

Energy Efficiency Advocates' Comments on FTC's Proposed Lamp Labeling Rules

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The undersigned organizations --Alliance to Save Energy (ASE), American Council for an Energy Efficiency Economy (ACEEE), Natural Resources Defense Council (NRDC), Northeast Energy Efficiency Partnerships (NEEP), Northwest Energy Efficiency Alliance (NEEA) -- jointly support the comments and recommendations contained in this document that were developed in response to the Federal Trade Commission's (FTC) November 10, 2009 proposed rule on lamp labels. Our comments focus on the following topics:

- Scope
- Categorical Labeling
- Front Panel Disclosures
- Operating Cost
- Rules for Making Light Output Equivalency, Energy Savings, or Dollar Savings Claims
- Communicating Lamp Life
- Light Output Claim on the Lamp
- Use of the Term Power Instead of Energy
- Inclusion of Efficiency in Light Facts
- Reporting Requirements
- Label Layout

1. Scope – We strongly support FTC's efforts to expand the scope of the lamp labeling requirements beyond everyday "incandescent" lamps and to include new technologies such as LED lamps, but we believe that changes are needed in the proposed rule to fully accomplish this objective. On page 57953 of the November 10, 2009 Code of Federal Register (CFR), FTC states that the proposed rule would cover any "general service

lamp” which is defined to include “ any medium screw base lamp that is a general service incandescent, CFL, or general service LED”. In addition, footnote 27 states the FTC will also require labeling of reflector lamps and 3-way Incandescent lamps.

As NRDC and others have stated in their earlier comments, we believe the lamp labeling requirements should apply to all screw based lamps regardless of the diameter of the lamp’s base, the size or shape of the lamp, or the technology used inside the lamp. The FTC’s proposal applies the potentially confusing term “general service lamp and unnecessarily limits the scope of the labeling requirements to lamps with medium screw bases. **We believe a simpler, clearer and more comprehensive approach is simply to require all screw based lamps to be covered by the labeling requirements.**

The fact that a lamp might have a smaller diameter screw base (commonly called a candelabra base) or intermediate screw base such as those sold for ceiling fans, should not in any way exclude the lamp from being covered by the FTC’s labeling requirements. Consumers of such products also deserve to know the amount of light the product will produce, what its operating cost is, etc.

To prevent the labeling requirements from becoming obsolete or missing certain lamp types, we think the scope needs to be completely technology neutral and not limited to incandescents, LEDs and CFLs. Over the next several years, it is quite possible that a new technology or hybrid technology could be introduced and it too should be subject to the same labeling requirements. We believe screw based reflector lamps of all shapes should also be included. This is particularly important as recessed cans, the fixture which these lamps go into, are increasingly popular in new and remodeled spaces. FTC, in consultation with stakeholders, should evaluate what other information might be required for reflector lamps, in particular a consistent methodology for describing the beam spread (e.g., how narrowly concentrated or broadly dispersed the emitted light is).

2. Categorical Labeling – We continue to support the use of categorical labeling as good energy policy and are disappointed with FTC’s decision not to adopt a five-star categorical rating for lamp energy efficiency. FTC’s own research on lamp labels demonstrates that including a five-star rating system on the Lighting Facts label would be a valuable complement to the annual energy cost estimate. The star rating not only helped consumers identify the most and least energy-efficient bulbs, it was found to be more useful and trustworthy than other disclosures. The finding that respondents were willing to pay more for a high-efficiency bulb confirms earlier research conducted by ACEEE and others showing that a stars-based categorical label helps motivate consumers to consider and purchase higher efficiency products. This research (including experiments in a simulated shopping environment) also found that categorical ratings are particularly effective in helping consumers to identify the poorest performers and to distinguish differences at the lower and higher ends of the efficiency scale.

