



Frequently Asked Questions Information on Compact Fluorescent Light Bulbs (CFLs) and Mercury

Why should people use CFLs?

Switching from traditional light bulbs to CFLs is an effective, accessible change every American can make right now to reduce energy use at home and prevent greenhouse gas emissions that contribute to global climate change. Lighting accounts for close to 20 percent of the average home's electric bill. Changing to CFLs costs little upfront and provides a quick return on investment.

If every home in America replaced just one incandescent light bulb with an ENERGY STAR qualified CFL, it would save enough energy to light more than 3 million homes and prevent greenhouse gas emissions equivalent to those of more than 800,000 cars annually.

Do CFLs contain mercury?

CFLs contain a very small amount of mercury sealed within the glass tubing – an average of 5 milligrams, which is roughly equivalent to an amount that would cover the tip of a ball-point pen. No mercury is released when the bulbs are intact or in use. By comparison, older thermometers contain about 500 milligrams of mercury. It would take 100 CFLs to equal that amount.

Mercury currently is an essential component of CFLs and is what allows the bulb to be an efficient light source. Many manufacturers have taken significant steps to reduce mercury used in their fluorescent lighting products. In fact, the average amount of mercury in a CFL is anticipated to drop by the end of 2007, thanks to technology advances and a commitment from the members of the National Electrical Manufacturers Association.

What precautions should I take when using CFLs in my home?

CFLs are made of glass and can break if dropped or roughly handled. Be careful when removing the bulb from its packaging, installing it, or replacing it. Always screw and unscrew the lamp by its base (not the glass), and never forcefully twist the CFL into a light socket. If a CFL breaks in your home, follow the clean-up recommendations below. Used CFLs should be disposed of properly (see below).

What should I do with a CFL when it burns out?

EPA recommends that consumers take advantage of local recycling options for compact fluorescent light bulbs, where available. EPA is working with CFL manufacturers and major U.S. retailers to expand disposal options. Consumers can contact their local municipal solid waste agency directly, or go to www.lamprecycle.org and click on "State Lamp Recycling Regulations & Contacts" to identify local recycling options.

If your state permits you to put used or broken CFLs in the garbage, seal the CFL in two plastic bags and put into the outside trash. CFLs should not be disposed of in an incinerator.

ENERGY STAR qualified CFLs have a warranty. If the bulb has failed within the warranty period, return it to your retailer.

How should I clean up a broken fluorescent bulb?

EPA recommends the following clean-up and disposal guidelines:

- 1. Open a window and leave the room (restrict access) for at least 15 minutes.**
- 2. Remove all materials you can without using a vacuum cleaner.**
 - Wear disposable rubber gloves, if available (do not use your bare hands).
 - Carefully scoop up the fragments and powder with stiff paper or cardboard.
 - Wipe the area clean with a damp paper towel or disposable wet wipe.
 - Sticky tape (such as duct tape) can be used to pick up small pieces and powder.
- 3. Place all cleanup materials in a plastic bag and seal it.**
 - If your state permits you to put used or broken CFLs in the garbage, seal the CFL in two plastic bags and put into the outside trash (if no other disposal or recycling options are available).
 - Wash your hands after disposing of the bag.
- 4. The first time you vacuum the area where the bulb was broken, remove the vacuum bag once done cleaning the area (or empty and wipe the canister) and put the bag and/or vacuum debris, as well as the cleaning materials, in two sealed plastic bags in the outdoor trash or protected outdoor location for normal disposal.**

What is mercury?

Mercury is an element (Hg on the periodic table) found naturally in the environment. Mercury emissions in the air can come from both natural and man-made sources. Utility power plants (mainly coal-fired) are the largest man-made source, because mercury that naturally exists in coal is released into the air when coal is burned to make electricity. Energy efficient CFLs present an opportunity to prevent mercury emissions from entering the environment because they help to reduce emissions from coal-fired power plants. Coal-fired power generation accounts for roughly 40 percent of the mercury emissions in the U.S.

EPA is implementing policies to reduce airborne mercury emissions. Under regulations EPA issued in 2005, mercury emissions from coal-fired power plants will drop by nearly 70 percent by 2018.

For more information on all sources of mercury, visit <http://www.epa.gov/mercury>.

EPA is continually reviewing its clean-up and disposal recommendations for CFLs to ensure that the Agency presents the most up-to-date information for consumers and businesses.

