

#### 6. Date of application

It is the Commission's intention for this act to apply from the same date of application of the ecodesign act which is developed in parallel. The existing energy labelling regulation for lighting products (Regulation (EU) No 874/2012) will be repealed from the day of application, with the exception of Article 3(2) and Article 4(2) of Regulation (EU) No 874/2012, which will be repealed from the date of entry into force of this act.

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<sup>11</sup> OJ L 346, 20.12.2016, p. 51.

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(Text with EEA relevance)

THE EUROPEAN COMMISSION,

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

Having regard to Regulation (EU) 2017/1369 of the European Parliament and of the Council of 4 July 2017 setting a framework for energy labelling and repealing Directive 2010/30/EU<sup>12</sup>, and in particular Article 11(5) and Article 16(1) thereof,

Whereas:

- (1) Regulation (EU) 2017/1369 empowers the Commission to adopt delegated acts as regards the labelling or rescaling of the labelling of product groups representing significant potential for energy savings and, where relevant, other resources.
- (2) The Ecodesign Working Plan 2016-2019<sup>13</sup> established by the Commission in application of Article 16(1) of Directive 2009/125/EC of the European Parliament and of the Council<sup>14</sup> sets out the working priorities under the ecodesign and energy labelling framework for the period 2016-2019. The Ecodesign Working Plan identifies the energy-related product groups to be considered as priorities for the undertaking of preparatory studies and eventual adoption of implementing measures, as well as the review of the current regulations.
- (3) Measures from the Ecodesign Working Plan have an estimated potential to deliver in total in excess of 260 TWh of annual final energy savings in 2030, which is equivalent to reducing greenhouse gas emissions by approximately 100 million tonnes per year in 2030. Lighting is one of the product groups listed in the Ecodesign Working Plan, with an estimated 41,9 TWh of annual final energy savings in 2030.

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<sup>12</sup> OJ L 198, 28.7.2017, p. 1.

<sup>13</sup> Communication from the Commission. Ecodesign working plan 2016-2019. COM(2016) 773 final of 30.11.2016.

<sup>14</sup> 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 (OJ L 285, 31.10.2009, p. 10).



- (4) Provisions on the energy labelling of lighting products, namely electrical lamps and luminaires, were established by Commission Delegated Regulation (EU) No 874/2012<sup>15</sup>.
- (5) Lighting products are among the priority product groups mentioned in Article 11(5)(b) of Regulation (EU) 2017/1369 for which the Commission should adopt a delegated act to introduce an A to G rescaled label.
- (6) Regulation (EU) No 874/2012 contains a review clause in Article 7 requiring the Commission to review the Regulation in light of technological progress.
- (7) The Commission has reviewed Regulation (EU) No 874/2012 and analysed the technical, environmental and economic aspects of lighting products 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 14 of Regulation (EU) 2017/1369.
- (8) The review concluded that there was a need to introduce revised energy labelling requirements for lighting products, namely for light sources.
- (9) The environmental aspect of light sources that has been identified as significant for the purposes of this Regulation is energy consumption in the use phase.
- (10) The review has shown that the electricity consumption of products subject to this Regulation can be further reduced significantly by implementing energy label measures.
- (11) As this Regulation discontinues the energy label specifically dedicated to luminaires in Regulation (EU) No 874/2012, suppliers of luminaires should be exempted from the obligations related to the product database established under Regulation (EU) 2017/1369.
- (12) Recognising the growth of sales of energy-related products through internet hosting platforms, rather than directly from suppliers' and dealers' websites, it should be clarified that internet sales platforms should be responsible for enabling the displaying of the label provided by the supplier in proximity to the price. They should inform the dealer of that obligation, but should not be responsible for the accuracy or content of the label and the product information sheet provided. However, in application of Article 14(1)(b) of Directive 2000/31/EC of the European Parliament and of the Council<sup>16</sup> on electronic commerce, such internet hosting platforms should act expeditiously to remove, or to disable access to, information about the product in question if they are aware of the non-compliance (e.g. missing, incomplete or incorrect label or product information sheet), for example if informed by the market surveillance authority. A supplier selling directly to end-users via its own website is covered by dealers' distance selling obligations referred to in Article 5 of Regulation (EU) 2017/1369.

