



Green Purchasing Institute

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Dear Energy Star Residential Light Fixtures Program:

The Green Purchasing Institute respectfully submits the following comments on the proposed mercury-content and labeling requirements for the Final Draft of the ENERGY STAR Residential Light Fixtures Specification Version 4.1., which states the following:

Maximum Mercury Content: EPA recognizes the growing public concern about products containing mercury and international movement on consumer education. As such we are proposing to adopt mercury content limits that are inline with those voluntarily promoted by the National Electrical Manufacturers Association (NEMA).

The US federal government's move to ensure that ENERGY STAR-qualified CFLs have a "cap" on the amount of mercury they contain is an important step in the right direction toward preventing harm to people and the environment and an appropriate one for a program that is partially administered by the US Environmental Protection Agency (US EPA). According to US EPA, mercury is a persistent, bioaccumulative and toxic chemical of priority concern. In its PBT strategy, EPA indicates that its goal is "to further reduce risks to human health and the environment from existing and future exposure to priority persistent, bioaccumulative, and toxic (PBT) pollutants" including mercury. The US EPA has prioritized mercury reduction due to its widespread contamination of fish throughout the United States, which is presenting a health threat to pregnant women, their unborn fetus and young children.

Mercury exposure at high levels can harm the brain, heart, kidneys, lungs, and immune system of people of all ages. Research shows that most people's fish consumption does not cause a health concern. However, it has been demonstrated that high levels of methylmercury in the bloodstream of unborn babies and young children may harm the developing nervous system, making the child less able to think and learn. (See <http://www.epa.gov/hg/about.htm>)

As local governments, utilities, nonprofit organizations and other entities step forward to help reduce the amount of energy used and greenhouse gases and other pollutants (including mercury) that are emitted from electricity-generating power plants, many are embracing the use of compact fluorescent lamps (CFLs) and other energy-efficient lighting technologies. We are concerned about mercury content of fluorescent lamps because the US already faces unsafe mercury levels in thousands of water bodies.

With hundreds of millions of fluorescent lamps being sold in the US, ENERGY STAR should make every effort to minimize mercury and lead pollution at fluorescent lamp manufacturing plants and disposal sites. Adding mercury “caps” to the ENERGY STAR standard will build public confidence in the ENERGY STAR ecologo and encourage organizations such as our to more eagerly promote qualified products as “environmentally preferable”.

There is a lot more the ENERGY STAR program can do to promote the use of low-mercury (and lead-free) CFLs and the development of an effective lamp recycling infrastructure in the United States. We urge the ENERGY STAR program to better protect human health and the environment by making make the following revisions to this standard:

1. *Establish lower mercury caps.* The maximum mercury content proposed for the ENERGY STAR program is set only at levels that have already been adopted by the National Electrical Manufacturers Association (NEMA), which, with its 430 members, represents companies that offer a substantial portion of the CFLs in the US marketplace. Therefore, this standard will do little to encourage manufacturers to make further mercury reductions or reward those that have already made progress beyond the levels mentioned in the voluntary agreement. While the proposed mercury “caps” will encourage other non-NEMA manufacturers to meet the NEMA voluntary standard, we are concerned that this mercury “ceiling” is likely to become the new “floor” since industry is not being given any incentive for continuous improvement. ENERGY STAR is missing the opportunity to drive the market toward the “best in class” by requiring all CFL manufacturers to disclose the mercury content of their lamps and then setting a mercury cap that recognizes those models with the lowest mercury content on the market.

Moreover, the maximum mercury content that ENERGY STAR is proposing is higher than levels adopted by environmental labeling programs in other countries. For example, Canada’s Environmental Choice EcoLogo Program only certifies CFLs as “environmentally preferable” if they have mercury content under 3 mg. This standard is now accepted worldwide by the Global Ecolabeling Network. Similarly, while the EU requires all CFLs sold in Europe to have a mercury content of 5 mg or less, in September 2002, it established a more stringent standard of 4 mg for CFLs that qualify for its ecologo and promises to upgrade its standard periodically.

2. *Document that a higher mercury cap (of 6 mg) for CFLs with wattages of 25-40 watts is justified.* NEMA has asserted that it needs to have a higher mercury maximum on CFLs with wattages above 25 watts, but it has not demonstrated that the higher mercury content is necessary from a technological basis. This is inconsistent with standards established in Canada and the EU, which do not make an exception in their mercury caps for higher-wattage CFLs. The ENERGY STAR program should require manufacturers to submit independent test data about the mercury content of their lamps and then establish a “cap” that approximately half of the models can meet.

