



September 15, 2008

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US Environmental Protection Agency  
Ariel Rios Building 6202J  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

Richard Karney  
US Department of Energy  
1000 Independence Avenue SW, EE2J  
Washington, DC 20585

Dear Mr. Baker and Mr. Karney:

The Consortium for Energy Efficiency (CEE) respectfully submits the following comments in response to the proposed ENERGY STAR Program Requirements for Solid State Lighting Luminaires Category “A” Additions, distributed on August 15, 2008 and the technical amendment to the ENERGY STAR Residential Light Fixture (RLF) Specification, version 4.2, released on June 2, 2008. We reiterate here that CEE’s interest is in having an effective ENERGY STAR lighting program that includes Solid State Lighting (SSL), and therefore our comments on both of these matters are covered in this letter. CEE’s previous comments that address incorporation of SSL light sources into the ENERGY STAR Program stand and are supplemented by this communication.

CEE is the national organization of energy efficiency program administrators, whose members are responsible for ratepayer-funded efficiency programs in 32 states and 4 Canadian provinces. CEE member programs are the primary vehicle for delivering energy efficiency to more than 50% of the U.S. population and more than 67% of Canadians. In 2007, CEE members’ budgets represented over 90 percent of the total \$3.7 billion in state- and province-authorized program budgets. This figure is expected to grow to nearly \$4 billion for 2008. In short, CEE represents the groups that are actively working to make ENERGY STAR the relevant platform for energy efficiency across North America.

The following comments, which were developed by the CEE Lighting Committee (Committee), are supported by the organizations listed below.

#### **Comments on Program Coordination**

CEE members fully support the ENERGY STAR Program, as it plays a valuable role in differentiating energy efficient products and services that they support locally. For ENERGY STAR to effectively play this role, we believe it is critical that there is consistency across products and services regardless of the managing agency or agencies. CEE members need the ENERGY STAR Program to develop and convey consistent messages to stakeholders and to speak with one voice.

As we noted in our July comments, there are now conflicting specifications for ENERGY STAR lighting. Announcements include a SSL specification for specified applications (Category “A” and expanded Category “A,” upon which we comment below), general illumination products (Category “B”) scheduled to take effect in 2011, and version 4.2 of the RLF Specification. We believe that having overlapping and/or premature ENERGY

STAR specifications for SSL products presents mixed market messages and hinders the effectiveness of members' efficiency programs and look to ENERGY STAR to resolve this matter as soon as possible.

### **Comments on the Incorporation of SSL into ENERGY STAR**

The following comments are intended to communicate CEE member needs with regard to an ENERGY STAR lighting specification that accommodates the emergence of solid state light sources. As we have indicated in previous comments, member programs require consistency from ENERGY STAR, and we seek a lighting specification that fully addresses the technical considerations outlined below.

#### Comments on Proposed Category "A" Additions

CEE seeks from ENERGY STAR a detailed response describing how proposed Category "A" applications were selected, including demonstrated evidence of suitable product performance for those applications proposed for inclusion. From an informal session about the specification at the ACEEE Summer Study conference, it is our understanding that the following three aspects were considered: SSL's ability to compete with the best in class incumbent technology, cost effectiveness, and the availability of CALiPER testing showing adequate performance. We seek to confirm that these three were considered and to understand whether other aspects of performance were considered as well. This information will enable CEE members to describe to other stakeholders the bar that needs to be met in order to be considered for the ENERGY STAR program, and thus, for member programs that are tied to the ENERGY STAR specification.

CEE asks ENERGY STAR to evaluate the near-term opportunity to include refrigerated case display lighting under the ENERGY STAR program and to share the outcomes of that assessment with all stakeholders. Using the three criteria we currently understand are used (competition with best in class incumbent technology, cost effectiveness, and CALiPER test results), CEE believes this application merits consideration. Further, several CEE members (including Efficiency Vermont, Cape Light Compact, Sacramento Municipal Utility District, Pacific Gas & Electric, Southern California Edison, Wisconsin Focus on Energy, and PUD No. 1 of Snohomish County) are currently promoting this technology; their efforts would be more effective if supported by an ENERGY STAR specification. We recommend ENERGY STAR review the findings of a recent Southern California Edison study described in this paper, "Cool Retrofit Solutions in Refrigerated Display Cases" recently presented at ACEEE Summer Study.

