



July 2011

**Position of ECOS, EEB, Friends of the Earth Europe,
WWF EPO, CAN Europe, INFORSE Europe and Zero Hg Working Group**

**on the EC Working Documents on
Ecodesign requirements for directional lamps and revised Energy
Labelling for lamps and luminaires (of June 2011)**

Summary

The environmental NGOs above welcome the documents and call for quick implementation of the measures, so that the EU regulation for lighting products is finally completed. We are however disappointed that environmental aspects beyond energy use have not been addressed more.

The Ecodesign measure should unambiguously drive the market towards LEDs, as these are the most environmentally-friendly and cost-effective option for directional lighting. To achieve this, the stage at LED-level for non-filament lamps should start one year earlier and the regulation should include a tentative LED-level stage for filament lamps as well.

The suggested quality and performance requirements for lamps are welcome to get rid of poorly performing products. Harmonisation with the existing EU LED Quality Charter should be ensured.

As far as luminaires are concerned, we have doubts about the proposed partial labelling based on the range of compatible lamps (and not the full performance of the product). We recommend a more effective set of measures to tackle the detrimental lock-in effects.

Promoting LEDs more strongly

The European Commission is currently preparing a Green Paper on solid state lighting¹ that will acknowledge the importance of promoting the wider deployment of LEDs and leading their development.

The Ecodesign measure for directional lamps should be a more visible support to this strategy, by:

- **Implementing the LED-level one year earlier for non-filament lamps:** stage 3 should start three years after the regulation's entry into force instead of four years.
- **Setting a tentative stage at the LED-level for filament lamps as well,** 5 years after the regulation's entry into force. This (tentative and revisable) stage is needed to send a signal to the industry that the objective is not to sustain the presence of halogens indefinitely and unnecessarily.

¹ http://cordis.europa.eu/fp7/ict/photonics/digitalagenda-and-ssl_en.html

Ensuring good quality and realistic claims

Quality, performance and better information requirements are needed for the new types of lamps. The current multiple initiatives around the world on LED performance should be better harmonised.

It would make sense to align the proposed performance requirements for LED lamps with the existing EU LED Quality Charter. In particular:

- The value for the colour rendering index (CRI) should be 80 for all LED lamps (a value of 90 for halogen retrofits would be too tough and discriminatory).
- A minimum value for the power factor above 0.5 seems unnecessary in the short term.

An additional positive development would be the introduction of a warranty (e.g. of 3 years) on long lifetime lamps, as it exists for other electronic products and in the Energy Star scheme for LEDs.

Market surveillance will be a key factor of success for the performance requirements. We encourage the European Commission and Member States to prepare a joint and visible testing campaign when the first stage enters into force, so that a clear message is sent to the market.

Better addressing non-energy environmental aspects

The proposed Ecodesign measure is not making any step forward in addressing environmental aspects beyond energy use. This in our opinion contradicts for instance the EU Resource Efficiency Flagship Initiative, which insists on the need to *'find new ways to reduce inputs and minimise waste'* and highlights *'the strategic importance of avoiding risks to supply of resources such as rare earths'*.

1. Design for dismantling and recycling

There is a growing variety of LED products coming to the market using different shapes and technologies. Current lamp designs, especially LED-lamps, would benefit from higher standardisation of part connections to facilitate disassembly and remanufacturing of components, and fewer material types in structural pieces to maximise homogeneous materials recovery².

- **We encourage the European Commission to include a generic Ecodesign requirement on dismantling**, for which conformity could be specified in a mandated EN standard (if this approach does not deliver in the next 4 years, more specific requirements would be set next time). The requirement could look like this:

'Lamps put on the market should be designed to facilitate disassembly and remanufacturing of components, and maximise recovery of homogenous materials. Particular emphasis should be put on easing the recycling of scarce materials and rare earths.'

- We are also concerned that lighting products will become increasingly difficult to collect and recycle when LEDs will be directly integrated into luminaires, construction products, furniture, clothes, etc. This aspect should be seriously considered and we suggest the following provision:

'When LED lamps or modules are integrated into another product (not sold as a retrofit), it shall be made as easy as possible to separate the LEDs and accompanying power supply and control gears from the product in order to collect and recycle them separately.'

2. Mercury

The mandatory indication of the mercury content on the lamp packaging included in the regulation 244/2009 and repeated here for directional lamps has proven to be very ineffective.

² *'Reducing environmental burdens of solid-state lighting through end-of-life design'* (Environmental Research Letters) – stacks.iop.org/ERL/5/014016

Most manufacturers indicate the mercury content in extremely small font at the back of the packaging and in incomprehensible acronyms. This is not at all consumer-friendly and not up to the challenge of dealing appropriately with this significant environmental aspect.



