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Vice President, Government Relations

March 26, 2015

Submitted via email: docket@energy.ca.gov

Mr. Andrew McAllister
Commissioner
California Energy Commission
1516 Ninth Street
Sacramento, California 95814

Proposed Revisions to the California Building Energy Efficiency Standards California Code of Regulations, Title 24, Part 6 and Appendices; 45-Day Language

Dear Commissioner McAllister,

The National Electrical Manufacturers Association (NEMA) appreciates the opportunity to provide the attached comments on the California Energy Commission's Proposed Revisions to the California Building Energy Efficiency Standards California Code of Regulations, Title 24. These comments are submitted on behalf of NEMA Submetering Section and NEMA Residential and Commercial Controls Section companies.

The National Electrical Manufacturers Association (NEMA) represents nearly 400 electrical and medical imaging manufacturers. Our combined industries account for more than 400,000 American jobs and more than 7,000 facilities across the U.S. Domestic production exceeds \$117 billion per year.

Please find our detailed comments below. We look forward to working with you further on this important project. If you have any questions on these comments, please contact Alex Boesenbergh of NEMA at 703-841-3268 or alex.boesenbergh@nema.org.

Sincerely,

Kyle Pitsor

Vice President, Government Relations

California Energy Commission

DOCKETED

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NEMA Comments on Proposed Revisions to the California Building Energy Efficiency Standards California Code of Regulations, Title 24

Submetering Section Comments

The following recommendations are intended to clarify and improve upon the intent of the CEC's 45-day language with respect to submetering, not to substantively change it. We hope the CEC will agree and incorporate them as proposed.

1. Clause 130.5 (a), Electrical Metering: If projects use a utility meter to comply with the requirements in section 130.5, the regulation should allow the data to be made easily accessible to the rate payer so that the rate payer may take actions to address their energy use in real time (or near real time) rather than waiting until after receiving their utility energy bill. NEMA proposes modifying the first exception to this section to improve accessibility of the metering data the requirement is intended to yield. We propose the following modifications to the existing proposal: (NEMA changes are in double strikeout or double underline, to distinguish them from the single strikeout and underline of the CEC 45-day language.)

NEMA Proposal:

EXCEPTION to Section 130.5(a): Buildings Service or feeder for which the utility company provides a metering system capable of electrical energy measurement in accordance with TABLE 130.5-A requirements provided that the data is readily accessible to the building owner for occupant or user use that indicates instantaneous kW demand and kWh for a user-resettable period.

2. Clause 130.5(b), Disaggregation of Electrical Circuits: Disaggregation of electrical circuits doesn't save energy or provide any value unless monitoring of the loads is also provided or required. Additionally, disaggregation of circuits is more costly in most cases than submetering or monitoring of electrical loads. Therefore, it is suggested that the metering and measurement option be listed prior to the disaggregation options so that it is shown more prominently over the disaggregation options. We propose the following modifications to the existing proposal: (NEMA changes are in double strikeout or double underline, to distinguish them from the single strikeout and underline of the CEC 45-day language.)

NEMA Proposal:

Electrical Energy Monitoring/Disaggregation of Electrical Circuits ~~/Electrical Energy Monitoring~~. Electrical power distribution systems shall allow installation of measurement devices for monitoring the electrical energy usage of load types be designed to permit the disaggregated measurement of electrical load energy uses downstream from the service meter according to TABLE 130.5-B. ~~Additive and subtractive methods may be used to determine aggregate and disaggregated energy use.~~ This may be accomplished by any of the following methods:

1. Installation of a complete metering and measurement system is provided which at a minimum measures and reports the loads called for in Table 130.5-B; or
2. ~~1. Separate~~ Switchboards, motor control centers, or panelboards loads shall be disaggregated to which are connected only the required load for each load type of TABLE 130.5-B allowing their independent energy measurement per TABLE

130.5-B. Up to 10 percent of the disaggregated connected load is permitted to be from any other disaggregated load types specified in TABLE 130.5-B or group of loads; or

3. ~~2.~~ Switchboards, motor control centers, or panelboards may supply other distribution equipments with their loads disaggregated for each load types in accordance with TABLE 130.5-B. The measured interval demand loads for each distribution equipment must be able to be added or subtracted from other distribution equipment supplying them. This method must permit permanent measurement and determination of actual interval demand load value for each disaggregated load in the system. Up to 10 percent of the disaggregated connected load type is permitted to be from any other disaggregated load types specified in TABLE 130.5-B.
~~Subpanels of the above to which are connected only the required load or group of loads and for which the subpanel load can be independently measured in aggregate;~~
~~or.~~

~~Buildings for which a complete metering and measurement system is provided that at a minimum measures and reports the loads called for in TABLE 130.5-B Branch circuits, taps or disconnects requiring overcurrent protection devices rated 60 amperes or greater.~~

Residential and Commercial Controls Section Comments

1. The NEMA Residential and Commercial Controls Section appreciates the opportunity to ask questions about proposed regulatory language and its underlying intent during the March 2nd 2015 CEC hearing. During the hearing, NEMA members inquired about several points of potential confusion or misunderstanding and received replies from CEC staff. We summarize these exchanges below and include suggested changes or additions to the regulatory language which will reflect the conversations of March 2nd and clarify the regulation.
2. Regarding the definition of a Thermostat in Section 100.1: NEMA members inquired of CEC staff during the March 2nd webinar if a networked system with the required sensing and communications capabilities of Joint Appendix 5 could qualify for inclusion in the regulation. The answer was "Yes". NEMA believes the existing definition can be improved upon to clarify this allowance. We suggest the words "or networked system" be added to the 45-day language proposed definition as shown below in bold italics:
"THERMOSTAT is an automatic control device **or networked system** used to maintain temperature at a fixed or adjustable setpoint."
3. In follow up to item #2, we suggest the following changes to the wording of Section JA5.3.1 in Joint Appendix 5 to reflect the understanding that networked systems may satisfy the requirements of JA5, again shown in bold italics inserted into 45-day proposed language:
"1. The OCSST shall be capable of connecting to a **Wi-Fi** network **either** compliant with Institute of Electrical and Electronics Engineers **Wi-Fi** (IEEE) **802.11** Standard, **802.2/3 (Ethernet)**, 802.11, and/or Zigbee network compliant with IEEE 802.15.4. Manufacturers may choose to include additional wireless or wired physical communication interfaces."

and secondly

“The logical communication interface within the OCST hardware, which describes the messaging protocol and information model used in representation and interpretation of demand response signals, shall comply at a minimum, with any individual or combination of the following open-based standards, **to facilitate translation and/or interpretation of OpenADR originated commands**: OpenADR 2.03”...

(NEMA suggests CEC staff review Section JA5.3.1 and make grammar and punctuation edits as needed because it has become somewhat difficult to follow due to the number of edits proposed.)

4. Regarding qualification or requalification of compliant products already listed in the CEC database: it is our understanding based on the statements of Mr. Peter Strait that “There is no intent to exclude existing compliant products.” Accordingly, industry will wait for further notification post-adoption as to what relisting actions should be undertaken (if any) to maintain currently listed products in the database.