

Texte zu den geplanten neuen EU-Regelungen zur umweltgerechten Produktgestaltung und zur Energieverbrauchs-kennzeichnung in der Beleuchtung – Zusammenstellung ^[1] des Umweltbundesamtes (UBA), Deutschland



Studien der EU-Kommission

Anträge auf Erneuerung verschiedener Ausnahmeregelungen nach Richtlinie 2011/65/EU (RoHS):

Studie vom 29. Juli 2019

– Stellungnahme des Herstellerverbandes LE ^[2]
vom 8. November 2019 –

Hinweis: Bitte beachten Sie, daß der angehängte Text nur in Englisch verfaßt ist.

EN: Information on the coming EU Lighting Regulations – Ecodesign and Energy Labelling – Compilation ^[1] of the Federal Environment Agency (UBA), Germany

Studies of the EU Commission

Requests for renewal of various exemptions under Directive 2011/65/EU (RoHS)

– Study of 29 July 2018: Comments by the Industry Association LE ^[2]
as of 8 November 2019 –

FR: Informations sur les futures réglementations de l'UE concernant l'éclairage – l'écoconception et l'étiquetage énergétique – Compilation ^[1] de l'Agence Fédérale de l'Environnement (UBA), Allemagne

Études de la Commission européenne

Demandes de renouvellement pour diverses exemptions pertinentes accordées par la directive 2011/65/UE (LdSD)

– Étude du 29 juillet 2019 : Commentaires de l'association de producteurs LE ^[2]
de 8 novembre 2019 –

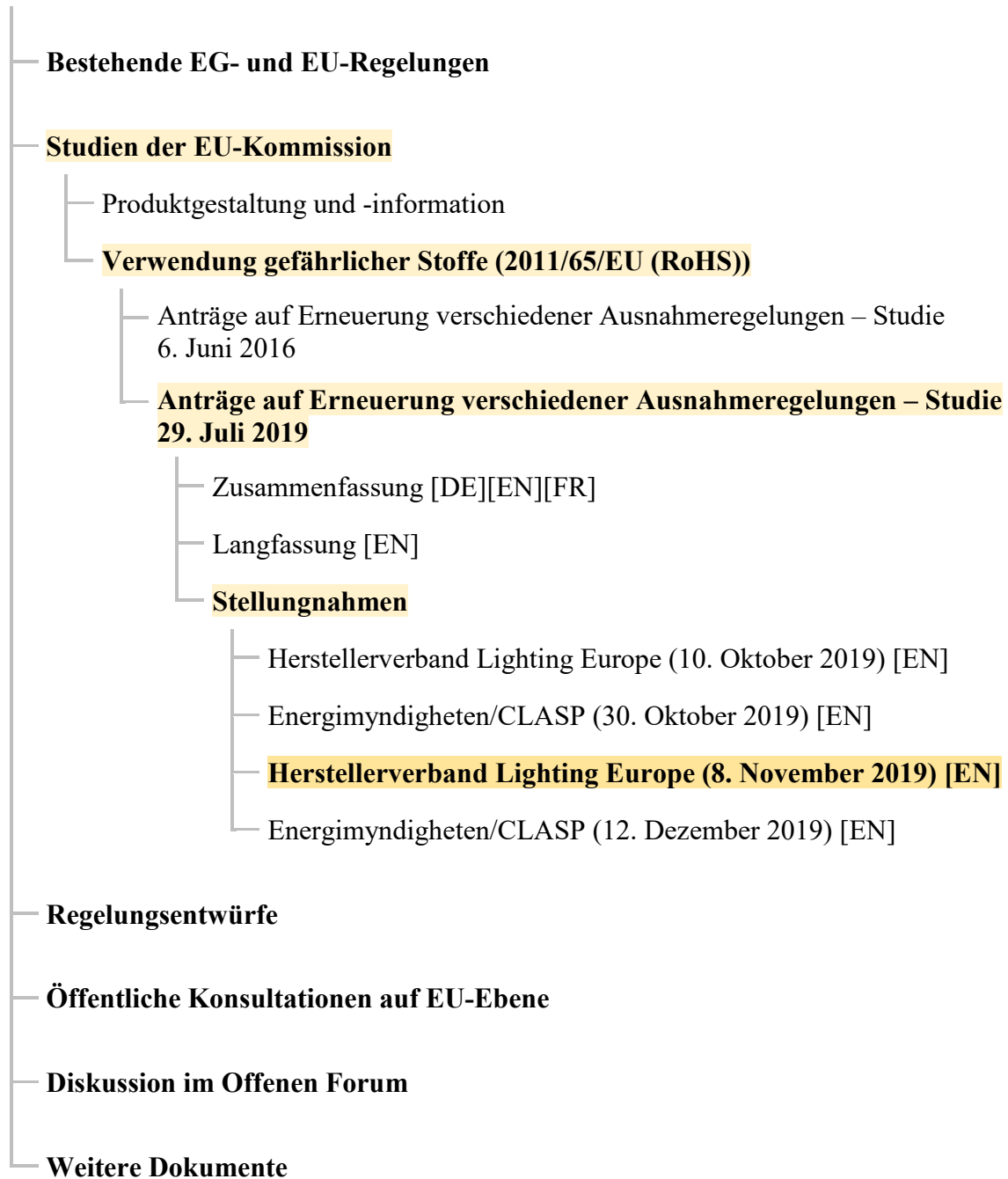
Indication : Veuillez noter que le présent texte n'est disponible qu'en anglais.

