



COMPACT FLUORESCENT LIGHTS

INTRODUCTION

Compact fluorescent light bulbs (CFLs) are being heavily promoted as an energy-saving alternative to traditional incandescent bulbs, but they contain mercury vapor which makes them a hazard both to human health and to our landfills.

BACKGROUND

- The Canadian government announced that incandescent bulbs would be banned by 2012. Australia has pledged to phase them out by 2010.
- Compact fluorescent light bulbs and tubes are energy-efficient alternatives to traditional incandescent bulbs.
- CFLs use up to 75% less energy than incandescents and last up to 10 times longer
- Environmental groups and governments are promoting the switch to CFLs as an effective energy saving measure that's easy for most people to implement at home.
- Ikea was the first major retailer to implement a recycling program for CFL bulbs in 2001 for all its North American locations. In 2007, Home Depot Canada created a nation-wide take back program for CFLs.
- In the US, Maine and Massachusetts have launched state-wide CFL recycling programs, while California has banned mercury-containing items from its landfills.

MERCURY AND CFLs

Fluorescent lamps require mercury vapour to produce light. The amount of mercury in a bulb is proportional to the size of the lamp and contributes to its long lifespan. A bulb contains approximately 5mg of mercury, while a 4-ft tube contains roughly 12mg. In contrast, a mercury thermometer contains approximately 500 mg, while an older mercury thermostat contains about 3000 mg.

The US Environmental Protection Agency found that using CFLs can actually reduce the amount of mercury in the atmosphere. The largest source of atmospheric mercury occurs when fossil fuels are used to produce energy. In fact, because of their energy efficiency, the power required to run a CFL generates 2.4 mg of mercury compared to an incandescent bulb which generates 10mg of mercury pollution.

When CFLs are recycled, mercury and other materials are recovered and reused, preventing them from entering the environment.

Handling a broken bulb or tube:

According to Natural Resources Canada, broken CFLs do not pose an immediate health risk due to the small quantity of mercury in the lamps. The US EPA recommends opening a window for 15 minutes to allow the vapour to dissipate. Afterwards, using rubber gloves, sweep or scoop up the glass fragments and phosphor powder, then wipe the area with a damp towel. On carpet, sticky tape can be used to collect the remnants. Double bag the CFL remains and all cleaning supplies before disposing in the garbage.

ENVIRONMENTAL IMPACT

As more incandescent bulbs are replaced with CFLs the amount of energy saved will have a significant impact on the environment. If the province of British Columbia were to replace all of its household lights with CFLs it would save 2 million megawatt hours of energy annually, that's enough to power 200,000 homes or the equivalent of taking 86,000 cars off the road.

On the other hand, more CFLs means that more mercury could be ending up in our landfills and watersheds. Convenient recycling options need to be available if we are to convert our lighting to fluorescents.

FUTURE DIRECTIONS

In April 2007 the BC Provincial Government announced that it would be establishing a provincial recycling program for mercury containing devices. Once this program is established, residents will have a convenient method of safely disposing of CFL bulbs as well as fluorescent tubes, thermometers and thermostats.

WHAT YOU CAN DO

The best way to ensure you keep up with the latest developments on bans and other sustainability issues and have your voice heard is to join RCBC. You will receive the latest RCBC publications that explore these issues and more. By being a member of RCBC, whether you are a consumer, a retailer, a recycler or a brand owner, you will become part of the made-in-BC solution that fits our province's waste management objectives as we work together for a sustainable future.

FOR MORE INFORMATION

RCBC: www.rcbc.bc.ca

BC Ministry of Environment: <http://www.env.gov.bc.ca/epd/>

Natural Resources Canada: <http://www.nrcan-rncan.gc.ca/media/newcom/2007/200735a-eng.php>

http://oee.nrcan.gc.ca/publications/infosource/pub/home/Household_Lighting_Section4.cfm?attr=4#cfl

California Product Stewardship Council: http://caproductstewardship.org/products/fluoro_p.htm

Ontario Ministry of Energy: http://www.energy.gov.on.ca/index.cfm?fuseaction=english.news&body=yes&news_id=148

OR CALL

RCBC Recycling Hotline at 604-732-9253 or 1-800-667-4321

RCBC Mission Statement

RCBC is a multi-sectoral non-profit organization promoting the principles of Zero Waste through information services, the exchange of ideas and research.

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