

“EPBD review: Identifying the potential of Lighting”

Brussels, 11 October 2017

Energy savings of lighting products under Ecodesign legislation

- From 60W incandescent to 6W LED retrofit (134 lm/W) we will save 90% in 2018 with current regulations compared to the 2009 situation
- Potential future product Ecodesign regulation (134 - >200lm/W) will save extra 6% (2W), which is less significant

For further savings we have to look at lighting systems

What is a lighting system?

- A lighting system means a system of devices intended to deliver effective lighting to create a comfortable, functional, and safe environment for human habitation, travel, work, and leisure activities*.

luminaires + sensors + controls
shall be addressed together as a system

**An energy efficient luminaire operating within a room without persons
is not energy efficient!**

*Source: [ENER Lot 37 study preliminary results](#).

Energy savings with lighting systems

- EU-28 total annual electricity savings for optimized lighting system designs with controls are*
 - **20-29 TWh/year in 2030** and
 - **48-56 TWh/year in 2050**
- As a reference, EcoDesign (EC)245/2009 on tertiary sector lighting products saving potential is 38 TWh/year in 2020).

Well designed lighting systems increase the potential for energy savings and improve quality of light and wellbeing of people in the building itself

* see paragraph 7.5.5 (page 331) of the ENER Lot 37 study preliminary results.

Why do we support EPBD review?

- EPBD Impact Assessment states that lighting accounts for around 20 % of the total cost-effective energy saving potential towards 2030
- Member States shall set system requirements for all technical building systems, built-in lighting included
- Use of ICT and smart technologies is encouraged to ensure that non-residential buildings operate efficiently
- Smartness Indicator takes lighting technologies into consideration

How to improve EPBD review?

- Lighting Systems to be defined as Technical Building System replacing Built-in Lighting
- Lighting Systems, like all technical building systems, should be taken into account in order to determine the energy performance of non-residential buildings (Annex 1 par.1);
- Long-term renovation strategy from Member States should include estimate of expected energy savings and wider benefits, such as health, well-being and productivity.
- Requirements on Smart Readiness Indicator (SRI) shall be included in the EPBD.



These are LightingEurope priority messages

Proposal: Lighting Systems as Technical Building System

- Properly designed and well-coordinated lighting systems are one of the most cost-efficient ways to reduce energy consumption and CO₂-emissions
- Regulatory requirements for lighting shall shift from efficiency of products to efficiency of systems for more savings and quality of light
- During transposition of the EPBD, lighting system design process shall be referred to (see CEN/TS 17165)

Parliament proposals on art. 2, point 3 – e.g. amendment 207, include suggestion while Council General Approach has overlooked Lighting Systems



LE Proposal: Lighting Systems energy needs in the Energy performance measurement

- All technical building systems, lighting included, shall be in the calculation of the energy performance
- The right electrical lighting supplementing daylight, which is also in the Annex, helps to reduce energy consumption and promotes wellbeing and productivity
- EN 12464-1 (Lighting of workplaces), should be referred to safeguard minimum light quality whilst saving energy.

Both Draft report and Council General Approach included this suggestion in their texts



LE Proposal: renovation strategy should include estimate of energy savings and wider benefits, such as well-being.

- EPBD should include a requirement for Member States to establish a long-term renovation strategy.
- This strategy should encompass an evidence-based estimate of expected energy savings and wider benefits, including air quality improvements and other benefits such as **health, well-being and productivity**.

Parliament proposal for an addition to Art. 2(a), par.1(i) e.g. amendments 244, 245, 248 needs to be adopted.

On the other hand, Council overlooks well-being issues in its text



LE Proposal: Requirements on Smart Readiness Indicator (SRI) shall be included in the EPBD

- LightingEurope supports the introduction of a Smart Readiness Indicator in the EPBD.
- Such an indicator is currently being developed by a consortium led by VITO (on behalf of the European Commission) and has the potential to enable **energy efficiency savings and Human Centric Lighting**
- The SRI can further foster energy savings and enable Human Centric Lighting applications taking well-being into account when measuring savings and smartness of a building

**Proposal to add a new point 1(a) in Annex I. E.g. amendment 628 from the European Parliament needs to be adopted
Council text on SRI lacks ambition**





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Thank you