^[1] <https://www.eup-network.de/de/eup-netzwerk-deutschland/offenes-forum-eu-regelungen-beleuchtung/dokumente/texte/>

^[2] LE = Lighting Europe; <http://www.lightingeurope.org/>

Texte im Offenen Forum

(abc = vorliegender Text)



Abkürzungen/Erklärungen: ● CLASP = Collaborative Labeling and Appliance Standards Program, USA (Kooperationsprogramm für Kennzeichnungs- und Gerätestandards) <https://clasp.ngo/> ● EG = Europäische Gemeinschaft ● Energimyndigheten ist die staatliche Energieagentur Schwedens; <https://www.energimyndigheten.se/en/> ● EU = Europäische Union

Documents in the Open Forum

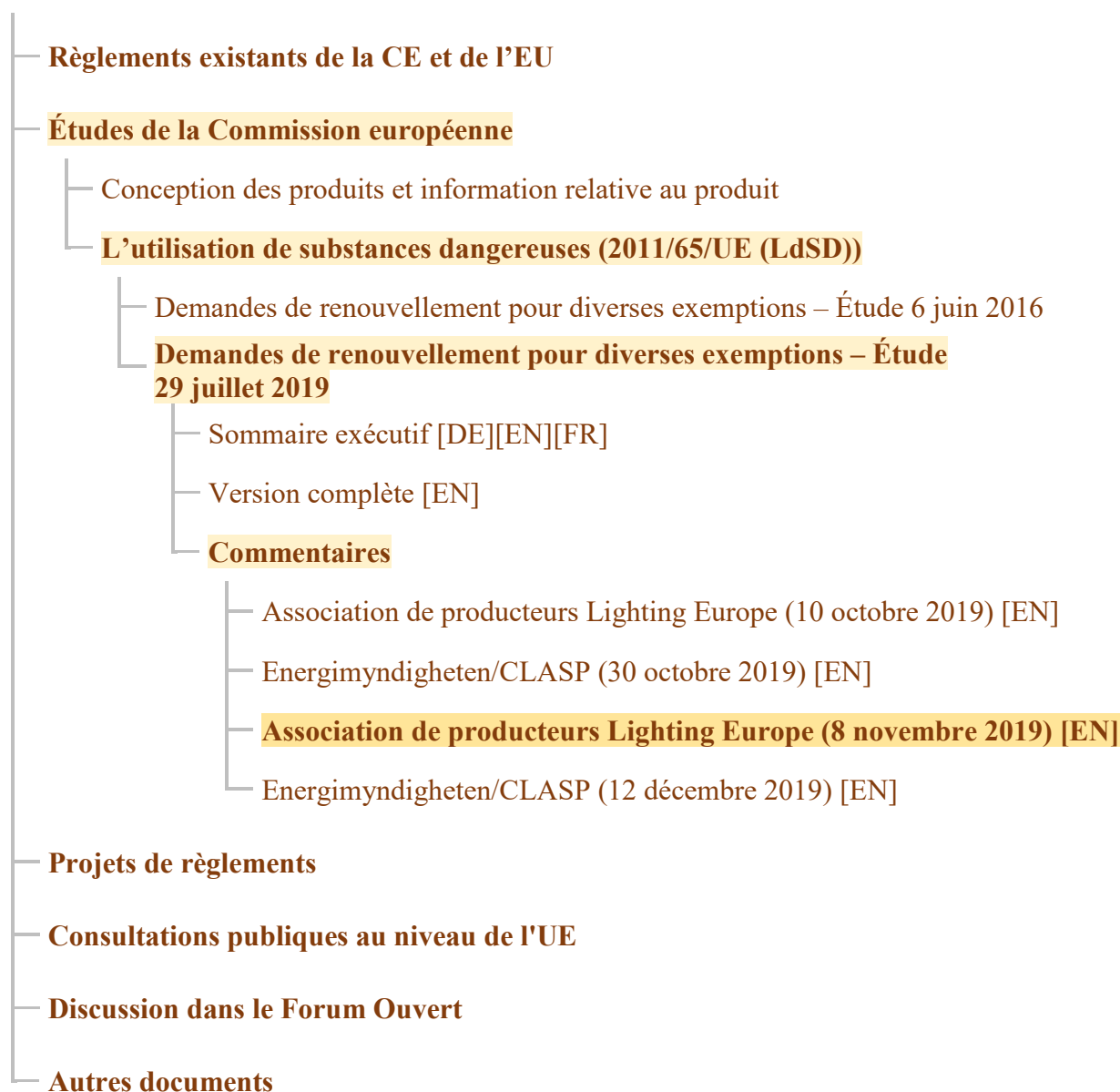
(**abc** = text at hand)



