

Corner for Small Change – January, 2007

Then God said, “Let there be light”; and there was light. And God saw that the light was good; and God separated the light from the darkness. Genesis 1;3-4

Light, both physical and metaphorical, is a recurrent image in the Bible. However, in our world all light is not created equal. Sunlight being free, warming and the source of energy for all plant growth cannot be matched by man. Instead we turn to artificial light to illuminate our world in darkness.

The standard incandescent light bulb transformed the quality of life for us. Prior to its invention, many people, unable to afford to burn candles for long, often enjoyed ten hours of sleep in the winter. However, the standard incandescent light bulb is a highly inefficient source of light – 90 percent of the energy used to power the bulb is given off as heat – only 10 percent is actually used for light. In the United States, one quarter of our electricity is used for lighting. Using incandescent bulbs means that over 20 percent of your electric bill is wasted energy.

Why does this matter?

It matters because over half the electricity generated in the United States comes from coal-fired plants- one of the dirtiest power sources in use. It is responsible for:

- Largest U.S. source of carbon dioxide pollution (global warming) – 2.5 billion **tons** per year – 8.3 tons for every man, woman and child in the country.
- Coal-fired plants account for 99 percent of the mercury emissions in the country polluting 75 percent of the waterways making the fish unsafe for consumption.
- Contributing 96 percent of sulfur dioxide and 93 percent of the nitrogen oxide emissions. These pollutants weaken the lungs, trigger asthma attacks and contribute to forming toxic acid rain.

You can make a simple change to compact fluorescent light bulbs (CFLs) and make a difference. CFLs use only one quarter of the watts needed to produce the same amount of light as a regular light bulb. This will also allow you to use brighter bulbs with smaller lamps that have a safe wattage maximum of 40 or 60 watts. They also last much longer so you will only replace one CFL for every 13 regular light bulbs you use, saving resources and landfill space. They are available in many types and colors including ones that can be used with dimmers. Although more expensive than regular bulbs, the savings in energy is recouped within the first 500 hours of use and the bulbs last 7000 hours or more. Buying multi-bulb packs save too.

Replacing just five bulbs will keep almost half a ton of carbon dioxide out of the atmosphere and save \$25 -\$45 in energy costs for each CFLs you use. There are two

drawbacks though. The CFLs do contain a tiny amount of mercury which means they must be recycled responsibly, but the amount of mercury is still less than the mercury emissions caused by energy used by regular bulbs. Secondly, the bulbs last so long you may forget to buy light bulbs once you replace them all in your home.

For a guide to choosing the right CFLs for the purpose and to sign up to pledge for the One Million-Bulb Swap-Out go to Environmentaldefense.org.