



February 05, 2008
Mr. Gary Flamm
Docket Number 07-BSTD-1
California Energy Commission
Docket Office
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512

RE: Docket Number 07-BSTD-1 as Submitted by NEMA

Dear Mr. Flamm,

Thank you for sharing with me the comments made recently by NEMA in a letter submitted to the CEC on December 14th 2007. Although Watt Stopper is a long time member of NEMA, we were unaware that these comments were being considered by NEMA nor did we have a chance to comment. For that reason I feel compelled to contribute my own remarks.

Clearly the issue at stake here is the escalation of occupancy sensors in commercial buildings. There are numerous studies by independent educational agencies such as the LRC (Lighting Research Center) and the CLTC (California Lighting Technology Center) and studies from electric utilities such as PG&E and SCE that clearly prove energy savings in a wide range of occupancy sensor applications. The application of occupancy sensors to save significant energy has been historically proven through the many iterations of Title 24.

Specifically, I would like to comment on the remarks made by NEMA paraphrased below:

The National Electrical Manufacturers Association (NEMA) appreciates the opportunity to comment on the recently proposed revisions to Title 24 lighting requirements. NEMA, which represents over 450 companies that manufacture products used in the generation, transmission and distribution, control and end-use electricity, strongly supports sound energy efficiency legislation. We are pleased to have worked in collaboration with the CEC since the early stages of the rule making process, and we feel that the 45-day language is a step in the right direction. While positive changes have been made throughout the rulemaking process, a few sections continue to cause concern for NEMA. They are:

(WSL) While there are areas that we might change, we believe the changes recommended for the 2008 standard will help in our shared goal of eliminating energy waste. In particular, we believe that bi-level control capability is a must. Based on our own experience and the research funded by the CEC, bi-level switching reduces energy consumption and demand. Furthermore, these reductions can be made without compromising occupant satisfaction.

Section 119(f)(1)

Be capable of reducing the power consumption of the general lighting in the controlled area by at least two thirds in response to the availability of daylight while maintaining relatively uniform illumination throughout the area;

The change in this requirement from 1/2 to 2/3 reduction precludes the use of 2 lamp fixtures with step-dim ballasts. We believe that the market dynamics will result in designs that favor 3 lamp fixtures over 2 lamp in order to meet the 2/3 level with simple switching – encouraging designs that utilize more energy.

Indirectly requiring that only 3 lamp fixtures with 2 ballasts for inboard / outboard switching be used for all non-dimming daylight harvesting projects rather than a 2 lamp fixture with a single ballast seems counter productive. Moreover, this section contradicts section 131(b), which specifies that multi-level controls "have at least one control step that is between 30% and 70% of design lighting power and allow the power of all lights to be manually turned off" as well as 131(c) (4)(C) "Automatic daylighting controls shall be multi-level, including continuous dimming, and have at least one control step that is between 50% to 70% of rated power of the controlled lighting". To avoid contradiction, we suggest that a better approach for 119(f)(1) would be to specify that the multi-level controls meet the requirement of 131(b).

(WSL) There are many reasons for wanting to be able to reduce lighting levels...it may be used for low level standby lighting for brown-out conditions, access and regress lighting in an office etc. The 2/3 reduction provides a "HIGH...MED...LOW...OFF" lighting level capability.

Section 131(d)(4)

(d) Shut-off Controls.

4. Offices 250 square feet or smaller; multipurpose rooms of less than 1000 square feet; and classrooms and conference rooms of any size; shall be equipped with occupant sensor(s) to shut off the lighting. In addition, controls shall be provided that allow the lights to be manually shut off in accordance with Section 131(a) regardless of the sensor status.

Exceptions to Section 131 (d) 4:

(a) Spaces with multi-scene lighting control systems

(WSL) Scene control systems can certainly improve lighting comfort and add user control options but do not always offer the ability to turn off lighting when the room is unoccupied. Clearly spaces with multi-scene lighting control systems still would benefit from the use of occupancy sensor. These types of systems are easily integrated with occupancy based controls.

(b) Shop and laboratory classrooms

(c) Spaces where an automatic shutoff would endanger the safety or security of the room or building occupant(s)

(WSL) Clearly proposed exception b and c are talking about the same thing. C is too broad and open to so much interpretation that would essentially negate section of 131(d)4. Title 24 offers many other control options and controls manufactures offer

products and services that avoid these types of situations. I would propose that NEMA should offer evidence that lighting controls were primary cause of any injuries of breaches in security due to their proper use before this exception could even be considered. In addition, I present that there are features implemented into sensors that negate the NEMA arguments about safety and security. For instance sensors can flash the lights or beep before impending shutoff or in manual-on situations the sensor can have a grace period for turning on lights back on automatically.

(d) Lighting required for 24-hour operation

(WSL)I believe this point is already addressed in EXCEPTIONS to Section 131(d)1: 1. Where the lighting system is serving an area that must be continuously lit, 24 hour per day/365 days per year.

(e) School buildings containing classrooms for any of grades K- 8.

(WSL) The logic for this exception is based on the notion that the use of automatic controls trains our children to leave the lights on. There is a fallacy in this argument in that K-8 students rarely are the first or last people into the classroom, the teacher is. Hopefully the teacher or cleaning people will turn the lights off. If not the sensor will guarantee they will be turned off. The way this exception is written it would essentially exclude the use of occupancy sensors in the administrative office of the school.

We propose adding the bolded exceptions to section 131 (d)(4). If the outlined exceptions cannot be included, then we propose that Section 131 (d)(4) should be removed.

Our concerns are based on energy savings, education, and safety. Many studies that report energy savings from occupant sensors show that the energy savings are observed after normal working hours, and are the result of the baseline building not meeting energy code requirements, such as "Shut-off Controls" requirement in Section 131 (d)(1). The current standard already requires an automatic control device be installed to shut-off lighting in all spaces. There are three methods identified to achieve this result, and there has been no justification given to single out one method as the preferred one and mandate it. In some cases, more lighting energy will be used by mandating occupant sensors.

In addition, and quite apart from energy savings, there is the broad educational role of schools to consider. The discipline to turn off lights when leaving a room is a good habit to learn, and the use of automated devices in a classroom reduces the effectiveness of the school to reinforce that lesson.

I appreciate the opportunity to provide my comments to the CEC.

Sincerely,



Jon Null
Director of Marketing, The Watt Stopper/Legrand