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Lutron Electronics Co, Inc Comments on the 2025 Building Energy Efficiency Standards, Title 24 Part 6, Express Terms

Additional submitted attachment is included below.

May 8, 2024

Submitted via: <https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=24-BSTD-01>

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

Re: Docket No. 24-BSTD-01

Lutron Electronics Co., Inc. Comments on the 2025 Building Energy Efficiency Standards, Title 24 Part 6, Express Terms, 45-day Language

Dear Commissioner McAllister,

Thank you for the opportunity to review and provide comments on the 2025 Title 24 Part 6 45-day Language. These comments are submitted on behalf of Lutron Electronics Co., Inc.

As you may know, Lutron was founded in 1961 and is headquartered in Coopersburg, Pennsylvania. From dimmers for the home, to lighting management systems for entire buildings, the company offers more than 17,000 energy-saving products, sold in more than 100 countries around the world. In the U.S. alone, Lutron products save an estimated 10 billion kWh of electricity, or approximately \$1 billion in utility costs per year. The company's early inventions— including the first solid-state dimmer invented by Lutron's founder, Joel Spira—are now at the Smithsonian's National Museum of American History in Washington, DC.

Please find our detailed comments below. We look forward to working with you further on this important project. Please contact Michael Jouaneh at 484-809-2782 or mjouaneh@lutron.com if you have questions or would like more information on these comments. Thanks again for your consideration.

Respectfully submitted,



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The comments and suggested edits to the proposed 2025 Title 24 Part 6 45-day Language are shown below. The changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) to the draft language.

General Comments

Lutron comments:

- It would be helpful to users of the standard if all defined terms were italicized as is done in ASHRAE 90.1. What would be even more useful is if the defined terms were clickable right to the definition or if the definition shows up when the mouse hovers over the term.
- The PDF should be bookmarked better. Currently, the draft has every clause bookmarked which makes the bookmarks cumbersome and unhelpful. The way that Title 24 2022 PDF was bookmarked was much easier to navigate, and we recommend using that format for 2025.
- If a section or table is referenced in another section, please link the section or table reference so that users can navigate to the reference more easily.

Subchapter 1-100.0

Table 100.0-A Application of Standards.

Lutron comments: Section 110.12 (demand response) applies throughout Table 100.0-A. It does not appear anywhere in the table and should be added where it is mandated. Also, we recommend adding another column to show where in the main body of the standard each Joint Appendix is used.

Section 100.1 –Definitions and Rules of Construction.

Lutron comments: Change definition of Multilevel Lighting Control to be clearer.

Changes:

Multilevel Lighting Control enables the level of lighting illumination to be adjusted upward and downward raised or lowered in addition to full-ON and OFF across multiple levels. ~~adjusted upward and downward raised or lowered in addition to full-ON and OFF across multiple levels.~~

Subchapter 2-110

Section 110.12(a) Demand responsive controls.

Lutron comments: Item 4 states an obvious outcome and is not required. There is no language in the standard that would prohibit demand responsive controls from performing other functions. The addition of this item merely adds confusion.

Changes:

~~(a)4. When the demand response signal is disabled or unavailable, all demand responsive controls shall continue to perform all other control functions provided by the control.~~

Subchapter 4-130

Section 130.1(b) Multilevel lighting controls.

Lutron comments:

- A square footage threshold is not necessary, since an exception exists for spaces using only one luminaire, which would typically provide sufficient illumination for spaces less than 100 square feet.
- The threshold for requiring multilevel lighting controls should solely be based on the lighting power in the space.
- The lighting power threshold should be lowered from 0.5W/sf to 0.4 W/sf of lighting power. This should capture additional spaces where multilevel lighting would be effective, such as dining areas and theater areas.
- The exception for classrooms should be stricken. It is a dated exception that was used to permit switching of fluorescent lighting in lieu of dimming them. Classrooms are another key space where multilevel lighting can be effectively implemented to save energy. Lutron supports the California Energy Alliance (CEA) proposal on multilevel lighting expansion submitted to the Commission on Aug. 2023.

Section 130.1(c) Shut-OFF controls.

Lutron comments: Captive card key controls should not be considered an equivalent compliance option to occupant sensing or automatic controls in hotel guestrooms. Captive card key controls are a manual control (not automatic) that are easily and often bypassed by the user, thereby negating any potential energy savings. A compromise is to allow the option only for smaller hotels/motels with fewer than 50 rooms. Larger hotels should be required to use automatic guestroom controls, guaranteeing energy savings and providing guests with a more satisfactory experience.

Changes:

8. Hotel/motel guest rooms shall be controlled with one of the following such that, no longer than 20 minutes after the guest room has been vacated, lighting power is switched off.

~~i. captive card key controls; or~~

ii. occupant sensing controls;

or

iii. automatic controls.

EXCEPTION 1 to Section 130.1(c)8: One high efficacy luminaire as defined in TABLE 150.0-A that is switched separately and where the switch is located within 6 feet of the entry door.

EXCEPTION 2 to Section 130.1(c)8: Hotels with fewer than 50 guestrooms, shall be permitted to use captive card key controls to comply with this requirement.

Section 130.1(d) Daylight responsive controls.

Lutron comments: This section should align with energy codes such as ASHRAE 90.1, which prohibit manual controls from raising light levels beyond those set by daylight responsive controls. It is unclear why manual controls would be necessary for this purpose, and it undermines the energy savings facilitated by daylight responsive controls. Therefore, the second sentence should be removed.

Changes:

F. In spaces where manual controls are required, the manual controls shall be capable of turning off or decreasing light levels below the light level set by the daylighting controls. ~~Manual controls shall be permitted to temporarily increase electric lighting light levels above the light level set by the daylight responsive controls if the controls are configured to reset electric lighting controls back to the Section 130.1(d)3 defaults after electric lighting have been turned off or reduced by a manual control, occupancy sensor or timeclock.~~

Subchapter 7-150

Section 150.0(k)1C Recessed Downlight Luminaires in Ceilings.

Lutron comments: Section 150.0(k)1C prohibits screw-based sockets in recessed ceiling downlight luminaires. Since Title 20 has ensured that only energy efficient lamps can be sold in California, this prohibition is no longer required.

Changes:

- C. **Recessed Downlight Luminaires in Ceilings.** In addition to complying with 150.0(k)1A, luminaires recessed into ceilings shall meet all of the following requirements:
- i. ~~Shall not contain screw base lamp sockets.~~ [renumber ii, iii, and iv]

Section 150.0(k)3 Residential outdoor lighting.

Lutron comments:

- All permanently installed outdoor lighting should be controlled even when not mounted to a building (e.g., light poles).

- There are no requirements for outdoor lighting to have dimmers, occupant sensors, or vacancy sensor, so the second sentence in 150.0(k)3C does not make sense and should be stricken.

Changes:

A. Outdoor permanently installed lighting ~~permanently mounted to a residential building or to other buildings on the same lot~~ shall meet the following requirements:

C. An energy management control system (EMCS) or other controls that provides the specified lighting control functionality and complies with all requirements applicable to the specified controls may be used to meet these requirements. ~~No controls shall bypass control functions of a dimmer, occupant sensor, or vacancy sensor where the dimmer or sensor has been installed to comply with Section 150.0(k)3.~~