



# Mercury and energy efficient lighting

## FACT SHEET



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For a list of retailers in your area who carry ENERGY STAR qualified lighting products, or for more information call 800.762.7077 or visit [focusonenergy.com](http://focusonenergy.com)

One of the easiest ways to reduce your energy costs is to replace standard incandescent light bulbs with compact fluorescent light bulbs (CFLs). These energy efficient lamps last up to ten times longer than traditional bulbs and provide the same light output using up to 75 percent less electricity. But CFLs also contain mercury. Does that make them hazardous to our health and the environment?

The truth is that CFLs are safe to use and account for fewer mercury emissions than traditional incandescent bulbs.

### MERCURY AND CFLS

Like all fluorescent lamps, CFLs contain a small amount of mercury—an average of five milligrams (mg) per bulb. By comparison, some watch batteries contain 25mg of mercury and many manual thermostats contain up to 3,000mg. (See Chart 1.)

**CHART 1: MERCURY CONTENT OF CFLs -VS- OTHER COMMON HOUSEHOLD PRODUCTS.**

Product	Amount of Mercury	Number of Equivalent CFLs
Compact fluorescent bulb	an average of 5 milligrams	1
Watch battery	25 milligrams	5
Dental amalgams	500 milligrams	100
Home thermometer	500 mg - 2 grams	100-400
Float switches in sump pumps	2 grams	400
Tilt thermostat	3 grams	600

The largest source of mercury in our air (about 40 percent in the U.S.) comes from burning coal to produce electricity. Because CFLs require significantly less electricity than incandescents, they actually contribute to a reduction in net mercury emissions. This is because a power plant will emit more mercury producing the electricity to light incandescent bulbs than CFLs.



CFLs do not emit mercury when they are intact, in use, properly stored, handled, and/or installed. Manufacturers continue to take steps to reduce the amount of mercury used in their fluorescent lighting products, and mercury levels in CFLs are expected to decrease by the end of 2007 thanks to advances in technology and a commitment from the members of the National Electrical Manufacturers Association.

### OTHER CFL BENEFITS

According to the U.S. Environmental Protection Agency (EPA), if every home in the U.S. replaced just one incandescent light bulb with an ENERGY STAR qualified CFL, we would save enough energy to light more than three million homes and prevent greenhouse gas emissions (which contribute to global climate change) equivalent to those of more than 800,000 cars annually.

### CFLs offer other benefits as well:

- **Lower energy costs.** Compared to incandescent bulbs, CFLs use 75 percent less energy to produce the same amount of light. Because the average home spends about 20 percent of its electricity on lighting, this can result in significant savings.
- **Longer life.** Most CFLs last 6,000 to 10,000 hours compared to just 1,000 hours for



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incandescent bulbs. This saves consumers both time and money on replacement bulbs, and reduces waste.

- **Cooler operation.** CFLs burn cooler, reducing the risk of fire.

### PROPER DISPOSAL OF CFLS

EPA recommends that consumers take advantage of local recycling options, such as recycling centers and transfer stations, to dispose of CFLs. Many communities schedule household hazardous waste collection events when fluorescent lamps are collected along with paints, pesticides, used motor oil and other materials.

To locate recycling options in your area, contact your local municipal solid waste agency or visit [lamprecycle.org](http://lamprecycle.org) and click on "State Lamp Recycling Regulations & Contacts." If there are no recycling options in your area, or if your state permits you to dispose of used or broken CFLs in the garbage, seal the CFL inside two plastic bags and place it into the outside trash. CFLs should never be sent to an incinerator.

### CLEANUP OF BROKEN CFLS

According to guidelines established by the EPA, you can safely clean up a spill from a broken CFL. The small amount of mercury in a CFL is not likely to cause a health problem, but it should still be cleaned up properly. The following steps can be performed by the general public:

- 1) Open a window and leave the room for 15 minutes or more.
- 2) Carefully scoop up the fragments and powder with stiff paper or cardboard and place them in a sealed plastic bag.
  - Use disposable rubber gloves, if available (i.e., do not use bare hands). Wipe the area clean with damp paper towels or disposable wet wipes and place them in the plastic bag.
  - Do not use a vacuum or broom to clean up the broken bulb on hard surfaces.
- 3) Place all cleanup materials in a second sealed plastic bag.
  - Place the first bag in a second sealed plastic bag and put it in the outdoor trash container or in another outdoor protected area for the next normal trash disposal.

**Note:** some states prohibit such trash disposal and require that broken and unbroken lamps be taken to a local recycling center.

- Wash your hands after disposing of the bag.
- 4) If a fluorescent bulb breaks on a rug or carpet:
    - First, remove all materials you can without using a vacuum cleaner, following the steps above. Sticky tape (such as duct tape) can be used to pick up small pieces and powder.
    - If vacuuming is needed after all visible materials are removed, vacuum the area where the bulb was broken, remove the vacuum bag (or empty and wipe the canister) and put the bag or vacuum debris in two sealed plastic bags in the outdoor trash or protected outdoor location for normal disposal.

### LEARN MORE

[focusonenergy.com](http://focusonenergy.com)

Contact Focus on Energy to learn more about smart energy choices, and retailers that offer CFL recycling.

[energystar.gov](http://energystar.gov)

The ENERGY STAR site provides information on energy efficient products that meet ENERGY STAR standards.

[www.dnr.state.wi.us/markets/matsearch.asp](http://www.dnr.state.wi.us/markets/matsearch.asp)

This website will direct you to a recycler in your area that accepts CFLs.

[www.epa.gov/bulbrecycling](http://www.epa.gov/bulbrecycling)

This site provides information on recycling sites for CFLs.

[www.earth911.org](http://www.earth911.org)

Earth911 provides information on recycling services for many common household products, including aluminum cans, motor oil, CFLs, thermostats and other mercury containing items.

[www.lamprecycle.org](http://www.lamprecycle.org)

Lamprecycle.org is a resource for any light bulb user seeking details on recycling spent mercury-containing lamps. It also contains information on state lamp recycling regulations & contacts.