

DOCKETED

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On Draft Express Terms

Additional submitted attachment is included below.

October 20, 2017

Submitted via email: doCKET@energy.ca.gov

Docket #17-BSTD-01

Mr. Andrew McAllister
Commissioner
California Energy Commission
1516 Ninth Street
Sacramento, California 95814

Draft Express Terms for Nonresidential, Residential, Joint, and Administrative Sections of the California Building Energy Efficiency Standards California Code of Regulations, Title 24, Part 6; Pre-rulemaking # 17-BSTD-01

Dear Commissioner McAllister,

Acuity Brands appreciates the opportunity to provide comments regarding the proposed requirements for Title 24 Building Energy Code. Acuity Brands has a long history of working with the Commission and contractors to promote the adoption of the state building code to promote high efficiency lighting installations. We look forward to discussing our comments and working collaboratively on revisions necessary to ensure an effective building code.

Acuity Brands is the leading manufacturer of luminaires and lighting controls in North America. We operate facilities throughout California under the Peerless, Hydrel, Lighting Control & Design and Sunoptics product brands. In addition, our western region manufacturing and distribution center is located in Ontario, CA. The California building code has a direct impact on our investment of nearly 400 California based employees.

Our comments are based on the draft 2019 Standards posted on September 20th, and the CEC staff presentations from the October 4th and 5th pre-rulemaking workshop, and focus primarily on the proposed residential lighting requirements, nonresidential lighting requirements for outdoor lighting sources, and daylighting provisions. We also have included recommendations for your consideration.

Please contact me to discuss our comments in more detail.



Tanya Hernandez
Director, Government & Industry Relations
770-860-2793
Tanya.Hernandez@AcuityBrands.com

1. Residential Lighting –

- a. **General** – We were surprised to see proposed changes to the residential requirements since the Commission had previously stated that the focus for the 2019 would be nonresidential measures and there was no mention of residential lighting in the CASE reports or previous pre-rulemaking workshops for 2019.
- b. **Correlated Color Temperature (CCT)** – The Commission has proposed two major changes for CCT. 1) Moving the requirements for CCT from Joint Appendix JA8 to Section 150.0(k)1B, making the requirement applicable to all “general lighting” in habitable spaces; 2) Limiting CCT to 3500K maximum for lamps and luminaires in habitable spaces.

We applaud the Commission in its attempt to allow lighting products with higher color temperatures in areas of the home that are designed for human occupancy but only occupied occasionally and for short periods of time, such as bathrooms, toilets, hallways, storage areas, closets, and utility rooms, however, we believe the Commission has erred in its decision to tighten color temperature for inseparable luminaires used in habitable spaces which was previously 4000K maximum. Since the adoption of the 2016 code, manufacturers like Acuity Brands have committed considerable resources to update residential portfolios with JA8-2016 inseparable SSL luminaires at 4000K, and ask that the Commission evaluate the cost-effectiveness of making the change from 4000K to 3500K.

2. Outdoor Light Sources –

- a. **Lighting Power Allowances** - The Commission continues to propose a new set of outdoor lighting power allowance values using LED lighting as the baseline. We support utilizing LED technology as the baseline for the lighting power allowances and believe that the values in Table 140.7-A and Table 140.7-B will be achievable by 2019, however, the values are aggressive given that there was a 40% reduction in Z3 in the 2016 code. We recommend that the Commission review the values for applications using **decorative post tops and other luminaire types that have an efficacy handicap due to the dissimilar design criteria and features** from area lighting products to ensure that the use of these solutions is not eliminated from the code.
- b. **Exemption (by wattage) for Cutoff Distribution** - Previously luminaires with wattage less than 150W were exempt from the maximum zonal limits for uplight and glare, and the Commission is proposing to lower the wattage for this exception from 150W to 30W based on lower wattages of LED technology. Again, we recommend that the Commission review luminaire wattage data for multiple LED luminaire types, including decorative post tops, and move forward with an exemption to ensure that the 30W threshold does not eliminate the use of decorative, historical or other specialty type of products from the code. The current proposal is an 80% reduction from the previous standard, however LED technology has not yet achieved that level of reduced energy performance. We recommend that 75W is a more appropriate threshold for this exemption in the 2019 standard.

3. **Joint Appendix JA8** – The Commission updated the testing references and requirements for Lumen Maintenance testing, and the rewrite leaves the impression that long term luminaire-level lumen maintenance testing (at least 3000-hrs and up to 6000-hr) is now required for inseparable SSL luminaires, and that the option to use LM-80/TM-21 data has been removed. In the workshop, the presenter confirmed that the Lumen Maintenance testing is now aligned with Energy Star’s testing for lamps and luminaires, so we are suggesting the following revision language for JA8.4.5 (underlined):
 - (a) Lumen Maintenance: The percentage of initial light output shall either be 86.7 percent after the 6,000 hours test or 93.1 percent after 3,000 hours. For inseparable SSL luminaires referencing the in-situ measurement temperature of the LED, complying products shall have IES LM-80 test results that produce an IES TM-21 projected L70 of at least 25,000 hours.
 - (b) Rated Life: The light source shall have a minimum rated lifetime of 15,000 hours.
 - (c) Survival Rate: For tests using a sample group of ten units, 90 percent of tested units shall be operational at the completion of the test. For tests using a sample size less than ten, all tested units shall be operational at the completion of the test.
Exception to Section JA8.4.6(c): Inseparable SSL luminaires referencing the in-situ measurement temperature of the LED.
4. **Joint Appendix JA13** – Although no language has been posted, the Commission confirmed that there will be a new JA13 for smart inverters and indicated there is a working group. We look forward to reviewing the Appendix once it is made available.
5. **Advanced Daylighting Design** – We previously commented on the inclusion of Tubular Daylighting Devices (TDD) and highlighted a concern with the equivalence study for developing a Min VTannual for TDDs. It still is not clear if the performance comparison of traditional skylights to TDDs is a direct “apples-to-apples” comparison, especially in an open ceiling application. We believe that using NFRC 200 or ASTM E972 as a static comparison to NFRC 203 leaves room for assumptions. Traditional skylights will distribute light over a larger area than a TDD and this difference should be accounted for in the equivalence study. The equivalence study to determine Min VTannual should perhaps be done on a per square foot of aperture basis to ensure that the difference in size does not result in different amount of daylight in a space from a TDD and traditional skylight. We request that the Commission evaluate the equivalence study and address this concern in the next review cycle.