

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



Entwürfe der EU-Kommission vom 6. November 2015  
**Stellungnahme Deutschlands vom 1. Februar 2016**

*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

The EU Commission's drafts of 6 November 2015

**Comments by Germany as of 1 February 2016**

**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

Les projets de la Commission Européenne du 6 novembre 2015

**Commentaires de l'Allemagne du 1 février 2016**

*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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# **Germany's position on the working documents regarding the review of the ecodesign and energy labelling regulations for lighting products (244/2009, 245/2009, 1194/2012 and 874/2012)**

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## **General remarks**

### **1. Creation of new regulations**

We appreciate the intention of the Commission to unify the existing ecodesign regulations and to revise the regulation concerning the energy labelling. We also support the aim to simplify things for manufacturers and market surveillance authorities. We would like to stress, however, that the present draft has to be reviewed in many aspects in order to serve as a new regulation. We will provide general comments as well as comments on single topics in the draft. Apart from these, we refer to the UBA background information which will be distributed soon.

### **2. The scope of this position paper**

Because of the short time period between the end of the study and the consultation forum in December, it was not possible to consider the results of the study adequately and to assess the topic in its complexity. Many questions still arise from the documents. Therefore, this position is not to be regarded as final. We will provide further documents in the next few months which will among other things be based on a large data evaluation of lighting products which will allow us to comment in more detail on the requirements regarding the energy efficiency of lighting products.

### **3. Further steps regarding the development of the new regulations**

The intended scope in the draft regulations means a considerable extension of regulated lighting products, especially luminaires. This increases the complexity of the products within the scope. There are still many open questions related to the drafts of the Commission that could not be answered in the Consultation Forum. From our point of view, sufficient time for a more extensive discussion is needed, and also another Consultation Forum meeting.

## **The strategy to reach more energy efficiency relating to lighting products**

Lighting consumes about 20 % of the worldwide power consumption which shows the need for effective policies. Ecodesign and energy labelling can be useful elements of a strategy. We appreciate that the EU commission intends a combination of these. However, in our opinion, the future strategy concerning the total power consumption of lighting has to be discussed further. The success of the EU regulations regarding energy savings of lighting products depends also on factors which they are not able to influence to a great extent, especially unintended consumer reaction and rebound effects. That means that the first steps should not be stricter requirements regarding energy efficiency but the development of a strategy which in reality - and not only in theory - leads to energy savings.

Apart from that, it is not reasonable to create requirements which finally would leave products of mainly one technology on the market, namely inorganic LED, which is promoted by the Commission draft. There are still applications where inorganic LED are not suitable or not the best solution.

Another point we would like to mention is that the requirements on energy efficiency in the present draft take only luminous flux and on colour rendering index into account. This is not enough to create adequate requirements. We see a strong need to discuss other product features too: features which on one hand deliver a service to the user and on the other hand need more electricity.

We will give additional input on this matter soon.

## **Draft of the ecodesign regulation**

### **Comments to Article 1: Subject matter and scope**

From our point of view, the expression "putting into service" should not remain in the proposed regulation because it is confusing. It only makes sense if products are not placed on the market. If these are relevant, the sentence could be formulated thus that only products which have not been placed on the market are covered by the expression "putting into service".

Regarding the exemptions in the draft of the new regulation, they probably represent larger loopholes than the special purpose products in the present regulations. There are certainly products which should be excluded from requirements. Different from the proposal in the draft, those products should be within the scope. This allows market surveillance to check them.

The description of these exemptions should be non-ambiguous and based on existing standards or directives (e.g. medical device directive) as far as possible. The latest

improvements of the regulations 244/2009, 245/2009 and 1194/2012 in that area should be considered as well.

To make the scope clearer, especially in order to enable effective market surveillance, we propose the following:

- If standards are available to support the claim of a special purpose, then the relevant economic operator shall submit proof of meeting these standards to market surveillance authorities upon request, within a reasonable time period.
- If there is no standard, analogue to article 4 (c) a description under which conditions and because of what features the main purpose of use is defined. A proof that no type of conventional lighting technology for indoor and outdoor lighting can be used for the same purpose, has to be given.

In addition there shall be a written hint on the package and in any kind of advertising (including websites) like "not for household illumination" and the special purpose shall be stated to avoid selling (inefficient) special purpose lamps to end users for household illumination.

The exemption (d) needs further specifications. There is a risk that non-compliant lamps will be sold as "signaling lamp" in future.