Other concerns raised by FTC regarding the stars rating could readily be addressed through consumer education and consumer experience in using the label. In the case of consumer inferences about quality or reliability, fewer than one-third of respondents answered the question correctly for any of the descriptors shown (energy cost, stars

rating, or lamp efficacy) suggesting that consumer education on this point will be critical regardless of the descriptor(s) provided. As for potentially problematic interactions with the ENERGY STAR logo, the FTC study found no differences between stars and other descriptors when the ENERGY STAR was present—similar to a real shopping environment where consumers will encounter products with and without the ENERGY STAR logo. When no ENERGY STAR logo was shown, more than one-third of respondents mistakenly identified a bulb as ENERGY STAR regardless of the descriptor. These problems can be addressed through consumer education and improved familiarity in the marketplace with both the ENERGY STAR and the stars rating.

FTC also cites the need to update and recalibrate the star rating system over time as a problem leading to consumer confusion, although no research findings support this claim. Any comparative label—whether using a categorical rating or a continuous scale like that currently used on the EnergyGuide label—must be adjusted over time if the comparison is to effectively reflect the range of products available in the market at both the highest and lowest levels of efficiency. Again, consumer education and experience using the label in real-world situations can help consumers make decisions more effectively.

Although FTC has decided against a categorical rating for the lamp label at this time, we will continue to advocate for categorical labels for consumer electronics and other products. A comprehensive program of categorical labeling covering a wide range of products would be an effective component of U.S. energy policy and serve as a complement to minimum efficiency standards, voluntary endorsement labels, and efficiency programs. Research in the U.S. and experience from around the world demonstrate the effectiveness of categorical labeling in informing consumers and motivating them to purchase the most efficient products. Of the more than 50 countries with energy labeling programs, all but a few (most notably the U.S. and Canada) use categorical label designs. The experience of these countries—including fellow OECD member countries such as the EU member states, Australia, and Japan as well as developing economies such as Brazil, India, Thailand, Iran, and Columbia—serves as a testament to the effectiveness of categorical labeling in practice. Most of these countries have more than 5 years (and some close to two decades) of experience with categorical labeling schemes for multiple products. This experience should inform the FTC's efforts; research and evaluation of these labeling programs should be considered along with U.S. consumer research to guide the design and implementation of a categorical label that meets the needs of consumers, manufacturers, retailers, efficiency programs, and the federal government

3. Front Panel Disclosures – We strongly concur with FTC's finding that consumers currently buy lamps based primarily on the product's power (Watts) and that they should instead be buying a lamp based on the amount of light it produces (lumens).

Accordingly, FTC has proposed a new label format and content for the front of the package that includes only the lamp brightness in lumens and estimated energy cost in \$/yr. In this update, FTC deliberately removed the requirement to list lamp power or lifetime.

While we agree with FTC's decision not to require a power disclosure on the front of the package, we fully expect manufacturers to continue to include power on the front of the package. These statements will be made either as "60 W" for a conventional incandescent or for a more efficient bulb such as a CFL, "15W = 60W," or "as bright as a 60W bulb."

To minimize prominence of the lamp's power use on the packaging, we encourage FTC to establish some font size requirements that would restrict the size or prominence of any power use or brightness equivalency claims by the manufacturer. One option would be to restrict such claims to having a font no larger than the ones used in the brightness and operating cost disclosures on the front panel. Absent such a requirement, the product claims made by the manufacturer on the package will continue to get greater attention from consumers than any FTC-required labeling claims, and, as a result, continue to exert a greater influence over what consumers choose to buy.

Regarding lifetime, we expect many manufacturers to continue to include lifetime data on the front of the package. FTC should require that such claims be based on specified test methods and expressed in hours (e.g., average life 10,000 hours) rather than in years.

4. Operating Costs – **We strongly support FTC's decision to include annual operating cost as a mandatory element disclosed on the front of the package.** We also agree with FTC's decision to include this information within the required Light Facts box on the side or back of the package. We also concur with FTC requiring this calculation to be made with a uniform operating hour assumption of 3 hours/day and an average national electricity rate of 11.4 cents/kWh.

The absence of categorical labeling information on the front of the package makes the inclusion of operating costs even more critical. Otherwise consumers would have virtually no way of easily determining if the bulb they are considering is an efficient one or how it compares to other bulbs that give off equivalent amounts of light.