3. *Set a maximum mercury content level for CFLs over 40 watts.* The current standard does not address CFLs with wattages above 40 watts, although models such as 42-watt and 57-watt CFLs are used frequently by government agencies and businesses. Again, to determine the appropriate maximum mercury content, the ENERGY STAR program should require manufacturers to submit independent test data about the mercury content of each of their qualified lamps and then establish a “cap” that approximately half of the models can meet.
4. *Require the use of automated, encapsulated dosing technology.* Traditional mercury-dosing technologies (such as droppers) are prone to spills that can cause workers and the community in and around fluorescent lamp manufacturing plants to be chronically exposed to this chronic nerve toxin and potentially carry it home on their shoes and other clothing, exposing their families. Several new technologies have emerged over the few several years that are safer for workers and the environment because, unlike the use of droppers to “dose” a CFL, mercury dosing capsules and strips prevent workers from being directly exposed to mercury solution. Because automated dosing techniques are precise, they can also ensure that lamps will consistently meet the maximum mercury levels proposed.

Establishing a mercury-content standard more stringent than the NEMA voluntary levels and that directs manufacturers to use automated mercury-dosing technology to consistently achieve those levels is a strategy that was adopted by Wal-Mart. In May 2006, Wal-Mart announced that it had negotiated new contracts for low-mercury CFLs sold through its stores and Sam’s Club. All CFLs offered will be ENERGY STAR-qualified. In addition, according to the Wal-Mart news release, “To reduce the amount of mercury in its CFLs, Wal-Mart worked closely with its manufacturers GE, Royal Philips, Osram Sylvania and Lights of America. All four suppliers committed to achieving a greater reduction in mercury content than the 5 mg standard set by the National Electrical Manufacturers Association (NEMA) earlier this year. These suppliers will also adhere to clean production techniques that will minimize mercury pollution from factories manufacturing CFLs.”

Wal-Mart’s supplier commitments include the following:

GE Consumer & Industrial will reduce CFL mercury content up to 50 percent from NEMA levels in new products, while maintaining the excellent light quality and long life that GE customers expect.

Philips currently supplies Wal-Mart with CFLs that have mercury contents 40 to 60 percent below the NEMA level of 5 mg per unit (for CFLs less than 25W). Philips utilizes pellet dosing versus liquid mercury to ensure safe and accurate levels of mercury per bulb, and continues to look for ways to reduce the amount of mercury in its CFL, while still maintaining the lamps' high quality and performance characteristics.

OSRAM SYLVANIA CFLs currently meet the NEMA standard of 5 mg of mercury, with reflector lamps that are 40 percent lower at 3 mg. Sylvania has committed to reducing the mercury content in all of its CFLs to 4 mg or less by the end of 2007, and to 2.5 mg by the end of 2008.

Lights of America will reduce the amount of mercury in its CFLs by up to 50 percent. Wal-Mart's new standards have resulted in Lights of America identifying a different metal alloy technology that improves bulb performance while requiring less mercury per bulb. This technology is currently being added to Lights of America CFLs and the company expects all of its bulbs to have no more than 2 mg of mercury by the end of 2007.

(Source: News Release: "Wal-Mart Announces Major Mercury Reduction in Compact Fluorescent Light Bulbs," May 10, 2007, <http://www.prnewswire.com/cgi-bin/stories.pl?ACCT=104&STORY=/www/story/05-10-2007/0004585479&EDATE=>).

5. *Require better labeling of CFL packaging to help consumers choose low-mercury models.* The proposed labeling of CFL packaging relating to mercury content is inadequate because it only informs consumers that the lamp contains mercury but not how much. Again, since the proposed standard only codified NEMA's current voluntary lamp labeling standards, the ENERGY STAR program is missing an important opportunity to label CFLs in a way that will provide consumers with meaningful information they need to effectively compare models and choose those with the lowest mercury content that meets their needs.

The Green Purchasing Institute supports comprehensive and transparent reporting of toxic chemical content – including mercury and lead – because it is critically important for consumers who are interested in making informed decisions about their purchases. The City and County of San Francisco, which has adopted a Precautionary Purchasing Ordinance, requires its vendors to disclose the maximum amount of mercury – and the presence of lead – in all lamps sold on it lamps contract. Its big specification states:

Contractor aggress to comply fully with the provisions of the San Francisco Environment code including chapter 1: Precautionary Principle Policy Statement, which provides that 'The community has a right to know complete and accurate information on potential human health and environmental impacts associated with the selection of products, services, operations or plans. The burden to supply this information lies with the proponent, not with the general public.' Pursuant to this policy, the City and county of San Francisco requires all contractors to provide...full disclosure to the satisfaction of the purchaser, of the amount of mercury or range of mercury in milligrams, for each mercury added product sold.

