



KYLE PITSOR

Vice President, Government Relations

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

NEMA Concerns Regarding Upgradable Setback Thermostat Requirements and Title 24 Proposals

The National Electrical Manufacturers Association (NEMA) appreciates the opportunity to bring the following concerns to your attention. This letter primarily addresses procedural and process issues. Our detailed technical responses to the recently published draft JA-5 for these products will be addressed in a separate letter.

As you may 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 NEMA Thermostat companies.

NEMA and its member companies thank you and your staff for our continued collaboration on so many energy-saving ideas and approaches. Over the last several years we have successfully collaborated on numerous initiatives which have helped California save energy while at the same time not over burdening any single entity or business area. However, in the issue of "Upgradable Setback Thermostats" (USTs) we are not satisfied that collaboration has been up to the usual standard and we have concerns regarding intellectual property and due diligence regarding the UST proposal. These concerns are presented in the attachment.

Thank you for your consideration of these concerns. In your reply to these matters and for any questions regarding these issues, please contact Alex Boesenberg of NEMA at 703-841- 3268 or alex.boesenberg@nema.org.

Sincerely,

Kyle Pitsor
Vice President, Government Relations

Attachment

**National Electrical
Manufacturers Association**

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

NEMA Concerns Regarding Upgradable Setback Thermostat Requirements and Title 24 Proposals

Background

Proposals are being developed by Investor-Owned Utilities (IOUs) and CEC staff which center around the development and requirement of a new device which has been termed an “Upgradeable Setback Thermostat (UST)” in new construction homes (Title 24). The intent of this measure is to allow a simple programmable thermostat to be upgraded later with a radio communications capability and enhanced functionality by inserting a radio module into a pre-provided port, thus allowing for ‘smart’ communications and interaction. This upgrade would permit participation in demand response and other energy-related programs. It bears pointing out that these devices are not readily available on the market today, though there is one known patent application. NEMA has raised several objections and concerns regarding this subject to CEC staff to date which we now present below to the Commission directly.

NEMA’s Concerns

- NEMA considers the sensitive consumer issues of mandatory participation in HVAC demand response and energy initiatives as still both very active. The inclusion of a mandatory “upgradable” thermostat in Title 24 has been argued to NEMA and others as leaving the option open for homeowners to more easily join these programs in the future while avoiding a replay of the public and media response to the 2008 CEC proposal. However, the ability of USTs to “upgrade” through the insertion of a radio module still places California homeowners in an untenable position regarding participation in these programs. Imagine receiving a package in the mail with a small radio module and a letter which states “...a rate increase in your billing will be implemented in the next few weeks. You may offset this increase by participating in a demand response program that requires you to enable your thermostat by inserting the enclosed wireless communications module...” The proposal and its approach leave very little difference in sentiment between a UST and a radio-equipped thermostat.
- Intellectual property issues: In discussions prior to mid-October, NEMA and its members asked CEC staff if they knew of any patents or other intellectual property in this area, to which the reply was “No”. Recently, it came to our attention that in fact there is a pending utility patent application for a thermostat which has a retrofit port for a radio module; in other words a UST patent. This application comes from a company based in California, whose principal representative is Mr. Timothy Simon, which worked closely with CEC staff over the last several years in an advisory role on the subject of intelligent thermostats. If this patent application is granted it is possible that a manufacturer wanting to sell a UST in California will have to pay a licensing fee to the owner of the patent. Again, the draft proposal which is the subject of this letter mandates USTs in Title 24 homes. NEMA is concerned about the real or perceived conflict of interest this raises, and to what extent CEC staff undertook due diligence on intellectual property issues during the development of the UST proposal. (NEMA advised CEC staff of this patent issue on October 20th directly following our discovery.)
- NEMA and its members continue to have significant concerns about technical feasibility, including the lack of available standards for demand response. The timing of this proposal comes in advance of the establishment of necessary standards which could facilitate commerce, and the technical requirements imposed by the UST proposal will burden any manufacturer who seeks to develop and market this new device before the benefits of standards can be realized. We also have material technical objections to the draft Appendix JA-5 as written, particularly because it seeks to change labeling requirements in deference to an existing industry standard (NEMA DC-3) and to long-accepted technical practice with no incremental benefit (JA-5 Table 5.2-1). We will detail this and other comments in our forthcoming technical letter.

Actions requested

NEMA requests that CEC investigate the above and answer the following questions:

- 1) Have reviews for patent and other intellectual property (IP) issues been performed and if so what were the findings?
- 2) If an IP review has not been performed, NEMA requests one be done in light of the above and to bring to light any other similar issues so they may all be addressed at once. When will this review take place?

Conclusions

In light of the above stated concerns, NEMA cannot endorse the Upgradeable Setback Thermostat proposals at this time and requests that they be withdrawn from this code cycle. NEMA remains committed to work with the CEC to address UST issues and to work towards developing a proposal for later submission that addresses our procedural and forthcoming technical concerns.