



Setting Standards for Excellence

April 3, 2012

Submitted via email to: [Docket@energy.ca.gov](mailto:Docket@energy.ca.gov)

Ms. Karen Douglas  
Commissioner  
California Energy Commission  
1516 Ninth Street  
Sacramento, California 95814

**DOCKET**

**12-BSTD-1**

DATE APR 03 2012

RECD. APR 03 2012

**NEMA Comments to Docket No. 12-BSTD-1 California 2013 BUILDING ENERGY EFFICIENCY STANDARDS Notice of Proposed Rulemaking 45-Day Language**

Dear Commissioner Douglas,

The National Electrical Manufacturers Association (NEMA) thanks you for the opportunity to comment on the 2013 BUILDING ENERGY EFFICIENCY STANDARDS rulemaking. We applaud the open, collaborative and coordinative efforts of CEC staff through which many of the proposals were developed with industry and other stakeholders. This proactive collaboration clearly resulted in a superior product and we look forward to increased and continued cooperation.

As you know, NEMA is the association of electrical equipment manufacturers, founded in 1926 and headquartered in Arlington, Virginia. Its member companies manufacture a diverse set of products including power transmission and distribution equipment, lighting systems, factory automation and control systems, and medical diagnostic imaging systems. Worldwide annual sales of NEMA-scope products exceed \$120 billion. These comments are submitted on behalf of all NEMA member companies.

Thank you for your consideration of these comments. If you have any questions, please contact Alex Boesenberg of NEMA at 703-841-3268 or [alex.boesenberg@nema.org](mailto:alex.boesenberg@nema.org).

Sincerely,

Kyle Pitsor  
Vice President, Government Relations

**NEMA Comments to Docket No. 12-BSTD-1 California 2013 BUILDING ENERGY EFFICIENCY  
STANDARDS Notice of Proposed Rulemaking 45-Day Language**

**Comments Relating to Lighting Controls**

NEMA recommends modifications to four of the new Lighting Controls definitions and one change to Section 110.9.

We note that the newly proposed definitions of Dimmer, Dimmer-Full Range, and Dimmer-Stepped, vary between Section 100.1 and the Appendix JA-1. We suggest that these two be harmonized and/or modified as indicated below:

- 1) For the definition of Dimmer.  
Section 100.1; Dimmer is a lighting control that varies the current through an electric light in order to control the level of illumination and the energy use.  
Appendix JA-1; Dimmer is a lighting control that varies the current through an electric light in order to control the level of illumination and the energy use.  
Suggested harmonized definition: Dimmer is a lighting control that varies the luminous flux of an electric lighting system by changing the power delivered to that lighting system.
- 2) For the definition of Dimmer, Full Range.  
Section 100.1; Dimmer, Full-Range means varying the light output of lamps over a continuous range from full light output to minimum light output.  
Appendix JA-1; Dimmer, Full-Range varies the luminous flux of the electric lighting system over a continuous range from the device's maximum light output to the device's minimum light output. without visually apparent steps  
Suggested harmonized definition: Dimmer, *Continuous* varies the luminous flux of the electric lighting system over a continuous range from the device's maximum light output to the device's minimum light output without visually apparent abrupt changes in light level. [NEMA notes that "full-range" is not an industry accepted, common term as applied to Dimmers and we propose the more common industry term "continuous". Also note that Title 24 Table 130.1-A still uses the word Continuous.]
- 3) For the definition of Dimmer, Stepped.  
Section 100.1; Dimmer, Stepped varies the luminous flux of the electric lighting system in one or more predetermined discrete steps between maximum light output and OFF.  
Appendix JA-1; Dimmer, Stepped means varying the light output of lamps in one or more predetermined discrete steps between full light output and OFF.  
Dimmer, Stepped varies the luminous flux of the electric lighting system in one or more predetermined discrete steps between maximum light output and OFF *with changes in light level between adjacent steps being visually apparent.*

To Section 110.9, add mention of Partial-ON and Partial-OFF sensors.

110.9(b)(4) add the following:

D. Partial-ON Sensor shall meet all applicable requirements for partial on sensing devices in the Title 20 Appliance Efficiency Regulations.

E. Partial-OFF Sensor shall meet all applicable requirements for partial off sensing devices in the Title 20 Appliance Efficiency Regulations.

**A note about controls and outdoor lighting:** NEMA supports the inclusion of lighting controls for outdoor lighting mounted at 24 feet or less. However, we believe this provision should allow for a variety of control strategies other than just occupancy sensors. Title 24 successfully addresses energy efficiency in California, because it provides designers the flexibility to determine the most effective solution for specific application characteristics. In many cases, a programmable wireless control system or a part night system can not only address the application needs better than occupancy sensors – but it can also save more energy than sensors. NEMA is working with CLTC to develop language that will allow more flexibility in solutions to meet this requirement and hopes to deliver it before the close of this Rulemaking.

