



NRDC Comments on ENERGY STAR's Version 1.0, Draft 2
Light Bulb Specification

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On behalf of the Natural Resources Defense Council (NRDC) and its more than 1.3 million members and electronic activists, we respectfully submit our comments on ENERGY STAR's Version 1.0, Draft 2 Product Specification for lamps issued on July 6, 2012.¹ NRDC broadly supports EPA's latest draft which includes tightened technical requirements for several parameters and provides additional clarity on various elements throughout the specification. One part of the specification which is not yet resolved is the dimming requirements for lamps marketed as dimmable and we urge EPA to include some basic dimming requirements for these products prior to finalizing its Version 1.0 specification. This will help minimize the likelihood of consumer dissatisfaction with dimmable ENERGY STAR rated lamp products due to their inability to provide adequate dimming or re-strike from the dimmed position.

Below we provide topic specific comments for EPA's consideration.

Dimming – Draft 2 of the specification still contains TBD language in the dimming section. Despite extensive outreach by ENERGY STAR and others to the industry to jointly develop the dimming requirements for lamps marketed as dimmable, the industry has failed to provide any proposals to EPA and unfortunately appears to have disengaged from this part of the specification setting process.

As we commented previously, the status quo does not work for consumers whereby manufacturers provide a website for consumers that lists the dimmers a specific lamp is compatible with. With the exception of most commercial customers and a few highly motivated/knowledgeable consumers, very few consumers have a clue as to the model number of the dimmer they currently have installed.

¹ Our comments supplement NRDC's previously submitted comments dated December 9, 2011.

As NRDC has stated during this specification setting process, EPA should at a minimum include some basic fundamental dimming requirements to start. These should at least include: a) lamp must dim down to 20% of a lamp's maximum light output, and b) the lamp must be able to re-strike from the dimmed position (i.e. 20 or 50% of full light output). Although "formal" test methods for these two basic tests do not exist, a sufficiently detailed version can be quickly developed by EPA and interested stakeholders. These test methods would need to include the specific set of dimmers that the testing would be performed under. NRDC staff remain committed to and available to participate in these discussions.

Should EPA fail to include dimming in its specification, its likely that utilities and incentive programs administrators will simply develop one or more sets of dimming requirements on their own. This would be unfortunate as these requirements might differ between regions and create market issues for both manufacturers and retailers, and the benefits of the ENERGY STAR program – single national set of requirements, marketing support tied to ENERGY STAR label, verification testing and enforcement, etc. would not be achieved for dimmable lamps.

Minimum Lamp Lifetime – NRDC supports EPA's revised position on lamp life whereby :

- CFLs continue to have a minimum lifetime requirement of 10,000 hours and lumen maintenance requirement of 80% initial lumen output at 40% of rated life, and
- LEDs now have minimum rated lifetime requirements of 15,000 and 25,000 hours for decorative and non decorative lamps, and 35,000 hours for those lamps marketed as commercial.
- Lifetime and lumen maintenance data requires testing of the whole lamp, not simply the "light engine". This will ensure the impacts of heat buildup caused by the envelope and the heat management properties of the whole lamp are properly accounted for during testing.

CFL Run-Up Time – NRDC strongly supports ENERGY STAR's efforts to speed up CFL run-up time. Faster run-up time will help address consumer frustration with CFLs whereby it takes a few minutes for the lamp to come to full brightness, and consumers experience very low levels of light after they first turn on the light.

As some lamps perform really poorly during the first 15 to 30 seconds, we encourage ENERGY STAR to re evaluate the data and see if it can increase the stringency in the requirements in this initial period, when the user first walks into a room after turning on the light.

Rapid Cycle Stress Test – NRDC supports ENERGY STAR’s proposal to increase the number of switching cycles a lamp must survive to qualify for ENERGY STAR. As some lamps may be turned off 5 to 10 times a day (up to 3650 switches per year), a requirement tied to one cycle per hour of rated lifetime, up to 15,000 cycles is an improvement from the current requirements and will not impede a manufacturer’s ability to achieve interim certification in a timely basis.

Color Quality/R9 Requirement – Consumer satisfaction with light “color” is dependent upon two factors: a) their buying the lamp with the desired color temperature, eg. cool or warm, and b) a lamp’s color rendering, in particular how a lamp renders wood and red objects. We support ENERGY STAR’s insertion of a positive R9 value as it will address consumers’ primary complaint about color quality. Consumer education, aided in part by the new package labeling requirements, will help build consumer knowledge around color temperature.

Beam Angle Requirement – NRDC supports ENERGY STAR’s establishment of beam angle and light distribution requirements. This will address early concerns with some LED lights which on paper deliver a lot of light but disappoint consumers as the light is directed in a very tight “laser like” pattern.

Inclusion of MR-16 lamps – NRDC was one of the initial proponents of adding the increasingly popular MR-16 lamp category to the ENERGY STAR program. These lamps are extremely popular in new and remodeled commercial buildings and residential homes, both in common areas and living space. We support ENERGY STAR’s decision to add them to its specification and program and are comfortable with the proposed treatment of line voltage and low voltage MR-16 lamps,