

Consultation Questionnaire Exemption Request No. 2(b)4

“Lamps for other general lighting and special purposes (e.g. induction lamps): 15 mg may be used per lamp after 31 December 2011 “

Abbreviations and Definitions

CFL	Compact Fluorescent
Hg	Mercury
LED	Light emitting diode
LEU	LightingEurope
Mpcs	Million pieces

Background

The Oeko-Institut and Fraunhofer IZM have been appointed within a framework contract for the evaluation of applications for the renewal of exemptions currently listed in Annexes III of the new RoHS Directive 2011/65/EU (RoHS 2) by the European Commission.¹

LightingEurope (LEU) has submitted a request for the renewal of the above mentioned exemption, which has been subject to a first completeness and plausibility check. The applicant has been requested to answer additional questions and to provide additional information, to be made available on the request webpage of the stakeholder consultation (<http://rohs.exemptions.oeko.info/index.php?id=228>).

LEU apply for the renewal of Ex. 2(b)(4), with the current wording formulation listed in Annex III of the RoHS Directive and requesting the maximum available duration allowed.

According to LEU, lamps in the scope of Ex. 2(b)(4) are in a wide variety of different lamp families with mercury content from < 2 mg and up to 15 mg. They are mainly niche products with low market shares compared to the other fluorescent lamps, with a vast variety of parameters (form, factor, length, spectrum, colours, technologies e.g. induction, external ignition etc.).

In general, LEU explains that fluorescent lamps are very energy- and resource efficient lamps. They contain a small amount of intentionally added mercury in the discharge tube, which is essential to convert electrical energy into light. There are no specific market data available for the lamps covered by this exemption.

There is a growing market for mercury-free lamps based on LED technology with features such as energy efficiency and design flexibility. LEU explains however, that at present alternatives are not available for most of the lamps covered by Ex. 2(b)(4). The lamp portfolio of this exemption addresses fragmented, specialized applications, that cannot be easily replaced by LED in all situations, since in some cases, the functional objective of the special lighting application might not be met. Decided if a LED

based solution can be an effective replacement for an existing fixture is said to mostly require involvement of people with professional expertise due to the following issues:

- **Electrical compatibility:** A LED tube has to operate on the installed control gear without any problems. This can require technical changes to the luminaire (rewiring), especially in luminaires equipped with an electronic control gear.
- **Applicable legal and compliance requirements** like conformity assessments, declaration, and labeling of the changed luminaire, fixture or other electrical or electronic equipment are needed. The person installing the LED based solution is responsible to test and ensure the new system fulfils such requirements. LEU claim there is a risk that this will not be carried out correctly in such cases when a professional is not involved, resulting in safety risks and unsuitable light.
- **Different light distribution:** due to the LED tubes changed optical characteristics vs. the existing lamp, the light plan can be no longer optimized for the application.
- **Restricted choice in the LED based lamps,** only a fraction of the existing lengths and colours are available.

For most of the lamps covered by this exemption there is currently no significant market for LED retrofit or conversion lamps. Possible routes for replacing a linear fluorescent lamp with a LED substitute are:

- **Retrofit route:** a fluorescent lamp is substituted by a LED tube. The luminaire itself is not rebuilt and the control gear remains in the installation. Driver compatibility is assumed here.
- **Conversion route:** the fluorescent lamp is replaced, and technical changes also need to be made to the luminaire: ballasts and/or internal wiring may need to be replaced or altered – it is explained that this shifts the responsibility for the technical and the safety consequences of the conversion to the party carrying out the conversion.
- **Rewiring route** – removing the control gear (CG) from the existing installation – in these cases it is assumed that driver compatibility of the LED requires removal of the CG.
- **Replacing the luminaire completely** with an LED compatible luminaire (in some cases luminaire with integrated LED).

A growing market approach is the use of LED luminaires, but this full luminaire replacement is said to result in additional investment (in the luminaire) and negative environmental impact (assuming the original installation is not yet at end-of-life). There are no data available about the number of luminaires, equipment and fixtures using non-linear lamps.

LEU does not expect LED alternatives to allow for a full phase-out of Ex. 2(b)4 lamps within the coming 5 years, and thus request a renewal of the exemption.

For details, please check the applicant's exemption request at:

<http://rohs.exemptions.oeko.info/index.php?id=260>

The objective of this consultation and the review process is to collect and to evaluate information and evidence according to the criteria listed in Art. 5 (1) (a) of Directive 2011/65/EU (RoHS II), which can be found under:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32011L0065:EN:NOT>

If you would like to contribute to the stakeholder consultation, please answer the following questions:

Questions

1. The applicant has requested the renewal of Ex. 2(b)(3), with the current wording formulation:
“Lamps for other general lighting and special purposes (e.g. induction lamps): 15 mg may be used per lamp after 31 December 2011” and with the maximum validity period possible.
 - a. Do you agree with the scope of Ex. 2(b)(3) as proposed by the applicant?
 - b. To support your views, please provide detailed technical argumentation / evidence in line with the criteria in Art. 5(1)(a).
 - c. Please suggest an alternative wording and explain your proposal, if you do not agree with the proposed exemption wording or with the wording of one or more of the entries.
2. LEU state that a vast variety of parameters (form factor, length, spectrum, etc.) cannot be easily replaced with LED applications.
 - a. Do you agree with this statement?
 - b. If not, please explain what alternatives are available and what part of the Ex. products scope they could cover.
 - c. For possible alternatives, please provide typical parameters and specifications, so that a comparison with Ex. 2(b)(4) lamps is possible.
 - d. Please clarify what share of lamps can be substituted with LED replacements (conversion route; rewiring route; etc.)
3. LEU proposed definitions for special purpose lamps falling under the RoHS Directive. Please explain how lamps falling under this term and under Ex. 2(b)(4) could be differentiated from lamps used for generally purposes in terms of their technical parameters?
4. Please explain what efforts are being undertaken to develop further substitutes for the range of lamps falling under Ex. 2(b)(4)

Please note that answers to these questions are to be published as part of the available information relevant for the stakeholder consultation to be carried out as part of the evaluation of this request. If your answers contain confidential information, please provide a version that can be made public along with a confidential version, in which proprietary information is clearly marked.