As requested previously, CEE asks ENERGY STAR to eliminate ambiguity in the program by developing clear and precise definitions that outline the specific fixture types that are covered under each general application title. For example, CEE believes that the potential for uncertainty and confusion exists given vague titles such as "Circular or Square Wall Wash Luminaires" and "Ceiling-Mounted Luminaires with Diffusers." A clarification of these definitions is critical to ensure that all stakeholders understand what is, and is not, covered at this point in time. In setting forth these definitions, CEE recommends that ENERGY STAR look to established definitions used by the lighting industry and not create definitions unique to the ENERGY STAR program.

Regarding the Minimum Light Output requirements for the proposed expanded Category “A” applications, CEE asks that ENERGY STAR further consider the requirements for outdoor fixtures. We understand that in setting these requirements, ENERGY STAR benchmarked against the initial lumen levels provided by incumbent technologies, such as metal halide. (We are not addressing whether the initial lumens provided by the incumbent technologies are appropriate.) Metal halide has a very different lumen depreciation curve than SSL and while the initial lumens required by the ENERGY STAR specification are equivalent, the mean lumens of the SSL product will be higher than metal halide for far longer. CEE asks ENERGY STAR to consider variations in lumen depreciation when benchmarking SSL against other technologies and to share their research on this topic with stakeholders so that we all may better understand these factors. We also urge ENERGY STAR to carefully consider whether the practice of setting specification levels based on comparisons between SSL and incumbent technologies may result in other potential problems.

CEE also asks ENERGY STAR to consider whether it is feasible to increase the warranty and lifetime requirements for the outdoor applications covered under the specification. This suggestion is based on our understanding that most outdoor fixtures will be operating at a lower temperature than indoor fixtures and that compact size is less important for most outdoor products (leading to greater thermal mass and the potential for better heat management).

CEE understands that the final version of the IESNA LM-80 procedure, which is currently under development, may not enable extrapolation from lumen depreciation over the first 6,000 hours to lumen depreciation at 70% of initial lumens, or  $L_{70}$ . We believe that prediction of  $L_{70}$  is an important factor in communicating to the consumer about useful life of the fixture. At the ACEEE Summer Study conference, ENERGY STAR verbally communicated a proposal for evaluating lifetime of products against the specification, and we ask that this proposal be formally shared with all stakeholders prior to the effective date later this month. We believe it is important for ENERGY STAR to engage industry and efficiency program stakeholders in developing an enhanced or alternative predictive procedure and look forward to the opportunity to comment on the proposal.

#### Comments on ENERGY STAR RLF Specification, Version 4.2

CEE submitted comments on Version 4.2 of the Residential Light Fixture (RLF) Specification on July 2, 2008. (A second version of this letter was submitted on July 10 with additional stakeholder support.) CEE would like to reiterate its call for the suspension of the RLF, Version 4.2 and to resolve the matters described in those comments.

Thank you for your consideration of these comments. Please contact CEE Senior Program Manager Rebecca Foster at (617) 589-3949 ext. 207 with any questions.

Sincerely,



Marc Hoffman  
Executive Director

CC: Kathleen Hogan, EPA  
David Rodgers, DOE  
Jim Brodrick, DOE

**Supporting Organizations**

Cape Light Compact  
Efficiency Vermont  
Long Island Power Authority  
Midwest Energy Efficiency Alliance  
National Grid  
New York State Energy Research & Development Authority  
Northeast Energy Efficiency Partnerships  
NSTAR Electric  
PacifiCorp  
Pacific Gas & Electric  
Public Utility District No. 1 of Snohomish County  
Sacramento Municipal Utility District  
San Diego Gas & Electric  
Seattle City Light  
Southern California Edison  
Tacoma Power  
Wisconsin Focus on Energy