

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



OFFICE OF
AIR AND RADIATION

August 6, 2015

Dear ENERGY STAR[®] Lighting Stakeholders:

The Environmental Protection Agency (EPA) is pleased to announce the release of draft three of the ENERGY STAR Lamps Specification version 2.0, intended to replace the Lamps Specification version 1.1. The specification development process, including subsequent specification drafts and stakeholder comment periods, is anticipated to conclude in September 2015 with an effective date of September 2016. Until the Lamps version 2.0 Specification is effective, version 1.1 of the specification will remain in effect.

The Agency thanks partners and stakeholders for their review of draft two, and for the comments submitted. Comments received are posted to the ENERGY STAR Lamps Specification Development website at www.energystar.gov/lamps.

Following the release of draft two, EPA held a webinar providing further details and addressing questions about EPA's rationale for the content of the second draft. Slides from that meeting are available at the above website address.

The primary goals for Lamps Specification version 2.0 include:

1. Increase efficacy levels.
2. Broaden the scope and the features.
3. Provide for use of DOE's pending test procedures for CFL and integrated LED lamps.
4. Improve harmonization between ENERGY STAR lighting specifications.

The proposed changes for version 2.0 are intended to avoid the need for partners to retest products, however they do reflect updated industry standards and alignment with a final DOE test procedure for integrated LED lamps. The following summarizes proposed changes in this draft; more information on EPA's rationale for these changes is detailed in note boxes located throughout the specification.

Overview of Key Changes Made in Draft 3

Product Scope

EPA received comment that 120V halogen-replacement LED products are now available with ANSI standard bases not included in the existing specification. In order to expand consumer choices, EPA proposes adding "G4" and "G9" ANSI standard base types to the list of products eligible for ENERGY STAR certification. As noted, manufacturers may pursue either the Omnidirectional or Decorative lamp shape certification pathways.

EPA received comment about the market demand for, and availability of “filament” style LED lamps. In order to expand consumer choices, EPA proposes adding the “ST” ANSI standard lamp shape to the list of decorative products eligible for ENERGY STAR certification.

Correlated Color Temperature (CCT)

EPA received stakeholder support for the future addition of 2200K and 2500K nominal Correlated Color Temperatures (CCTs). With the recent release of ANSI C78.377-2015, EPA proposes adding these nominal CCTs at this time and seeks stakeholder input on appropriate CCT Descriptors.

Testing and reporting to align with DOE’s pending Test Procedures for Integrated LED and CFL Lamps

EPA is aware of DOE’s Test Procedures SNOPR for Integrated LED Lamps published on June 25, 2015 and Test Procedures NOPR for Compact Fluorescent Lamps (CFLs) published on July 9, 2015. DOE has proposed significant changes in testing methodology for LED lamps (e.g., incorporating IES LM-84-14 and TM-28-14 in place of LM-80-08 and TM-21-11) as well as new test procedures that will cover all CFLs.

EPA’s intent is to allow use of DOE’s test method as a pathway to ENERGY STAR certification following its final publication, combined with additional test requirements (efficacy, elevated temperature, etc.) specific to certain lamp types. To further harmonize with pending DOE requirements, EPA has proposed adjustments throughout the specification including reporting guidance and passing rate requirements for rated lifetime. Of particular note, the current DOE proposal does not appear to allow a tolerance on measured luminous flux values.

Control Requirements

Responding to previous stakeholder comments EPA conducted research that indicated insignificant performance differences between testing one lamp per dimmer vs four lamps per dimmer. EPA therefore proposes changing the sample size from 4 to 1 in sections 12.2 – 12.5 of the specification

Additionally, EPA received comment from a variety of stakeholders requesting additional clarity in the connected product criteria section. In this draft, EPA added language to clarify 1) the means by which a product enables connectivity (§12.8), and 2) that reporting of estimated power consumption (watts) is allowed (§12.9).

Clarifications and Other Items

- **Color tunable lamps:** EPA further clarified that input power, lumens, and color must be tested and reported for default and most consumptive white light settings.
- **3-way lamps:** EPA received comment that some 3-way lamps are marketed as 30/70/100, whereas others are marketed as 30/60/100, or 40/60/100. In this draft, EPA has revised the language for rated wattage of the referenced 3-way incandescent lamp because, for ENERGY STAR, 3-way lamps are only evaluated for equivalency claims based on tested results at the highest input (i.e., highest light output) setting.
- **Color Angular Uniformity:** EPA has clarified that the color angular uniformity requirement is based on the total linear distance of the color coordinates from the weighted average point on the CIE 1976 (u’v’) diagram.

- **Lumen Maintenance:** EPA has reorganized the Requirements and Supplemental Testing Guidance content but is not proposing additional changes at this time.
- **Power Factor:** EPA is aware that C82.77-10-2014 relies on to the publication of C82.16. Until ANSI C82.16 is published, EPA will continue to reference the most recently published version of ANSI C82.77.
- **Audible Noise:** EPA has added language to clarify the intent that an anechoic chamber is not required for noise testing.
- **Lamp Toxics Reduction:** EPA has added two (2) additional exemptions based on stakeholder feedback.
- **Lamp Packaging:** EPA has clarified the Application Exceptions language based on stakeholder feedback.
- **Consolidation of decorative lamp category:** EPA proposes consolidating >7 watt and 7< watt category and adding a single efficacy requirement.

Partners and stakeholders are encouraged to submit comments on the third draft to lighting@energystar.gov by **September 4, 2015**. Please indicate “ENERGY STAR Lamps 2.0 Draft 3 Comments” in the email subject line. **Please note comments received will be posted to the ENERGY STAR website unless otherwise requested.**

On **August 21, 2015**, EPA will host a webinar providing a more detailed discussion of the proposed changes, a call in line will also be made available. Stakeholders will have the opportunity to ask questions via the web or phone. Please [register for the Lamps 2.0 Draft 3 Webinar](#) to participate.

The strength of the ENERGY STAR Program is in large part derived from the active interest and participation of our partners. EPA appreciates your contribution to the development of this specification and welcomes individual inquiries; please contact me with questions, comments or concerns any time at (202) 343-9408 or Banwell.Peter@epa.gov or Lighting@energystar.gov. For questions pertaining to the U.S. Department of Energy test procedures, contact Lucy Debutts, DOE, at Lucy.Debutts@ee.doe.gov or (202) 287-1604.

As always, thank you for your support of ENERGY STAR.

Sincerely,



Peter Banwell
ENERGY STAR Program
U.S. Environmental Protection Agency