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Switching to Efficient Lighting - The Policy at EU level

The EU is about to adopt a policy to increase the energy efficiency of lighting products. Its level of ambition is a crucial issue, since it will influence market transformation and innovation.

This policy on domestic lighting was prepared by the European Commission in the last 10 months in the framework of the “*Ecodesign of Energy-Using Products Policy*”¹. A finalised draft **has been voted by Member States on 8 December 2008**.

Now, the European Parliament has 3 months to exert a right of scrutiny until the measure is officially adopted. This measure covers general lightbulbs, not the directional spotlights nor the luminaires (which will be addressed in a further measure in 2009).

The future of lighting

Climate change and increasing energy prices threaten the planet and the economy. The European Union has promised to take the lead, through a reduction in greenhouse gases by 20 to 30% and a 20% energy savings by 2020.

In this context, **the EU is about to ban some of the most inefficient lightbulbs** for everyday lighting. In particular the traditional short-lived incandescent bulb with filament, one of the least energy efficient way of producing light. Such bulb is cheap to buy, but expensive on the electricity bill and indirectly responsible of a lot of CO₂ emissions. The lighting sector is one of the most promising for saving energy and cutting emissions.

Alternatives to incandescent bulbs are **halogen lamps** (both for specific halogen luminaires and now in classic shapes for usual lamp sockets), **compact fluorescent lamps / CFLs** (very energy efficient and long life, but including mercury and electronic components) and **light emitting diodes / LEDs** (also very efficient but not yet powerful enough to replace all lamps).

Issues at stake

The goal of the legislation is to ensure lighting products on the European markets reduce their environmental impact and are cost effective for consumers.

Three main issues are at stake:

- Which **timeline** will be applied to progressively get rid of the least efficient lightbulbs
- Which **alternatives** to incandescent bulbs will be left on the market
- Which **quality requirements** will ensure innovative lighting products are performing well enough

¹ More information about this policy process:

http://www.ecostandard.org/downloads_a/eup_introduction_2-p_03-11-08.pdf

There were several options proposed for the timeline. The initial one was short enough, but due to pressure from lamp manufacturers the final calendar proposed by the European Commission and adopted by Member States is a delayed one made of 6 complicated stages. At first incandescent bulbs would be removed from the market in four progressive steps from 2009 to 2012 (depending on the wattage). The latest sixth stage in 2016 would then finally raise the minimum requirements so that other poorly efficient lamps (standard halogens) are also banned.

The timeline has been systematically watered down along the process, especially for this last important stage which would now only take place in 8 years from now.

Issue of the level of ambition

The European Commission had presented several possible scenarios for the level of ambition of the final stage taking place in 2016:

- **Option 1** would set the limit at the level of CFLs/LEDs (most energy efficient existing lamps). The energy savings would be maximised: 86 TWh of electricity saved² per year in the EU by 2020, equivalent to the overall consumption of residential electricity in all Eastern Europe.
- **Option 2.a** would also tolerate advanced efficient halogen bulbs, appearing today on the market (but still not as efficient as CFLs). Energy savings would drop to 51 TWh per year by 2020, equivalent to the residential sector consumption in Sweden and Denmark.
- **Option 2.b** would also allow less efficient products for specific halogen luminaires. Energy savings drop to 39 TWh per year by 2020, equivalent to the residential consumption of Belgium and Portugal.
- **Option 2.c** would allow all kinds of halogen alternatives for transparent bulbs (non frosted), with energy performance far below CFLs/LEDs. The savings drop to 33 TWh per year by 2020.
- **Option 3** would allow all types of halogen lamps for all types of applications. This means just replacing incandescence by halogen technologies. Savings drop to 22 TWh of electricity per year.

The European Commission and Member States did not agree to go higher than option 2.b., meaning that savings would be limited to less than a half of the full potential. Despite the common understanding that lighting is one low hanging fruit in energy efficiency policies and energy efficiency is the lowest hanging fruit in climate policies, this measure fails to grasp the majority of this very very low hanging fruit. This is not a positive signal if we mean to be serious about climate change.

All in all, the current situation means that for the next decade, incandescent bulbs may mostly be replaced by slightly more efficient bulbs based on halogens. This was warmly welcomed by European lamp manufacturers, showing how unambitious the measure currently is. Innovation for more efficient lighting solutions will be slowed down and consumers will fail to get the appropriate message.

Moreover, the measure will undergo a revision process in 5 years, before the final stage is implemented. This means the timeline and level of ambition could even be further watered down in the future.

We consider that option 2.a is the minimum acceptable level of ambition for this measure, and this option should be implemented much sooner than 2016. Therefore, we call:

- **For the final stage to start in 2013 at the latest**
- **For this stage to target option 2.a**
- **For the revision process to take place after this last stage is implemented**

² a TWh is a billion of kWh, the standard unit to measure electricity consumption. 1 TWh is on average the residential consumption of 650,000 European individuals.

Concerns about availability of lamps and impacts on health

➤ *Lamp manufacturers often claim that it would be impossible to supply Europe with quality alternative lamps if the level of ambition is raised or the timing shortened. They also point out threats of 10,000 job losses in the EU.*

In its documents, the European Commission estimates that the figure for job losses is considerably overestimated. In reality, at most 2 to 3,000 jobs could be at stake all over Europe with the option proposed. Moreover, the European factories could become perfect candidates to produce more efficient bulbs, such as the advanced halogens eligible in options 2.a.

The Commission also considers that global production capacity for quality lamps should not be a problem. Not only CFLs but also new innovative halogens already meet the level in option 2.a. In a 5 year time, they may become widespread and affordable if the legislation is a good enough incentive.

➤ *Worries about potential effects of CFLs on health are frequently raised.*

We consider these claims seriously, this is why we acknowledge that going for only CFLs in a very short timeline would be inappropriate. However, the mentioned risks should be tackled and not a reason to simply reject fluorescent lamps.

CFL collection systems and recycling rates need to be improved, in order to reduce exposure to mercury. Information and awareness raising campaigns are necessary, since citizens are not enough aware that these lamps should be collected separately. We also advocated for more information on the packaging on this aspect, which was supported by Member States. In their vote in December, they have made indication of mercury content in mg and instructions about collection and breakage mandatory on any CFL packaging.

UV and electromagnetic field radiations from CFLs can be diminished through second envelope and embedded shield. We also suggest that the few people suffering from specific light sensitivity causing them harm with all possible alternatives to incandescence could get appropriate lamps in pharmacies through medical attestation.

Is efficient lighting expensive for consumers?

In an energy efficient economy, the model of cheap inefficient products must become obsolete. An energy efficient lamp might cost more than a simple incandescent or standard halogen bulb, but the pay-back time is short through electricity savings. Moreover, the existing so-called “anti-dumping duties” on compact fluorescent lamps have been removed, making them cheaper. Overall, efficient lighting will be a benefit for consumers. And it will require less maintenance as it lasts much longer.

By improving the level of ambition and adopting a more reasonable timeline, European Institutions would also make the very right decision to speed up consumer awareness raising in that needed sense.