### **Suggested Change to Section 150**

The current version of Title 24 prohibits GU-24 based recessed downlight fixtures. Since this version of Title 24 was enacted, many manufacturers have developed GU-24 downlight fixtures which address heat concerns, and even ENERGY STAR recognizes GU-24 base recessed downlight products. Accordingly, NEMA suggests a modification to table 150.0A Change item 5 of the “High Efficiency Light Sources” column to read: 5. GU-24 sockets rated for compact fluorescent lamps, ~~and which are not recessed luminaires.”~~

### **Suggested Change to Section 130.0 (c)**

Regarding the labeling of downlights, NEMA supports the use of peel-down wattage labels in certain situations. We have discussed this with CEC staff and support these mutually agreed-upon suggestions as summarized below.

130.0(c) (insert new text)

1. Luminaire labeling. Luminaire wattage shall be labeled as follows:

A. The maximum relamping rated wattage of a luminaire shall be listed on a permanent, pre-printed, factory-installed label, as specified by UL 1574, 1598, 2108 (what is correct UL for LED luminaires?); and

B, The factory-installed wattage label shall not consist of peel-off or peel-down layers or other methods that allow the rated wattage to be changed after the luminaire has been shipped from the manufacturer.

EXCEPTION 1 to Section 130.0(c)1B. The wattage of a compact fluorescent luminaire, with single electronic ballast, that can accommodate a range of wattages without changing the luminaire housing, ballast, or wiring, and with a maximum relamping rated wattage of 42 watts, may have a peel-down label that allows the rated wattage to be changed.

EXCEPTION 2 to Section 130.0(c)1B. The wattage of a high intensity discharge luminaire, with single electronic ballast, that can accommodate a range of wattages without changing the luminaire housing, ballast, or wiring and with a maximum relamping rated wattage of 150 watts, may have a peel-down label that allows the rated wattage to be changed.

EXCEPTION 3 to Section 130.0(c)1B. The wattage of a low voltage luminaire, with single electronic transformer, that can accommodate a range of wattages without changing the luminaire housing, transformer, or wiring, and with a maximum relamping rated wattage of 50 watts, may have a peel-down label that allows the rated wattage to be changed.

12A. Wattage of such luminaires shall be determined as follows:

i. The maximum relamping rated wattage of the luminaire, ~~as listed on a permanent, pre-printed, factory installed label, as specified by UL 1598~~ shall be labeled in accordance with item 1; and

~~5. For luminaires with medium screw-base sockets, the factory installed wattage label shall not consist of peel-off or peel-down layers or other methods that allow the rated wattage to be changed after the luminaire has been shipped from the manufacturer.~~

~~6 B. The wattage of a compact fluorescent or high intensity discharge luminaire that can accommodate a range of wattages without changing the luminaire housing, ballast, or wiring shall be the larger of:~~

~~i. The wattage of the lamp/ballast combination determined in accordance with Section 130.0(c)2A when using the wattage of the initially installed lamp/ballast combination; or~~

~~ii. The average wattage of all of the lamp/ballast combinations for which the luminaire is rated; or~~

~~iii. As noted on a permanent, pre-printed, factory installed label, as specific by UL.~~

8. Luminaires and lighting systems with permanently installed or remotely installed transformers. The wattage of such luminaires shall be determined as follows:

A. For low-voltage luminaires that do not allow the addition of lamps, lamp holders, or luminaires without rewiring, the wattage shall be the rated wattage of the lamp/transformer combination. ~~, listed on a permanent, pre-printed, factory installed label, as specified by UL 2108.~~

B. For low-voltage lighting systems, including low voltage tracks and other low-voltage lighting systems which allow the addition of lamps, lamp holders, or luminaires without rewiring, the wattage shall be the maximum rated input wattage of the transformer, ~~listed on a permanent, pre-printed, factory installed label~~ labeled in accordance with item 1, or maximum rated wattage published in transformer manufacturer's catalogs, ~~as specified by UL 2108.~~

C. ~~For luminaires and lighting systems with the maximum rated transformer wattage greater than 53 watts, the factory installed wattage label shall not consist of peel-off or peel-down layers or other methods which allow the rated wattage to be changed after the luminaire or lighting system has been shipped from the manufacturer.~~

9 B. The maximum rated input wattage shall be ~~listed on a permanent, pre-printed, factory installed label as specified by UL~~ labeled in accordance with item 1.

10. The wattage of all other miscellaneous lighting equipment shall be the maximum rated wattage of the lighting equipment, or operating input wattage of the system, ~~listed on a permanent, pre-printed, factory installed label~~ labeled in accordance with item 1,