



# Standby Power – When “Off” Means “On”



You’ve just finished watching your favourite television show and, being environmentally conscious, you turned off your TV set before leaving the room. Or did you?

A growing number of household electrical devices are designed to draw power 24 hours a day, seven days a week. Even when turned “off,” these appliances and home electronics continue to use electricity – referred to as **standby power** – to operate features, such as clocks, timers and touch pads, or to receive signals from remote controls. Battery chargers (used by products such as cordless phones) or external power supplies (used by products such as laptops) also draw power when they are plugged in – even if the device they power is fully charged or disconnected. Some electronics (such as television set-top boxes) are always awake, waiting to receive information.

In fact, the only way to guarantee that an electronic device is not drawing power is to unplug it from the outlet.

## So what’s the problem?

Although the standby power consumption of most devices is relatively small, generally ranging from 0.5 to over 25 watts of electricity, the number of devices drawing standby power is large and growing – a trend that is turning standby power into a big problem in Canada, as in other parts of the world. To make matters worse, though many of the features enabled by standby power are useful, electricity consumption in standby mode is often far greater than necessary. For some products, much of this power is wasted by inefficient product design.

Also known as “leaking electricity,” “vampire power” and “phantom loads,” standby power accounts for 5 to 10 percent of all electricity used in the typical Canadian home. Across Canada, appliances in standby mode are estimated to be using at least 6.3 terawatt hours – that’s 6 300 000 000 kWh. Excessive standby power consumption not only wastes money, it also has an

environmental impact. Reducing the standby power consumption of all devices to 1 watt or less would save 5 terawatt hours – roughly equivalent to the residential electrical consumption of New Brunswick.

## Stopping Standby Power Consumption

Although some of the features enabled by standby power can be useful, a quick look around your home may have you wondering what you can do to slay at least a few of these electricity vampires. Here are some simple actions you can take to reduce standby power consumption.

### Around the house

- ▶ Unplug battery chargers as soon as the device is fully charged or when the charger is not being used. A battery charger continues to draw power even when the device it is charging has been removed. This electricity is wasted as heat (which you can feel by simply touching the charger when it is plugged in).
- ▶ If you regularly use a number of battery chargers (e.g. for power tools, cell phones or personal digital assistants [PDAs]), consider creating a “charging station” where all of the chargers are plugged into a single power bar. This will allow you to easily monitor their use and turn them all off at once.
- ▶ When buying a new appliance, ask yourself if all the extra bells and whistles are necessary. Will you really use the timer on your new coffee maker, for example, or a remote control for a fan?

### In the entertainment room

- ▶ When shopping for new home entertainment equipment, look for ENERGY STAR® qualified products. These products use up to 50 percent less electricity in standby mode while providing the same performance at the same price as less energy-efficient models.

## DID YOU KNOW?

In the average Canadian home, 5 to 10 percent of the electricity consumed is used to power appliances and home electronics while these devices are on standby.



STANDBY



- ▶ When you are finished watching a movie or playing a video game, remember to turn off the DVD player, set-top box or game console as well as the television itself. While no one is watching, these television peripherals consume a significant amount of electricity: left “on,” DVD players consume 5 to 25 watts, set-top boxes (for cable or satellite reception) 8 to 45 watts, and game consoles 8 to 135 watts (though the latest models can consume up to 185 watts).
- ▶ If you have home electronics that are used infrequently, such as a second TV, DVD player or audio system, plug them into a power bar that can easily be turned off to avoid standby power consumption. Entertainment devices are among the biggest culprits when it comes to standby power consumption: 40 percent of all electricity used to power consumer electronics is used when the products have been turned off and are in standby mode.
- ▶ Check the owner’s manuals to ensure you are taking full advantage of any energy-saving features that may be built into your electronics.

## In the home office

- ▶ Look for ENERGY STAR qualified products when purchasing a new computer, printer or other office equipment. Competitively priced ENERGY STAR qualified products are widely available in Canada.
- ▶ An ENERGY STAR qualified computer, for example, uses 70 percent less electricity than a model that does not have power management capabilities. When left inactive, ENERGY STAR qualified computers enter a low power mode and use 15 watts or less. Computers that operate in low power mode much of the time not only save electricity, but also run cooler and last longer. And because they consume significantly less electricity, ENERGY STAR qualified computers can reduce air conditioning loads, noise from fans and transformers, and electromagnetic emissions from monitors, compared with conventional products.
- ▶ Make sure to activate the power management features of your ENERGY STAR qualified computer and monitor (see the user’s guide for instructions). Letting the equipment “sleep” will do wonders for your electricity bills, and it only takes a few seconds for a computer to “wake up” when you return.
- ▶ Turn off your computer when it’s not being used. In the case of computers, most electricity waste occurs when they are left on overnight, on weekends or for extended periods of inactivity during the day.
- ▶ Avoid using “screen savers” – they will cause a monitor to consume the same amount of power as when it is running normally. The best way to protect the screen (and to save electricity at the same time) is to enable your computer’s power management feature to turn off the monitor after a certain period of inactivity.
- ▶ Plug your home office equipment (computer, monitor, speakers, printer, scanner, etc.) into a power bar that can easily be turned off when the equipment is not in use. In addition to saving electricity and money, this may also extend the life of your equipment. Choosing a power bar with surge protection will protect your

## JUST HOW MUCH POWER DOES YOUR COMPUTER CONSUME?

Electricity consumption over a 12-hour period (in watt-hours), computer and monitor\*

Left “On” ..... 1 680  
(computer without power management features enabled)

In standby mode ..... 360  
(ENERGY STAR qualified computer and monitor with power management features enabled)

Turned “Off” ..... 24

\* For a personal desktop computer and 17-inch CRT (Cathode Ray Tube) monitor.

equipment from surges, spikes and other fluctuations in electrical current.

## Availability of ENERGY STAR Labelled Consumer Electronics and Office Equipment

The Office of Energy Efficiency promotes the international ENERGY STAR symbol in Canada and monitors its use. Major manufacturers and retailers of energy-efficient products, utilities and energy retailers, all levels of government, and interest groups recognize the benefits of ENERGY STAR to consumers.

Many consumer electronics and office equipment sold in Canada now show the ENERGY STAR symbol on the product, on its packaging or in its literature.

For more information on ENERGY STAR in Canada, visit the Web site at [energystar.gc.ca](http://energystar.gc.ca), or to order ENERGY STAR publications, call the publications line at 1-800-387-2000 (toll-free).

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