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## **Answers to Growing Concerns about the Quality and Functionality of CFLs**

Recent stories have surfaced about the frustration some consumers have experienced with compact fluorescent lighting (CFLs). The benefits of CFLs are significant compared to traditional incandescent lights, but, like any lighting source, it is necessary for the correct precautions to be taken. In response to these concerns, Focus on Energy is providing answers to common issues/questions below, and possible fixes to help consumers alleviate the frustration.

**Question: “CFLs are supposed to last for 10,000 hours, I have bought several that don’t work at all or burn out much earlier.”**

Answer: CFLs are not a “one size fits all” bulb. While CFLs do deliver superior efficiency results, they also require additional precaution to make sure the appropriate bulb is used in the fixture. The common spiral shape bulbs work in most traditional indoor lighting applications ranging from 60w to 150w. However, consumers should be sure to check packaging if the bulb will be used with dimmers and three-way switches. ENERGY STAR<sup>®</sup> offers a simple guide to ensure the appropriate bulb is being used to maximize results at: [click here](#).

**Answer: “My CFLs inside work fine, but they keep burning out quickly or malfunctioning when used outside. What can be done to fix this?”**

Answer: Using the wrong bulb outdoors in applications such as photocells, motion sensors and electronic timers will cause a CFL to burn out quickly or not work. Each lighting application can be maximized by using the appropriate bulb, indoor or out. When looking to maximize energy efficiency with your outdoor lighting, consumers may want to consider:

- Outdoor covered lighting – Spiral or tubed ENERGY STAR qualified lighting are both appropriate to use in outdoor covered fixtures where cold and snow can’t hurt them. For colder temperatures which are common in Wisconsin, check the packaging for starting temperatures to make sure the bulb will work properly.
- Outdoor exposed fixtures – ENERGY STAR qualified outdoor flood light bulbs are recommended. These bulbs have special cases that protect them from snow and rain. Placing a bare spiral CFL in an open fixture exposes the tubing and electronics to the elements, causing early failure.

**Question: “The spiral bulbs just don’t look right when the bulb is exposed. What else is out there?”**

Answer: There are a few different options available to consumers looking for the benefits of a CFL with a more traditional looking bulb.

- Covered A-Shape – These bulbs combine the energy efficiency benefits of CFLs with the look and feel of a traditional incandescent. You can use A-shape bulbs wherever traditional incandescents are used. Make sure to check packaging for compatibility.
- Globe-shaped bulbs – These are great for use where you can see the bulb, like vanity bathroom bars and ceiling pendants. A globe bulb is basically a spiral bulb with a cover. Like other CFLs, globe bulbs need a little time to warm up and reach full brightness. But be patient – they generate just as much light as traditional bulbs, while using less energy.

- Candle bulbs – These are great for use in sconces and ceiling fans where the bulb is visible. Given their sleek design, the bulbs could be a good alternative where globe-shaped bulbs won't fit.

**Question: “With all these CFLs burning out so quickly, am I doing more harm than good by throwing the bulbs containing mercury away?”**

Answer: 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. Below is a mercury comparison to several items found around the house:

- Compact Fluorescent bulb – an average of 5mg
- Watch battery – 25mg
- Home thermometer – 500mg - 2 grams
- Float switches in sump pumps – 2 grams
- Tilt thermostat – 3 grams

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 incandescent bulbs, 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.

Even with the small amount of mercury in each bulb, it is important to take the necessary recycling measures. The Environmental Protection Agency recommends that consumers take advantage of available local recycling options for compact fluorescent light bulbs. Consumers can contact their local municipal solid waste agency directly. In Wisconsin, Focus offers free bulb recycling at retailers around the state. For more information, [click here](#).

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. More information is available by [clicking here](#).

For more information on choosing the correct CFL or to answer additional questions, call (800) 762-7077 or visit [focusonenergy.com](http://focusonenergy.com). For more answers on CFLs, visit [www.askfocusonenergy.com](http://www.askfocusonenergy.com). If you are developing a story on energy efficiency or CFLs, please let me know what assistance Focus on Energy can provide. I can be reached at (414) 225-9554 or [mtreichel@hyc.com](mailto:mtreichel@hyc.com).