AUSTRIAN ENERGY AGENCY

Austrian comments on energy labelling working documents regarding possible energy labelling requirements for general lighting and household luminaires (Working documents for Consultation Forum 5th July 2011)

1. Scope

Extension of scope to professional lighting

The extension of the scope to professional lighting products is appreciated, if (as indicated in the explanatory document) labelling for professional lamps is restricted to information in technical documents, websites etc.. We believe that the label facilitates the orientation of professional buyers.

Reduction of information on the label

The reduction of the information on the label to *energy consumption* and *efficiency class* is acceptable if all other essential information is required by the eco-design regulation to be shown on product packages and web sites. Duplication of information on the product packages shall be avoided.

Lumen per watt as the essential indicator of energy efficiency shall be included either on the label or on the product package. Currently Lm/W neither is included in the information on lamp packaging nor on websites and technical documents.

Label for Luminaires

The proposed concept for domestic luminaire labelling seems relatively complex and not easy to apply in practice. Furthermore all E14 and E27 luminaires basically accomodate the whole range of lamp efficiency classes thus allowing no differentiation for a large part of the market. Therefore a simpler labelling approach would be more effective for consumer information.

A simpler “label” could be applied “warning” consumers of buying luminaires which may not be supported with compatible lamps in the future. This could be achieved by an indication similar to the following: “This luminaire can not be operated with lamps better than efficiency class C”.

We support the view that for domestic luminaires it makes no sense to require a comprehensive labelling based on optical parameters. Design of domestic luminaires is highly variable and consumers select products basically based on design criteria rather than any other aspects. Thus labelling based on optical parameters would be relatively complex but not very effective.

In contrast labelling based on optical parameters would be effective for professional luminaires. Such concepts are already successfully applied in Switzerland. This aspect may also be considered in a further revision of the regulation for tertiary lighting.

2. Requirements

Label types

We do not see a need for two types of lables since the difference illustrated in the document is minor. It seems that the simple version can be avoided.

Calculation method

Revising the efficiency scale to a consistent lumen per watt approach would be the cleanest approach (proposed option B). The impact of this approach should be further analysed. It has been argued in the document that filament lamps would be at a disadvantage if this approach is applied. However energy efficiency of halogen lamps remaining on the market after the phase-out due to the ecodesign regulation only varies within a narrow range of 15 to 25lm/W. Thus there is little need for efficiency comparison in this low end efficiency segment and the focus regarding the optimization of the calculation method shall be put on the energy efficient lighting technologies (CFL, HID, LED).

Option C suggesting a switch of the calculation method at an arbitrary threshold of 1300 lm is a less desirable compromise. 1300lm lamps are not only encountered in the professional area but are also used in the domestic sector.

Levels

Defining efficiency levels by a strict technology based approach can be problematic since there may be overlap between classes. Thus it is recommended to define the efficiency scale independent of technologies (though probably roughly corresponding with technology levels).

It is agreed that the directional and non-directional lamps are rarely compared to each other and therefore criteria respectively classes do not need to support such a comparison.

It is recommend that the new labelling scale introduces comparable class sizes facilitating the orientation of the consumer. The original concept with strongly variing class sizes has been partly misleading. A linear easy to understand scale for the consumer similar to the approach indicated in the table below is to be preferred:

Energy Efficiency Class	Non directional lamps (lm/W)	Directional lamps (lm/W)	Technology example
A+++	>120 lm/W	>96 lm/W	LED (2016), LPS
A++	120lm/W >x > 100lm/W	96lm/W >x > 80lm/W	LED (2012) etc., LFL
A+	100lm/W >x > 80lm/W	80lm/W >x > 64lm/W	LFL, CFL, LED etc., MH
A	80lm/W >x > 60lm/W	64lm/W >x > 48lm/W	CFL, LED, MH, HID
B	60lm/W >x > 40lm/W	48lm/W >x > 32lm/W	LEDs. CFLs, HID
C	40lm/W >x > 20lm/W	32lm/W >x > 16lm/W	Halogen IRC
D	<20lm/W	<16lm/W	Halogen

A slight downgrading at the lower end of the scale would not have a negative effect on the market since consumers are already aware of the fact that halogen technology is not energy efficient.

Austrian comments on the working document regarding eco-design requirements for directional lamps, light emitting diode lamps and halogen lighting converters (Working document for Consultation Forum 5th July 2011)

1. Scope

It is welcome that the scope of the regulation covers both lamps for domestic and professional use. This ensures that the whole range of lamp products is covered by the different lighting regulations and gaps are avoided.

An alternative option would be to include the requirements for professional lamps in the ecodesign regulation for the tertiary sector. However this would currently be the more complex and time consuming approach.

2. Definitions

Some definitions shall be further clarified not to leave any room for different interpretation. This issue should be addressed in the technical working group meeting in September. Rated useful luminous flux is not explained in the definition section.

3. Ecodesign-Requirements

3.1 Energy efficiency requirements for directional lamps

The matrix in table 1 defining the stages for the implementation of the efficiency criteria indicates C-class level as mandatory requirement for filament lamps and A class level for all other lamp types at stage 1 and 2. Expecting adoption of the regulation in 2012 stage 1 and 2 would correspond with 2013 and 2014. For stage 3 (expected to be 2016) B class level is indicated for filament lamps and A+ class for all other lamp types.

We suggest the following slight modifications to this approach:

- Introduction of class B level for low voltage halogen lamps at stage 1 or 2 (2013 or 2014)
- Indication of class B requirement for high voltage halogen lamps for stage 3 however including a review of the market situation in 2015, one year before implementation of the requirement

For low voltage halogen lamps it should be no problem to set the B-class target earlier than originally proposed.

For high voltage halogen lamps the target should be set as proposed however the market situation should be assessed in 2015 to check for quality and price of replacement lamps. While it is desirable from an energy efficiency perspective to remove C- class products from the market it has to be made sure that substitutive products (either LED or CFL) are available on the market at adequate prize and quality level.

3.2 Energy efficiency requirements for halogen lighting converters

The proposed requirements regarding transformers for low voltage halogen lamps (>0,925) currently can only be met by some standard electronic transformer types.

Magnetic transformers can meet the requirements only if toroidal technology is used which is significantly more expensive and for many applications not the adequate solution from an economic point of view.

We therefore recommend to reconsider both the level and the timing of requirements for halogen lighting transformers.

3.3 Functionality requirements for LED lamps

Requirements regarding number of switching cycles for LED lamps provided in table 7 appear low also compared to the values indicated for the other lamp technologies. Further product data should be assessed as a basis for level setting. As indicated in other sections of the working document functional criteria for retrofit lamps should at least meet the levels of the technologies to be replaced. Retrofit lamp requirements could be indicated as a separate category in the tables on functional parameters.

4. Product information requirements

Adequate product information will be critical for the acceptance of efficient products and especially replacement products by consumers. In this context also the adequate indication of product lifetime and number of switching cycles (both interlinked) are to be considered.

The current rating of lamp lifetime based on 50% lamp survival is not commonly understood by consumers. It indicates that on average 50% of the lamps would operate after the specific time period specified. Consumers however would expect that all or most lamps bought would meet the lifetime indicated on product packaging. Thus for consumer information it would be more appropriate to provide a higher percentage lifetime indicator.

Currently both lamp survival and lamp life time are used in product information for the different technologies. This shall be unified.

5. Verification for retrofit LED lamps

The proposed procedure for verifying retrofit LED lamps seems to much effort in practice as resources for market surveillance are generally limited. The effort for comparative testing does not seem necessary.

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