



July 16, 2008

Mr Gary Flamm
Docket No. 07-AAER-3
California Energy Commission
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512

RE: Docket No. 07-AAER-3, NEMA Response to CEC Proposed Regulation for Portable Luminaires, Tables N-6 and N-7

Dear Mr. Flamm:

Thank you for the opportunity to comment on the proposed regulations for compact fluorescent lamps contained within Section 1602 for Portable Luminaires. We understand that these comments are preliminary to the issuance of 45-day language, which is expected on or about August 1, 2008.

As we understand this proposed regulation, effective January 1, 2010, portable luminaires can be furnished for sale in California using four different lamping options. It is the fourth option (Option D) that is of immediate and urgent interest to the NEMA Lamp Section, since it would require luminaire manufacturers to include a screw base compact fluorescent lamp (CFL) with a new luminaire with a screw socket. The American Lighting Association and its members have advised the NEMA Lamp Section that Option D is the option that they will most often select, so there is nothing speculative or remote about the concerns expressed herein.

Table N-6 describes the specifications for compact fluorescent lamps that the manufacturer might package with the luminaire for the two years between January 1, 2010 and December 31, 2011. These specifications are virtually the same as those found in Energy Star Version 4.0 for Compact Fluorescent Lamps. Table N-7 describes specifications for these same lamps beginning January 2012. These proposed CEC energy conservation standards for CFLs are different than what federal law requires for CFLs.

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The NEMA Lamp Section comments fall into two categories: Federal pre-emption and technical merit

Federal Preemption

In its May 29, 1997 Final Rule amending 10 CFR 430, "Fluorescent and Incandescent Lamp Test Procedures," DOE determined the following:

"The Department believes that products such as general service incandescent lamps and medium base compact fluorescent lamps that are subject to labeling are covered products...."

In EPAAct 2005, Congress affirmed that determination and set federal energy conservation standards for medium base compact fluorescent lamps manufactured after January 1, 2006. In October 2005, DOE published in the Federal Register and adopted the standards for medium base compact fluorescent lamps. The federal standards (based on Energy Star version 2.0- Aug 9, 2001) were established for initial efficacy, lumen maintenance at 1,000 hrs, lumen maintenance at 40% rated life, rapid cycle stress test, and lamp life.

Furthermore, in 2007, EISA incorporated 'compact fluorescent lamps' under a new definition of General Service Lamps and clearly follows the rationale used in the 1997 Federal Register that DOE assumes coverage of lamps clearly intended 'to satisfy lighting applications traditionally served by general service incandescent lamps', and this would expand coverage to other base types other than medium screw base.

Additionally, EISA establishes that prior to Jan 1, 2014 DOE shall undertake to initiate a rule making to determine whether standards in effect for general service lamps shall be amended and is specifically not limited to incandescent lamp technologies, so CFL is included.

It is the opinion of the NEMA Lamp Section and NEMA's legal counsel that even though the proposed Title 20 regulation purports to target Portable Luminaires, the specifications in Table N-6 and N-7 are in reality energy conservation standards for compact fluorescent lamps and that California is expressly preempted from establishing such regulations which vary from the federal energy conservation standard established by Congress and DOE. While the proposed Title 20 regulation purports to give luminaire manufacturers "options," the fact is that if a portable luminaire has a screw socket (and they do and they will), the only "option" would be the mandatory use of a CFL, which is not required by and is different than what federal law requires for CFLs. Furthermore, the marketplace does not currently manufacture the Tier 2 lamp specified in Table N-7. Manufacturers of CFLs would be required to do something different than what federal law prescribes. Portable luminaires and general service lamps are not an integrated product; they are sold separately, and the proposed regulation's coercive requirement that the portable luminaire with a screw socket be sold with a CFL meeting an energy conservation standard that is different than what federal law mandates is transparently a regulation of the CFL. The fact that the proposed Tier 2 regulation would require a CFL to be made that is not currently on the market underscores that this is a regulation of the CFL.

