



Brussels, **XXX**  
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**COMMISSION DELEGATED DIRECTIVE (EU) .../...**

**of XXX**

**amending, for the purposes of adapting to scientific and technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for the use of mercury in double-capped linear fluorescent lamps for general lighting purposes**

(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.*

## EXPLANATORY MEMORANDUM

### 1. CONTEXT OF THE DELEGATED ACT

This Commission Delegated Directive amends, for the purpose of adapting to technical and scientific progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment (recast)<sup>1</sup> (the RoHS Directive). The amendment concerns specified applications containing mercury in double-capped linear fluorescent lamps for general lighting purposes.

The RoHS Directive restricts the use of certain hazardous substances in electrical and electronic equipment (EEE), as specified in Article 4. Ten substances are currently restricted and listed in Annex II to the Directive: lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), polybrominated diphenyl ethers (PBDE), bis (2-ethylhexyl) phthalate (DEHP), butyl benzyl phthalate (BBP), dibutyl phthalate (DBP) and diisobutyl phthalate (DIBP). Annexes III and IV list EEE materials and components for specific applications that are exempt from the substance restrictions laid down in Article 4(1).

Article 5 of the Directive provides for the adaptation of Annexes III and IV to scientific and technical progress, which can include granting, renewing or revoking exemptions. Pursuant to Article 5(1)(a), exemptions are to be included in Annexes III and IV only if this does not weaken the environmental and health protection afforded by Regulation (EC) No 1907/2006 (REACH)<sup>2</sup> and only if they meet any of the following conditions: (i) elimination or substituting the substance via design changes or materials and components which do not require any of the materials or substances listed in Annex II is scientifically or technically impracticable; (ii) the reliability of substitutes is not ensured; (iii) the total negative environmental, health and consumer safety impacts caused by substituting the substance are likely to outweigh the total environmental, health and consumer safety benefits thereof.

Decisions on exemptions, and their duration, must also take into account the availability of substitutes and the socioeconomic impact of substitution. Decisions on the duration of exemptions must take into account any potential impact on innovation. A life-cycle approach to assess the overall impacts of the exemption must be taken, where relevant.

Article 5(1) also states that to include, or, where applicable, delete, materials and components of EEE for specific applications in the lists of Annexes III and IV, the Commission must adopt individual delegated acts. Article 5(3) and Annex V describe the procedure for submitting exemption-related applications.

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

The Commission received requests<sup>3</sup> from economic operators to grant or renew exemptions under Article 5(3) and Annex V to the RoHS Directive.

The current Annex III exemption 2(a) entries (1) to (5) permit the use of mercury in double-capped linear fluorescent lamps for general lighting purposes not exceeding the following values (per lamp):

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<sup>1</sup> OJ L 174, 1.7.2011, p. 88.

<sup>2</sup> OJ L 396, 30.12.2006, p. 1.

<sup>3</sup> The list is available at: [http://ec.europa.eu/environment/waste/rohs\\_eee/adaptation\\_en.htm](http://ec.europa.eu/environment/waste/rohs_eee/adaptation_en.htm).

- 2(a) (1) Tri-band phosphor with normal lifetime and a tube diameter < 9 mm (e.g. T2): 4 mg;
- 2(a) (2) Tri-band phosphor with normal lifetime and a tube diameter  $\geq$  9 mm and  $\leq$  17 mm (e.g. T5): 3 mg;
- 2(a) (3) Tri-band phosphor with normal lifetime and a tube diameter > 17 mm and  $\leq$  28 mm (e.g. T8): 3,5 mg;
- 2(a) (4) Tri-band phosphor with normal lifetime and a tube diameter > 28 mm (e.g. T12): 3,5 mg;
- 2(a) (5) Tri-band phosphor with long lifetime ( $\geq$  25 000 h): 5 mg.

The Commission received two applications to renew this exemption in December 2014 and January 2015. One of the applications was renewed with additional information in January 2020. The applicants in essence claimed that substitutes for all the applications in question were not available. One applicant stated that, although mercury-free light-emitting diode (LED) alternatives were increasingly available on the EU market, they cannot always serve as a fully compatible replacement for the wide variety of LFL lamps for consumers and professional end users.<sup>4</sup> The other applicant argued along the same lines.<sup>5</sup>

In line with the requirements of the RoHS Directive (Article 5(5), second subparagraph), an exemption remains valid until the Commission takes a decision on the renewal application.