Abbreviations/Explanations: • CLASP = Collaborative Labeling and Appliance Standards Program, USA; <https://clasp.ngo/> • EC = European Communities • Energimyndigheten is the national Energy Agency of Sweden (SEA) • EU = European Union; <https://www.energimyndigheten.se/en/>

Documents dans le forum ouvert

(abc = présent document)



Abréviations / Déclarations : ● CE = Communauté européenne ● CLASP = Collaborative Labeling and Appliance Standards Program, États-Unis (Programme de coopération pour les normes d'étiquetage et les normes relatives aux dispositifs) <https://clasp.ngo/> ● Energimyndigheten et l'administration nationale suédoise de l'énergie ● UE = Union européenne ; <https://www.energimyndigheten.se/en/>

Es folgt ein unveränderter Originaltext.

EN: The following is an unmodified original text.

FR: Ce qui suit est un texte original.

Ms Karolina Zazvorkova
 Directorate-General for the Environment
 B3 - Waste Management & Secondary Materials
 Avenue de Beaulieu 9 – 5/106
 B-1049 Brussels/Belgium

Brussels, 8 November 2019
 2.08_11_2019.12

Subject: Additional Information on Compatibility and Waste - RoHS Mercury Exemptions

Dear Ms Zazvorkova,

On behalf of LightingEurope, I would like to share additional feedback regarding our 2015 applications for the renewal of the RoHS mercury exemptions for lamps and kindly request that you also share this information with the members of the RoHS Member States expert group.

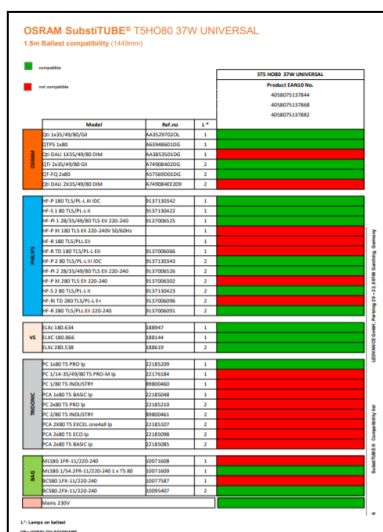
We understand that during the exchange in the October 21st meeting, there have been discussions on the availability of LED substitutes for certain lamp types, supported by a report of the Swedish Energy Agency and CLASP, and on the impact of waste lamps.

