Energy - Docket Optical System

From: Jay Martin <JMartin@willdan.com>
Sent: Saturday, April 18, 2015 12:23 PM
To: Energy - Docket Optical System
Subject: Re: Docket No. 15-BSTD-01: Suggestion to allow timed shutoff of parking garage lighting

Dear CEC Commissioners and Staff:

I suggest an addition to section 130.1(c)7B of the California Energy Code, the section that concerns occupant sensing controls for the general lighting in parking garages, parking areas, and loading and unloading areas:

"During periods when a space is scheduled to be unoccupied, the occupant sensing controls may, while no occupant is sensed, turn the lighting fully OFF or reduce the lighting level to the minimum required by a health or life safety statute, ordinance, or regulation."

Savings. The suggested addition to the code would allow further energy savings in parking garages that are closed in the evening and on weekends, such as the parking garages for office buildings. In the current code, nighttime lighting is required even when a parking garage is empty and locked.

Approach. The suggested addition to the code would be an option ("may"), not a requirement ("shall"). The suggested addition to the code would continue to rely on occupant sensing controls, which would turn the lighting fully ON if an occupant were sensed outside of normal operating hours.

Authority. The suggested addition to the code would allow parking garage lighting to operate closer to the ASHRAE standard. The ASHRAE standard for parking garage lighting control includes both scheduled shutoff and occupant sensing controls: "Parking garage lighting shall have automatic lighting shutoff" and "Lighting power of each luminaire shall be automatically reduced by a minimum of 30% when there is no activity detected within a lighting zone for 20 minutes" (from section 9.4.1.2 of ASHRAE 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, https://www.ashrae.org/standards-research--technology/standards--guidelines/other-ashrae-standards-referenced-in-code).

Feasibility. The suggested addition to the code would allow the use of a timed shutoff setting that is already available with some common lighting products. For example, a parking garage luminaire from Cree has this option: "The Cut Off feature can be adjusted from none (fixture never turns off) to 5 hours and is factory set at one hour. This feature allows the luminaire to switch from low mode to off after no motion is detected by the sensor for the specified duration of time" (from LED Programmable Multi-Level Options, 10/21/13, https://www.creelink.com/exLink.asp?11771499OY74R53I27481479).

Consistency. The suggested addition to the code would allow parking garage lighting to operate more like the lighting for open rooftop parking and other outdoor parking which has an automatic scheduling control.

Disclosure. The suggested addition to the code occurred to me during a recent project that I completed for my employer, Willdan Energy Solutions. However, I did not ask my employer to endorse my suggestion. I am not writing as an authorized representative of my employer. My suggestion is only my suggestion.

Respectfully submitted,
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