To evaluate the applications to renew that exemption, the Commission launched a study in June 2015<sup>6</sup>, concluded in 2016, to carry out the required technical and scientific assessment, including an eight-week online stakeholder consultation.<sup>7</sup> Further to that study assessing the extensive technical and scientific data and contributions received, as documented in the study report, the Commission carried out two complementary studies/updates, including stakeholder involvement. The study published in 2019<sup>8</sup> focused on the socioeconomic assessment and on the availability of substitutes, whilst an update based on recent figures and modelling was carried out in 2020<sup>9</sup>. The final reports of the study and of the socioeconomic assessment updates were published<sup>10</sup>; stakeholders were notified.

The Commission consulted the Member State expert group for delegated acts under the RoHS Directive during the expert meetings of 1 September 2016, 29 October 2018 and 21 October 2019. In July 2020, the Commission also informed the Member State expert group via written consultation of the 2020 socioeconomic update and collected the Member States' positions on a proposed course of action. It carried out all the requisite procedural steps

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<sup>4</sup> [http://rohs.exemptions.oeko.info/fileadmin/user\\_upload/RoHS\\_Pack\\_9/Exemption\\_2\\_a\\_\\_15\\_/Lighting\\_Europe/2a1\\_LE\\_RoHS\\_Exemption\\_Req\\_Final.pdf](http://rohs.exemptions.oeko.info/fileadmin/user_upload/RoHS_Pack_9/Exemption_2_a__15_/Lighting_Europe/2a1_LE_RoHS_Exemption_Req_Final.pdf)

<sup>5</sup> [http://rohs.exemptions.oeko.info/fileadmin/user\\_upload/RoHS\\_Pack\\_9/Exemption\\_2\\_a\\_\\_15\\_/NARVA/01\\_02\\_a\\_\\_2b3\\_4a.pdf](http://rohs.exemptions.oeko.info/fileadmin/user_upload/RoHS_Pack_9/Exemption_2_a__15_/NARVA/01_02_a__2b3_4a.pdf)

<sup>6</sup> The final report of the study is available at <https://op.europa.eu/en/publication-detail/-/publication/a3fdcc8c-4273-11e6-af30-01aa75ed71a1>.

<sup>7</sup> Consultation period: 21 August 2015 to 16 October 2015, <http://rohs.exemptions.oeko.info>.

<sup>8</sup> [https://rohs.exemptions.oeko.info/fileadmin/user\\_upload/reports/FWCW\\_RoHS\\_Lamps\\_SEA\\_20190729\\_Final.pdf](https://rohs.exemptions.oeko.info/fileadmin/user_upload/reports/FWCW_RoHS_Lamps_SEA_20190729_Final.pdf)

<sup>9</sup> <https://op.europa.eu/en/publication-detail/-/publication/f44f2383-dd0a-11ea-adf7-01aa75ed71a1/language-en/format-PDF/source-146144383>, starting on page 92.

<sup>10</sup> [https://ec.europa.eu/environment/waste/rohs\\_eee/studies\\_rohs1\\_en.htm](https://ec.europa.eu/environment/waste/rohs_eee/studies_rohs1_en.htm).

relating to exemptions from the substances restriction under Article 5(3) to 5(7).<sup>11</sup> The Council and the European Parliament were notified of all activities.

The supporting study highlighted the following technical information and assessments:

- The 2015-2016 study concluded that reliable mercury-free substitutes are available on the European Union market. The study provided ample evidence that substituting mercury in the lamp categories covered by the exemption is scientifically and technically practicable.
- The 2019 and 2020 study updates focused on the availability of substitutes and the socioeconomic impact of substitution. The updates revealed that the total costs of substitution largely depend on the share of lamps available on the market as replacements and that the substitution costs would be relatively quickly offset by benefits generated by related energy savings. The 2020 socioeconomic assessment update showed that, overall, substituting mercury with LED alternatives in the lamp categories under assessment would avoid placing 2882 kg of mercury in lamps on the EU market.<sup>12</sup> Overall, the premature generation of e-waste due to the need to rewire and replace lamps for certain lamp categories would be offset both by avoiding the use of mercury in the future and by generating substantial energy savings.<sup>13</sup> In conclusion, the scientific and technical assessments, including stakeholder consultations, detailed that none of the exemption criteria are now met with regard to exemption 2(a)(1) to (5). The availability of substitutes has furthermore been documented and calculations based on the socioeconomic impact of substitution have shown to result in overall savings and in total environmental, health and consumer safety benefits.

