



The NEMA Lamp Section submits the following interim comments in response to DOE's request for stakeholder input on the Draft revision to the CFL Energy Star specification dated December 12, 2002.

Revision Process

While NEMA agrees that it may be appropriate to begin a general discussion regarding potential changes to the current Energy Star specification for CFLs, NEMA believes that stakeholders should have been consulted prior to development of an initial draft and prior to the establishment of an implementing schedule with an effective date. The current Energy Star specification has only been in effect for slightly over one year. At the conclusion of the revision process for the current specification (effective date October 1, 2001), the Department agreed that before another revision cycle would be initiated, stakeholders and DOE would convene to review and discuss the experiences gained in applying and enforcing the current version.

In this manner it would be possible to have a constructive dialogue regarding any perceived need to further revise specific requirements, the rationale for each, and an initial discussion on possible specific changes that might be appropriate, including any change in scope or covered products.

NEMA urges the Department to reconsider its current approach, which did not follow this process. As a result, it is not possible to understand DOE's rationale behind proposed changes in the current Draft.

Timing for an Overall Revision- April 1 Effective Date

NEMA strongly objects to the proposed effective date of April 1, 2003 for a revised specification. The proposed changes have significant implications for manufacturers and require careful evaluation. Any implementation date should be arrived at only after stakeholders have had a chance to submit detailed comments, participate in an open workshop with other stakeholders and the Department, and after there is general consensus that there are compelling reasons for any changes or for a full revision.

In addition, an effective date of April 1 will have a very negative commercial impact on manufacturer/partners that have CFL testing underway in accordance with the requirements and sample sizes in the existing specification. Such a near term date would completely negate in-process tests and would

require testing to be re-started, incurring increased costs and delaying introduction of any new models into the Energy Star program.

Interim Vs. Final Comments

These interim comments are being provided with the understanding that NEMA will submit additional comments by the extended comment date of January 24.

Item 1- Elimination of the Pre-Qualification Option

NEMA strongly objects to total elimination of the pre-qualification option as proposed by DOE.

Rationale:

The pre-qualification option requirements were developed at DOE's request and adopted in Version 2 of the Energy Star Spec as a means to provide for a timely introduction of CFLs while minimizing the performance risk to consumers that was inherent in the first Energy Star Specification (Version 1). It is imperative that this option be maintained.

Requiring full data for lumen maintenance and life will extend the time for qualification significantly, especially for CFL's with 10-12,000 hour ratings. Elimination of the pre-qualification option will encourage manufacturers to only produce shorter life lamps since qualification will be quicker. Such a change will also unfairly penalize manufacturers with CFLs currently planned for pre-qualification under provisions of the existing requirements.

NEMA believes that DOE should share its reasons for wanting to eliminate pre-qualification, including any supporting data that would indicate where the current pre-qualification process is deficient. Given that information, and with a then better understanding of any perceived deficiency with the current pre-qualification scheme from DOE's perspective, NEMA is confident that it can propose a modification to the pre-qualification option that will eliminate the deficiency while preserving the benefits of this approach.

Item 2- Scope Coverage of Circle and Square Adapter Products

NEMA does not agree with the scope language change as it relates to Circle and Square shaped adapter products since the new language is ambiguous. Either the original language should be maintained or DOE should clarify the intent of the change so that it can be properly evaluated for comment.

Rationale:

DOE's proposed revision of Scope language related to circle and square adapter products is confusing and needs clarification. The phrase "and lamp systems" has been eliminated. In addition, in (B.) the more proper description phrase 'circle and square lamps....and having electronic ballast adapters that are tested and packaged with the lamp' has been changed to language that would imply that only integral (non-separable) products may be qualified. However, NEMA is not

persuaded this is DOE's specific intent since other portions of the Draft Specification (Draft Spec Page 8, "Note: Testing with a reference ballast...") continue to maintain requirements intended for qualification of adapter products. Hence the need for additional discussion and clarification.

NEMA would strongly object to eliminating circle and square shaped compact lamps with (separable) electronic ballasts (adapters) from the Energy Star CFL program. Such products provide an environmentally preferable option for very high use applications such as the hotel/motel/hospitality segment. The requirement to have the lamp and its intended adapter ballast tested/packaged ensures that the combination meets the appropriate performance standards.

Item 3- CRI for Niche Application Colored CFLs

NEMA strongly urges a detailed stakeholder discussion on the advisability and necessity of extending qualification beyond 'white' colors, for which the current specifications were derived, to a full range of colored CFLs. If it becomes advisable to do so, then there needs to be a complete technical discussion on what the appropriate specifications should be for such products- beyond the color related items of CRI and CCT.

NEMA does not agree with a 'greater than 77.00' requirement for niche colored lamps. There should be no CRI requirement for niche colors. Nor should there be CCT requirements. In addition, the lumen maintenance requirements would need to be reconsidered since the requirements in the current spec were not developed with the intent that they would apply to colored applications where phosphor systems may be very different than those used for general illumination.

Rationale:

The establishment of a CRI requirement for Energy Star CFLs was intended to ensure that lamps marketed for general service illumination of people and objects (so called 'white color lamps') would provide sufficiently accurate color rendering. 'Colored lamps', by contrast, are not intended to provide accurate color rendering. By design they are intended to provide a biased or saturated color for a special purpose or to accentuate a color. It is technically possible to measure CRI or CCT for a colored lamp but that data has little practical meaning since such lamps are not used to light spaces for general purpose illumination, nor are they marketed for such use. Bug light lamps are one example of a niche colored lamp (yellow) that would not be intended for general illumination and for which a specific color rendering requirement is not appropriate.

