DANISH ENERGY AGENCY

European Commission
DGENER
att. Mr. Leo Wierda

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Building and Energy Efficiency

By e-mail

In continuation of the earlier comments given, The Danish Energy Agency (DEA) welcomes the progression of the Commission's Lot 8/9/19 Ecodesign Preparatory Study on Light sources now including draft reports on the tasks 4, 5 and 6.

Below please find comments from the Danish Energy Agency on the draft reports as presented before the 2'd stakeholder meeting at 17'th of June 2015 accompanied with some important observations to consider for the future (revised) regulations.

Comments on the draft study reports

1. Task 1: 1.4.1 Lamp types not yet regulated (identification)
   The quotation from 244/2009 and 1194/2012 of the definitions of special lamps should instead be quotation from the new amendment adopted by the Regulating Committee on 17'th of April 2015.
2. Task 1: 6.2.1. Comparison of scope
   The DEA supports the explicit inclusion of OLEDs and induction lamps in the scope and in the subsequent regulation(s). Probably also plasma lamps should be explicitly included or excluded. Both induction lamps and plasma lamps are marketed for road lighting, area lighting and industrial lighting and are claimed to be of superior energy efficiency which is probably not true. The current uncertainty about the inclusion or not is not satisfactory.
3. Task 2: Sales and stocks of LED's and LED modules integrated in luminaires does not seem to be included in the market data. It should be clearer if they are included or not and in the latter case explained why not.
4. Task 4: Executive Summary p. 10 and other occurrences
   Using the term "LED filament lamp" should be reconsidered. "Filament lamp" is a general term defined as "threadlike conductor which is heated to incandescence" of which "LED filament lamp" can never be a sub-term. This may lead to misunderstanding and confusion.
5. Task 4, 5 and 6: As explained several placed there are very few LED replacement lamps for HID lamps. Further LED (replacement) tubes are in many cases less optimal than LEDs integrated in luminaires. The options in real life are in many cases LED luminaire with integrated LEDs or luminaire with conventional technology (LFL, CFL and HID) similar to the cases of new installations
   It would be interesting to see the technology options be compared on luminaire level as in real life and not only on lamp replacement level.

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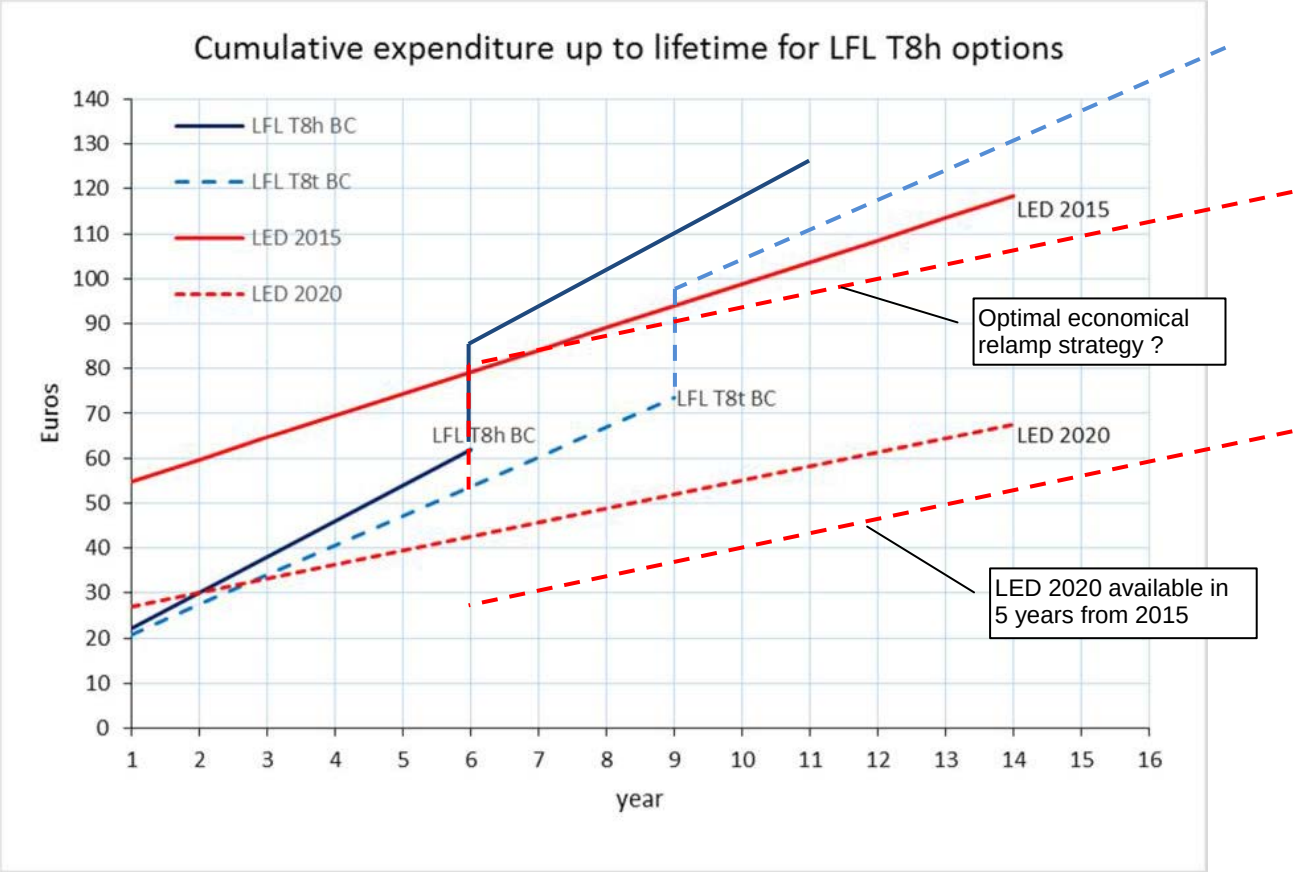
6. Task 6: 3.2 LFL T5
   First and 3'rd bullet: "T8" should read "T5"
7. Task 6: 3.1, 3.3 and 3.4 and possibly others
   The comparison of conventional lamps LFL, CFL and HID with LED in the figures 2, 6, 10 and 12 should be done over the necessary re-lamp periods to reach the lifetime of the LED2015. Hence the long-time expenses of the conventional lamps are illustrated. Further a combined (optimal) re-lamping strategy could be illustrated as shown below for the figure 6.



