EEB
European
Environmental
Bureau

To: Executive Vice President Timmermans, Commissioner Breton, Commissioner Kyriakides, Commissioner Simson and Commissioner Sinkevičius, European Commission

Cc: Directors General for Environment, Energy, Internal Market and Health

Brussels, 5 February 2021

RE: Delay in Commission Decision on Fluorescent Lamp Exemptions List under RoHS Directive

Dear Executive Vice President, dear Commissioners,

We are writing to express our concern at the continuing delay in the taking of a decision to phase out mercury-containing fluorescent lamps under the Restriction of Hazardous Substances (ROHS) Directive.

The Commission's handling of this issue over the past four years has been worse than disappointing. As you know, the original exemption for certain fluorescent lamps was granted in September 2010 up to July 2016, allowing the lighting industry ample time to adapt its processes. When a review process was launched in 2015, evidence presented by the Commission's own consultants (Öko Institut) as well as the EEB showed the ready availability of low-energy mercury-free LED alternatives and provided the justification for an early phase-out of the larger categories of mercury-containing fluorescent lamps. Regrettably, prioritising the interests of the lighting industry over environmental, consumer and public health concerns, the Commission ignored this evidence and wasted more than two years commissioning a socioeconomic analysis based on data that was already well out of date when it was eventually published in 2019 and was therefore completely misleading, indicating that the phase-out would have a net cost of €250 billion. It took a further year and further evidence submitted by the EEB and others for the Commission to correct its mistake and issue a revised analysis showing that a 2021 phase-out would actually bring a net *benefit* of €29.9 billion. That was more than six months ago, July 2020, and yet still the Commission has not acted. Please see further details in the attached annex.

This failure to take timely and effective action over the past four years has serious environmental, health and financial consequences. According to a newly published study, with one year of regulatory delay (ban effective in 2022), the EU loses €5.6 billion in cost savings due to excess energy use and adds 570 kg to its mercury pollution burden. Given the delegated powers it has under the ROHS Directive, the Commission bears full responsibility for this.

We have warmly welcomed the central priority given by the Commission to the European Green Deal, with its zero-pollution ambition and commitment to a low-carbon future. But such high-level commitments ring hollow if they are not backed up by concrete actions. The upcoming decision on phasing out of fluorescent lamps is a very clear opportunity for the Commission to demonstrate that it means what it says when it comes to protecting our environment.

We urge you to proceed immediately with the publication of a draft decision to phase out, as a minimum, CFLni, T5 and T8 mercury-added fluorescent lamps, with a transition period no more than 12 months.

Thank you in advance for considering our concerns.

Yours sincerely,

Jeremy Wates
Secretary General

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Annex

Memo on the Exemption of Mercury-Based (Fluorescent) Lamps Under the RoHS Directive

February 2021

The Restriction of Hazardous Substances (RoHS) Directive bans most electric and electronic mercury added products, and establishes criteria under which products can be exempted from such a ban. Most mercury-based (i.e., fluorescent) lamps have historically been exempted from coverage under RoHS on the basis of these exemptions.

Analyses submitted to the Commission as far back as 2016 shows that mercury-based lamps no longer meet these criteria, and by law should not be exempted from RoHS.

Also, in 2020, the Commission adopted the European Green Deal and the Chemicals Strategy for Sustainability, recommitting to sustainability as a centrepiece of European policy. The Chemicals Strategy committed to "ensure that the most harmful chemicals no longer find their way into consumer products." Despite its commitments to sustainability and consumer protection, **the Commission is now coming up to five years past its 2016 deadline to act on its obligation to eliminate mercury-based lighting from the EU market.**

A decision to phase out the most widely used categories of fluorescent lamps is an opportunity for the Commission to showcase this commitment. An immediate phase out of CFLs and linear fluorescent tubes (T5 and T8) for general lighting practice, will lead to around **30 billion euro of net benefits**.

1. Background - Overlapping Jurisdiction Has Produced Paralysis

While DG Environment had a clear obligation under RoHS to assess the lighting exemptions in 2016 and act on that assessment, DG Energy also has authority over certain aspects of lighting regulation under the Ecodesign Directive. On the other hand, the Ecodesign directive was designed (in 2009) as complementary to existing Community instruments including RoHS (first adopted in 2002)[1].

Despite this, the lighting industry has been able to leverage the distinct regulatory processes related to energy efficiency and to hazardous substance management into endless postponements of limitations of sale on unsafe and inefficient mercury-based lighting.

Under the RoHS Directive:

- Article 5(1)(a) of the RoHS Directive sets out six criteria which must all be met in order to grant an exemption for a mercury-containing product: (i) Annex II materials or substances; (ii) reliability of substitutes, (iii) environment, health and safety, (iv) availability of substitutes, (v) socioeconomic impact, and (vi) impact on innovation.

- The exemptions which limit the amount of mercury in lamps under RoHS was valid until July 2016.

[1] Ecodesign Directive, preamble paragraph 35.