Example of indication of mercury content on the packaging
(from a leading manufacturer)

We call for the provision to be improved in this way:

'If the lamp contains mercury:

(o) Lamp mercury content as X.X mg; this indication shall be in a font at least as large as the nominal lamp power, and placed close to the nominal lamp power. It shall contain the word 'mercury' (in English or national language) instead of acronyms such as 'Hg'.

Regulation 244/2009 is amended to include the same modification in the provision on mercury.'

3. Electromagnetic radiation

As it is becoming an increasing concern for consumers, we encourage the European Commission to **set a limit on the electromagnetic radiation of lamps**. TCO-norms and the German 'Blau-Engel' label for lamps could provide a basis for discussion.

A reclassification of the energy labelling of lamps

We welcome the expansion of the energy labelling of lamps to directional and professional lamps. As a modification of the scope covered and methodology to rate lamps is proposed, we consider that it is possible under the Energy Labelling Directive 2010/30/EU to **introduce a reclassification of the label** (according to article 10.4(d) of the Directive).

- This would avoid numerous empty classes at the bottom of the scale and the need for A+ and A++ classes. The current Energy Labelling of lamps has not proved very effective in transforming the market; introducing classes with pluses would increase the risk of further ineffectiveness.
- A reclassification should ideally reserve the A class to top-class LEDs. CFLs and HID (which are now very mainstream products) would be distributed in B to C classes. Infrared-coated halogens would be class D. Other halogens and incandescent would fall under E, F and G classes.

In addition, it is important that the energy labelling is fully harmonised among lamps. The label should display the rating on the scale as well as the annual energy consumption even when this information is mentioned elsewhere on the packaging.

Ensuring that luminaires support energy efficiency

With current trends in luminaires, consumers are often 'locked-in' to tiny halogen capsules which do not have energy efficient replacements. **This effect is detrimental to energy conservation and consumer choice and should be stopped.**

We express some doubts about the proposed solution to implement a sort of energy labelling of luminaires showing the 'range' of applicable lamps through 'max' and 'min' arrows. This potentially

confusing and misleading label has not been tested on consumers and may prevent the introduction of a genuine energy labelling of luminaires based on their performance.

Instead of this uncertain instrument, we suggest a more effective set of provisions to tackle the lock-in effect:

- At stage 3 of the Ecodesign measure **luminaires unfit to accommodate energy saving lamps should be banned**, through the following requirement:

'luminaires shall offer sufficient space for fitting lamps that are in one of the three highest energy classes and provide a lumen output above 400 lm'.

This could be more formally accompanied by an explicit phasing out of luminaires using G9, GU9 and R7s sockets.

- Before the entry into force of stage 3, luminaires not complying with the above-mentioned criteria shall display a mandatory warning on their packaging **'cannot operate with energy saving lamps'**. This warning should be in a sufficiently large font and in a visible place of the packaging.

The two previous provisions should help decreasing the sales of tiny halogen capsules over time; however it will not be enough, as some socket 'converters' are already available:



- There should be a **longer-term tentative stage (for instance 2018 or conditioned to market trends) to ban these capsule lamps**.

It would also make sense to avoid that consumers are provided with inefficient lamps when they buy a luminaire. Hence we recommend the following provision:

- *'Luminaires shall either be sold without lamps or only with lamps of the highest energy class (for the socket used).'*

Moving towards a genuine energy label for luminaires?

A genuine energy labelling scheme for professional and domestic luminaires should be based on the optical efficiency of the product (e.g. LOR value). This has been so far strongly opposed by the luminaire industry. We encourage the European Commission to continue investigating this topic and find solutions to overcome the barriers highlighted by the industry (definition of categories and sub-categories, testing cost, options to display the label in shops...)

In parallel, the option of using Ecodesign requirements to ban the worst performing luminaires based on their optical efficiency should also be pursued (as explained in an ECOS/eceee paper: http://env-ngo.eup-network.de/fileadmin/user_upload/ENGOS_Intern/Position_Papers/Eceee_and_ECOS_joint_tertiary_lighting_response_Sept2010.pdf).

However, this controversial debate should not prevent the Commission from quickly adopting all the other proposed measures in the working documents and in this paper.

Contacts:

ECOS – European Environmental Citizens' Organisation for Standardisation
Edouard Toulouse, Ecodesign Officer - Tel: + 32 2 894 46 57 / E-mail: edouard.toulouse@ecostandard.org

EEB – European Environmental Bureau
Stéphane Arditi, Policy Officer on Waste and Products -
Tel: + 32 2 289 10 97 / E-mail: stephane.arditi@eeb.org



Our coolproducts for a cool planet campaign website: www.coolproducts.eu