

**CZ comments on proposals for review of regulations
244/2009, 245/2009, 1194/2012 and 874/2012
(ecodesign and energy labelling of light sources)**

January 2018

The Czech Republic thanks the Commission for the effort in preparing the proposals for review of the following legislative acts: Regulation 244/2009 with regard to eco-design requirements for non-directional household lamps, Regulation 245/2009 with regard to eco-design requirements for fluorescent lamps without integrated ballast, for high intensity discharge lamps, and for ballasts and luminaires able to operate such lamps, Regulation 1194/2012 with regard to eco-design requirements for directional lamps, light emitting diode lamps and related equipment and Regulation 874/2012 with regard to energy labelling of electrical lamps and luminaires.

Following the consultation forum held on 7/12/2017. Please find below our comments on the working documents.

Ecodesign requirements

The Czech Republic appreciates the Commission's intention to unify the current regulations into one single regulation for all light sources. Rapid technological development of light sources have been witnessed in last years, so it is needed to reflect it in the ecodesign as well as labelling regulations.

Regarding eco-design requirements, we cannot agree with the proposed phase-out of T8 linear fluorescent light sources by 2020. On the contrary, based on the explanatory memorandum, we think that suitable LED replacements are not available for all applications. Above that T8 fluorescent lamps are widely used in state and public sectors, often installed only recently while using European and national funds. Especially in case of newer installations, more time is needed in order to payback the investment.

From the technical point of view, simple replacement of the T8 fluorescent lamp by an alternative LED tube is usually not possible due to the different light emission characteristics of the luminaire. Therefore, a new design of the spatial distribution of the luminous flux is necessary in order to preserve the original illumination of the space, or the luminaire needs to be redesigned (disconnection of the ballast). Equally important are other aspects: ensuring electromagnetic compatibility, maintaining electric safety (the original luminaire must be reassessed according to EN 60598-1, new electric devices are needed if LED tube is to be installed) and the aspect of the light flux decrease over the lifetime of the light source needs to be taken into account (possible decrease of lifetime of LED tubes if installed in cover luminaires due to high temperatures). Generally LED tubes cannot be placed at higher ambient temperatures. The maximum ambient temperature for LED tubes is usually about 40 °C (luminaires with protection IP65, ambient temperature for IP66 will be approx. 30 °C).

Therefore the Czech Republic supports allowing T8 fluorescent lamps to stay on the market at least until the next revision of the regulation in 2022.

Removal of light sources and separate control gears

Even though we understand the need to incorporate the principle of circular economy, **the Czech Republic cannot agree with Article 4**, i.e. to introduce requirement that light sources and separate control gears can be readily removed without permanent mechanical damage.

The main reasons are that such requirement may result in a preference of less efficient interchangeable light sources and in a reduction of the overall efficiency of the luminaire as integrated (non-removable) LED sources achieve higher energy efficiency. It should be also taken into account that the lifetime of the LED light source is often declared as the same as the lifetime of the luminaire itself.

Setting such requirement from 2020 is too early - given that it will have a substantial impact on the technology of production because significant part of today's products, especially industrial lights, office lights and decorative design lights have integrated LED sources.

Another issue is that removability does not guarantee the exchangeability of the light source. Therefore we suggest to firstly address the issue of standardization of light sources and the availability of the current types of light sources in the longer time period. **We ask the Commission to explore removability together with exchangeability and to present the possible options in the revision of the regulation in 2022.**

Definition of light source and containing product

From our perspective, the definition of light source is ambiguous and needs to be improved in order to provide clear interpretation. Especially the last paragraph "If a containing product is itself a light source,..." creates room for different interpretations.

In this context, the Czech Republic suggests to explore the possibility to base the definition on standards EN 62504 (General Lighting – Light emitting diode (LED) products and related equipment – Terms and definitions) and EN 13032-4 (Light and lighting - Measurement and presentation of photometric data of lamps and luminaires - Part 4: LED lamps, modules and luminaires). These standards distinguish LED source with socket (LED lamp) and LED module (LED module). As far as the exceptions are concerned, we are in favour of providing an exemptions for special purpose lighting (e.g. theatre lighting and special lighting for medical purposes). However, at the same time we stress that these exceptions need to be precisely specified and limited in order to avoid circumventions.

Lifetime of light source

Rather than setting requirements on removability the Czech Republic prefers setting additional functional requirements on light sources: luminous flux decrease during certain period of time, lifetime of the light source and number of switching cycles. The reason is that functional parameters of the light source have an impact on power consumption (for example luminous flux decrease is taken into account when designing the lighting system) as well as on the circulation economy (for example lifetime and number of switching cycles determine how often the light source is exchanged and thus how often the broken light source is thrown away).

Energy label

The Czech Republic doubts that the proposed procedure to replace existing labels by a new ones is realistic in practice. Unlike for example white domestic appliances, light sources are sold in large quantities and the label is usually printed on the packaging. Therefore dealers will be hardly able to cover all existing labels by a new labels in form of sticker in 14 working days. As the framework regulation 2017/1369 (Article 11, point 13, last paragraph) allows to provide specific rules for energy labels printed on the packaging we ask the Commission to propose different procedure. This could be e. g. prolonging time period for dealers to replace old labels and allowing them to sold products with old labels within the extended timeframe provided that the new label is displayed on the shelf.

Proposals for editorial corrections

- 1) Ecodesign, Article 2 Definitions, point (1) (d) and Labelling, Article 2 Definitions, point (1) (d)
"a colour rendering index CRI > 0 Ra" – CRI is dimensionless, there is no unit.
- 2) Ecodesign, Article 2 Definitions, point (9) and Labelling, Article 2 Definitions, point (8)
„colour rendering index“ (CRI), expressed in Ra,...\" replace by \"colour rendering index (CRI),...\"
CRI is dimensionless.
- 3) Ecodesign, Annex II – Definitions, point (3)
„extra low voltage“ part of the sentence \"...120 V direct current,...\" replace by \"...120 V direct voltage,...\".
- 4) Ecodesign, Annex III, part 1.1 Light sources
\"CRI (in Ra)\" replace by \"CRI (-)\".
- 5) Ecodesign, Annex IV, Table 6, one of the parameters is \"Power factor\", but Annex III, Table 4 sets as a functional requirement \"Displacement factor\", which is similar to \"Power factor\", but their definitions differ. Which one is meant to be required?
- 6) Ecodesign, Annex VI, sentence \"The most efficient light sources have an energy efficiency...\" replace by \"The most efficient light sources have an efficacy...\".
- 7) Labelling, part 3. Legal elements of the delegated act, Article 2
Expression \"efficiency\" is wrongly used and should be replaced by \"efficacy\".
- 8) Labelling, annex V, part 3.1 Light source as an independent product, point (i)
\"the colour rendering index CRI in Ra, rounded...\" replace by \"the colour rendering index CRI, rounded,...\".
- 9) Labelling, Annex V, part 3.1 Light source as an independent product, point (j)
\"if CRI < 80 Ra, and...\" replace by \"if CRI < 80, and...\".