   It is also somehow not appropriate to show the expenditure of LED 2020 from year 1 because it is only available from 2020, i.e. in the year 5 (or 6?) after 2015. The LED 2020 curve could start 5 years later than 2015.

Observations to consider for the coming (revised) regulation(s)

1. 244/2009 non-directional lamps:
   Clear and non-clear lamps:
   a. The current distinguishing between clear lamps and non-clear lamps should be abandoned. As it is now clear LED lamps (and "naked" LED modules?) are in the category of clear lamps and therefore only subject of energy efficiency requirements corresponding to energy class C and after 2018 to class B. However their efficiency corresponds to class A at the least and often to class A+.
   b. If the non-directional clear (wolfram) filament lamps (as wolfram halogen lamps) are intended to stay on the market, then they should be subject to separate requirements similar to the case for directional filament lamps 1194/2012.

c. Miniature halogen capsules for low voltage or mains voltage (G9) should be allowed to be frosted (non-clear) insofar as halogen capsules are intended to stay on the market. In luminaires with opaque screen the clear types create un-aesthetic patterns on the screen due to un-even refractions in the capsule. Also the direct illumination of surfaces from a clear halogen capsule (with or without a clear second envelope) has un-desired shades and patterns. Frosted capsules has the same energy efficiency as the clear ones bur provides a much better visual appearance of luminaires and direct illumination.

2. 244/2009 non-directional lamps:
   3.1. (a): "When the nominal lamp power is displayed outside the energy label in accordance with Directive 98/11/EC, the nominal luminous flux of the lamp shall also be separately displayed in a font at least twice as large as the nominal lamp power display outside the label"
   Directive 98/11/EC has been replaced by regulation 874/2012 but the latter does not require the luminous flux or the power of the lamp to be displayed.
   Hence, it could look like no regulation requires the lamp power or the luminous flux to be displayed inside or outside the energy label for lamps brought on market after September 2013.
   Clearly this has never been the intention and should be corrected.
3. General compliance considerations:
   a. It is claimed by Lighting Europe that some halogen lamps that are rated as energy class D according to 847/2012 at the same time complies with the energy efficiency requirements of table 1 in 244/2009 corresponding energy efficiency class C[1]. Clearly, such discrepancies have never been intended and provisions should be taken to avoid them in future regulations or revisions of existing regulations.
   b. When basing compliance checks on information given by the manufacturer including rated valued then the product should appear as complying. No tolerances apply for the rated values declared by the manufacturer according to information requirements.
   c. The tolerances specified for the authorities "Verification procedure for market surveillance purposes" applies only for this and are used to avoid the risk of rejecting a complying products.

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Yours sincerely

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[1] This can be due to misuse of tolerances or (seldom?) to difference of decimal rounding procedure when computing respectively the EEI according to 874/2012 and the " Maximum rated power (Pmax) for a given rated luminous flux (Φ)" according to 244/2009.