LightingEurope, as the applicant for the renewal of these exemptions, would like to respond that:

- LED substitutes are not available for all lamp types covered by the RoHS mercury exemptions, due to the variety of lamps and applications they are used in and the possible compatibility issues between the LED substitute lamps and the installed lighting fixture.
- Preliminary waste collection data recently gathered in cooperation with EucoLight illustrates that the industry is meeting collection and recycling targets and that the renewal of exemptions will not result in significant additional waste lamps – we estimate a total of 6.6% additional waste as a result of renewing RoHS exemptions 1 and 2.

Herewith some additional details on these two points.

1/ On availability of mercury-free LED substitutes to certain fluorescent lamps:



The table lists various lamp models and their compatibility with LED substitutes. A legend indicates green for 'compatible' and red for 'not compatible'. The table is organized into categories: T5 HO80 37W UNIVERSAL, T5 HO80 37W UNIVERSAL (with a sub-table for Philips EcoLight), T5 HO80 37W UNIVERSAL (with a sub-table for Philips EcoLight), T5 HO80 37W UNIVERSAL (with a sub-table for Philips EcoLight), T5 HO80 37W UNIVERSAL (with a sub-table for Philips EcoLight), and T5 HO80 37W UNIVERSAL (with a sub-table for Philips EcoLight).

The SEA/CLASP report selects a few samples of marketing communications and mistakenly claims this is evidence of the availability of mercury-free LED substitutes for all fluorescent lamps and for all the installations they are used in.

The report completely disregards the publicly available technical documentation from these same companies ([Signify](#), [Ledvance](#) and [Tungsräm](#)) that illustrates that these LED substitutes are not compatible with all the installed lighting fixtures.

This means that the LED substitutes will not work in all installed lighting fixtures. For example, a survey of the most popular lineal fluorescent lamp types of LightingEurope members illustrates that for more than 2400 tested lamp/installed driver combinations, 23%

result in non-functioning installations, 12% result in variations in light level. *Please see Annex 1 for further examples of the consequences of non-compatibility.*

The SEA/CLASP report only selects a few lamps and does not take into account all the different lengths of tube lamps nor all the different lamp sockets to show that there are mercury-free LED substitutes for all these lengths and socket types. LightingEurope did a quick check on amazon.de and found substitutes available for only 5 of 16 lengths of T8 lamps, i.e. only 30% of all available lengths.

It is because of these compatibility issues and the variety of lamps that the Oeko socio-economic impact assessment, mandated by the European Commission and published in August 2019, arrives to such a substantial cost for substitution (e.g. 250 Billion Euros between 2019-2025 for linear fluorescent lamps-LFLs).

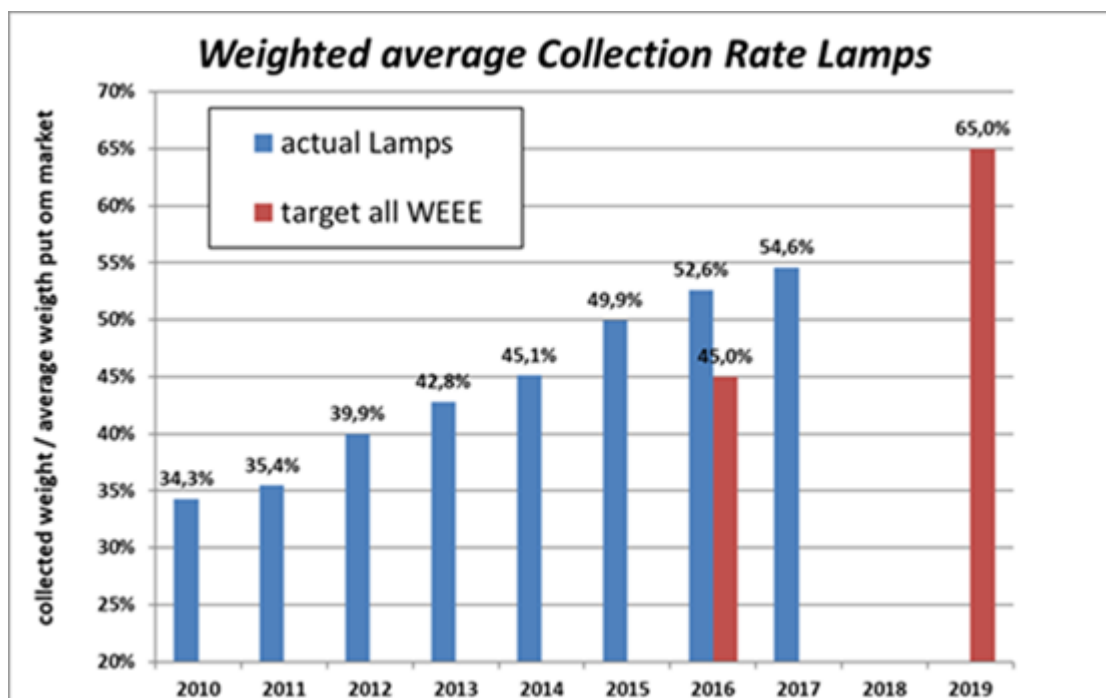
LightingEurope asks regulators not to confuse marketing communications with technical facts and to make decisions based on the latter and taking into account the entire product portfolio used in the lighting fixtures installed across Europe today.

