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bi-level lighting

Additional submitted attachment is included below.

UCDAVIS
California Lighting
Technology Center

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We applaud the removal of the proposed exception to Section 130.2(c)3 for parking lot lighting to avoid installing occupancy-based sensors for certain exterior lighting applications.

Sensor based controls for exterior lighting offers significant potential for reduced energy use, as well as helping to reduce extraneous nighttime light pollution and sky glow. Reducing light at night during periods of vacancy is critically important, and technologies and design practices that reduce lighting energy use are urgently important due to the growing asymmetry of the electrical demand curve in California.

The 2013 CASE study report modeled the use of sensors with a 50 foot diameter coverage pattern, which provided a reasonably good coverage in typical parking lot applications. CLTC market assessments and testing results show that there are a substantial number of exterior lighting occupancy sensors available that can provide this coverage (or better) in a cross-section of technology categories (i.e. passive infrared, microwave, LiDAR). Furthermore, at UC Davis there are approximately 5,000 sensors installed and we have not received any complaints associated with the sensors. This adaptive sensor based lighting portfolio has provided >70% savings given the long periods of unoccupied illuminated areas often with highly variable schedules.

While not universal, a more common issue with exterior lighting occupancy sensors is that the wrong sensor, or sensor accessory such as the Fresnel lens option for PIR sensors, can easily be specified and installed in the field. Depending on the application, this can lead to a less-than-ideal range of detection and complaints. This type of issue is inevitable in the absence of an explicit performance specification for exterior lighting occupancy sensors, which I recommend be developed to help mitigate these issues.

Sincerely,

Michael Siminovitch

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