

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



OFFICE OF
AIR AND RADIATION

December 31, 2015

Dear ENERGY STAR® Partner or other Interested Stakeholder:

With this letter, the U.S. Environmental Protection Agency (EPA) announces the release of the final ENERGY STAR Lamps V2.0 specification. V2.0 will replace V1.2 on January 2, 2017. If all light bulbs sold in the United States in 2017 met these new requirements, the utility cost savings would amount to more than \$4 billion each year and more than 54 billion pounds of annual greenhouse gas emissions would be prevented, equivalent to the emissions from more than 5.2 million vehicles.

EPA thanks partners and stakeholders for their thoughtful participation in the specification development process. The input shared has been invaluable in forming the final outcome. The new specification reflects the previously stated goals of increased efficacy levels, broadened scope and features, alignment with final U.S. Department of Energy (DOE) test procedures, and improved harmonization with Luminaires V2.0. This specification raises the bar for efficacy and performance, reduces testing burden while maintaining performance integrity, and establishes the first set of testing and baseline requirements for color tunable and connected lamps.

Comments received in response to the final draft specification raised a limited number of new issues. Stakeholders continued to urge EPA to adjust the requirement for power factor, in both directions. EPA believes the requirements in V2.0 represent a fair compromise to allow for cost reductions and minimal impact compared to existing levels. Going forward EPA will monitor the issue and determine whether further adjustments to power factor requirements are warranted in future specifications. Minor changes made to the final specification are discussed below. All materials related to EPA's development of the specification including a document outlining considerations for recertification of products can be found at www.energystar.gov/lamps.

Changes and Updates:

The following additional changes are reflected in the final specification document as a result of stakeholder feedback and follow up discussions on the final draft:

- The requirement to report new TM-30 metrics R_f and R_g was removed and replaced with a requirement to report spectral power distribution.
- To prevent the potential for gaming of the new omnidirectional requirements, and assist partners in having a consistent national "standard" for omnidirectionality, EPA has aligned Luminous Intensity Distribution requirements for A lamps (and all omnidirectional lamp types in the specification) with the California Energy Commission Title 20 15-Day notice by adding the following: "All measured values (candelas) in the 0° to 130° zone shall vary by no

more than 60% from the average of all measured values.” A tool to evaluate luminous intensity distribution is now available.

- ANSI C78.23:1995 (R2003) has been included as the correct Omnidirectional ANSI Standard Lamp reference in Section 14.1 for S and T bulb shapes.
- An exception for low voltage replacements for halogen capsule type lamps was added to allow for the lamps using the newly added G4 bases.
- Lumen Maintenance reporting for solid-state lamps (Section 10.1) has been re-aligned with V1.1: “if less than 3% difference” was inadvertently removed in Draft 1.
- Several hyperlinks were included to direct readers to ENERGY STAR reference documents.
- The guidance for testing of color tunable lamps was clarified to be performed at the most consumptive white light setting “covered by this specification.”
- The reporting requirements for standby power (Section 11.7) and power consumption (Section 12.6) of equipment outside the lamp required for connectivity has been clarified.
- Testing of 4 lamps per dimmer has been removed from the dimming recommended practice.
- 2200K and 2500K nominal CCTs have been included for filament style bulbs and full certification only. Early initial certification will not be applicable.

EPA will continue to follow relevant trends and engage stakeholders on key topics such as dimming, flicker, accelerated robustness testing, and connected products.

Transition Timeline and Next Steps:

EPA shares its Partners’ desire for a smooth transition from one ENERGY STAR specification version to the next, such that consumer expectations are satisfied in terms of ENERGY STAR labeled products meeting the latest requirements upon their effective date. With this in mind, EPA has established the following timeline:

- Effective immediately, manufacturers may elect to have their Certification Body (CB) certify their eligible products to the Lamps Version 2.0 requirements.
- On Friday, January 29, 2016 at 1:30 PM EST, EPA will host a webinar, providing an overview of the major changes from Lamps V1.1 to V2.0. [Register here.](#)
- After July 1, 2016, CBs will be instructed to stop certifying new product to V1.1. Models already certified to V1.0-V1.1 will maintain certification until January 2, 2017.
- Any lamp manufactured as of January 2, 2017 must be certified to V2.0 to bear the ENERGY STAR mark.

Upon satisfactory completion of all certification requirements, a CB will notify the partner that the product is ENERGY STAR certified and will submit certified product data to EPA for listing on the ENERGY STAR website. For more information on the Third-Party Certification program please visit www.energystar.gov/testingandverification.

As a reminder, ENERGY STAR manufacturer partnerships are limited to organizations that own and/or license a brand name under which they sell eligible products in the United States and/or Canada. Partnership is not available to original equipment manufacturers (OEMs) that do not sell directly to consumers or end users in the United States. OEMs may certify products on behalf of the ENERGY STAR brand owners/licensees; however the brand owner must be the ENERGY STAR partner associated directly with the certified product models, since only partners are authorized to use the ENERGY STAR certification mark.

EPA and DOE worked together to incorporate guidance and references into the Lamps V2.0 specification to clarify where data should be shared and highlighting where testing may differ.

For questions pertaining to the U.S. Department of Energy test procedures, contact Lucy Debutts, DOE, at (202) 287-1604 or Lucy.Debutts@ee.doe.gov.

EPA looks forward to working with you to bring high quality, energy efficient lamps to the market carrying the ENERGY STAR certification mark. Please feel free to contact me with questions, comments or concerns at (202) 343-9042 or Jantz-Sell.Taylor@epa.gov or Daniel Rogers, ICF International, at (908) 233-0554 or Lighting@energystar.gov.

Thank you for your contributions towards the development of this new specification, and for your continued support of ENERGY STAR.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Jantz-Sell". The signature is written in a cursive, flowing style.

Taylor Jantz-Sell
ENERGY STAR Lighting Program Manager
U.S. Environmental Protection Agency