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Office of Air and Radiation
Washington DC, 20460

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Ms. Jantz-Sell,

Northeast Energy Efficiency Partnerships (NEEP) appreciates the opportunity to provide comments to ENERGY STAR's Luminaires V2.0 Specification Draft 2. After a careful review of the document and attending the associated webinar on 3/17 and connected conversation on 4/1, NEEP, along with the Cape Light Compact, the District of Columbia Sustainable Energy Utility, Efficiency Vermont, and National Grid (henceforth referred to as 'NEEP') respectfully submit this letter.

NEEP very much appreciates the timeliness of this specification and EPA's hard work towards completing this specification. From Draft 1 to Draft 2, we generally feel that the EPA made logical and clarifying changes that will build a strong specification to improve the quality and efficiency of luminaires. More specific comments are as follows.

Section 8: NEEP fully supports the addition of enclosed fixture testing. NEEP supports adding elevated temperature testing for enclosed luminaires, as this is important to ensure continued consumer satisfaction with ENERGY STAR luminaires.

Section 9: We feel that while the efficacy levels proposed in section 9.1 and 9.2 are improvements from the previous version of the luminaires specification, from Draft 1 to Draft 2, the efficacies for several key categories have dropped. Continued alignment with other products of surface mounted SSL retrofit efficacies is a good goal, however a consideration for setting efficacy levels is the portion of current products that could meet the new specification. If many of the surface mounted SSL retrofits can reach efficacies above what was proposed in draft 1, bringing that requirements down seems unnecessary. A 15lpw reduction has quite significant energy implications, and we would ask the EPA reconsider the necessity to align efficacies in this instance.

Additionally, for undercabinet, SSL downlight retrofits, and accent lighting, the Draft 2 proposed decreases in efficiency will mean a very large portion of the market will qualify for the ENERGY STAR Specification. With undercabinets, for example, the Draft 1 proposal already had 52% of the current products meeting the 60lpw level. Lowering that level to 55lpw would mean the vast majority of existing products would remain in the program and misses an energy saving opportunity. While manufacturers provided feedback to Draft 1 that a lower efficacy was key to market adoption because of consumer preference features, such as "smooth light" that had an efficacy tax, it is unclear why some manufacturers are able to meet the higher efficacy requirements and some are not. We understand that the products that meet the higher efficacy levels may be the more expensive products, but when products achieve ENERGY STAR qualification with higher efficacy levels, efficiency programs are able to put forward larger incentives to help offset the cost of those products to consumers. If there is truly a product differentiation, perhaps it would be appropriate to split the undercabinet product category and set different efficacy requirements for products that provided different services (i.e. smooth vs. non-smooth). Otherwise, we feel that efficacy levels should reflect what the best of the products realistically can achieve, and as such a higher efficacy may be appropriate.



Regarding the proposal to increase efficacies by 20% in 2 years, we feel that this would be a good goal for EPA to set, however caution that if technological improvements come faster than we anticipate, this might create a challenge to change the specification. We understand that the EPA plans to monitor the market, but would ask that this monitoring be spelled out more formally to manage expectations. We would ask EPA to consider the proposed 2018 levels as a **minimum**, but to add into the language the opportunity to increase these efficacies if the need exists. For example, EPA could put in a 1 year revision period to, in 2017, see if DOE projections of 9% a year have changed. If the DOE projections change and show a greater than 10% annual efficacy increase, that could trigger the reaction that EPA would revisit those numbers and the 20% goals set in this specification. Generally, once you put an efficacy level out there, manufacturers will start to work towards that, so if that number changes from what is published in the 2015 final specification, that might create some challenges amongst stakeholders. Overall, however, we feel that the 20% in 2 years level seems reasonable and the attempt to be able to move efficacies forward without needing a larger specification 3.0 process is positive.

Regarding section 9.3, and consistent with NEEP's comments on Draft 1 of the Lamps 2.0 specification, NEEP would be supportive of including 2200K and 2500K lamps for ambient lighting products that may be used in a restaurant/hospitality setting or are more similar to candlelight. Since this specification applies to residential products, however, it may not actually make sense to allow this lower CCT provision or perhaps just for the sconces category. NEEP would recommend that the EPA take a close look at the categories to determine what would classify as ambient or decorative lighting. A lower CCT could be beneficial for those products, but should not be allowed for all products in order to avoid customer dissatisfaction with light that is "too red" for general lighting applications.

NEEP supports changes to section 10 regarding keeping track of color maintenance during lumen maintenance testing, assuming that it is not too much of a testing burden. It is important for consumers that lighting does not change color over time and can match in color other luminaires within a home, so we support additional reasonable requirements to help ensure color is maintained.

Regarding connected lighting, NEEP feels that this is an important market development to include in the specification and supports EPA's inclusion of these criteria for connected luminaires that seek to be ENERGY STAR recognized. NEEP reiterates our Draft 1 comments to limit standby power draw to .5W or less. To EPA's specific question for section 15.2, NEEP feels operational status reporting on the energy drawn by the luminaire, on/off status, lumen levels (if dimming is controlled by connected controller), and color temperature (if color tunable) would be key pieces of information for consumers. Specifically, if a luminaire is dimmable and is connected, the light level needs to be relayed to the consumer in some way. Regarding remote management, that is key to the importance of connected lighting products and we feel the requirements set out in section 15.2.5 are appropriate. Finally, with regards to enabling third party remote management, several connected lighting products on the market have Home Energy Management Systems (HEMS) that they integrate with directly (i.e. GE's smart bulb with the Wink system, Osram's Lightify system with the WeMo, etc). A more thorough analysis of the data currently being provided to HEMS might be helpful. We would recommend asking connected-bulb manufacturers directly what information is being reported.

Regarding section 16.1, NEEP supports EPA's efforts to develop common terminology for color temperature, though do recognize concerns from manufacturers regarding packaging changes and legacy use of terminology. As such, we believe EPA could develop "recommended" terminology for the various color temperatures and hope that manufacturers will begin to use this language when they can make those changes. It is in the best interest of the lighting industry to have common language around CCT, and as such we believe manufacturers would eventually see the benefit of unified terminology, but would not force the manufacturers to make potentially costly changes for certification.



More generally, NEEP appreciates the approach this specification takes towards explicitly targeting residential applications. This should help clarify some existing confusion between the ENERGY STAR Luminaires program and the NEEP-administered Design Lights Consortium (DLC).

Thank you again for offering this opportunity for NEEP, the Cape Light Compact, the District of Columbia Sustainable Energy Utility, Efficiency Vermont, and National Grid to provide comments on this second draft of the Luminaires Specification. Please don't hesitate to contact me with any follow up questions or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read 'Claire Miziolek', with a long horizontal flourish extending to the right.

Claire Miziolek
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