2/ Updated data on collection of waste lamps

LightingEurope is currently collecting recent collection and recycling numbers in cooperation with EucoLight, the European association representing the WEEE schemes for lighting.

The table below contains the data we have received so far and covers both consumer and professional lamps.

The table illustrates that the lighting industry has met the 2016 target for waste collection and is on the way to reach the 2019 target.



Some general remarks about waste lamps:

- As professional lamps have a long lifetime, only a small fraction is replaced each year. Collection rates will increase over the next few years, as the number of lamps placed on the EU market will decrease.

- Professional lamps have higher collection rates compared to consumer lamps (e.g. CLF-I). LightingEurope agrees that the exemption for such consumer lamps should expire on 1 September 2021, the date communicated to the global market under EU ecodesign rules.
- The bulk of the lamps that will need to be recycled over the next few years are already installed and in service. The renewal of the exemptions will not significantly add to the number of lamps on the EU market that will need to be collected and recycled – LightingEurope estimates that the renewal of RoHS exemptions 1 and 2 will result in an 6.6% increase of the total collection and recycling effort (*see Annex 2 for the details of this calculation*).
- The lamps that will be sold in the next years (according to the EU MELISA model) are only a fraction of these installed lamps. This means that the number of lamps arriving to the waste stream will continue to decrease.

In conclusion:

- LED substitutes are not available for all lamp types covered by the RoHS mercury exemptions, due to the variety of lamps and applications they are used in and the possible compatibility issues between the LED substitute lamps and the installed lighting fixture.
- Recent waste collection data illustrates that the industry is meeting targets and that the renewal of exemptions will not result in significant additional waste lamps.

We trust that this information will be valuable for you and remain at your disposal if you have any questions or comments regarding the information provided above.

Yours sincerely,



Ourania Georgoutsakou
Secretary-General

ANNEX 1 Compatibility of LED Substitutes

The SEA/CLASP report highlights marketing claims of certain LightingEurope members, but forgets to also highlight and take into account all the files that the same LightingEurope members make available, also publicly on their websites, to alert and inform the market of compatibility problems and the limits of the 'plug and play' marketing communications. See for example the compatibility information publicly available on the websites of [Signify](#) (Philips brand products), [Ledvance](#) (Osram brand products) and of [Tungsrham](#).

The Oeko Institute has made this distinction in their 2019 socio-economic impact assessment mandated by the European Commission and have concluded that a premature phaseout would come at a significant cost (e.g. 250 Billion euros for LFLs between 2019-2025) due to the lack of compatible, plug-and-play LED lamps to replace all fluorescent lamps in all the luminaires installed across Europe.

The luminaires currently installed across Europe are not designed nor approved for the use of LED tubes, as these luminaires function in a wide variety of applications and temperatures. This is why LED tube manufacturers include compatibility tables and other disclaimer information and warnings, stating that the compatibility information of a LED tube for a certain conventional driver is tested under a lab-controlled environment and should be treated as a recommendation and cannot be guaranteed¹.

