



COMPACT FLUORESCENT LIGHT BULBS

Benefits and usage:

Switching-out incandescent bulbs for compact fluorescent light bulbs (CFLs) is one way for Virginians to reduce their energy consumption. These bulbs save both energy and money. The U.S. Department of Energy (DOE) and the U.S. Environmental Protection Agency (EPA) report that CFLs use 75% less energy than the standard incandescent light bulbs, and last up to 10 times longer (up to 10,000 hours compared to the 1,000 hour incandescent). DOE and EPA also state that CFLs produce about 70% less heat than their incandescent counterparts, which can result in lower energy costs related to home cooling needs.

PLEASE NOTE: Although many CFLs come in a variety of shapes and sizes to fit your household needs, some types of CFLs may be incompatible with use on circuits that have a dimmer switch. It may cause serious overheating, particularly if incandescent and CFL lamps are on the same circuit. Check the bulb manufacturer's instructions on lamp packaging to ensure you are purchasing a CFL safe for use in a dimmer, and for additional warnings.

Mercury issues:

CFLs are safe to use in your home. No mercury is released when the bulbs are in use and they pose no danger to you or your family when used properly. CFLs do, however, contain approximately 4 to 5 mg of mercury (the amount equivalent to the tip of a pen), and thus should be managed responsibly when they burn out.

CFLs actually present an opportunity to prevent mercury emissions from entering the environment by reducing the demand for electricity generated by coal-fired power plants. Utility power plants are the primary man-made source for mercury in the environment, accounting for approximately 40% of the mercury emissions in the U.S. A coal-fired power plant will emit 13.6 mg of mercury to produce electricity required to use incandescent bulbs, compared to 3.3 mg of mercury for CFLs.

The use of CFLs can also produce other positive environmental impacts. A reduced power generation demand can reduce the production of nitrogen oxides which cause smog, prevent the generation of CO₂ which is the gas linked to global warming, and also reduce the emission of other pollutants.



If your CFL breaks:

Because of the small amount of mercury in the CFLs, the greatest risk in case a CFL bulb breaks is from the glass shards. EPA states that there is no immediate health risk, and you can minimize any risks by following these proper clean-up and disposal guidelines:

- Sweep up – don't vacuum – all of the glass fragments and fine particles.
- Place broken pieces in a sealed plastic bag and wipe the area with a damp paper towel to pick up any stray shards of glass or fine particles. Put the used paper towel in the plastic bag as well. Dispose of in the trash.
- If the weather allows, open windows to allow the room to ventilate.

To get rid of your CFL:

Do not throw used CFLs away in your household garbage if better disposal options exist!

- Check directly with your local waste management agency on the recycling options and disposal guidelines in your community:
www.deq.virginia.gov/recycle/contactlist.html
- If your community has a household hazardous waste (HHW) drop off center or offers HHW collection events, check to see if they accept CFLs (many do!)
- The following web sites also offer updated management options for CFLs:
www.earth911.org
www.lamprecycle.org

If recycling of the CFL bulbs is not an option where you live, EPA recommends the following disposal guidance: place the CFL in a plastic bag and seal it before putting it in your trash. However, EPA also states that you should not dispose of CFLs or any mercury-containing device in your trash if it is destined for a waste incinerator as this increases the risk of mercury emissions to the environment. Ask your local waste management agency for guidance in this situation.

Additional information:

The following web sites can provide additional background information on CFLs:

Energy Star: www.energystar.gov/index.cfm?c=cfls.pr_cfls

Mercury and CFLs:

www.energystar.gov/ia/partners/promotions/change_light/downloads/Fact_Sheet_Mercury.pdf

Recycling CFLs: www.deq.virginia.gov/p2/mercury/fluorescents/recycle.html#house

Also, please direct any questions on the proper management of fluorescent bulbs and other mercury-containing devices to:

Virginia DEQ's Universal Waste Coordinator, Willard Keene, at (276) 676-4847

Virginia DEQ's Manager of Recycling and Litter Prevention, **Steve Coe**, at (804) 698-4029