



Setting Standards for Excellence

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## **NEMA Lamp Section Comments on December 2008 Environmental Working Group Report on CFLs**

Members of the Lamp Section of the National Electrical Manufacturers Association (NEMA) have been informing U.S. consumers for many years about the benefits of energy-efficient lighting options, including compact fluorescent lamps (CFLs), and we appreciate the efforts of others to inform the public about these options. Such efforts have helped to advance consumer adoption of CFLs and we are pleased that the market penetration of CFLs has now reached 25 percent recently.

However, that number indicates that the majority of consumers are still using less efficient incandescent light bulbs. With the immense amount of energy that can be saved by shifting consumers to more efficient light sources, we believe manufacturers, environmental groups and governments should be working together to convince consumers to make the right choices. That is why we are disappointed and concerned by the many misleading and inaccurate statements and assertions made by the Environmental Working Group (EWG) in its December 2008 report on CFLs, which can be found at <http://www.ewg.org/node/27220>.

Some undisputable facts:

### Mercury

- A typical fluorescent lamp is composed of a phosphor coated glass tube with electrodes located at each end. A small amount of mercury is contained in this tube. When a voltage is applied, the electrodes energize the mercury vapor, causing it to emit ultraviolet (UV) energy. The phosphor coating absorbs the UV energy, causing the phosphor to glow or “fluoresce” and emit visible light. Without the mercury vapor to produce UV energy, there would be no useful amount of light. Manufacturers have tested virtually every other element on the periodic chart to find an acceptable, equally efficient substitute for mercury in fluorescent lamps, without success.
- Five (5) milligrams (mg) of mercury is equivalent in size to the tip of a ballpoint pen.
- After conferring with the U.S. Government and the Natural Resources Defense Council (NRDC), in March 2007 NEMA Lamp Section members announced a voluntary commitment to cap the amount of mercury in their CFL products offered for sale in the U.S. at 5 mg for CFLs that use less than 25 watts of electricity and at 6 mg for CFLs that use from 25 to 40 watts of electricity. Higher wattage lamps require a slightly higher amount of mercury due to their size and to meet life requirements.

## ENERGY STAR

- The stated purpose of ENERGY STAR qualified product programs, including the program for CFLs, is to save energy, save money and protect the environment. Participation in ENERGY STAR program is voluntary.
- From August 2005 to March 2008, NEMA and many stakeholders worked with the Department of Energy to develop and approve Version 4.0 requirements for ENERGY STAR qualified CFLs. In several areas, not only mercury content, the Version 4.0 requirements challenge manufacturers and sellers to produce CFLs that are the top performers and satisfy consumers. In some cases, meeting this challenge necessitated product redesigns. However, many models that qualified under Version 3.0 have been or will be requalified under Version 4.0 without design changes. Each manufacturer or marketer of CFLs must submit test results for each bulb model to verify ENERGY STAR compliance.
- At the same time, the economic downturn the U.S. is experiencing has left many Version 3.0 CFLs unsold on store shelves or in warehouses. Based on the March 2007 NEMA commitment, these CFLs meet the mercury requirement but for other reasons (e.g. color consistency) do not qualify under the Version 4.0 requirements –. Based on these conditions, in October 2008 NEMA appealed to the U.S. Department of Energy (DOE) to extend the grace period for Version 3.0 CFLs to remain on the market with the ENERGY STAR logo. Recognizing the economic facts and its core goal of getting more CFLs into sockets that are currently filled with incandescents, DOE agreed to allow Version 3.0 product to be sold as ENERGY STAR until July 1, 2009. These facts were explained to EWG by NEMA during EWG's work on this publication.

In the opinion of the members of the NEMA Lamp Section, EWG makes several misleading statements that can confuse consumers:

1. Telling consumers not to use CFLs because of their mercury content is counterproductive. All fluorescent lamps contain mercury. EWG focuses solely on the mercury content of the bulb rather than the energy performance. Selecting bulbs based on, for example, 2 versus 5 milligrams of mercury, ignores performance, energy use, rated life and the net mercury benefit of CFLs in reducing mercury emissions from power plants.

As EWG correctly notes, power plants are the single largest source of mercury emissions in the United States. Reducing energy consumption can significantly reduce the amount of atmospheric mercury these power plants emit. Therefore, encouraging consumers to use CFLs is a far more effective, and immediate, method of eliminating mercury than lowering the content in CFLs.

2. The statement that "CFLs take 10 to 15 minutes to reach optimum light and energy efficiency" is misleading. Although it might not be the optimum choice for every

application, an ENERGY STAR CFL is always more efficient than the common incandescent light bulb.

3. Telling consumers that "CFLs slow start-up poses a safety risk" is misleading. A CFL lamp cannot be ENERGY STAR qualified if it takes longer than an average of 1 second to begin providing light. It's true that some CFLs do not come to full illumination for several seconds, but to claim that this generates a safety risk is unjustified.

4. Where did EWG get the list of items it claims do not meet the Version 4.0 requirements for energy efficiency? Their methodology is not stated. We suspect many of these claims are false.

5. EWG's assertion that it has identified only 7 manufacturers/or bulb lines manufacturing CFL's with "low mercury" appears to be based on researching each company's website. This is very misleading to the consumer as these 7 bulb lines are not the only manufacturers creating low mercury lamps, and per ENERGY STAR guidelines 5-6 mg is the current standard.

6. Despite EWG's claims, the ENERGY STAR *is* an indicator of low-mercury bulbs. Any model labeled with ENERGY STAR must comply with the 5-6 mg maximum. It is not the indicator of the lowest mercury bulbs and it should not be. There are CFL bulbs on the market that are not and never have been ENERGY STAR qualified and therefore do not have to adhere to this requirement.

In conclusion, while members of the NEMA Lamp Section appreciate EWG's efforts to promote consumer awareness and understanding of CFLs as a good choice to achieve energy savings, due to some inaccuracies and highly questionable claims the EWG publication does not serve the consumer as well as it should have.

We look forward to work constructively with EWG and other stakeholders to make sure consumers have the right information to help them make well founded choices and fulfill their personal goals for lighting performance, energy savings, and environmental protection.

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