

CALIFORNIA ENERGY COMMISSION

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Staff Supplement to CASE Report #

Date: February 18, 2015

Pages: 2

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Subject: Residential Lighting, 2016-RES-LTG1-F

California Energy Commission

DOCKETED**15-BSTD-01**

TN # 75796

MAY 26 2015

DESCRIPTION OF PROPOSED REGULATORY CHANGES

CASE report #2016-RES-LTG1-F, titled Residential Lighting, proposes to make the following changes to the Standards:

- Update Section 150.0(k) to require the use of high efficacy lighting in all residential new construction applications, and eliminate exceptions which allow low efficacy lighting in combination with controls. To accommodate this change, the definition of “high efficacy luminaire” for residential lighting is revised to include any fixture installed with high quality, high efficacy lamps, regardless of base type (including screw base lamps) provided they comply with requirements in the revised Reference Joint Appendix 8 (JA8). Recessed luminaires, currently the primary low efficacy luminaire type, would not be allowed to contain screw based sockets or lamps, and would be required to contain a JA8 compliant source.
- Substantially revise JA8 to cover lighting of multiple technologies and types, and contain specifications relating to color, flicker, noise, and lifespan in either ambient or elevated temperature conditions.
- Add a new Appendix JA10, Test Method for Measuring Flicker of Lighting Systems and Reporting Requirements.

Staff agrees with the majority of the proposed changes to Section 150.0(k), JA8 and JA10, and have incorporated substantively similar changes into the proposed Express Terms.

Staff does not agree with the specific proposed regulatory language for JA8 included in the CASE report, and have instead proposed to make the following changes to JA8 in the Express Terms:

- The proposed JA8 warranty requirement is not adopted as product warranty enforcement is outside the jurisdiction of the Energy Commission.
- JA8 in the proposed Express Terms is formatted differently from the CASE recommendation. The JA8 Draft language has a subsection JA8.3, which outlines test objective and procedure, and a subsection JA8.4 which describes the qualification

requirement. The other subsection JA8.5 includes marking requirements and JA8.6 describes the test report requirements.

Staff are proposing this alternative because this format separates out the requirement by categories and distinguishes the test procedure from the qualification requirement. This is deemed to be easier to understand compared to the CASE recommended language. It is also easier for the jurisdiction to enforce the regulation for the same reason.

STAFF ANALYSIS AND CONCLUSION

Staff has analyzed the submitted CASE report and reached the following conclusions for the measures included in the Express Terms:

- Based on the evidence presented in the CASE Report, the measures, as proposed, appear to be cost effective and the author appears to have appropriately followed the Energy Commission's Life Cycle Cost methodology.
- Measure costs premiums presented in the CASE Report appear reasonable and appropriate for the measure proposed.
- Measure energy savings presented in the CASE Report appear to have been appropriately modeled and appear credible.
- Measure environmental impacts presented in the CASE Report appear reasonable and appropriate for the measure proposed.

Staff additionally finds that the alternate proposal for JA8 falls within the analysis of the CASE report, and is found to be feasible and cost effective based on the report's analysis of the CASE proposal for JA8. The changes are largely editorial, with the exception of removing a warranty requirement. Staff finds that the CASE information and analysis shows that the measures are both feasible and cost effective without this requirement, and that removing this requirement provides a marginal reduction in the estimated cost of compliance.