



## Compact Fluorescent Light Bulbs (CFLs) FAQs for Households

### What is mercury?

Mercury is an element found naturally in the environment. Although it has some very useful properties, it is a toxic heavy metal with potential health effects, and must be handled properly. Human activities, such as burning coal for electricity and using mercury in manufacturing, increase the amount of mercury cycling through the air, water, and soil. According to the EPA, the main sources of mercury pollution are coal-burning power plants. American power plants pump 96,000 pounds of mercury into the air annually.

### Why is mercury in compact fluorescent light bulbs (CFLs)?

Mercury is a necessary part of a CFL. The ballast, mercury, and phosphor coating inside the bulb work together to efficiently convert electrical energy into visible light.

### How much mercury is in a CFL?

On average, newer CFLs contain a very small amount of mercury (about 4 to 5 milligrams of mercury) sealed in the glass tubing, which is about enough to cover the tip of a ballpoint pen. Older CFLs tend to contain higher amounts of mercury.

### Is there a difference in mercury content between ENERGY STAR® and non-ENERGY STAR® CFLs?

All ENERGY STAR® qualified CFLs have less than 5 milligrams of mercury (some manufacturers are able to produce CFLs that have only about 1 milligram of mercury). Avoid purchasing non-ENERGY STAR® CFLs, as they may have much higher levels of mercury in them.

### How can I tell how much mercury is in a CFL before I purchase one?

As of September 2008, all ENERGY STAR® qualified CFLs are required to list their mercury content on the packaging. This information is not required on non-ENERGY STAR® CFL packaging.

### Does mercury escape into the environment when I use a CFL?

A CFL is a sealed unit, and no mercury is released when it is in use or as long as it is intact. Some mercury is released when a bulb breaks, and appropriate clean-up guidance should be followed.

### Does the use of a regular incandescent light bulb really create more mercury emissions through the generation of electricity than a CFL?

Yes, in fact a recent study by the Environmental Protection Agency shows that when using an incandescent light bulb, more mercury emissions are released into the air due to increased energy usage. A power plant emits about 10mg of mercury to produce the electricity to run an incandescent bulb over a 5-year period. A power plant will emit only 2.4mg of mercury to run a CFL for the same time period.

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.

### **Can I throw my burned out CFL in the trash?**

As of now, New York State households are exempt from the ordinary hazardous waste regulations of businesses, so CFLs may legally be disposed as normal household trash, although NYSDEC does not recommend this practice. The New York State Energy Research and Development Authority (NYSERDA) and the NYSDEC are strongly encouraging New Yorkers to use and recycle them safely. Careful recycling of CFLs prevents the release of mercury into the environment and allows for the reuse of glass, metals and other materials that make up CFLs. NYSERDA and the NYSDEC recommend that consumers take advantage of available local recycling options for CFLs, such as household hazardous waste collection events and the new CFL Collection Program operated by participating ENERGY STAR® retailers. The agencies are also working with CFL manufacturers and major U.S. retailers to expand recycling and proper disposal options.

### **Why should I recycle my old burned out or broken CFLs?**

CFLs need to be managed properly at the end of their useful lives in order to keep harmful mercury from entering the environment. Last year alone, Americans purchased 400 million CFLs! It is important to begin proper recycling of CFLs today so there is not a problem in the future when these bulbs need to be replaced, since they typically last up to 10 years.

### **What happens when my CFL is recycled?**

A CFL is like a small computer containing many electronic components in an internal ballast. When a CFL reaches a recycler, all the components are separated, including glass and mercury which in many cases are resold to manufacturers.

### **How do I currently recycle my CFL?**

There are several ways to recycle your CFL:

1. Check out NYSERDA's resource map for a participating CFL Collection Center near you (available on the right side of this page under "Links Leaving DEC's Website"). The retail stores listed are trained to accept and manage CFLs for recycling.
2. Take advantage of local recycling options through your municipal landfill or transfer station. Many towns or counties also have household hazardous waste collection days where CFLs can be dropped off for recycling.

### **What do I do if a CFL breaks in my house?**

It is important to minimize the exposure, by contact or inhalation, of humans and pets to mercury. These simple clean-up instructions will help to ensure safe handling of broken CFLs:

1. **Before clean-up make sure you ventilate the room.** Make sure that people and pets leave the room, and don't let anyone walk through the breakage area for 15 minutes. Be sure to open a window and shut off the forced-air heating or air conditioning system.
2. **Clean-up on hard surfaces.** Using stiff paper or cardboard, carefully scoop up glass fragments and powder and place them in a container, preferably a glass jar with a metal lid (such as a

canning jar). Use sticky tape (such as duct tape) to pick up any remaining small glass fragments and powder. Wipe the area clean with damp paper towels or disposable wet wipes and place them in the container. DO NOT use a vacuum or broom to clean up the broken bulb on hard surfaces, since this will spread the particles around the room.

3. **Clean-up on carpets or rugs.** Carefully pick up glass fragments and place them in a container, preferably a glass jar with a metal lid (such as a canning jar). Use sticky tape (such as duct tape) to pick up any remaining small glass fragments and powder. If vacuuming is needed after all visible materials are removed, vacuum only 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. It is important to discard the bag and wipe out the canister with a damp cloth before using the machine again.
4. **Disposal of clean-up materials.** Immediately place all clean-up materials outside the building in a trash container or outdoor protected area for the next normal trash disposal day. Wash your hands after disposing of the jars or plastic bags containing clean-up materials.