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<sup>15</sup> Commission Delegated Regulation (EU) No 874/2012 of 12 July 2012 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of electrical lamps and luminaires (OJ L 258, 26.9.2012, p. 1).

<sup>16</sup> Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market ('Directive on electronic commerce') (OJ L 178, 17.7.2000, p. 1).

- (13) This Regulation should specify tolerance values for lighting parameters taking into account the approach to information declaration laid down in Commission Regulation (EU) 2017/254<sup>17</sup>
- (14) The measures provided for in this Regulation were discussed by the Consultation Forum and the Member States' experts in accordance with Article 14 of Regulation (EU) 2017/1369.
- (15) Regulation (EU) No 874/2012 should therefore be repealed,

HAS ADOPTED THIS REGULATION:

#### *Article 1*

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

1. This Regulation establishes requirements for the labelling of, and the provision of supplementary product information on, light sources with or without integrated control gear. The requirements also apply to light sources placed on the market in a containing product.
2. This Regulation shall not apply to light sources specified in points 1 and 2 of Annex IV.
3. Light sources specified in point 3 of Annex IV shall comply only with the requirements in point 4 of Annex V.

#### *Article 2*

#### **Definitions**

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

- (1) 'light source' means an electrically operated product intended to emit, or , in the case of a non-incandescent light source, intended to be possibly tuned to emit, light, or both, with all of the following optical characteristics:
  - (a) chromaticity coordinates  $x$  and  $y$  in the range:  
 $0, 270 < x < 0, 530$ ; and  
 $-2, 3172 x^2 + 2, 3653 x - 0, 2199 < y < -2, 3172 x^2 + 2, 3653 x - 0, 1595$ ;
  - (b) a luminous flux  $< 500$  lumen per  $\text{mm}^2$  of projected light-emitting surface area as defined in Annex I;
  - (c) a luminous flux between 60 and 82 000 lumen;
  - (d) a colour rendering index (CRI)  $> 0$ ;

using incandescence, fluorescence, high-intensity discharge, inorganic light emitting diodes (LED) or organic light emitting diodes (OLED), or their combinations as lighting technology, and that can be verified as a light source according to the procedure of Annex IX.

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<sup>17</sup> Commission Delegated Regulation (EU) 2017/254 of 30 November 2016 amending Delegated Regulations (EU) No 1059/2010, (EU) No 1060/2010, (EU) No 1061/2010, (EU) No 1062/2010, (EU) No 626/2011, (EU) No 392/2012, (EU) No 874/2012, (EU) No 665/2013, (EU) No 811/2013, (EU) No 812/2013, (EU) No 65/2014, (EU) No 1254/2014, (EU) 2015/1094, (EU) 2015/1186 and (EU) 2015/1187 with regard to the use of tolerances in verification procedures (OJ L 38, 15.2.2017, p. 1).

High-pressure sodium (HPS) light sources that do not fulfil condition (a) are considered light sources for the purposes of this Regulation.

Light sources do not include:

- (a) LED dies or LED chips;
- (b) LED packages;
- (c) products containing light source(s) from which these light source(s) can be removed for verification;
- (d) light-emitting parts contained in a light source from which these parts cannot be removed for verification as a light source.

- (2) ‘control gear’ means one or more devices that may or may not be physically integrated in a light source, intended to prepare the mains for the electric format required by one or more specific light sources within boundary conditions set by electric safety and electromagnetic compatibility. It may include transforming the supply and starting voltage, limiting operational and preheating current, preventing cold starting, correcting the power factor and/or reducing radio interference

The term ‘control gear’ does not include power supplies within the scope of Commission Regulation (EC) No 278/2009<sup>18</sup>. The term also does not include lighting control parts and non-lighting parts (as defined in Annex I), although such parts may be physically integrated with a control gear or marketed together as a single product.

