

Phantom load the next frontier in electricity conservation

Peter Love, Chief Energy Conservation Officer of Ontario, Conservation Bureau



For many Ontarians, incandescent light bulbs are already a thing of the past. In order to cut their household electricity consumption, many Ontario homeowners have switched their old-fashioned bulbs with long-lasting, efficient compact fluorescent lights, or CFLs. Some have gone even further in their quest for maximum electricity savings by installing ENERGY STAR ceiling fans, dimmers, outdoor motion sensors and programmable thermostats, trading in their old holiday lights for efficient LEDs, and replacing their furnace filters on a regular basis.

However, even the most conscientious homeowners are often unaware of the hidden ways in which electricity goes to waste. Phantom load, sometimes referred to as "standby power" or "vampire power", is one of the biggest culprits. In a nutshell, phantom load is the electricity being consumed by a device even though it's turned off. A large plasma TV can draw 88 kWh per year even when it's turned off, as can a VCR or DVD player. A large projection TV can drain as much as 210 kWh per year when you're not watching it.

Many household electrical devices are designed to draw electricity all the time, so they're adding to the household electricity bill even when they are turned "off."

A quick look around any modern home will identify the features that contribute to phantom load – the computer peripherals like printers, scanners, modems, and speakers; the TV, stereo and gaming system on standby so that they can be turned on with the remote control; the cable set-top box that remains powered 24 hours a day, seven days a week. Although some phantom load may be unavoidable – for example, a cordless phone needs to remain plugged in in order to work, and same for the cable box – cutting down on unnecessary phantom load can lead to savings.

As portable electronic devices – like cellphones, laptops and PDAs – become more common, so do "wall warts", those

small black transformers which power battery chargers and external power supplies. There's a good reason those little devices are always warm – they draw power whenever they are plugged in, even if they device they are powering is fully charged or disconnected.

Canadian homes have more electronic devices than ever before, so phantom load grows and grows. According to Natural Resources Canada, 10 per cent of the electricity consumed in the average Canadian home can be attributed to phantom load, meaning it represents 10 per cent of the average electricity bill, or nearly a month's worth of electricity. Across the country, devices in standby mode are estimated by Natural Resources Canada to use at least 5.4 billion kWh, which represents an enormous waste of money and resources. If the standby power consumption of devices could be limited to 1 watt or less, the electricity saved could power the cities of Ottawa and London combined.

For Ontarians who want to make their homes as efficient as possible when it comes to electricity, phantom load issues must be addressed and "wall warts" are a good place to start. Instead of having each member of the family plug in their device chargers around the house, leaving the "warts" to draw power all day, why not create a "charging centre" somewhere central in the home? Use a single power bar which can be turned off when the devices are charged. Or, better yet, use a power bar with an integrated timer. The bar can be set to turn on at night when the chargers are most likely to be in use, and set to turn off during the day when the devices are most likely out of the house.

How to spot phantom load?
If you're not sure where phantom load lurks in your home, then turn off the lights. The glowing red and green LED lights on appliances and electronics are a good clue.

They continue to use their current utility provider, but pay Bullfrog Power to return clean, renewable electricity into the Ontario grid to offset their coal based electricity use. This provides homeowners with the satisfaction of knowing that their electricity dollars are supporting clean, renewable power instead of polluting and carbon-intensive sources like coal.

"EcoLogoM is a national certification process under Environment Canada's Environmental Choice Program that seeks to identify and certify facilities, products and services that have environmentally superior performance in relation to other similar products available in the marketplace."

Bullfrog Power is a leading provider of 100% green electricity to Ontario residents and businesses. Bullfrog's power comes from clean, green sources like wind power and low-impact water power. The electricity is produced by generators which have received Environment Canada's Environmental Choice Program EcoLogo® certification*. Approximately 80% of the electricity comes from low-impact hydro and 20% from wind power sources along the Great Lakes.

Homeowners do not require special equipment or wiring to become a Bullfrog Energy customer and there is no change in the reliability of a homeowner's electricity service.

GREEN TIPS FROM ONTARIO'S PROVINCIAL PARTY LEADERS

Ontario's provincial party leaders are talking about how to improve our environment as Ontarians prepare to vote on October 10th. Here's what they and their families are doing to make their own homes greener.



Dalton McGuinty
Liberal Party of Ontario Leader

www.ontarioliberal.com

- I guess we're typical – we use less air conditioning in summer and wear sweaters in winter; we've changed to energy-efficient light bulbs and we recycle.
- We avoid unnecessary car trips, and we're planning to take advantage of Ontario's new incentives and rebates for energy efficient appliances and vehicles.
- We use reusable shopping bags, and return our empties!



John Tory
Progressive Conservative Party of Ontario Leader

www.ontariopc.com

- Use green power - We use Bullfrog Power at our cottage. It's 100 percent green electricity, which helps us reduce our carbon footprint.
- Use energy efficient products - My wife Barbara and I have switched to more energy efficient products at home, such as a new ENERGY STAR refrigerator.
- Walk when possible - Whenever we can, we walk to get where we are going.



Howard Hampton
New Democratic Party of Ontario Leader

www.ontariondp.com

- Common Sense energy reduction: Simple but effective, we use our air conditioning as little as possible (5 times this summer), turn off unnecessary lights and watch only an hour of tv (after homework and before bed) a night.
- Energy Star Appliances: We make sure our house is properly insulated and we use all Energy Star appliances, including an energy efficient furnace, which greatly reduce our energy bills.
- Energy Efficient Lightbulbs: We use energy efficient lightbulbs in all our lamps and home lighting.



Frank de Jong
Green Party of Ontario Leader

www.gpo.ca

- My household buys locally grown food from the organic farmers market in our neighbourhood.
- We wash our clothes in an efficient front loading machine using solar heated water, and dry them on a linear solar drying device (clothesline).
- We live downtown and can walk, cycle or transit everywhere. We don't own a car.



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Bullfrog Power
Ontario's green electricity provider