5. Rules for Making Light Output Equivalency, Energy Savings, or Dollar Savings Claims – Although FTC does not require manufacturers to include comparative claims on the package about how one lamp's light output, energy use, or operating costs compares with other models, we believe FTC should provide clear requirements/guidance on the basis for such claims. For example:

a) All comparative claims should be made, for the time being, against the baseline of a conventional, standard lifetime, soft-white incandescent lamp. Manufacturers have already begun to make deceptive claims that their recently introduced, EISA-compliant, modified-spectrum products will save large amounts of energy and money. When we examined such claims more closely, it was evident that they were comparing their newly introduced products to the least efficient types of incandescents sold today, rather than to the standard bulbs. The newly introduced products are roughly comparable in efficiency to today's standard incandescent light bulbs, and would be more fairly compared to them. Clear FTC guidance will ensure that all comparisons are made against an identical and

familiar base case. Once the new federal light bulb efficiency standards set by the Energy Independence and Security Act (EISA) take effect beginning in 2012, FTC should update specifications for the baseline lamp, to ensure that future comparisons remain relevant and accurate.

b) Lumen equivalency claims should be based on a baseline of typical light output of a standard incandescent lamp, until the new EISA standards take effect. Below is an example of the current Energy Star requirements for lumen equivalency claims for the familiar “A-shaped” light bulbs. A similar equivalency table will be needed for reflector lamps which historically have been offered as 25, 40, 50 and 75 W incandescent based lamps .

ENERGY STAR QUALIFIED CFL/INCANDESCENT EQUIVALENCY CHART	
A-Shaped Incandescent bulb (Watts)	Typical Luminous Flux (Lumens) [†] <i>† Lumens must be 100 hr, initial values for CFLs</i> <i>Note: excludes globes, reflectors, or decorative CFLs. Lumens for 3-way lamps correspond to maximum equivalency shown.</i>
25	Minimum of 250
40	Minimum of 450
60	Minimum of 800
75	Minimum of 1,100
100	Minimum of 1,600
125	Minimum of 2,000
150	Minimum of 2,600
30-70-100	Minimum of 1,200
50-100-150	Minimum of 2,150

Using this table, a product providing 1100 to 1599 lumens would be able to claim 75 watt equivalence. A 1099 lumen product would have to claim 60 watt equivalence.

c) Money savings claims are fairly common for energy saving bulbs such as CFLs and LEDs. To ensure similar comparisons by all manufacturers, we recommend: i) All money savings claims should be expressed per lamp, not for the entire package of lamps. Per package claims can be confusing to consumers who might be comparing 4 packs, 6 packs, etc. ii) FTC should provide guidance on how such claims should be calculated, specifically the electricity rate (FTC should update these rates every 1 to 2 years to keep them current, rather than the proposed 5 years), along with the power and lifetime of the lamp, the base case, and whether the cost of initial purchase (including replacement incandescent lamps if these are compared with a longer-life CFL, for example). Again, we believe the base case should initially be a standard life, soft-white incandescent lamps.

d) Power/energy savings claims are also made by manufacturers in the form of “uses x % less energy” or “y %” more efficient. Again, to ensure accuracy and consistency of these claims, we encourage FTC to publish rules on how to calculate such claims.

To make these issues more concrete, we include below an example of a lamp introduced in 2009 by Philips. The information on the box shows the lamp as providing 630 Lumens and being equal to a 60W lamp. This claim is misleading as the lamp provides roughly 20% less light than a standard 60W soft-white incandescent lamp. Per the ENERGY STAR lumen equivalency table shown above, lamps that replace a 60W incandescent lamp must provide at least 800 Lumens.



Another example of exaggerated equivalency claims can be seen in the new LED screw based product from LEDnovation Inc. that only delivers 700 Lumens while claiming to be equal to a 75W incandescent. This is quite an egregious overstatement as this product is 35% dimmer than a conventional 75W incandescent lamp, that gives off approximately 1100 Lumens.