In conclusion, the scientific and technical assessments, including stakeholder consultations, detailed that none of the exemption criteria are now met with regard to exemption 2(a)(1) to (5). The availability of substitutes has been documented and calculations based on the socioeconomic impact of substitution have shown to result in overall savings and in environmental, health and consumer safety benefit.

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

On the basis of Article 5(1), the delegated directive revokes exemption 2(a) entries (1) to (5) listed in Annex III to Directive 2011/65/EU for the use of mercury in specified applications.

The Commission's assessment, based on the supporting studies and consultations, concluded that the exemption request does not meet any of the criteria laid down in Article 5(1)(a) of the RoHS Directive that justify extending the exemption: mercury can be substituted with reliable substitutes in the lamp categories covered by this exemption, this being scientifically and technically practicable, and evidence is provided that the total impact of substitution in environmental, health and consumer safety impacts largely outweigh any negative impacts. Substitution would not only avoid placing considerable quantities of mercury on the EU

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<sup>11</sup> A list of the required administrative steps is available on the [Commission website](#). The current stage of the procedure can be viewed for each draft delegated act in the Interinstitutional Registry of Delegated Acts at <https://webgate.ec.europa.eu/regdel/#/home>.

<sup>12</sup> The 2020 socioeconomic assessment update included compact fluorescent lamps non-integrated (CFLni), linear fluorescent lamps with a tube diameter 9-17 mm (e.g. T5) and 17-28 mm (e.g. T8).

<sup>13</sup> Idem.

market, but would also generate energy savings and stimulate innovation<sup>14</sup>. This assessment results from the most recent technical and scientific evidence and updated market information included in the above-mentioned supporting studies. In summary, the conditions for the exemption are no longer fulfilled, and entries 2(a)(1) to (5) are to be deleted, in accordance with Article 5 (1)(b).

The expiry date for this exemption is set in line with Article 5(6) of the RoHS Directive which prescribes that, in the event an exemption is revoked, it shall expire at the earliest 12 months, and at the latest 18 months, after the date of that decision. For exemption 2(a) entries (1), (4) and (5), there are no particular elements that would justify setting a longer date than the earliest expiry date, 12 months after the date of the decision. For exemption entries 2(a) (2) (“T5 LFL lamps”) and (3) (“T8 LFL lamps”), however, a transition time of 18 months is proposed. This is the maximum possible transition period for a decision that revokes an exemption based on the assessment against the RoHS criteria and giving full consideration to the less advanced availability of substitutes and to the socioeconomic impact of substitution. Granting the maximum transition period possible also reflects the fact that this exemption applies to a high volume of lamps, and gives enough time to make the necessary arrangements for new mercury-containing lamps that may not be placed on the EU market after the expiry date.

The legal instrument is a delegated directive, which is in line with the enabling legal act, Directive 2011/65/EU, in particular with the delegation set out in Articles 5(1) and 20 thereof. In line with common practice regarding delegated directives relating to RoHS exemptions, it sets a timeframe of six months after entry into force.

The objective of the delegated directive is to contribute to the protection of human health and the environment and to align the provisions for the functioning of the internal market in the field of electrical and electronic equipment, by revoking an exemption for the use of otherwise banned substances for specific applications, with the provisions and under the conditions of the RoHS Directive and the procedure for adapting Annexes III and IV to scientific and technical progress.

The delegated directive has no implications on the EU budget.

