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2028 Title 24 Comments on Pre-Rulemaking Draft from Legrand-Wattstopper

Additional submitted attachment is included below.

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November 5, 2026

California Energy Commission
Commissioner Andrew McAllister
1516 Ninth Street
Sacramento, CA 95814-5512

RE: Docket No. 25-BSTD-03 – Comments on 2028 Title 24, Part 6 Pre-Rulemaking Draft

Legrand, especially its California based Wattstopper lighting control brand, appreciates this opportunity to submit comments on the lighting portion of the Pre-Rulemaking draft for the 2028 Title 24, Part 6 Standard. We appreciate the significant work put forward by all proposal teams, commission staff, commission consultants and other contributors to improve the energy efficiency and applicability of the Title 24 lighting and lighting control related sections.

Before addressing any individual code requirements, we would like to note the difficulty working with the new numbering scheme for the code's organization. We know that this is a *fait accompli*, but having worked with the code sections for over 30 years, it's going to be rather hard finding a specific language requirement when it's identified by a 5 or more digit string. And while we appreciate the use of italics to indicate a word or phrase that is called out in the Definitions, it unfortunately does not make for easy reading of the code language. While the italicized phrases are helpful, we hope that in the final version of the Code these will be hyperlinked to that same phrase in the Definition section. But enough about the code's new format…

However, we do appreciate that the previous Mandatory Requirements for Lighting and Controls are now unified with the Power Requirements for Lighting. The combination of both into a single Chapter is a more logical way to arrange the code, and we appreciate this change.

Regarding our comments, we've arranged them in accordance with the document's new numbering format and have included the page numbers as well. Again, we hope you find them helpful.

201 Definitions Page 2-43
One-to-One Alteration: The phrase previously used in the Code was "One-for-One". We're unclear why this was changed, as "One-for-One" more properly describes what is required for this specific type of lighting alteration – that the existing fixture is being replaced for a new fixture . However, if the CEC does wish to use this new phrase, be aware that the original phrase still shows up in the code in **Exception 6 to Section 601.5.2.2.4** on Page 6-92.

Table 401.2(2) Space Types with Required Occupied Standby Controls Page 4-60
While most of what we want to discuss is focused on Lighting, we did want to say that the inclusion of this table is very helpful. It provides clear guidance as to which space types are required to have Occupied Standby Controls rather then the way it was done previously with a footnote in another table.

Deleted 601.2.1.2 Permanent label Page 6-9
While we understand that the code wants to focus on what is needed to meet the code, and not what is not allowed, we suggest there be some added clarity about not allowing peel down labels in non-resi applications. We understand the new language does not support peel down labels, but the removal of this statement from the standard could lead people to believe the restriction no longer applies and peel down labels are still permissible. We note the revision does allow peel down labels in the Group R exception to **601.2.1.2.2**, so would opt for clarity regarding the peel down labels for nonresidential projects.
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601.2.2.1.4 Manual Dimming Controls Page 6-14
The section states it is a [New section], but it is actually using the second line in 2025's **Section 130.1(a)3**.

There's an unintended error in this paragraph, specifically in the second sentence which states "Scene controllers may comply with this requirement provided that at least one scene sets the general lighting power to a level between 10 and 100 percent of full power". Unfortunately, the new 2028 Code is omitting the latter portion of the 2025 Code sentence, which requires of the scene controller ", and the control provides a means to manually turn off all lighting." We understand that the first sentence in the 2028 Code states that controls shall provide a means to manually dim the lights and turn off all lighting, but the second sentence then says you can comply with the above by just using a scene switch without manual off being a requirement. We believe strongly that it's important the 2028 Code match the 2025 Code's requirement that all Scene Controllers have a way to turn off all lighting that they control, by appending the phrase ", and the control provides a means to manually turn off all lighting." to the end of the second sentence.