Concerning exemption (h), there should be at least a definition of „pieces of art“ and a limitation on the number of pieces sold should be considered to avoid mass production, if this exemption is really needed. The exemption in (i) concerning "environments with ambient temperatures below - 20 °C or above 50 °C" needs further specification to avoid that GLS lamps are sold, because they can cope with high temperatures.

The exemption of battery operated lamps should cover battery operated luminaires and the corresponding lamps sold within the same packaging, as well as lamps sold as replacement intended for battery operation only. It should not cover all lamps that can theoretically be operated with a battery.

Apart from the points mentioned above, from our point of view, it has to be checked carefully if the scope is phrased well enough. Lighting products are defined such that they are in the scope if they can be directly connected to the mains and emit light. That means that not all dimmers or luminaires are covered, but some of them. This should be properly thought through.

The Commission has proposed to include luminaires in the scope. Without doing this, there would be a regulatory gap which would even grow in future. That should be avoided. On the other hand the first draft of the Commission takes luminous flux and colour rendering into account – nothing more. In many cases luminaires deliver much more than just brightness and colour rendering. Especially technical luminaires have a wide range of features which deliver what people need: for example light with reduced glare at working places, light at the right spot on streets and other public places or light that is close to the natural spectrum experienced in a day-night cycle

(this technique is called human centric lighting). The price for many of these features is a reduction of energy efficiency. Since these features are no luxury, we should enable the related products to remain on the market by allowing them a higher power demand.

The current state of knowledge in the science of human centric lighting does not yet allow to quantify this extra power demand. Until the next revision, these products should be exempted from the energy efficiency requirements as special purpose products.

## Comments to Article 2: Definitions

We propose to list all definitions in Article 2 and not to have extra definitions in the annex. The definitions should – as far as possible – be based on standards.

In definition (3), the expression “or by its dominant or complementary wavelength and purity taken together” should be removed because this is not the correct definition for the chromaticity.

The colour rendering index (CRI) in definition (4) is mentioned with Ra as unit, but Ra is no unit. It should be further discussed if the parameter Ra for the colour rendering is most suitable.

Apart from that, the comparison should be carried out with the colour appearance under **the** reference illuminant (this is not an arbitrary one).

The definitions (5) and (6) concerning the “rated value” and the “nominal value” are confusing.

It is questionable if the “final owner” should be defined in (7). Or the “consumer”, or the “end user”? This should be aligned with other regulations.

The problem with definition (8) is that extremely inefficient vintage filament loop lamps are outside the scope, because they have a colour temperature of less than 2000 K.

In definition (9) it is sufficient to refer to 230 V without the range of  $\pm 10 \%$ .

In (9)(b), it is not clear if the illuminance in  $\text{lm}/\text{m}^2$  or the luminance in  $\text{cd}/\text{m}^2$  is meant. This should be checked carefully, also the maximum value should be checked.

Regarding definition (10), we think that it would be reasonable to deal only with lighting products, consisting of lighting parts and auxiliary parts. The expression “lighting product component” is not useful.

## **Comments to Article 3: Ecodesign requirements**

Regarding the paragraph about the “defeat devices”, we propose to replace “to improve” by “to change”.

Given the rapid development in the lighting technology, especially concerning the LED, it is from our point of view not reasonable to set requirements for many years in advance. Apart from that, the main focus of the next step should not be stricter efficiency requirements but the facilitation and strengthening of market surveillance. Therefore, we propose defining only one stage which sets consistent requirements. As a second step, there should be a review of the first step which could result in stronger efficiency requirements. Our suggestion is to eliminate stage 3.

## **Comments to Article 4: Conformity assessment**

In point (c), it should be better defined what “one realistic combination of product settings and conditions” means. Otherwise there is the risk that one condition is specified which is never used by the consumer. The phrase then opens loopholes and provides the opportunity for defeat devices.

## **Comments to Annex I: Definitions for the annexes**

As mentioned before, we propose to list all definitions in Article 2.

Definition (4) for the stabilised luminous flux should be reviewed because sometimes it is not yet stabilised after 10 hours of continuous operation. The definition should be based on a standard. Apart from that, every test would occupy the measurement equipment for 10h resulting in extreme costs and time effort for market surveillance authorities. The current “state of art” definition of stabilisation should be used, please refer to Annex A.1 of EN62612.

