



KYLE PITSOR
Vice President, Government Relations

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December 14, 2007

Commissioner Jackalyne Pfannenstiel
Commissioner Art Rosenfeld
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

Dear Commissioners Pfannenstiel and Rosenfeld:

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:

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%

**National Electrical
Manufacturers Association**

1300 North 17th Street, Suite 1752
Rosslyn, VA 22209
(703) 841-3274
FAX (703) 841-3374
kyl_pitsor@nema.org

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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).

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

(b) Shop and laboratory classrooms

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

(d) Lighting required for 24-hour operation

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

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.

Section 146(a)(2)

Reduction of wattage through controls. The controlled watts of any luminaire may be reduced by the number of controlled watts times the applicable factor from TABLE 146-C if:

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D. For Occupant sensors used to qualify for the Power Adjustment Factor in any space less than or equal to 250 square feet enclosed by floor-to-ceiling partitions, or any size classroom, corridor, conference or waiting room, shall be controlled by a multi-level occupant sensors meeting Section 119(e)....

This section does not adequately define “multi-level circuitry and switching.” Since power adjustment factors are available of “multi-level occupant sensor combined with multi-level circuitry and switching”, “multi-level circuitry and switching” should be defined here or in the compliance manual.

Again, NEMA appreciates the attentiveness and cooperation of the CEC. Should you have any questions, please feel free to contact Dain Hansen at (703) 841-3200.

Sincerely,



Vice President
NEMA, Government Relations