Potential compatibility issues include flicker, damage to the substitute lamp or the substitute lamp no longer operating due to non-compatibility with the ballast, no dimming possibility, issues with light distribution and heating of closed luminaires, to list a few examples.

A survey of LightingEurope members' products indicates that compatibility of LED alternatives for current luminaire installations is not universal. The inventory for the most popular lineal fluorescent lamp types shows that for many lamp driver combinations (out of more than 2400 tested lamp / driver combinations):

¹ Compatibility information is meant for information purposes only and must be treated as a recommendation. Manufacturers attempt to provide best results, results that are generated in a lab-controlled environment and may differ from actual application conditions.

- More than 565 LED tube/installed driver combinations are not compatible, i.e. resulting in non-functioning installations. This is 23% of all tested combinations (do not start, flicker, emit no light).
- More than 284 LED tube/installed driver combinations result in variations in light level (of more than 10% compared to specification) – this is 12% of all tested combinations
- Most LED tubes are not suitable for dimming installations, resulting in no dimming possibility and may even cause lamp damage for example for daylight-controlled installations.
- All LED tubes are tested under a lab-controlled environment and are not tested in real luminaires which might have higher internal temperatures (e.g. closed cover protected luminaires used e.g. in car parking's & home garages, industry halls, street lighting)

The compatibility of LED tubes with installed electronic drivers of other manufacturers, not members of LightingEurope is not known to us, nor have we found technical guidance documents online. We encourage regulators to base themselves on such compatibility files when evaluating whether universal mercury-free substitutes are available for all installed lighting.

The compatibility guidance documents focus on the behavior of LED tubes and contain recommendations, e.g.:

- Acoustic: audible noise can occur if LED tubes are used in currently installed conventional luminaires.
- Check and follow the instructions of ballast manufacturers for installation instructions. The responsibility of installing and/or rewiring adaptations of the luminaire for new LED tubes remains the responsibility of a professional installer.
- Verify the latest update of the compatibility list on the manufacturer website.
- Dimming an LED tube:
 - Some ballast types indicated in this list are conditionally released by manufacturers to offer dimming functionality
 - The dimming curve of the LED tube might differ from the curve of a fluorescent lamp
 - In case of usage of a non-dimmable product in a dimmable application, warranty does not apply.

The SEA/CLASP report does not take into account other distinctive lamp features when evaluating the availability of substitutes:

a/ Variety of lengths for LFLs: T8 lamps for example are available in 16 lengths, yet the SEA/CLASP report make no reference to this parameter. LightingEurope did a quick check on amazon.de and found substitutes available for only 5 lengths, i.e. only 30% of all available lengths.

b/ Variety in lamp bases - Not all lamp bases have LED substitutes. The images below demonstrate that there is a large variety in lamp bases.

Example 1: Lamp bases for Linear Fluorescent lamps – substitutes for 3 out of 9 lamp bases

FLUORESCENT PIN BASES



Example 2: Lamp bases for Compact fluorescent lamps without integrated control gear (CFL-ni) – substitutes for Six out of nineteen lamp bases

COMPACT FLUORESCENT PLUG IN BASES



ANNEX 2 Calculation of waste impact of renewing RoHS exemptions 1 and 2

On the basis of the EU MELISA model, in 2019 there are:

- 2228 Million linear fluorescent lamps operating in Europe, these lamps contain 8874 kg Mercury
- 3970 Million compact fluorescent lamps operate (CFL-I and CFL-ni) they contain 12101 kg Mercury

This means in total there is 21 ton of mercury in installed 6 billion lamps that will have to be collected and recycled the coming years.

If exemptions 1 and 2 are granted until 21 July 2021, a potential 452 Million additional lamps extra will be sold according to the EU estimations. This is before the ban on CFL-I lamps on 1 September 2021 and the limitation of market access for T8 on 1 September 2023.

These lamps contain in total 1.4 Ton of mercury.

This means that the collection and recycling effort will increase 6.6% by granting the exemption until July 2021.