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<sup>14</sup> The products in scope are also regulated by Commission Regulation (EU) 2019/2020 of 1 October 2019 laying down ecodesign requirements for light sources and separate control gears that applies from 1 September 2021. Differently from Directive 2011/65/EU, the ecodesign legislation does not restrict substances in products but sets energy efficiency requirements to be respected in order for the products to be placed on the market. CFL with integrated control gear (CFLi) will not *de facto* be placed on the market from 1 September 2021 due to their non-compliance with these energy efficiency requirements. Commission Regulation (EU) 2019/2020 identifies mercury content as a significant environmental aspect in the lifecycle of a light source, but acknowledges that the use of hazardous substances, including mercury in light sources, is governed by Directive 2011/65/EU.

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**amending, for the purposes of adapting to scientific and technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for the use of mercury in double-capped linear fluorescent lamps for general lighting purposes**

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

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

Having regard to Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment<sup>1</sup>, and in particular Article 5(1), point (b), thereof,

Whereas:

- (1) Directive 2011/65/EU requires Member States to ensure that electrical and electronic equipment placed on the market does not contain the hazardous substances listed in Annex II to that Directive. That restriction does not apply to certain exempted applications, which are listed in Annex III to the Directive.
- (2) The categories of electrical and electronic equipment to which Directive 2011/65/EU applies are listed in Annex I to that Directive.
- (3) Mercury is a restricted substance listed in Annex II to Directive 2011/65/EU.
- (4) By Decision 2010/571/EU<sup>2</sup>, the Commission granted, among other things, an exemption for the use of mercury in double-capped linear fluorescent lamps for general lighting purposes ('the exemption'), which is now listed as exemption 2(a)(1), 2(a)(2), 2(a)(3), 2(a)(4) and 2(a)(5) in Annex III to Directive 2011/65/EU. The exemption was to expire on 21 July 2016, in accordance with Article 5(2), second subparagraph, point (a), of that Directive.
- (5) Mercury is used in double-capped linear fluorescent lamps for general lighting purposes to produce ultraviolet light, which is then converted into visible light by the fluorescent coating on the lamp.
- (6) On 19 December 2014 and 15 January 2015, the Commission received two applications for renewal of the exemption ('the renewal applications'), that is within the time limit laid down in Article 5(5) of Directive 2011/65/EU, of which one was updated with a renewed application on 20 January 2020. In accordance with Article

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<sup>1</sup> OJ L 174, 1.7.2011, p. 88.

<sup>2</sup> Commission Decision 2010/571/EU of 24 September 2010 amending, for the purposes of adapting to scientific and technical progress, the Annex to Directive 2002/95/EC of the European Parliament and of the Council as regards exemptions for applications containing lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers (OJ L 251, 25.9.2010, p. 28).

5(5), second subparagraph, of Directive 2011/65/EU, the exemption remains valid until a decision on the renewal application has been taken.

- (7) The evaluation of the renewal applications, which took into account the availability of substitutes and the socioeconomic impact of substitution, concluded that sufficiently reliable mercury-free substitutes for the lamp types covered by the exemption have become available and that the substitution of mercury in these lamps is scientifically and technically practicable. Furthermore, that evaluation concluded that the benefits of substitution will clearly outweigh any negative impact.
- (8) The evaluation of the renewal applications included stakeholder consultations in accordance with Article 5(7) of Directive 2011/65/EU. The comments received during those consultations were made publicly available on a dedicated website.
- (9) As the conditions set out in Article 5(1), point (a), of Directive 2011/65/EU are no longer fulfilled, the renewal application should be rejected. Expiry dates for the exemption should be set in accordance with Article 5(6) of that Directive.
- (10) Directive 2011/65/EU should therefore be amended accordingly,

HAS ADOPTED THIS DIRECTIVE:

#### *Article 1*

Annex III to Directive 2011/65/EU is amended as set out in the Annex to this Directive.

#### *Article 2*

1. Member States shall adopt and publish, by [\[the last day of the sixth month after the date of entry into force of this Directive\]](#) at the latest, the laws, regulations and administrative provisions necessary to comply with this Directive. They shall forthwith communicate to the Commission the text of those provisions.

They shall apply those provisions from [\[the last day of the sixth month after the date of entry into force of this Directive + 1 day\]](#).

When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

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

#### *Article 3*

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

#### *Article 4*

This Directive is addressed to the Member States.

Done at Brussels,

*For the Commission*  
*Ursula VON DER LEYEN*  
*The President*

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