Item 4- Sample Size Requirements

NEMA initially objects to the sample size testing modifications proposed by DOE.

Rationale:

Without a basis for DOE's proposed increase in CFL sample sizes, NEMA's initial reaction is that the proposals are overly burdensome and therefore not

acceptable. (Example- requirement to add 5 base down units for all photometric testing out to 40% of life. Why? What is achieved by this additional cost/burden?) NEMA desires to understand DOE's reasons for increasing sample sizes so that it may better evaluate the implications of the proposed changes or assist DOE in improving any deficiency related to sample sizes that it has identified. DOE's proposal to test 5 different lamps in two orientations for a total of ten lamps increases the testing burden without any obvious benefit.

In addition, it is not clear how DOE would plan to evaluate some of the data under the proposed new sampling. In other areas, such as destructive transient testing, one would anticipate no significant difference in the outcome with respect to orientation.

NEMA is open to the possibility that some changes in sample sizes may be appropriate but only if a compelling rationale can be made on a case by case (test by test) basis as to a justification for a change.

Item 5- Base up/Base Down Testing

Significant discussion needs to occur on this topic. Note 1 at the bottom of page requires minimum efficacy to be evaluated as the average of the lessor of the lumens per watt measured in the base up and base down positions. NEMA does not agree with this as it is contrary to the method specified in LM- 66. In addition, there has been a significant shift to newer physical lamp configurations such as spiral shaped designs that may need further exploration if requirements are to be set for both orientations.

Rationale:

Rated lumens are measure in the base up position unless the lamp is rated specifically for base down operation. This is because some lamp configurations have insufficient photometric stability in the base down position. The reason to initially include base down data was to allow a determination/calculation of whether the difference in lumens between base up and base down exceeded the FTC requirement. Perhaps this calculation should be explicitly required in a revision of the specification.

Item 6- Power Factor

NEMA's experience is that both the current and proposed specification (0.50) are needlessly restrictive. A negative tolerance, based upon the practical tolerances of electrolytic capacitors should be applied to allow for typical variation since this requirement was originally intended to function as a nominal specification.

Rationale:

There are two fundamental classes of power factor for low cost electronic ballasts: normal (nominal 0.5) and high PF (greater than 0.9). The original intent of setting a 0.5 minimum for power factor was to allow a so-called normal PF ballast circuit to be utilized. It is not desirable to evaluate this requirement to two significant decimal places from a manufacturing perspective.

In addition, it is not beneficial to establish this requirement for both a base up and base down condition. One orientation (same base up industry standard as used for photometry) is sufficient. Any change in PF that occurs from orientation is not significant for either the end user or utility and should not add an unwarranted conformance complexity and testing burden.

Item 7- Labeling

NEMA does not agree with the proposed changes in packaging/labeling, particularly by the proposed April 1st date.

Rationale:

Packaging and labeling changes are time consuming, disruptive, and expensive.

The production of new packaging involves graphic design, artwork, and negotiations with suppliers. These resources are expensive, limited, and subject to considerable lead times. Packaging cannot be changed at short notice without costly consequences. April 1 is already an unrealistic date for products that are either in production or planned for launch in 2003. In addition, no compelling reason has been advanced by DOE that would justify destruction of existing packaging that is compliant with the current requirement and that is already in the supply chain pipeline.

NEMA is open to a discussion with DOE regarding the reasons for these proposed packaging changes on a case by case basis. If consensus is reached on any of the proposals, then NEMA would be willing to work with DOE to develop a more practical time line that would allow for a cost effective rolling change with a realistic end date for any agreed change.

NEMA's position is that any eventual new labeling requirements should conform to the same implementation timing as the new Energy Star logo, so that all package changes can be managed with a minimization of cost and disruption.

Item 8 - Data Reporting

NEMA does not initially agree with the proposed increased frequency of reporting model and shipment data to DOE.

Rationale:

While NEMA understands the need for the basic reporting requirements that currently exist, DOE has not made a compelling case that would justify adding to the burden presented by such reporting. NEMA is willing to reconsider its initial position if DOE can provide a rationale that would justify this additional effort in terms of value added to the program and its stakeholders.

Item 9- Warranty

NEMA does not agree with the proposed warranty change.

Rationale:

NEMA believes that a more complete discussion of the entire warranty subject is required, focusing on at least three important areas: 1 year vs 2 years, limited vs unlimited, and a common definition for what is intended by terms such as 1 year or 2 years. (For example, consistent use of the same assumed "hours per day" usage so actual test life is consistent with claimed 'elapsed time' or 'calendar' life.)

Conclusion

NEMA believes that once these and other comments are received and posted, DOE should subsequently convene a workshop to: enable the Department and its administrative contractor to share its own experiences and perspective regarding the current specification, facilitate cross-stakeholder discussion on the various issues raised by the proposed changes and comments received (including input from stakeholders on possible scope changes), and to cooperatively develop a more realistic time frame for a revised specification.

End NEMA Interim Comments

Jan 10, 2003