

## DOCKETED

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*Comment Received From: Anthony Serres*

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**Philips Lighting Comments on Voluntary Lamp Quality Specification v3.0**

*Additional submitted attachment is included below.*



November 30, 2016

Submitted via e-filing

Ms. Soheila Pasha  
California Energy Commission  
1516 Ninth St  
Sacramento, CA 95814

Docket No.: 16-AAER-04

**RE: Comments on Voluntary California Quality Light-Emitting Diode (LED) Lamp Specification 3.0**

Dear Ms. Pasha:

Philips Lighting appreciates the opportunity to provide the attached comments on the draft Voluntary California Quality Light-Emitting Diode (LED) Lamp Specification 3.0 that was published on Oct. 31, 2016.

Philips Lighting is a global leader in lighting products, systems and services. Our understanding of how lighting positively affects people coupled with our deep technological know-how enable us to deliver digital lighting innovations that unlock new business value, deliver rich user experiences and help to improve lives. Serving professional and consumer markets, we sell more energy efficient LED lighting than any other company. We lead the industry in connected lighting systems and services, leveraging the Internet of Things to take light beyond illumination and transform homes, buildings and urban spaces. In 2015, we had global sales of over 8 billion USD and currently we have approximately 36,000 employees in over 70 countries. Our North American headquarters is located in Somerset, New Jersey.

Our comments begin on the following page. We look forward to working with the CEC on this revision. Please contact me if you have any questions.

Sincerely,

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## Comments on Voluntary California Quality Light-Emitting Diode (LED) Lamp Specification 3.0

November 30, 2016

**Docket No.: 16-AAER-04**

Philips Lighting appreciates the opportunity to submit written comments on the Voluntary California Quality Light-Emitting Diode (LED) Lamp Specification 3.0.

### General Comments

We note that v3.0 of the specification harmonizes with the changes to Title 20 that were approved by the Energy Commission at the beginning of 2016. In our comments earlier this year, we cautioned that implementing the requirements in Title 20 could result in less availability of product in the market. We are of the firm belief that the proposed changes to the specification still will not increase the availability of LED lamps in the California market beyond the existing 2.0 specification.

Based on comments made by the DOE at the GSL public hearing on April 20<sup>th</sup>, we also believe that the Title 20 changes will be pre-empted once the GSL Final Rule is published. In the unlikely event that preemption does not occur, we are concerned that there will be no rebates for products that meet the voluntary specification.

Please note that the many objections to the requirements in Title 20 that we previously submitted to the Title 20 rulemaking file still stand, such as CRI > 80; limits on R<sub>1</sub> – R<sub>8</sub> and Duv, and standby power. We object to those being carried over to this specification.

With regard to standby power, we note that the draft specification proposes an effective date of 1/1/18. In Title 20, the date was moved back 6 months to 7/1/19 to give industry more time to meet the rather aggressive limit of 0.2W. **It is extremely unlikely that connected products will meet the limit proposed in the specification, especially 18 months before it is to be effective in Title 20.** Preemption of the Title 20 limit on standby power, and the early adoption of the limit in the v3.0 specification will not help California move the market to lower standby power.

Please realize that connected lamps are also part of the much broader *Internet of Things* (IoT). IoT devices will encompass more than just lighting and will use standby power as well. In many cases, they will use lighting devices as a carrier for their features, however, their standby power is not related to lighting. Thus limiting the standby power for a lamp will limit the future of this technology. Thus, until the CEC is ready to separate lighting and non-lighting standby power, we strongly prefer the approach taken by the DOE where standby power is not explicitly restricted and should be compensated for by a higher requirement on lamp efficacy.

It might not be obvious, but the specification makes no allowance for color tunable products. It is not possible to meet the efficacy and CRI requirements at all settings of a color tunable lamp. If a light can be tuned to blue or red, efficacy drops dramatically. Also, if a chromaticity is selected that is more than a certain distance away from the black body locus, CRI is not even defined, so one is not even able to do the calculation to see if it meets the equation.

Energy Star requires manufacturers to qualify tunable lamps at the highest output power setting of the ANSI white points. Then, at every other setting, power is lower. If power is lower, then energy is being saved with respect to the qualifying condition, no matter what the efficacy is. This is a straightforward approach that does not require testing at multiple settings. We ask that the specification clearly include tunable products with the requirements defined in the manner used by Energy Star.

Finally, as a member of NEMA, Philips Lighting echoes and supports their comments. We particularly wish to emphasize that life testing based on LM-80/TM-21, such as allowed by Energy Star, should be permitted until the LM-84/TM-28 testing is complete. The Energy Star test is on the complete lamp, just like LM-84, and has to run for a minimum of 6000 hours. Thus, it is completely unnecessary to repeat this testing to qualify for the voluntary quality specification. Thus, we strongly recommend that results of Energy Star testing be accepted for this specification in lieu of LM-84/TM-28 for existing products.

### Technical Corrections and Typos

#### **Page 3 – Chapter 2**

The second bullet under ‘Chapter 2’ says that the brightness must be “... less than or equal to 2,600 lumens ...”, while the Performance Metric Comparison on page 10 says “... less than 2,600 lumens ...”. Which is correct? We suspect the former if the intent is to be consistent with Title 20.

#### **Page 4 – Effective Date**

Paragraphs 2 and 3 in this section refer to Tier 1 and Tier 2, but these tiers are not defined in the specification. Do they refer to the tiers in the Title 20 regulation? Please clarify.

#### **Page 4 – Test Criteria**

Reference is made to 10 CFR §429.56. This section of 10 CFR 429 may change over time. We suggest that you clarify your intent and make reference the specific place where this section appears in the Federal Register. The same comment holds for all the references to DOE regulations.

**Page 11 – Lumen Maintenance**

Delete the row for lumen maintenance. We challenge whether there is an actual lumen maintenance requirement. There is a life requirement in Title 20, based on life and lumen maintenance data, but we are not aware of a specific requirement for lumen maintenance.

END COMMENTS