This transparent approach to consumer product labeling is similar to that which has been taken by other industries. Food labels, for example, are required to report the number of calories and grams of sodium each product contains so that consumers can search for the healthiest choices.

6. *Require submission of mercury content documentation.* Manufacturers should be required to submit independent test data verifying the mercury content of each CFL model they want approved by the ENERGY STAR program. This would not only guarantee that each product meets the proposed standard, it would also help inform the ENERGY STAR program so that it can establish cutting-edge mercury standards in the future. There is no reason why the verification of mercury content should be any less stringent than of performance requirements for which manufacturers are required to submit real documentation.
7. *Establish mercury caps on fluorescent lamps used in exit signs and other residential and commercial lighting fixtures.* None of the other specifications for residential or commercial lighting fixtures currently address mercury content. A similar approach should be taken whenever a mercury-added product is qualified under the ENERGY STAR program in which manufacturers should be required to submit independent laboratory documentation about the mercury content of their products and ENERGY STAR should use this data to establish maximum mercury content levels that reward industry leaders.
8. *Establish longer lamp life minimum for CFLs.* Another way ENERGY STAR can prevent mercury pollution is to encouraging the use of long-life lamps. Both Canada's and Europe's ecologo programs have set minimum rated life standards of 10,000 hours, which is stronger than ENERGY STAR's 6,000-hour rated life minimum. While some CFL models are not available with a rated life above 6,000 hours, ENERGY STAR could increase the lamp life of those types (such as bare spirals) for which there are long-life options widely available. The ENERGY STAR website notes that "the current average rated lifetime for ENERGY STAR qualified CFLs is 8,000 hours." See http://www.energystar.gov/index.cfm?c=cfls.pr_crit_cfls.
9. *Require ENERGY STAR-qualified CFLs to submit information about the lead content of their lamps.* Some CFLs contain lead, another potent neurotoxin and priority PBT, in their base solder and glass. The proposed environmental specification for CFLs should identify which models contain lead so that consumers can easily find lead-free brands.
10. *Require manufacturers of ENERGY STAR-qualified lamps to offer a "takeback" program.* Unlike the Electronic Products Environmental Assessment Tool (EPEAT), another ecolabeling program US EPA has been involved with developing that requires all manufacturers of computers and monitors to offer a recycling program in order to become certified as environmentally preferable, no such requirement exists for CFLs. As a result, the recycling rate for CFLs nationally is an abysmally low 2%. The proposed labeling program, which simply "codifies" the voluntary fluorescent lamp labeling

requirement that are currently in place, will do little to improve the recycling rate of CFLs in the United States.

By requiring the industry to participate in the development of a lamp recycling infrastructure, the ENERGY STAR program can help dramatically increase the recycling rate of CFLs and other mercury-containing lamps and take the burden off of community household hazardous waste collection program, which are unable to handle this burden on their own. It is not surprising that most of the entities listed on the website to which consumers will be directed, www.epa.gov/bulbrecycling are government agencies; therefore, without any requirements or incentives, the lighting industry has failed to step up to the plate to contribute in a meaningful way toward solving the problems associated with the disposal of mercury from CFLs and other types of fluorescent lamps.

11. *Provide better guidance to consumers about how and why they should handle and recycle spent CFLs and other mercury-containing lamps and fixtures (such as exit signs).* The proposed labeling requirement would carry more weight with consumers if it explained to them what mercury is and why it should not be thrown into the regular trash. The proposed language, which simply says “Lamp Contains Mercury” and “Please Recycle Where Facilities Exist” is likely not to motivate many people other than those who are already familiar with mercury’s hazardous nature. The label could also help prevent unnecessary exposure by providing additional warnings such as encouraging consumers not to clean up a broken bulb with a vacuum cleaner and to ventilate a room.

While we applaud ENERGY STAR’s first steps toward addressing the concerns about the mercury content of fluorescent lamps, we urge the program to establish mercury caps and labeling requirements that will move the industry toward continuous progress in this area and not simply rubber stamp the voluntary status quo NEMA agreement. We believe that it would serve the ENERGY STAR program to effectively collect information from manufacturers about the mercury and lead content of each lamp that is submitted for qualification so that mercury-content levels are not established “in the dark”.

We look forward to further discussion with US EPA, the Department of Energy, and the ENERGY STAR program staff about further steps it can take to advance the use and recycling of environmentally preferable CFLs and other fluorescent lighting equipment.

Sincerely,

Alicia Culver
Executive Director