A Power over Ethernet (PoE) switch is not a control gear in the sense of this Regulation. ‘Power-over-Ethernet switch’ or ‘PoE switch’ means equipment for power-supply and data-handling that is installed between the mains and office equipment and/or light sources for the purpose of data transfer and power supply;

- (3) ‘containing product’ means a product containing one or more light sources, or separate control gears, or both. Examples of containing products are luminaires that can be taken apart to allow separate verification of the contained light source(s), household appliances containing light source(s), furniture (shelves, mirrors, display cabinets) containing light source(s). If a containing product cannot be taken apart for verification of the light source and separate control gear, the entire containing product is to be considered a light source;
- (4) ‘light’ means electromagnetic radiation with a wavelength between 380 nm and 780 nm;
- (5) ‘mains’ or ‘mains voltage’ (MV) means the electricity supply of 230 ( $\pm 10$  %) volt of alternating current at 50 Hz;
- (6) ‘LED die’ or ‘LED chip’ means a small block of light-emitting semiconducting material on which a functional LED circuit is fabricated;
- (7) ‘LED package’ means a single electric part comprising principally at least one LED die. It does not include a control gear or parts of it, a cap or active electronic components and is not connected directly to the mains voltage. It can include one or more of the following: optical elements, light converters (phosphors), thermal, mechanical and electric interfaces or parts to address electrostatic discharge concerns. Any similar light-emitting devices that are intended to be used directly in an LED luminaire, are considered to be light sources;

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<sup>18</sup> OJ L93, 7.4.2009, p.3.

- (8) 'chromaticity' means the property of a colour stimulus defined by its chromaticity coordinates (x and y);
- (9) 'luminous flux' or 'flux' ( $\Phi$ ), expressed in lumen (lm), means the quantity derived from radiant flux (radiant power) by evaluating the electromagnetic radiation in accordance with the spectral sensitivity of the human eye. It refers to the total flux emitted by a light source in a solid angle of  $4\pi$  steradians under conditions (e.g. current, voltage, temperature) specified in applicable standards. It refers to the initial flux for the undimmed light source after a short operating period, unless it is clearly specified that the flux in a dimmed condition or the flux after a given period of operation is intended. For light sources that can be tuned to emit different light spectra and/or different maximum light intensities, it refers to the flux in the 'reference control settings' as defined in Annex I;
- (10) 'colour rendering index' (CRI) means a metric quantifying the effect of an illuminant on the colour appearance of objects by conscious or subconscious comparison with their colour appearance under the reference illuminant and is the average Ra of the colour rendering for the first 8 test colours (R1-R8) defined in standards;
- (11) 'incandescence' means the phenomenon where light is produced from heat, in light sources typically produced through a threadlike conductor ('filament') which is heated by the passage of an electric current;
- (12) 'halogen light source' means an incandescent light source with a threadlike conductor made from tungsten surrounded by gas containing halogens or halogen compounds;
- (13) 'fluorescence' or 'fluorescent light source' (FL) means the phenomenon or a light source using an electric gas discharge of the low-pressure mercury type in which most of the light is emitted by one or more layers of phosphors excited by the ultraviolet radiation from the discharge. Fluorescent light sources may have one ('single-capped') or two ('double-capped') connections ('caps') to their electricity supply. For the purposes of this Regulation, magnetic induction light sources are also considered as fluorescent light sources;
- (14) 'high intensity discharge' (HID) means an electric gas discharge in which the light-producing arc is stabilised by wall temperature and the arc chamber has a bulb wall loading in excess of 3 watts per square centimetre. HID light sources are limited to metal halide, high-pressure sodium and mercury vapour types as defined in Annex I;
- (15) 'gas discharge' means a phenomenon where light is produced, directly or indirectly, by an electric discharge through a gas, plasma, metal vapour or mixture of gases and vapours;
- (16) 'inorganic light emitting diode' (LED) means a technology in which light is produced from a solid state device embodying a p-n junction of inorganic material. The junction emits optical radiation when excited by an electric current;
- (17) 'organic light emitting diode' (OLED) means a technology in which light is produced from a solid state device embodying a p-n junction of organic material. The junction emits optical radiation when excited by an electric current;
- (18) 'high-pressure sodium light source' (HPS) means a high intensity discharge light source in which the light is produced mainly by radiation from sodium vapour operating at a partial pressure of the order of 10 kilopascals. HPS light sources may

have one ('single-ended') or two ('double-ended') connectors to their electricity supply;

- (19) 'point of sale' means a physical location where the product is displayed or offered for sale, hire or hire-purchase to the customer.

