

Energy Efficient Light Bulbs- a bright idea for the environment

The biggest contribution we make to smog is through electricity usage. This is due to Ontario's massive coal-burning generators, the biggest air polluters in Canada. Coal-fired power generation is also a major source of greenhouse gases that contribute to climate change. To meet the targets of the Kyoto Protocol, we each need to reduce our personal emissions of carbon dioxide - the most common greenhouse gas - by 1 tonne (1,000 kg). A household lighting "tune-up" is an easy way to do your share.



The most common household light is the incandescent bulb. They are cheap and will work in almost any fixture, but they are also short-lived and real energy pigs! Anyone who has touched a burning incandescent bulb knows that they generate far more heat than light. In summer this is double trouble, as the air conditioning has to work hard to remove this extra heat. Long-life incandescent bulbs last longer but are even less efficient than the regular ones. There are some fantastic alternatives out there.

The newest compact fluorescent (CF) bulbs are real heroes when used in the right places. They run cool, fit in most fixtures, have a pleasant light, are 90% more efficient and last years longer than incandescent bulbs. Recently the price has dropped significantly, and the designs have improved. Yesterday's long bulky shapes have been replaced with small spiral designs that fit almost any fixture, and with reflector styles for pot lights.



CF bulbs are fantastic for porch or driveway lights that are on all night, and will pay for themselves quickly there. CF bulbs can't be used everywhere though. They don't work with dimmers and aren't cost effective for lights that are turned on and off frequently, e.g. bathrooms and cupboards. CF bulbs will work with certain timers, but not all-electronic ones. At my office I have CF bulbs in all outdoor lights (on mechanical timers) and in the waiting room and halls.

In places where you can't use a CF, halogen bulbs are about 50% more efficient than incandescent bulbs. They last a bit longer and are excellent for floodlights or track lighting. They cost about \$3-7 per bulb, but can be used with dimmers, timers and motion detectors to save energy. The payback takes longer than for CFs.

The lights of the future are LEDs, the real kings of conservation. They're not cheap, but are 99% more efficient than incandescent bulbs and last for decades. Today they are available for nightlights, flashlights and solar-powered patio lighting. Bolton has some new LED traffic signals.

If you want to take one environmentally-friendly step this week, look for an incandescent bulb in your home that is on for more than 6 hours a day, and change it for a compact fluorescent.



The Cost:

\$7-12 for a spiral bulb, \$15- \$25 for a reflector light.

The Payback:

You'll save \$15 on your hydro bill each year for a bulb that's on 10 hours a day.

The Environmental Bonus:

If every household and business in Caledon replaced 1 high-usage incandescent bulb with a CF, the power saved could run 400 households. Over a year we'd prevent 3500 metric tonnes of carbon dioxide emissions and reduce sulphur dioxide, nitrogen oxide and mercury pollution.

If you replace 4 incandescents with CF bulbs and change 2 outdoor floodlights to motion detectors, you will meet your share of the Kyoto target. You can do this for the Caledon Countryside Alliance (CCA) Step Up To Kyoto pledge. Please see <http://www.woodrising.com/cca/stepup.htm> for more information.

Berney's Pro Hardware in Caledon East and United Home Hardware in Bolton have kindly offered a 10% discount off the regular price of CF bulbs if you bring in this article. You can also buy them from the CCA. If other local retailers are interested in participating, please contact me. Remember that shopping locally is another great way to reduce your greenhouse gas emissions.

For other topics in the Caledon Clean Air Clean Energy Program, contact greenenergy@woodrising.com or 519-927-0548. You can read all the articles in this series at <http://www.woodrising.com/cca/stepup.htm>



Step Up To Kyoto. Future generations will thank-you a tonne.