

Memorandum

To: California Energy Commission
Dockets Office, MS-4
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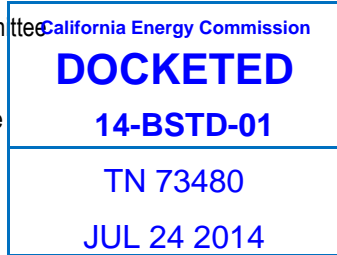
Date: 24 July 2014

From: International Association of Lighting
Designers
Energy and Sustainability Committee

Pages: 3

cc: **Project:** 2016 Building Standards Update
Docket No. 14-BSTD-1

Sent via: Email



Regarding: T-24 2016 Building Energy Efficiency Standards – Comments on Proposals Made at 24 June Staff Workshop

Comments:

Dear California Energy Commission,

On behalf of the IALD Energy & Sustainability Committee, we are pleased to submit the following comments regarding proposals shared at the Commission workshop on 24 June 2014 for consideration in the upcoming 2016 California Building Energy Efficiency Standards.

The difficulty in fully evaluating the items up for consideration is the fact that the 2013 current standards have been in effect for less than a month and many of our members have yet to fully execute designs under the new provisions. That being said, we do believe there are items being considered for 2016 that cause concern as well as items that our committee is pleased to be able to support.

Please review the items listed below organized by the various Case presentations made at the 24 June workshop.

Residential Lighting

In a preliminary webinar presented 15 May 2014, CEC consultants proposed that sec. 150.0(k) 1C of the Standards be simplified by making basically one major change. Where low efficacy luminaires outside of Kitchen, Bathrooms, Garage, Laundry Rooms and Utility Rooms are now allowed within the 150.0(k)7 section if they are controlled by dimmers or vacancy sensors, only high efficacy luminaires would be allowed. However another change would go hand in hand with that change to allow screw-base and other base high efficacy “retrofit” lamps to qualify in those areas, as high efficacy. Those luminaires would need to be on a fixture schedule presented to the homeowner upon final inspection so the homeowner would know that all high efficacy luminaires had been installed and be able to compare the documented luminaires to the installed luminaires.

When the proposal was presented in the Staff Workshop of 24 June 2014, another wrinkle had been added. The new proposal is to insist that recessed fixtures be all high efficacy AND have an integral source. It was characterized in the proposal that in the May meeting “stakeholders” preferred this requirement for dedicated downlights. This is not correct. We strongly disagree with this approach. Bi-pin lamps, such as MR16’s and other low-voltage lamps seem from the language and direction of the proposal to also be caught in this net of “all recessed downlights must have integral high efficacy sources”. LED MR16 lamps cannot, at this point in time, replace one-for-one, halogen MR16 lamps either in the wide variety of lumen outputs and beam angles or in the quality of color rendering and certainly not in a combination of these qualities. Performance and lamp life are not consistent. There are still many problems with flicker. This assertion is backed up by the DOE Caliper Snapshot of MR16’s published January 1, 2014 which states: “Few MR16 lamps currently listed by LED Lighting Facts are comparable to a 50 W (12 V) halogen MR16 lamp. Of the small subset of MR16s that provided data for beam angle and center beam intensity, only one would meet the minimum ENERGY STAR® CBCP criterion for equivalence to a 50 W halogen MR16 at the same beam angle (40°).”

We believe that the screw-type JA-8 compliance proposal should include recessed downlights and other fixtures in residences. The Commission's own consultants showed in their 24 June 2014 presentation that consumers are concerned about lighting quality. As pointed out in the workshop, we know that the market penetration of new light sources can be dramatically limited if consumers perceive those sources to be of poor quality. Moreover, requiring recessed downlights to use integral sources or unusual sockets will preclude homeowners from installing improved light sources as such improved sources come on the market. Therefore, we urge you to delete the proposed requirement that recessed downlights not be allowed to use JA-8 compliant screw base light sources (lamps).

Lighting quality is at the heart of the other major proposal that will affect residential installations: modifying JA-8 in the direction of higher CRI, a broader range of CCT, and reduced flicker. We strongly support this move to improve lighting quality by improving the quality of the light provided by these sources. We point out that the proposed requirement for dimmability to 10% is inadequate; residential applications often call for lower dimming levels than 10%. Overall, the proposal is a strong step in the right direction: set high standards, simplify compliance pathways, and meet consumers' desires for quality lighting.

Non-Residential Lighting (Indoor LPD Reduction)

During the 2013, code change cycle, the IALD shared its general position that LPD values are not the best approach in targeting large scale energy savings, and controls of lighting fixtures and other devices should be positioned more at the forefront. We appreciate that at that time the CEC welcomed our concerns and we saw a greater emphasis put on more advanced lighting control requirements and receptacle control requirements.

We were surprised to see, and appreciative to be properly informed, regarding the fact that many LPD values within current T24 standards had often times not been adjusted or re-visited since 2001. The time lapse alone lends itself to the obvious stance that LPD values should be revisited and adjusted accordingly. Given this time gap as well as the continuing advances in lighting technology, we support the approach to move LPD values to become more in line with the most recent ASHRAE/IES 90.1 2013 LPD values.

We ask that continued study be conducted of area types most significantly affected (i.e. Main Entry Lobby) to ensure that lighting designs using today's lighting technology (fluorescent, compact fluorescent, LED, metal halide, etc.) can still be properly executed without sacrificing visual comfort and various layers of light crucial to successful lighting design.

Non-Residential Lighting (Outdoor LPA Reduction)

We do have some concerns about utilizing LED sources as the baseline for new requirements. While we anticipate their efficacy to continue to rise and surpass other sources (Ceramic Metal Halide), it is not clear that costs associated with LED technology decline at the same rate performance improves. Considering the continued demand from project owners to reduce initial costs to lighting systems, we must be careful not to force the hand of designers into equipment that is more expensive than owners can bear. We fear that in doing so, layers of light critical to the perception of safety in an exterior environment may be omitted resulting in poor and unsafe design.

We find it difficult to evaluate whether the proposed reduction in LPA inhibits designers from executing proper exterior lighting design as the 2013 allowances have been in effect for less than a month and are thus not well vetted by the design community. That being said, due to past regulations not feeling "stringent", the significant reduction is an understandable starting point.

We ask that the proposed allowances be projected against their equivalent ASHRAE 90.1-2013 values for comparison similar to the interior LPD values.

Non-Residential Lighting (Partial-On Occupancy Sensors)

Overall we feel that the approach of requiring "Partial-On" or "Manual-On" occupancy sensors in lieu of "Automatic-On" occupancy sensors is a positive step toward common code language and approach. As noted in the proposal, ASHRAE/IES 90.1 currently employs similar control strategies, which we believe will show noticeable energy savings. We will continue to evaluate the language proposed as well as the areas it may impact, but agree with the premise of the proposal.

Non-Residential Lighting (Outdoor Lighting Controls Update)

We agree with the approach to reducing energy consumption associated with outdoor sales lots and canopies. Currently, these areas feel overlighted during the evening hours and especially when businesses (i.e. car dealerships) are not open. We will continue to evaluate the language proposed but agree with the premise of the proposal.


Thank you as always for allowing our team the opportunity to be involved in this critical opening stage of the code making process. We believe that with our organizations continued and active involvement, we can continue to work as partners in influencing energy legislation in a positive manner. We look forward to engaging with the CEC further as the code process continues.

Feel free to contact either of us directly should you have any questions regarding the submitted comments.

Regards,



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