- The RoHS review process started in 2015, examining the future of the lamps containing mercury. The EEB had already researched and submitted evidence[2] showing that for the larger fluorescent lamp categories, mercury-free LED alternatives were already available in the market. This evidence was further supported by the Commission's independent consultant Oeko Institute's 2016 report[3], which recommended revoking the exemptions and therefore phasing out the biggest categories of fluorescent lamps – CFLs and most LFLs – as early as January 2018.

- Despite this finding and correct application of the legal requirements under RoHS, DG Environment's process became frozen, apparently because of pressure from the lighting industry. At the request of the lighting industry, a decision was taken by DG Environment to conduct an additional Socio-Economic Analysis which was launched in the beginning of 2017 and foreseen to be published by Sept 2017. The Analysis report was eventually published in July 2019 – nearly two years late – and yet was still based on 2016 data. This study showed 250 billion euro costs due to the outdated figures used indicating among others, that the 'plug and play' possibility (direct replacement of fluorescent with LED that could operate on the same ballast) was only 20%. When a plug and play lamp is installed, the costs is practically zero – it is only the cost of the lamp to be considered.

- In December 2019, new evidence[4] (published by the Swedish Energy Agency (SEA) and CLASP) highlighted the fact that the data previously reviewed by the Ecodesign Committee and the RoHS expert group were out of date and did not reflect the current European lighting market. Indeed, the RoHS and Eco-design 2016 and 2017 studies respectively, were based on market data from between 2013 and 2016 and did not capture the innovation that had taken place over the previous three years. The new research, including the citations and references, concluded that mercury-free drop-in (direct retrofit) alternatives to fluorescent lamps exist for over 90% of the fluorescent luminaires in Europe, and thus the RoHS exemption for fluorescent lighting is clearly no longer needed nor is it justified.

- The SEA-CLASP report quantified the following benefits[5] for Europe by removing the exemptions (for CFLni, T5 and T8) by 2021:
    - 4.8 metric tonnes of mercury are avoided: 2.6 metric tonnes from the lighting supply chain and 2.2 metric tonnes from avoided emissions from power stations (coal);
    - €12.5 billion in energy and replacement lamp savings for businesses and consumers across Europe;
    - 138.3 TWh of electricity savings; and
    - 40.9 million metric tonnes of CO_2 emission savings.

- In February 2020, DG Environment convened an Expert meeting on lighting – the Commission, LightingEurope and EEB/CLASP were present as well as both of the Commission's independent

[2] https://www.zeromercury.org/download/6/position-paper/1317/151016_eep-rpn-mpp_comments_on_rohs_request-final.pdf
[3] https://rohs.exemptions.oeko.info/fileadmin/user_upload/RoHS_Pack_9/RoHS-Pack_9_Part_LAMPS_06-2016.pdf
[4] "Evidence of the availability of mercury-free alternative products to certain fluorescent lamps", revision v.2 published by the Swedish Energy Agency and CLASP Europe. 12 December 2019. Link: https://meta.eeb.org/wp-content/uploads/2019/11/SEA-and-CLASP-analysis-of-RoHS-exemptions-for-fluorescent-lamps-v2-1.pdf
[5] Benefits in this modelling were calculated for Sweden and CLASP by VHK, the consultants who conducted the lighting market analysis for DG ENER. The estimates were calculated using the same European lighting market model.

consultants Oeko Institute and VHK. The consultants confirmed the validity of the figures shown in the SEA/CLASP study.

- This led the Commission to ask the consultants to revise the Socio-Economic Analysis that had previously been published in July 2019. The revised report was published in July 2020, presenting new (final) estimates for Europe from phasing out CFLni, T5 and T8 in 2021. This study found that it would lead to around **€30 billion in net benefits**[6].

- New calculations on the costs of the delays in the EU decision have been carried out and just published on 27 January 2021, by CLASP[7]. **With one year of regulatory delay, Europe loses €5.6 billion in cost savings due to excess energy use and adds 570 kg to its mercury pollution burden. As the delay lengthens, the cost goes up.**

Ecodesign Directive Process

- An Ecodesign product regulation process was taking place almost in parallel with the above in 2017-2019, looking at some of the same lighting products. The first study by the independent consultants VHK advising the Commission, dated December 2017, resulted in a draft of the Implementing Measure (i.e., DG Energy decision) that CFLs and many LFLs should be phased out by September 2020[8]. Industry exerted heavy pressure on DG Energy and was able to postpone the effective date of September 2020 proposed by the Commission to be three years later: September 2023 for the highest volume LFLs – T8.

- The lighting regulation adopted under Ecodesign (Commission Regulation 2019/2020, 1st October 2019[9]) – looking at the energy efficiency – bans T2 and T12 LFLs and CFLs with integrated ballast in September 2021, and the high-volume lengths (2-foot, 4-foot and 5-foot) of T8 LFLs in September 2023. Other types of fluorescent lamps – including T5 LFLs and CFLs without integral ballasts were not allocated phase out timelines under Ecodesign, and thus will persist in the European market.

