

Texte zu den geplanten neuen EU-Regelungen zur umweltgerechten Produktgestaltung und zur Energieverbrauchs-kennzeichnung in der Beleuchtung – Zusammenstellung \* des Umweltbundesamtes (UBA), Deutschland



## Anforderungen an die Stromeffizienz

Hintergrundtext:

### **Kurzentwurf für ein Schema zur Entwicklung technikunabhängiger Stromeffizienzanforderungen (aus der Diskussion über Beleuchtungsregelungen, 2008)**

*Hinweis: Bitte beachten Sie, daß der angehängte Text nur in Englisch verfaßt ist.*

**EN:** Information on the coming EU Lighting Regulations – Ecodesign and Energy Labelling – Compilation \* of the Federal Environment Agency (UBA), Germany

Requirements on Energy Efficiency

**Background information: Short draft of a schema for developing  
technology independent energy efficiency requirements  
(taken from the discussion in 2008)**

**FR:** Informations sur les futures réglementations de l'UE concernant l'éclairage – l'écoconception et l'étiquetage énergétique – Compilation \* de l'Agence Fédérale de l'Environnement (UBA), Allemagne

Exigences d'efficacité énergétique

**Informations de fond: Bref ébauche pur un schéma de développement de  
exigences d'efficacité énergétique qui sont techniquement neutres  
(de la discussion de 2008)**

*Indication: Veuillez noter que le présent texte n'est disponible qu'en anglais.*

\* <http://www.eup-network.de/de/eup-netzwerk-deutschland/offenes-forum-eu-regelungen-beleuchtung/dokumente/texte/>

Es folgt ein unveränderter Originaltext.

**EN:** The following is an unmodified original text.

**FR:** Ce qui suit est un texte original.

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*draft,*

Non-official paper,  
communicated to Commission's staff  
during the time of first discussions about  
ecodesing regulation on lighting

*only*

## documents:

1	“Proposals for how to make work easier”	How to express threshold values?
1b	Proposals for how to make work easier - b) extension: street lighting	
1c	Proposals for how to make work easier – c) extension: threshold values for fluorescent lamps without integrated ballast and for related ballasts	
1d	<i>Proposals for how to make work easier – d) extension: ballasts (to be done)</i>	
2	Remark on the document “Proposals for how to make work easier“	Which base for calculations?
2b	Is a system threshold value = base value + supplement new within EuP?	
2c	Which are the consequences for changing the equation for Energy Class A?	
→ 3	<b>Short information about how to create threshold values independent from technology and application</b>	Which level for threshold values?
4	Principle: same system borders; a) lamp, ballast and system	
4b	Principle: same system borders; b) decrease of luminous flux	
4c	Principle: same system borders; c) power demand lamp and system	
4c	Principle: same system borders; d) reactive power and ballast losses	One system for all application areas?
5	How to determine the basic value	
6	a) Example for how to determine a supplement	
6b	<i>b) Supplement for ‘second lamp envelope’ – overview (to be done)</i>	Which level for threshold values?
6c	c) Supplement for ‘second lamp envelope’ – look on data for LFL	
7	Consistence – a) lamp technologies <i>b) supplements (to be done)</i>	One system for all application areas?
8	a) ballasts for CFL <sub>ni</sub> with 4 pin socket and electronic ballast (to be done)	
9	a) Which guiding parameter – efficacy or watt per lumen?	
10	Contradiction concerning efficacy values – a) ELC eco profiles	

## 1<sup>st</sup>

Germany's proposal for threshold values

Efficiency requirements defined as a function to be composed by

- a) a basic value (B), depending on the luminous flux and
- b) supplements depending on the service of a product, e.g. for
  - higher colour rendering index,
  - reduction of glare,
  - ...etc.

Remark: Each supplement ( $S_i$ ) should be independent from other supplements. For each product the individual threshold value would be calculated as follows:

$$\text{threshold value} = \mathbf{B} + \mathbf{S_1^*} + \mathbf{S_2^*} + \mathbf{S_3^*} + \dots \mathbf{S_n^*}$$

\* The value for B is used in any case, but values for  $S_i$  only if the product delivers the respective service.

## 2<sup>nd</sup>

Designing this system needs some steps:

- 1st: Creating a list of all services provided by the product (i.e. service oriented features) which may have an influence on the power consumption of the product
- 2nd: Determining if today's products needs additional energy for delivering this service; even if only a part of products delivering this service need additional electricity, the answer should be yes
- 3rd: Deciding for each partial service if (for environmental policy) an additional energy demand for each partial service is acceptable or not (and is "supported" by defining a separate supplement or not).
- 4th: Determining a supplement for each partial service

3<sup>rd</sup>

1 <sup>st</sup> step		2 <sup>nd</sup> step		3 <sup>rd</sup> step		4 <sup>th</sup> step
<i>Which are the (partial) services a product can deliver?</i>		<i>Does a (partial) service need additional energy?</i>		<i>Is this need accepted by policy?</i>		<i>What is the amount of energy needed additionally</i>
basic value	→	yes	→	yes	→	...
higher Colour Rendering Index	→	yes	→	yes	→	...
higher Colour Temperature	→	no <sup>1</sup>	→	—	→	...
matting/reduction of glare	→	yes	→	yes	→	...
bright point lighth	→		→		→	
protection against hazardous substances in case of lamp brake	→		→		→	
↓	→		→		→	
↓	→		→		→	
↓	→		→		→	
etc.						
↓ directional lighth	→	part of lot 19b	→			

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<sup>1</sup> result of a first analyse on base of some hundreds of data; the analyse will be repeated on base of a bigger number of data.