

CFL Facts and Myths

Why should people use CFLs?

Switching from traditional incandescent light bulbs to compact fluorescent light bulbs (CFLs) is an effective, simple way to save energy and save money. Making the change helps use less electricity at home and prevents greenhouse gas emissions that lead to global climate change. Lighting accounts for about 20 percent of the average home's electricity bill. ENERGY STAR qualified CFLs use up to 75 percent less energy than comparable incandescent light bulbs, last up to 10 times longer, cost little up front, and provide a quick return on investment. If every home in America replaced just one incandescent bulb with an ENERGY STAR qualified CFL, in one year it would save enough energy to light more than 3 million homes and prevent greenhouse gas emissions equal to that of about 800,000 cars. Because CFLs also help to reduce greenhouse gasses, other pollutants associated with electricity production, and landfill waste, they are clearly the environmental winner when compared to traditional incandescent light bulbs (EPA,2011).

Myth: CFLs contain a lot of mercury.

Fact: CFLs contain mercury. Mercury is used in many household items: thermostats, thermometers, fluorescent lights, batteries, watches, and appliance switches. Mercury is also found in some of the foods we eat: tuna fish, ketchup, soda, and barbeque sauce. An extremely small amount of mercury – an average of four milligrams – is sealed within the CFL glass tubing. All fluorescent lights require varying amounts of mercury to operate. There are about 1 to 3 grams of mercury in your average home thermometer, which is comparable to the mercury in about 250 to 1,000 CFLs (Michigan Department of Environmental Quality 2011).

Myth: CFLs result in more mercury in the environment compared to traditional incandescent light bulbs.

Fact: Electricity use is the main source of mercury emission in the U.S. CFLs use less electricity than incandescent lights, meaning CFLs reduce the amount of mercury into the environment. A 13-watt, 8,000-rated-hour-life CFL (the equivalent of a 60-watt incandescent bulb) will save 376 kWh over its lifetime, thus avoiding 4.3 mg of mercury. If the bulb goes to a landfill, overall emissions savings would drop a little, to 3.9 mg. EPA recommends that CFLs are recycled where possible, to maximize mercury savings (EnergyStar.gov).

Myth: Compact fluorescent bulbs are a major safety hazard because they contain mercury.

Fact: CFLs contain a tiny amount of mercury and it is true that if a bulb breaks, you will be exposed to mercury. But, just how dangerous is a broken bulb? Researchers at the Lawrence Berkeley National Laboratory compared how much exposure you'd get from the amount of mercury released from a broken CFL bulb to how much mercury you'd take in from eating Albacore tuna fish.

If you do a common sense job of cleaning up, then your mercury exposure would be equivalent of taking a tiny nibble of tuna, according to Francis Rubinstein, a staff scientist at Berkeley Lab. What if you did the worst clean-up job possible, say closed all of the doors and smashed the bulb with a hammer? It's

still no big deal, says Rubinstein, who points out that it would be the equivalent of eating one can of tuna (Lawrence Berkeley National Laboratory, May 2009).

Myth: Compact fluorescent light bulbs release mercury as they burn.

Fact: The mercury is sealed inside the glass tubing and nothing is released (Consumer Reports October 2008).

Myth: CFLs smoke when they burn out.

Fact: Today's spent bulbs typically flicker, dim, or emit a reddish-orange glow. If one you own smokes or smolders, turn off power to the light and allow the bulb to cool before removing it and taking it to a retailer or other recycler (Consumer Reports 2008).

Myth: CFLs can't be used in traditional incandescent light fixtures.

Fact: The design of CFLs makes them suitable for use in incandescent light fixtures. To generate light while using the least amount of electricity, most CFLs are constructed in long, thin tubes that are coiled into a spiral. This shape allows CFLs to fit a lighting fixture designed for incandescent bulbs (Underwriters Laboratory 2011).

Myth: CFLs flicker when they first light.

Fact: The first compact fluorescent light bulbs flickered when they were turned on because it took a few seconds for the ballast to produce enough electricity to excite the gas inside the bulb. Thanks to the refined technology in new compact fluorescent light bulbs, there is now no significant flicker (less than 1 second). However, these bulbs do require a short warm-up period before they reach full brightness, which is why they may appear dim when first turned on. Compact fluorescent bulbs are best used in fixtures that are left on for longer periods of time, rather than in fixtures that are turned off and on frequently (Michigangree.org).

Myth: Incandescent bulbs will be phased out from 2012 to 2014 as a result of the EISA Act of 2007.

Fact: Only the least efficient incandescent light bulbs will be phased out. Halogen light bulbs are available but they use 66% more energy than CFLs (Applied Proactive Technologies 2011).

Myth: CFLs cannot be recycled because of the mercury content.

Fact: CFLs can be recycled. Some communities offer household hazardous waste (HHW) collection days or recycling programs that accept CFLs and other fluorescent lamps. Check the Michigan Department of Environmental Quality, your local municipality or your county health department to locate a recycling program near you. The Home Depot accepts CFLs for recycling as part of their Eco-Options program. The IKEA store in Canton, Michigan has a CFL recycling program. You could ask wherever you purchase your CFL bulbs if they have a recycling program.

Mail-in CFL Recycling

- Waste Management provides a mail-in recycling program for a fee. The "[ThinkGreenFromHome](#)" program costs about \$1 per bulb.
- [Sylvania](#) offers a variety of containers for recycling CFLs by mail. The Minipaks hold up to 15 CFLs for about \$1 per bulb.

Household hazardous waste collection or recycling is preferred but you can lawfully dispose of CFLs in your household garbage. Of course, there may be local ordinance or landfill requirements. To reduce the risk of bulb breakage or contamination and to protect yourself and garbage staff from cuts, wrap the bulb in a sealed plastic bag and discard it with your trash (Michigan Department of Environmental Quality 2011).

Myth: Can Compact Fluorescent Light Bulbs be used in recessed cans, outdoor lights, or track lighting?

Fact: Yes! Always read the packaging of the CFL to be sure of its proper application, but there are a wide variety of CFLs that are designed for use in most fixtures in your home, including recessed cans, outdoor lights, and track lighting. (Energy Star).