

European Commission
DGENER
att. Mr. Hodson and Mr. Toth

June 30 2011

Ref. PEN/BJH

By e-mail

Page 1/4

Preliminary comments from Denmark on the Commission's discussion papers on eco-design regulation of directional lamps, light emitting diode lamps and halogen lighting converters, and energy labelling of general lighting lamps and diodes.

Denmark welcomes the Commission's draft proposals. Denmark acknowledges the work, which has been put into finalising the papers. However, there is a need to:

- obtain a clear assessment of the possible energy efficiency gains of the different elements in the proposals,
- consider the added value of establishing EU-regulation on some of the suggested items in comparison to the administrative costs of such regulation,
- make the proposals more operational and practical in order to facilitate a simple and cost-effective market surveillance
- make the regulations more precise and – where necessary – more ambitious.

Energy labelling

Denmark has previously expressed reservations towards an energy labelling of lamps primarily for professional use, due to the general energy knowledge among professional designers and planners of office lighting systems. We recognise the point stated in the explanatory note, that due to the inter-changeability of some HID, FL and LED lamps energy labelling of LED will provide better information to the non-professional end-user. However, we find that the possible energy efficiency gains by establishing a labelling regime should be assessed together with the costs of implementing and maintaining such a labelling regime.

We strongly recommend the Commission to change the proposal on labelling of luminaires. The value of a label indicating what range of lamps can be used in a specific luminaire seems to be very limited. Instead the DEA recommends a plain labelling of luminaires, where the energy efficiency of the luminaire is defined on basis of a fraction, where measured flux emitted from the luminaire equipped with a standard lamp is divided

Danish Energy Agency

Amaliegade 44
1256 Copenhagen K

Phone +45 33 92 67 00

Fax +45 33 11 47 43

E-mail: ens@ens.dk

www.ens.dk

Office hours:

Mon - Thursday 8.30-16

Friday 8.30-15.30

CVR-nr. 59 77 87 14

EAN-nr. 5798000020009

Direct +45

by the measured flux from the standard lamp without the luminaire. A labelling scheme based on this relation will provide the consumer with relevant information on the energy efficiency of the luminaire.

We do not see the reason for a short version of the lamp label.

Like the Netherlands the Danish Energy Agency urge the Commission not to adopt the energy labelling regulation before the ecodesign measures has been voted upon by the Regulatory Committee. We also recommend that the final proposal for an ecodesign regulation, and a delegated act on labelling of directional lamps are accompanied by an assessment of not only the potential energy efficiency gains, but also of the possible administrative cost both for Industry and for the Market Surveillance authorities in the Member States. Inter alia the estimated costs of the different (control) laboratory tests included in the acts should be listed.

Specific points in working document 2 draft proposal for energy labelling delegated act

Recital (9) on page 3 and Article 7 on page 7. The date of revision of this regulation should the same as the suggested date of revision of the ecodesign requirements, 3 years.

Article 5 on measurement methods. The present wording seems too flexible and may allow many loop holes for those manufacturers that want find ways not to comply with this regulation. Same comments relevant for the second paragraph in Annex IV of the ecodesign paper.

Article 9 on transitional provisions. 4.) The use of the energy classes defined in this regulation before the regulation enters into force should be limited for only a short period of time, necessary for practical reasons, since the interim period is a 'lawless' period.

Annex V.1 Verification procedure

Markets surveillance on CFLs according to the similar provision in regulation 244/ 2009 in Denmark has shown that the wording: '*the average result of the batch do not vary from the limit, threshold or declared values by more than 10%*' in practice both give rise to uncertainty on how this shall be applied and provides for 'low quality lamps on the market' As minimum the wording in this paragraph should be changed to¹:

The batch shall be considered to comply with the requirements laid down in article 3 and 4, if at least 9 out of every 10 lamps in the batch comply with the limit, threshold or declared value.

Subsequently - when other changes are due in regulation 244/2009 - this

regulation should be corrected too.

Annex VI Energy classes

Since LED lamps' relation between power and flux differs from CFLs' (the relation is closer to linear for LEDs) the formula $P = 0.88\sqrt{\Phi} + 0.049\Phi$ should not be used for LEDs instead lumen/W will be more suitable for LEDs.

Ecodesign requirements

The introduction of 'useful luminous flux' may be theoretically correct, but will make the market surveillance more costly and more complicated. According to our recent check-up only few European laboratories can measure the useful luminous flux, and at a high price. The Danish Energy Agency recommends that the energy efficiency is based on the lamps' luminous flux. The Commission has given no justification for introducing useful luminous flux as a necessary parameter. The DEA recommends therefore that the forward flux (i.e. flux in the lower hemisphere) is used as the basic parameter for directional lamps. This parameter is already used in the American standard for testing Solid state Lighting products (i.e. LED's) IESNA LM-79-08 where it is specified, how to measure the forward flux using a photometric sphere. Since a large proportion of LED lamps have the same dimensions and sockets as reflector lamps, reflector lamps can be tested the same way.

Annex III, 1.3 Energy efficiency requirements for halogen converters: If possible the specification of the requirements and the definitions should be similar to the text in the regulations on external power supplies and on Standby. Regulations 278/2009 and 1275/2008.

Functionality requirements for non-directional and directional LED lamps (table 7 in Annex III)

Rated lifetime at 50% lamp survival and 70% lumen maintenance: 15000 hrs for all lamps or higher for non-retrofits should be possible .

Number of switching cycles before failure: In general the number of switching cycles should equal the number of lamp life time measured in hours, as for CFL in regulation 244/2008. The suggested values of 7500/5000 switching cycles are too low.

Lamp warm-up time: Within 2 seconds a much higher percentage of \varnothing can be achieved (The Chinese Lighting Test Centre states that 95% can be met without problems).

Colour consistency/Colour temperature for LED retrofit lamps: The DEA recommends that requirements on Corre-

lated Colour Temperature (CCT) used in the recent LED Quality Charter is applied. The CCT shall be in the interval 2600-3500 K and shall be close to one of the three: 2700 K, 3000 K and 3500 K.

Flickering: Not mentioned in the table, but due to technical way of dimming LEDs, there should be a frequency requirements of at least 100 Hz.

Lamp power factor: The current research on the impact of power factor from LEDs supports that a power factor of 0.5 is appropriate for LEDs below 25W. There is no need to have the detail suggested regulation.ⁱⁱ

Annex III, 3.2 Information requirements for retrofit LED lamps replacing fluorescent lamps:

The DEA recognises the problems of LED-tubes claiming to substitute fluorescent tubes. However, the proposed measure for excluding low quality or incompatible products from the market seems complex. Especially point (b) should be considered rewritten. As for the test procedures for these lamps outlined in Annex IV 2 on page 21 there must be a less complicated way to test these lamps.

Annex IV Market surveillance: Same general comments as above. As for the verification procedure for retrofit LED lamps replacing fluorescent lamps, the suggested procedure is complicated and costly, we urge the Commission to rethink the procedure and present a more simple and less costly solution.

ⁱ The 10% tolerance on color rendering will let a lamp with colorrendering of 72 pass. Can this really be the intention of the Commission? How is the 10% tolerance applied to warm up time within a certain time limit. Shall the 10 % regulate the time allowed? The percentage of the flux? Or both?

ⁱⁱ The DEA can provide further written documentation for the relevance of a power factor of 0.5.