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Order Number: **LED-A19-75-1N-1**

SPECIFICATION DATA	
Light Output (Lumens)	700 lm
Watts	9.8W
Lumens per Watt (Efficacy)	71 lm/W
Color Accuracy (CRI)	85
Light Color (CCT)	3500K - Neutral White
Voltage	90-135 VAC, 60Hz
Power Factor	> 0.9
Rated Life	> 35,000 hours
Form Factor/ Base Type	A19 / E26 base (US)
Incandescent Equivalency	75 Watts
Warranty	3 year standard
Environment	Indoor Use Only
Intellectual Property	Multiple Patents Pending

* All values are nominal unless otherwise specified



This information was taken from the company's spec sheet found at http://www.lednovation.com/products/pdf/Spec_LEDnovation_A19_75W.pdf. This

example also reaffirms FTC's decision to include LED screw-based labels as part of its labeling program.

6. Communicating Lamp Life – We recommend that FTC require lamp life claims to be expressed in hours and not in years. A lamp's lifetime in years will vary based on where and how it is used. Some sockets may be on 2 hours per day, while others may be on 10 hours per day. The same lamp would thus have different years of life expectancy. Also, differences between (for example) 800 hours and 1000 hours of rated life would not appear significant to consumers if lifetime is reported in years (to the nearest 1/10th); in this example the two products, one with 25% longer life, would be reported as 0.7 years compared to 0.9 years (assuming usage at 3 hours/day). Finally, the industry has a long history of reporting lamp life in hours on product packaging and in catalogs.

7. Light Output Claim on the Lamp – **We strongly concur with FTC's proposed requirement to print the lamp light output on the lamp itself, not just on the packaging.** This information will be very useful when consumers need to replace the burned-out bulb. With the shift to more efficient light sources and the phaseout of today's conventional 40, 60, 75 and 100W incandescent lamps, lumens will become much more relevant and important to shoppers when purchasing a replacement lamp.

8. Use of the Term Power and Not Energy – In the Lighting Facts guidance, FTC uses the term "energy used" and then lists the lamp's wattage. The technically correct term is power, which is expressed in watts, and not energy, which is expressed in kWh. We recommend FTC change the parameter in the Lighting Facts label to Power Used or Electricity Used. The current wording perpetuates consumer confusion about the difference between power and energy.

9. Inclusion of Efficiency in Lighting Facts – We recommend that FTC require inclusion of a lamp's initial efficiency or efficacy on the Lighting Facts panel. This would appear as Lamp Efficiency and would be expressed in Lumens/Watt. While we agree most consumers are not currently familiar with lamp efficiency (also referred to in the industry as lamp efficacy), we believe there will be greater recognition and interest in this metric in the future, especially after implementation of public education campaigns to support the EISA mandated transition away from inefficient incandescent lamps. .

10. Reporting Requirements – The reporting requirements described in section D on page 57960 only seem to pertain to incandescent and CFL lighting products. We believe the lighting requirements should apply to all lighting technologies and not just to incandescents and CFLs. Conspicuously absent are reporting requirements for LEDs. Complete reporting requirements are a key element of compliance and enforcement efforts. Therefore, the reporting requirements should apply to all lamps covered by this rule and also to all the key parameters shown on the label including: rated power, initial lumens, average life, and lamp color temperature (CCT). These data points are the basis for all required and optional claims that are made on the label.

11. Support for Label Layout – We support FTC’s proposal to require both a brief front panel that includes brightness and estimated energy cost along with a more detailed Lighting Facts panel for the side or rear panel. As stated previously, we recommend that FTC:

- a) Limit the font size of lamp power claims made on the package
- b) Include lamp efficiency on the Lighting Facts panel
- c) Replace the term Energy Used with Power Used, and
- d) Change Life in Years to Lamp Life or Average Lamp Life expressed in hours

In closing we appreciate the opportunity to provide FTC with these comments. Should you have any questions or wish to discuss any of this further please contact Noah Horowitz at nhorowitz@nrdc.org or 415-875-61000.

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