- As a result, the Ecodesign decision appears to have not considered all the data and studies under the RoHS process, and political compromises meant that the initially proposed dates were again pushed down the road. The phase-out dates for these products were delayed for years due to an industry lobby that sought to keep the more profitable[10] mercury-lighting in the European market – essentially putting profit before people.

Industry approach

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[6] "Update of the data provided by the analysis model developed in the course of the `Study to assess socio-economic impact of substitution of certain mercury-based lamps currently benefiting of RoHS 2 exemptions in Annex III´"

[7] https://clasp.ngo/publications/quantifying-lighting-benefits-under-the-rohs-directive-calculating-the-cost-of-lost-time

[8] https://www.eceee.org/ecodesign/products/2452009linear-and-compact-fluorescent-lamps/

[9] Commission Regulation (EU) 2019/2020 of 1 October 2019 laying down ecodesign requirements for light sources and separate control gears pursuant to Directive 2009/125/EC of the European Parliament and of the Council and repealing Commission Regulations (EC) No 244/2009, (EC) No 245/2009 and (EU) No 1194/2012 (Text with EEA relevance.) https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2019.315.01.0209.01.ENG&toc=OJ:L:2019:315:TOC

[10] For information on the profitability of mercury lighting, which explains why industry is so insistent on keeping it in the market, please see: https://meta.eeb.org/2019/12/05/mercury-spotlight-the-toxic-lamps-that-shall-not-be-turned-off/

In 2017, Signify (formerly Philips Lighting) announced to their shareholders in their annual report that one of their new business strategies was to be the "last man standing" selling conventional lighting to extract value from the conventional (primarily fluorescent tubes and lamps) business. The reason for this is due to the very high profit margins on each of the old technology lamps sold. Here are some quotes from their recent Annual Reports which illustrate this point:

- 2017 Annual Report, p20: "2018 and beyond: The performance of Lamps in 2017 reflected the successful implementation of the company's last man standing strategy to continue to extract value from the conventional business. A continued reduction of the manufacturing footprint and cost base supports the objective to maintain an Adjusted EBITA margin of at least 16% until 2019."

- 2018 Annual Report
  - p7: "Strategic focus: We stayed focused on executing against our strategic priorities, continuously shaping the transformation of the industry. While the decline in conventional lamps is ongoing, we continue to increase our market share and profitability, benefiting from our 'last man standing' strategy. The halogen lamps ban in Europe particularly benefitted our third-quarter sales."
  - p24: "2019 and beyond: The performance of Lamps in 2018 reflected the successful implementation of the 'last man standing' strategy to continue to extract value from the conventional business,"

- 2019 Annual Report
  - p7: "We again increased our market share in conventional lamps, sustaining a high level of profitability, benefiting from our 'last company standing' strategy"
  - 2019 Annual Report, p28: "Lamps' focus is on winning market share in key segments and markets to remain the 'the last company standing'. … As a cash engine, Lamps continues to deliver on its 'last company standing' strategy, which resulted in further market share gains and strong free cash flow generation of EUR 222 million in 2019."

LEDvance, formerly the lamps division of Osram but which is now 100% owned by MLS, a Chinese electronics company, is following the same strategy as Signify. Both companies attended the February 2020 technical meeting at DG Environment and openly argued with the independent consultants, EEB and CLASP over the evidence presented that demonstrated LED lamps are now plug-and-play retrofittable into over 90% of the fluorescent sockets in Europe. Their opposition is both self-serving and contradictory because the evidence base illustrating this high level of compatibility (presented in Annex A of the Sweden-CLASP report[11]) was prepared using industry compatibility technical reports from their and other manufacturers' websites.

Criteria to phase out mercury lighting under Article 5 of RoHS

As discussed above, Article 5(1)(a) of the RoHS Directive sets out six criteria which must be met in order to grant an exemption for a mercury-containing product: (i) Annex II materials or substances; (ii)

[11] Article about the report: https://clasp.ngo/updates/2020/report-shows-market-readiness-to-eliminate-mercury-based-lighting Copy of the report itself: https://storage.googleapis.com/clasp-siteattachments/SEA-CLASP-Clarifications-on-Industry-Comments_final.pdf

reliability of substitutes, (iii) environment, health and safety, (iv) availability of substitutes, (v) socioeconomic impact, and (vi) impact on innovation.
The Swedish Energy Agency and CLASP applied these six criteria to the three mercury-containing fluorescent lamps – CFLni, T5 and T8 linear fluorescent – and found that none of the six criteria are met for any of these lamps (see analysis, evidence and discussion of these criteria in Annex B of this Sweden-CLASP report[12]). In other words, at this time, **none of the criteria for granting an exemption for fluorescent lamps are currently met**.

Conclusion

Complying with the legal obligation to end these lighting exemptions under RoHS has a net positive financial impact on consumers, in addition to the significant public health benefits.

The Commission should proceed without further delay to adopt a decision to phase out, as a minimum, CFLni, T8 and T5 mercury-added lamps with maximum transition time of 12 months.

[12] https://storage.googleapis.com/clasp-siteattachments/SEA-CLASP-Clarifications-on-Industry-Comments_final.pdf