Money Savings With A Twist

An Energy Star-qualified compact fluorescent light (CFL) bulb will save about $30 over its lifetime and pay for itself in about six months. It uses 75 percent less energy and lasts about 10 times longer than an incandescent bulb.

Compact fluorescent lights are more energy efficient. They are physically different than conventional light bulbs because fluorescent lights produce light energy in a different way.

A conventional light bulb has a piece of resistive wire inside a glass bulb. When an electric current is applied to the wire, it gets hot and begins to glow. As the temperature of the wire increases the brighter the light gets. A typical light bulb will emit 2.5 percent of its energy as visible light and wastes 97.5 percent of its energy mostly as heat.

A CFL uses a long sealed glass tube. To reduce the space this long tube takes up, manufactures ether bend the tube in a zigzag or corkscrew shape. The inside of this tube is coated with a fluorite.

The tube is filled with a small amount of mercury vapor. At each end of the tube is a small heating element that is used to warm the mercury into a vapor. Because mercury is metal, it is electrically conductive. When electric current flows through this vapor the atoms become excited and give off ultraviolet light. Ultraviolet light absorbed by the fluorite coating causes it to become fluorescence. The fluorite coating gives off visible light. The light output is regulated by electronic ballast built into be base of the bulb.

Battle of the Bulbs (Wattage Equivalency)

Compact Fluorescents		Incandescent Bulbs		Savings in Energy Costs
18 Watt	=	60 Watt	=	$16.80
22 Watt	=	75 Watt	=	$21.20
27 Watt	=	100 Watt	=	$29.20
30 Watt	=	150 Watt	=	$48

The Facts About Mercury

CFLs contain trace amounts of mercury sealed within the glass tubing—an average of 4 milligrams. By comparison, older thermometers contain about 500 milligrams of mercury, an amount equal to the mercury in 125 CFLs.

Mercury is an essential part of CFLs. It allows the bulb to be an efficient light source. No mercury is released when the bulbs are intact or in use.

Most makers of light bulbs have reduced mercury in their fluorescent lighting products. Thanks to technological advances and a commitment from members of the National Electrical Manufacturers Association, the average mercury content in CFLs has dropped at least 20 percent in the past year. Some manufacturers have even made further reductions, dropping mercury content to 1.4 -2.5 milligrams per light bulb.

Remember to Recycle

The typical life expectancy of a CFL is 10,000 hours or about nine years of average use. Some consumers say CFLs are expensive and do not last as long as advertised. Choosing Energy Star name brand bulbs with warranties should ensure the quality and advertised life expectancy.

There is a growing concern on the disposal of CFLs due to the mercury content, and where to recycle them. In Klickitat County, your nearest Transfer Station accepts CFLs for free as part of the recycling program for Klickitat County residents. ■

For other recycling needs, go to www.ecyclewashingon.org.