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Energy Efficiency Department
Peter Bennich, Carlos Lopes,
+46 73 625 6782
peter.bennich@swedishenergyagency.se
carlos.lopes@swedishenergyagency.se

Mr. Paul Hodson and Mr Andras Toth
European Commission
Directorate-General for Energy

By email

Swedish preliminary comments on the working documents for ecodesign requirements on directional lighting and revised energy labelling on general lighting

Summary and proposals

Sweden welcomes the Commission's proposals for labelling and ecodesign requirements for directional lamps. Labelling and ecodesign requirements for this category of lamps are urgently needed in order to make the lighting regulation portfolio complete.

Sweden has the following preliminary, general comments. In these we have mostly refrained from commenting on specific parts of the documents and would instead like to highlight the main topics of importance.

Sweden would like to provide broad comments in the following main areas judged to be important:

1. Scope. Sweden supports the inclusion of general lighting in the scope, including the HID lamps.
2. Efficiency requirements. Sweden supports requirements for mains-voltage lamps based on IRC technology performance levels but would like to discuss a slightly quicker introduction. For low-voltage filament lamps, Sweden believes that a significantly quicker introduction of lamps with performance based on or equivalent to the performance of IRC technology may be justified.
3. Correction factors and depreciation of LED-based products. Sweden supports the principle of accounting for light depreciation but would like to further discuss how such depreciation factors are defined.
4. Sweden supports the proposal to regulate halogen converters but welcomes a discussion on specific issues.
5. Sweden supports the method to establish performance by a goniometer measurement in principle but would like to discuss costs and possibility to test large quantities of lamps for compliance. Sweden believes it is important to discuss lower-cost methods.

6. Labelling. With very efficient lamps introduced in the labelling system the proposed labelling levels appear to be inappropriate. Sweden thinks it is very important that all options, including rescaling, are discussed.

1) Scope

Sweden believes the proposal to include general lighting (i.e. not only domestic lighting) in the scope in both the labelling and the ecodesign requirements is constructive and will result in a more complete portfolio of lighting regulations. Thus, this would include HID lamps as well. HID lamps are currently not frequently used in households, but as new and smaller lumen packages are being introduced, this technology will become increasingly competitive in household application. Also, many small-size commercial users in fact behave like consumers (e.g. owners of small shops) and should benefit from the inclusion. The point here is not household vs tertiary usage, but the fact that the definitions and measurement issues are the same regardless of the application.

2) Efficiency requirements

In general, Sweden supports the efficiency requirements but would like to discuss a slightly faster introduction of the requirements for stage three when it comes to mains voltage halogen directional lamps or equivalent. In the Commission's proposal, the introduction of a performance level based on infrared coating of the halogen capsule would be introduced in stage three, four years after the publication of the requirements. This effectively would mean 2015/2016, and would be harmonised with the introduction of the most stringent requirements for general non-directional lamps (regulation 244/2009 on non-directional lamps). Sweden would like to discuss possibilities introduce these requirements somewhat earlier.

When it comes to low-voltage lamps, Sweden believes that it may be possible to introduce requirements based on IRC-technology performance levels significantly earlier, already in phase two or shortly thereafter, and would thus like to discuss the options for this. Low-voltage lamps don't involve the added complexity of a transformer. Patent issues have been claimed to be an obstacle to early introduction, but Sweden would like to examine the arguments for and against more closely before settling on a final position. It should be pointed out, however, that this discussion should reflect the fact there are different performance levels achievable with a host of IRC technologies and production methods, and a minimum performance level must not necessarily be set at the top performing levels where patents are more likely to prevent non-licensed use of the applications.

3) Correction factors for the depreciation of LED light output.

Sweden appreciates the proposal to introduce correction factors that account for LED light depreciation. This will protect consumers and to some extent avoid poor quality LED to enter the market. However, it is not clear if the factor is appropriate or if this is the right way to safeguard against depreciation since also colour shift over time should be considered. Sweden therefore thinks this need to be examined more closely. In the near future, work done in the IEA 4E annex Solid State Lighting might provide test standards that treat these phenomena more accurately than today.

4) The regulation of halogen converters

Sweden supports the proposed minimum efficiency regulation for halogen transformers ("converters"). However, we realise that there may be problems associated with moving all transformers to switch-based technologies. For instance, if a transformer is designed for a halogen circuit of a certain load, there may be incompatibility problems the day these halogen lamps are replaced with LEDs or other more efficient lamps (the efficacy may go down if the load is too low, or the transformer may even cease to work completely with the low load). In this respect, magnetic transformers appear to be more forgiving.

However, this problem already exists with current electronic transformers, and Sweden believes it is easier if all transformers are the same. Any information regarding transformers could then be uniformly presented.

A discussion on this should reflect the above arguments but also the benefits associated with the proposal:

- There are clear energy efficiency gains
- The proposed regulation appears to be harmonised with that of external power supplies (278/2009)
- There are most likely resource efficiency gains due to the fact that the switched transformers require less material.

5) Definitions and measurement methods

The current Commission proposal would require measurement by a goniometer or similar instrument to establish the performance of directional lamps. While this will give a more accurate reflection of the lamp's performance and help to avoid loop holes, Sweden would like to discuss the costs involved with this method and how this may affect our and others' work to test for compliance.

Before any final decision is made on how to verify a lamp's claimed performance, Sweden believes it is important to discuss the issues of definitions and measurement with respect to alternative testing methods such as using an

integrating sphere or new and cheaper types machinery (such as “mini goniometers”) that may cost-effectively achieve the same thing.

6) Energy labelling

Sweden supports that the labelling proposal is extended to cover general lighting, then including HID lamps and other lamps used in the tertiary sector, for the reasons stated above. However, the proposed labelling classes present a number of formidable challenges, especially if extended to cover HID lamps and top-performing LEDs. With the current proposal, classes D, E, F and G will soon be phased out, and only classes A to C remain for the current lamps. The Commission consequently proposes to introduce classes A+ and A++ to cover the more efficient lamps.

However, even with new classes introduced the span between the most efficient classes will remain very wide and give little incentive for the introduction of more efficient technologies as long as they don't manage to “jump” up one complete class.

Sweden would therefore support an open-minded discussion on the problems of labelling where all options are considered, including a rescaling of the present A-G scale.