601.2.2.2 Multilevel lighting controls Page 6-15
It's extremely confusing that **Section 601.2.2.2** "Multilevel lighting controls" is stating the previous 2025 Codes language (which was for non-residential spaces) when it starts out with the phrase "In Group R occupancies".

Additionally, in the language that follows in this section, there's no indication that the rest of this section applies to spaces other than Group R occupancies. This could be solved by moving the "In Group R occupancies…" paragraph to the end of **Section 601.2.2.2**.

If we're misreading this, and the intention is that **Section 601.2.2.1.4** be the language for non-Group R occupancies, then why aren't the previous exemptions for any space with one luminaire and restrooms not included in that paragraph? We believe it's already been proven that there is no reason to require all restrooms to have multilevel lighting, based on what is in the 2025 Code language.

Exception 1 to 601.2.2.1.4 Pages 6-15 and 6-16
This exception states: "Lighting in commercial/industrial shipping and receiving areas, Copy Rooms, Corridor Areas, Electrical/Mechanical/Telephone rooms, kitchen/food preparation areas,

Laboratory areas, Laundry Areas, locker Rooms, Manufacturing, Commercial and Industrial Work Areas, Parking Garage Areas, Restrooms, Stairwells, and Transportation Function Areas."

We strongly recommend that the phrase "commercial/industrial shipping and receiving areas" be amended to read "commercial/industrial shipping, storage, and receiving areas" to make it clear that warehouse areas would also be included in this exception. We trust that the CEC is not trying to require Manual Dimming Controls inside storage facilities. While we understand the benefit of dimmable lighting for Warehouses where skylights are present, we cannot see where a requirement for manual control dimmers to be installed at the entrance/exit of every warehouse aisle would make sense.

Additionally, we find the phrase ", Manufacturing, Commercial and Industrial Work Areas" language confusing. Is this meant to indicate Commercial and Industrial Work Areas of Manufacturing facilities? Or are all Manufacturing AND Commercial and Industrial Work Areas exempted (in which case aren't all Manufacturing areas already considered Commercial or Industrial Work Areas?).

601.2.2.3.1.1-Occupant Sensing Control Page 6-16
We do not understand why this paragraph is titled "Occupant Sensing Control", when it includes other shut off control devices? It clearly includes "…automatic time-switch control, or other control capable of automatically shutting OFF all of the lighting when the space is typically unoccupied…". We believe this paragraph should be titled "Shutoff Control Devices" or something similar.

601.2.2.3.5.2 Occupancy sensing operation Page 6-17
It seems odd in **Section 601.2.2.3,** with the title "Shut-OFF lighting controls", that Title 24 24 perpetuates language for how lighting is permitted to turn ON. This is one of many areas where the lighting control section is getting increasingly difficult to interpret with the carve outs for certain space types or building types along with language on what is permitted based on previous lighting control section requirements. As an example:

> *Lighting* shall be permitted to use *automatic* full on *occupant sensing controls* in any spaces where a *manual dimmer* is not required by Section 601.2.2.1.4 and *multilevel lighting controls* are not required by Section 601.2.2.2 (Section 130.1(b)).

While those who've worked with the code may understand exactly what is required, those newly exposed to the code will have a difficult time discerning the meaning of these chained conditions.

601.2.2.3.6 Full or partial-OFF occupancy sensing controls Page 6-17
This is an interesting section title, because the way the 2025 Code was written for the covered spaces, it could be interpreted as allowing those spaces to go Full Off, or partial-Off. Most previously listed space types (Warehouses, Library Stack Aisles, Corridors, Stairwells) were allowed to go to any level at or below 50% when the space was unoccupied, and Open offices over 250 square feet were allowed to bring unoccupied areas at levels from 0-20%. However, in the proposed 2028 Code, there are spaces being listed that are not allowed to take advantage of Partial-Off at all – specifically Lounges, breakrooms, waiting areas, and ITEF rooms. These spaces might be better listed under **601.2.2.3.5.1-Automatic shut off?**