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

### *Article 3*

#### **Obligations of suppliers**

1. Suppliers of light sources shall ensure that:
  - (a) each light source which is placed on the market as an independent product (i.e. not in a containing product) and in packaging, is supplied with a label, printed on the packaging, in the format as set out in Annex III;
  - (b) the parameters of the product information sheet, as set out in Annex V, are entered into the product database;
  - (c) if specifically requested by the dealer, the product information sheet shall be made available in printed form;
  - (d) the content of the technical documentation, as set out in Annex VI, is entered into the product database;
  - (e) any visual advertisement for a specific model of light source contains the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII and Annex VIII;
  - (f) any technical promotional material concerning a specific model of light source, including technical promotional material on the internet, which describes its specific technical parameters, includes the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII;
  - (g) an electronic label in the format and containing the information, as set out in Annex III, is made available to dealers for each light source model;
  - (h) an electronic product information sheet, as set out in Annex V, is made available to dealers for each light source model;
  - (i) upon request by dealers and in accordance with Article 4(e), printed labels to rescale products are provided as a sticker, of the same size as the one which already exists.
2. Suppliers of containing products shall:
  - (a) provide information on the contained light source(s), as specified in point 2 of Annex V;
  - (b) upon request by market surveillance authorities, provide information on how light sources can be removed for verification without permanent damage to the light source.
3. The energy efficiency class shall be calculated in accordance with Annex II.

*Article 4*  
**Obligations of dealers**

Dealers shall ensure that:

- (a) At the point of sale, each light source which is not in a containing product bears the label provided by suppliers in accordance with point 1(a) of Article 3, with the label or the energy class being displayed in such a way as to be clearly visible, in accordance with Annex III;
- (b) in the event of distance selling, the label and product information sheet are provided, in accordance with Annexes VII and VIII;
- (c) any visual advertisement for a specific model of light source, including on the internet, contains the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII;
- (d) any technical promotional material concerning a specific model of light source, including technical promotional material on the internet, which describes its specific technical parameters includes the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII;
- (e) existing labels on light sources at points of sale are replaced by the rescaled labels in such a way as to cover the existing label, including when printed on or attached to the package, within eighteen months after the application of this Regulation.

*Article 5*  
**Obligations of internet hosting platforms**

Where a hosting service provider as referred to in Article 14 of Directive 2000/31/EC allows the selling of light sources through its internet site, the service provider shall enable the showing of the electronic label and electronic product information sheet provided by the dealer on the display mechanism in accordance with the provisions of Annex VIII and shall inform the dealer of the obligation to display them.

*Article 6*  
**Measurement methods**

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation methods, which take into account the recognised state-of-the-art measurement and calculation method, as set out in Annex II.

*Article 7*  
**Verification procedure for market surveillance purposes**

Member States shall apply the verification procedure laid down in Annex IX when performing the market surveillance checks referred to in paragraph 3 of Article 8 of Regulation (EU) 2017/1369.

*Article 8*  
**Review**

The Commission shall review this Regulation in the light of technological progress and present the results of this review, including, if appropriate, a draft revision proposal, to the Consultation Forum no later than *[OP – please insert the date - five years after day of entry into force of this Regulation]*. The review shall among other matters assess the energy efficiency classes, methods to address the energy efficiency of light sources in containing products and the possibility to address circular economy aspects.

*Article 9*  
**Repeal**

Regulation (EU) No 874/2012 is repealed with effect from 1 September 2021, with the exception of paragraph 2 of Article 3 and paragraph 2 of Article 4 which are repealed with effect from *[OP: please insert the day of entry into force of this Regulation]*.

*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 1 September 2021. However, point 1(b) of Article 3 shall apply from 1 May 2021.

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

Done at Brussels, 11.3.2019

*For the Commission*  
*The President*  
*Jean-Claude JUNCKER*