Notwithstanding the express preemption of State energy conservation standards for CFLs, NEMA also believes that in light of EISA 2007 and the manner in which Congress has comprehensively chosen for DOE to regulate general service lamps now and in the coming years, that State regulation of luminaires that use general service lamps, which set standards relating to the lamp, would be in conflict with the federal regulatory scheme intended by Congress and is impliedly preempted. In *Geier v. American Honda Motor Company, Inc.*, 529 U.S. 861 (2000), the Supreme Court held that interpreting state law in a way that would mandate airbags in all cars was impliedly preempted by the federal regulatory scheme established by Congress and the Department of Transportation that envisioned “gradually developing a mix of alternative passive restraint devices for safety-related reasons.” *Id.* at 886. Here too, in EISA 2007, Congress envisioned gradually developing a mix of alternative energy efficient general service lamps for energy conservation purposes, and for a state to specify a particular general service lamp to be used with a luminaire “would stand as an ‘obstacle’ to the accomplishment of that objective.” *Id.* We think the Secretary of Energy has been assigned by Congress the exclusive role for gradually determining the mix of these products, and with limited exception for California to set different standards only if the Secretary fails to adopt the required rule. EISA 2007, P.L. 110-140, Sec 321(a)(6)(A)(vi).

We suggest that CEC’s general counsel undertake a serious review of this issue.

Technical Merit

Table N-6 presents no technical problems to members of the NEMA Lamp Section, in that we are already voluntarily adhering to these specifications for the Energy Star program.

Table N-7 presents many technical problems, the principle ones being:

- ♦ **Power factor:** While technically feasible, we do not believe high power factor for compact fluorescent lamps is technically merited. With higher power factor comes higher voltage components and larger size. Lamps in this market segment are becoming smaller, not larger, to meet consumer and luminaire manufacturer requirements. Depending upon the method chosen to increase power factor, ballast efficiency can decrease, LPW can decrease, EMI can increase, and thermal issues arise.

Additionally, unlike some other non-linear loads, self-ballasted CFLs are typically used in applications where the active power consumed is typically one fourth of the power that would be consumed by an equivalent light level incandescent lamp. This means that even a normal power factor CFL represents a significant reduction in system wide utility electrical distribution losses. Further, since CFLs are typically used in conjunction with other electrical loads, we point out that aggregate effects need to be properly considered, since aggregate product diversity behavior provides additional mitigation that may not be initially apparent. We would be happy to explain both of these aspects in more technical detail at some point.

As a result, we see no compelling energy savings justification for requiring high power factor for screw base compact fluorescent lamps.

- ♦ **Dimming and CRI:** There is no justification for the power factor levels mentioned for each of the “dimming levels.” The practical energy savings benefits of dimming greatly swamp out any theoretical PF concerns as the active power decreases below full power. (NEMA is undertaking a project to develop phase control dimming compatibility standards, but this work is just getting underway.)
Furthermore, there is no product available today that would meet this requirement of dimming reliably to 10% -- particularly while maintaining the CRI requirement of 90. This combination is a major technical hurdle.
- ♦ **Mercury Content:** There is a mercury content maximum in Energy Star specifications, which the NEMA Lamp Section supports. However, we do not understand what authority the California Energy Commission has to mandate mercury levels as part of an energy efficiency regulation. In addition, the levels proposed are insignificantly different from the Energy Star mercury levels.
- ♦ **Run-up Time:** These specifications are different from the Energy Star specifications, and there is no associated test method being proposed. It is clearly not in the interest of manufacturers or consumers to have multiple requirements in the market for one product category.

In conclusion, the NEMA Lamp Section does not support the inclusion of a compact fluorescent lamp specification that is different from the federal standard set forth in EPCA. We contend that this action would be a clear infringement of federal authority over such products. We also submit that there are serious technical flaws contained in various other aspects of the proposal as summarized above.

We are always willing to discuss these issues with you, as they are very serious issues that the NEMA Lamp Section believes are ill-advised, both for legal and technical reasons.

Again, thank you for allowing us to comment on proposed 45-day language. If you have any questions or comments, please do not hesitate to contact Dain Hansen of NEMA Government Relations at (703) 841-3221 or dain.hansen@NEMA.org.

Sincerely,



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