Exception to Section 601.2.2.3.6.5 Page 6-19
We note that luminaires located in a parking garage daylight adaptation zone and dedicated to

providing illuminance for daylight adaptation are exempted from **601.2.2.3.6.5** (Parking Garages), and that it appears that the control requirements are located in **Section 601.2.2.7 Parking Garage Daylight Adaptation Zone Lighting Controls.** We understand why the code authors might not want to add a shut off requirement immediately following paragraph **601.2.2.3.6.5**, but we would suggest doing so, especially since the name this area includes the word "Daylighting". If someone has a question about Garage Daylight Adaptation Zone Lighting Controls, we expect that they will look in the Daylighting Section first for clarification.

601.2.2.3.6.8 – *ITEF* Page 6-20
This section is saying general lighting in ITEF spaces must use Occupancy Sensors, but that conflicts with the code section 601.2.2.3.2, which allows countdown timers to be used to control Server Aisles.

Additionally, is the **Exception to 601.2.2.3.6.8** for Group R occupancies needed since this only applies to ITEF spaces?

601.2.2.4.2.3- Daylighting Page 6-22
The new Code says "General lighting luminaires longer than 8 feet shall be controlled as segments of 8 feet or less according to the type of the *daylit zone* in which the segment is primarily located; and"

Wanted to say I appreciate this language, as the 2025 code had language in the Compliance Manual that said that even if a fixture was mostly in the secondary zone but a small amount was in the primary zone, the entire fixture (up to 8') was to be considered to be in the Primary Zone. We felt the new 2025 language was a significant change that was never discussed in any of the meetings we attended. We're hopeful that what is meant by a segment being primarily located means where the majority of that fixture lies in the space between Primary, Secondary, Skylit, and non-daylit zone.

601.2.2.4.3 Paragraph 4 - Daylight responsive control requirements Page 6-22
Believe a portion of this paragraph was accidentally removed. The previous paragraph 3 covers "areas other than parking garages". Believe the first words in paragraph 4 – "For parking garages" should not have been crossed out, because without those words, there's no definition for where the requirements stated in the later uncrossed out section should apply. The words not crossed out in paragraph 4 mention a combined primary and secondary sidelit daylit zone, and per previous text in the daylighting section, that can only apply to parking garages, proving that the initial text "For parking garages" should not have been removed.

601.2.2.4.3 Paragraphs 6-9 Page 6-22 and 6-23
I've always admired how Title 24 avoided for the most part trying to micromanage unique spaces, so we're surprised by the language that's being called out in these new paragraphs, mainly because these spaces were never individually called out in the daylighting section of the previous 2025 Code. Suggesting these paragraphs be re-written, as they are confusing at this time.

601.2.2.4.6 Multilevel lighting and manual dimming control interaction Page 6-23
We would like to say how appreciative we are by the language used in the latter part of the second paragraph. We believe one of the primary issues that people have working in spaces controlled by photocells is when they cannot temporarily override the photocell, and when that happens, they may often try to cover the photocell with tape or other opaque material. Providing

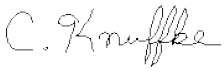
an allowance for the tenant to be able to temporarily override their photocell will go a long way to avoiding more permanent ways people have used to preventing the photocells operation. Again, thank you for this code addition.

OUTDOOR LIGHTING
601.2.3.2.2 Automatic scheduling controls Page 6-26
We're confused by line 4, specifically "Automatic scheduling controls are not required for Nonresidential Buildings excluding Group R occupancies where motion sensing controls are installed that:"

Does this mean that Group R occupancies are required? Suggest this line be edited for clarity.

If there is any discussion point in this letter where the CEC finds our concerns or suggestions unclear, we hope that you'll consider contacting us for clarifications. We've certainly enjoyed the opportunities we've had in the past to discuss the Energy Code language by phone, email, and in person, and hope to continue that positive relationship for many years to come.

Respectfully Submitted,



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LIGHTING AND CONTROLS

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