For more information about compact fluorescent bulbs, visit http://www.energystar.gov/index.cfm?c=cfls.pr_cfls

####

FACT SHEET: Mercury in Compact Fluorescent Lamps (CFLs)

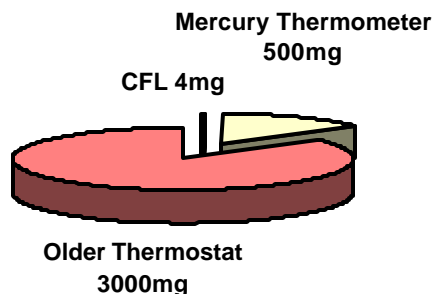
The US Environmental Protection Agency has prepared this fact sheet to respond to questions/concerns about mercury in energy-efficient lighting that uses compact fluorescent technology.

What are the Health Risks of Mercury and How do CFLs Fit In?

Mercury is an essential ingredient for most energy-efficient lamps. The amount of mercury in a CFL's glass tubing is small, about 4mg. However, every product containing mercury should be handled with care. Exposure to mercury, a toxic metal, can affect our brain, spinal cord, kidneys and liver, causing symptoms such as trembling hands, memory loss, and difficulty moving.

As energy-efficient lighting becomes more popular, it is important that we dispose of the products safely and responsibly. Mercury is released into our environment when products with mercury are broken, disposed of improperly, or incinerated. If you break a CFL, clean it up safely. And always dispose of it properly to keep CFLs working for the environment.

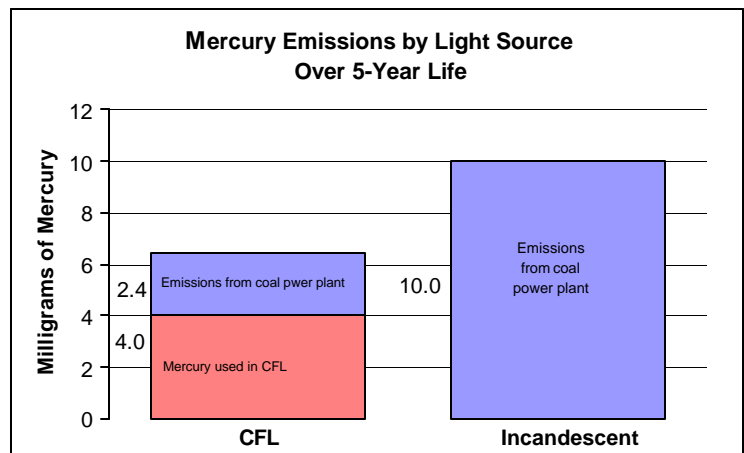
Household Mercury Amounts



Mercury is an ingredient in several household products. Recycling programs exist for mercury in older non-digital thermostats and mercury thermometers, but residential CFL recycling programs are just now appearing.

CFLs Responsible for Less Mercury than Incandescent Light Bulbs

Ironically, CFLs present an opportunity to *prevent* mercury from entering our air, where it most affects our health. The highest source of mercury in our air comes from burning fossil fuels such as coal, the most common fuel used in the U.S. to produce electricity. A CFL uses 75% less energy than an incandescent light bulb and lasts at least 6 times longer. A power plant will emit 10mg of mercury to produce the electricity to run an incandescent bulb compared to only 2.4mg of mercury to run a CFL for the same time.



Source: US EPA, June 2002

Always Dispose of Your CFL Properly

While CFLs for your home are not legally considered hazardous waste according to federal solid waste rules, it is still best for the environment to dispose of your CFL properly upon burnout. Only large commercial users of tubular fluorescent lamps are required to recycle. If recycling is not an option in your area (see below on how to find out), place the CFL in a sealed plastic bag and dispose the same way you would batteries, oil-based paint and motor oil at your local Household Hazardous Waste (HHW) Collection Site. If your local HHW Collection Site cannot accept CFLs (check Earth911.org to find out), seal the CFL in a plastic bag and place with your regular trash.

Safe cleanup precautions: If a CFL breaks in your home, open nearby windows to disperse any vapor that may escape, carefully sweep up the fragments (do *not* use your hands) and wipe the area with a disposable paper towel to remove all glass fragments. Do *not* use a vacuum. Place all fragments in a sealed plastic bag and follow disposal instructions above.

Resources for Recycling or Proper Disposal of CFLs

NOTE: Residential recycling programs are not yet available in most regions.

- 1. Earth911.org** (or call **1-800-CLEAN-UP** for an automated hotline): Online, enter your zip code, press "GO," click "Household Hazardous Waste", then "fluorescent light bulb disposal." The site will identify your nearest residential mercury recycling facility or mail disposal method. If you find no specific information on CFL disposal, go back and click on the link for "Mercury Containing Items."
- 2. Call your local government** if the Web site and Hotline number above does not have your local information. Look on the Internet or in the phone book for your local or municipal government entity responsible for waste collection or household hazardous waste.