

Dear Ms Jantz-Sell:

The International Association of Lighting Designers (IALD) appreciates the opportunity to comment on “Energy Star Lamps V1.0 Draft 3”, the product specification program requirements for lamps now under development in your office. Founded in 1969 and based in Chicago, Illinois, USA, the IALD is the leading global organization of independent architectural lighting designers.

The focus of our comments is on the need to address the impact of the proposed standards on lighting quality, most especially color. As section 3.1.4 of the draft points out:

As indicated in previous drafts of this specification, EPA sees color quality as a potential barrier to broader consumer adoption of energy efficient lighting. EPA will continue to monitor the market and explore opportunities for improving color quality and consistency of lamps to appropriately address this barrier while balancing other considerations such as cost and performance trade-offs.

Color is a key component of lighting quality. Lighting quality, in turn, is critical and mostly overlooked, even though it bears directly on consumer behavior. Residential consumers are not the only users of the lamps to be covered; such lamps are also likely to wind up as replacements in commercial installations, where their color fidelity to the lamps they are intended to replace will be immediately noticeable and may greatly affect acceptance in commercial installations.

Past experience, such as that with CFL lamps, indicates that American consumers are unwilling to accept reduced lighting quality even when coupled with significant energy savings. In this case, EPA may have an opportunity to significantly increase consumer acceptance with only small reductions in efficacy levels required for Energy Star certification. The net energy savings attributable to greater consumer acceptance will be worth the slight reduction in individual product efficacy that may be necessary to achieve better lighting quality at a reasonable cost.

The primary use of the lamps under consideration is to replace existing halogen or incandescent sources. Consumers expect a light source that provides lighting performance similar to these existing sources while saving energy. This performance has to be recognized to include the high level of color rendering to which consumers are accustomed. This lighting quality issue is instantly recognizable to consumers when they flip the light switch. The successful adoption of LEDs will be tied to this positive visual perception and Energy Star should help to reinforce that. Raising efficacy levels to limit or eliminate cost-effective products that present high-quality light will be self-defeating—consumers will not purchase lamps they find unacceptable, and opportunities for significant energy savings will be lost.

It appears that in Draft 3, EPA has adopted a methodology that deals with three variables (quality, efficacy, and price) by allowing quality to fall in order to keep price low while increasing efficacy as much as possible. This is exactly the problem encountered in the past with CFLs—efficacy is high, but appearance and color are poor. IALD believes that efficacy can be reduced a bit, quality can be increased, and price can still be kept competitive, leading to much greater acceptance by both household consumers and commercial consumers than would otherwise be the case.

The IALD recommends that you take the following actions in preparation of the next draft of the proposed standard:

1. Broaden the definition of “stakeholders” in this process to include the lighting design community, which can comment about lighting quality issues in a knowledgeable way that is based on both technical sophistication and understanding of human factors, including comfort, productivity, health and esthetic issues. IALD members are accustomed to saving energy without sacrificing lighting quality.

2. Slow the standard development process, if necessary, to ensure that the end product meets the needs of consumers and manufacturers, and promises a high standard of lighting quality.

3. Raise quality-related requirements, such as CRI, CCT, beam characteristics, and other color-related aspects, to levels that will duplicate, to the extent possible, the light that these devices are intended to replace: “legacy” incandescent and halogen sources.

4. Reduce efficacy requirements to a level that will allow economical manufacture of SSL replacement products—reducing lighting quality in order to keep costs down and efficacy somewhat higher than would otherwise be the case is a dead-end street that will lead to limited consumer acceptance of new products.

The IALD is happy to work with you and your colleagues to help make the proposed standard truly useful and an advance in lighting quality.

Sincerely,

John Martin

The logo for the International Association of Lighting Designers (IALD) features a vertical yellow bar on the left side, followed by the letters "IALD" in a bold, black, sans-serif font.

**JOHN MARTIN
PUBLIC POLICY**

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