Definition (6) for the lumen deterioration should be reviewed because here we need two stabilised luminous fluxes being compared, one of the new product and the other at a certain point of lifetime.

The definitions for standby, off-mode, colour consistency and „legible“ are missing as well as the definition for “nominal useful (luminous flux)”.

## **Comments to Annex II: Ecodesign requirements**

### **1. Energy Efficiency requirements**

We appreciate the intention of the commission to simplify the regulations and the aim to assess different lighting technologies equally. We consider it reasonable that there is no more difference made between directional and non-directional lamps.



Regarding the assessment, we propose to consider the power from the socket instead of the power of the light source. If not, the requirements are not technology neutral, e.g. those for light sources with and without integrated ballasts which are in the current formulation the same. Apart from that, only the luminous flux and the colour rendering index (CRI) are considered in the calculation of the maximum value for the power. Other properties of lighting products like e.g. white rendering, focusing and distribution of light, colour temperature et al. could also have an influence on the power and should thus be discussed as well. In one of our following comments, we will give our detailed view on the efficiency requirements.

Concerning the requirements for power supplies, 90 % is more than stipulated in 278/2009 and it is not clear, whether 90 % is valid for one single auxiliary part or for all auxiliary parts of one product.

Regarding luminaires, we would like to ask the commission if it is the intention to place luminaires at a disadvantage relative to lamps. The complexity of luminaires (e.g. light distribution, indirect lighting etc.) should be taken into account which is not the case in the present draft. The idea is probably to penalize luminaires with fixed lamps which we generally support but this should not be too strict.

The efficiency of LEDs increased notably over the last years and is expected to be raised even more. We see the problem that the enforcement of the currently existing regulations is insufficient. Thus, the next step should be to enable a better enforcement. This, however, is not the last step: stricter requirements, well thought out, will lead to further achievements and to a reduction of energy consumption in the framework of ecodesign and energy labelling. Nevertheless, we do not support the focus on only the inorganic LED technology.

## **2. Functionality requirements**

Some of the requirements can only be met by inorganic LED, e.g. the warm-up time for lamps with a luminous flux < 10 klm. For CFLs e.g., this time should be longer. If the requirements can only be fulfilled by inorganic LED, the problem arises that also the replacement of lamps in existing luminaires will often not be possible.

It does not seem reasonable that there is no requirement for lamps with a luminous flux larger than 10 klm regarding the power factor. Especially high lumen lamps need high power. If there is no requirement on power factor especially these lamps will harm supply power quality.

The requirement concerning the colour consistency should be based on a standard for LED if it applies to LED.

The maximum allowed values for lumen deterioration and flicker are too small. 1 % is less than measurement uncertainty.

There should be a (harmonized) standard how to measure flicker first, if it is planned to set regulations about it.

### 3. Information requirements

As already mentioned above, the useful luminous flux needs to be defined. It helps the market surveillance authorities and industry if directional light usable flux is defined and measured at a fixed angle of 180 °. In this case the very expensive goniophotometric measurements can be replaced by measurements in (existing) Ulbricht's Sphere using a "side port". The actual "usable flux" in any application depends on the luminaire anyway, so a fixed definition of 180 ° is reasonable.

The second paragraph regarding the values which shall be written directly on the lamp should be reviewed, this is formulated too vaguely. Probably it would be sufficient to have the luminous flux written directly on the lamp.

It does not seem reasonable to have values with the unit "mW". Power values should generally have the unit "W". Using "mW" leads to a precision requirement that cannot be fulfilled with reasonable effort and gives no useful additional information.

In the paragraph concerning requirements to be displayed on free-access websites, the indication of 180 nm in the context of UV light is not useful because this is not measurable with reasonable equipment (i.e. would have to be measured in vacuum with very special detectors). Apart from that, UV radiation is actually a safety relevant topic covered by other regulations.

The address of the free access website has to be on the package of the product in order that the information can be easily found by the user (and the market surveillance authorities).

The requested information should only be displayed in the form of graphs, drawings, or symbols, on the basis of exact specifications.

The definition of "high" flicker index and a minimum requirement for lamps is needed. We will provide further comments on information requirements.

### Comments to Annex III: Verification procedure

Market surveillance authorities are glad with only 10 samples. The additional obligation "where possible obtained in equal proportion from four randomly selected sources" makes sampling more complicated. Often there is only one batch of lamps available on the market and sometimes it is not easy to find the same products from different sources. Even the opening wording "where possible" leaves the market surveillance authorities to prove that it wasn't possible. If the problem lies with one defective batch of products the manufacturer can prove that other batches are unaffected and the MSA can react accordingly.

Furthermore, it would be a good assistance for market surveillance authorities if there were requirements for the single sample like in regulation 1194/2012. For example,

that a product is defined not to be compliant with the requirements, if the sample has a certain percentage deviation from the requested value, so that further sampling and measuring of 9 more samples is not necessary anymore.

The German market surveillance authorities appreciate the clarification in point (5).

Concerning point (6), this provision could be solved with ICSMS, the compulsory system for information and communication between MS and COM after article 23 of Regulation (EC) No. 765/2008. In Germany we have a long experience with ICSMS (especially in product safety) to inform other market surveillance authorities about the tested products and we developed an understanding which information is necessary to give and which is not interesting. We welcome the idea to communicate and inform other MS and the COM via ICSMS about non-conform products and relevant aspects of test results. Anyway it is definitely not feasible for MSAs to provide all relevant information on either the compliance or the non-compliance of each model they see. The working group of the European Council discussed that topic during its negotiations of the planned market surveillance regulation in combination with the planned article 21 of the planned market surveillance regulation. It was accepted, that ICSMS was used as information system. But the handling of ICSMS (which information is compulsory to enter into the system to inform other MS and the COM, which time target for filling in the information should be met, etc.) was still not clear. Anyway it should be discussed and clarified for all sectors within the scope of the regulation (EC) No. 765/2008. For example the IMP-MSG Expert group deals with ICSMS and could make suggestions on that topic, too. Therefore we request to delete this point in these planned regulations on lighting products. At least the time target should be changed into: *"The Member State authorities shall provide all relevant information to the authorities of the other Member States and to the Commission without delay..."*

## **Comments to Annex IV: Measurement methods**

The proposed measurement method is based on an IEC test for self-ballasted LED performance. It is very questionable, if this test method is appropriate for other lamps or luminaires. Apart from that, it is not clear how to perform the measurement: do the member states authorities have to verify 30 lighting products to have 10 for each single test? The proposed test procedure does not take into account the reality of manufacturers and market surveillance authorities properly. A measurement method which is applicable for all types of lighting products and which simplifies the procedure for market surveillance authorities still has to be proposed.

It should be clarified whether one collective should be subjected to all three endurance tests or just one of them. In case all three tests have to be done with the same samples, it has to be defined in which order the tests have to be done.

The provisions of paragraph 2 are very extensive for market surveillance authorities. Most lamps are very stable during the first 3000h of life, so it is not clear, if the test is comparable to the regular 6000h test. This test is still expensive and results in the fact that market surveillance authorities need either to open all samples, find the thermal protection and disable it (technically impossible because lamps will be destroyed when opening) or need to order such special samples from the first marketer. Then there is a risk that "golden samples" will be delivered to the market surveillance authorities.

It is a good idea to shorten the switching cycle test time. The problem is, that the switching cycle test is performed according to a standard using perfect power supply and zero-crossing semiconductor relays. Other relays do not survive so many switching cycles. This does not realistically reflect switching in actual use. German market surveillance authorities never recognized problems in switching cycles on LED. For CFL and other lamps 10 s on-time may be too short.

The estimated 15 min are not enough for stabilization. If products are "warmed up" it is not clear how long they need to stabilize and CFL products must not be "warmed up" at all.

## **Comments to Annex V: Benchmarks**

The value of 200 lm/W could be possibly reached in the laboratory for LED modules but it is far too high to be a benchmark. We propose to look on the market in order to find an adequate benchmark.

Perhaps other hazardous substances apart from mercury could be mentioned in the benchmarks.

## **Further comments**

Something should be said in the regulation about the equivalence values claimed on the packages of lamps. Either they should be forbidden or specifications should be given in the regulation.

## **Draft of the energy labelling regulation**

We appreciate the proposal of the Commission to simplify the label and not to have a label for luminaires any more. Since the future requirements on ecodesign are not fixed yet, and since the revision of the label directive has not yet been completed, is still going on, we do not have concrete remarks regarding the energy labelling, apart from those already given above in the framework of the ecodesign proposal, at this stage, but we see the necessity for additional comments once the proposal has been developed further. We would like to stress, however, that the proposed classes should be technologically achievable and distinguishable.