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Standby power

When “off” means on



Canada

YOU JUST TURNED OFF YOUR ENTERTAINMENT SYSTEM. OR DID YOU?



Most household electrical devices draw power 24 hours a day, 7 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, touch pads and displays or to receive signals from networks or remote controls. Battery chargers (used by products such as cordless phones, handheld devices and tablets) and external power supplies (used by products such as laptops) also draw power when they are plugged in – even when the device they power is fully charged or disconnected. Many electronics and network-connected products, such as television (TV) set-top boxes and smart appliances, are always awake, waiting to receive or send information.

In fact, the only way to guarantee that an electronic device is not drawing power is to unplug it from the outlet or plug it into a power bar that can be turned off.

SO WHAT'S THE PROBLEM?

Although the standby power consumption of some devices can be as little as 0.5 watts (W), others use more than 30 W of electricity. These amounts can add up. A home that has TV service to multiple rooms may have two set-top boxes that remain at close to full power in “off” or standby mode to receive information from the service provider. External power supplies may draw 7 W, modems about 6 W, and devices such as shavers, toothbrushes and battery chargers a watt or two, 24 hours a day, 7 days a week.

Also known as “leaking electricity,” “vampire power” and “phantom loads,” standby power amounts to at least 5 percent of the electricity used in the average Canadian home. Doesn't sound like much? It's enough to operate your fridge for a year!

REDUCING STANDBY POWER CONSUMPTION

Around the house

- ✓ Purchase, rent or borrow a watt meter (available at some public libraries) to determine which products consume the most standby power and address them as a priority. But choose your battles – you probably don't need to unplug a device that consumes only 0.5 W of standby power.
- ✓ Unplug a charger as soon as a device is fully charged or when the charger is not in use. A 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 touching the charger when it is plugged in).

DID YOU KNOW?

In developed countries, the average household uses between 5 and 10 percent of its electricity to power appliances and home electronics while these devices are in standby mode.



- ✓ If you regularly use several chargers (e.g. for power tools, laptops or mobile devices), 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.
- ✓ Use a “smart” power bar, also known as an advanced power strip, which leaves on the devices that must remain powered, while turning off peripherals you aren’t using with one easy flick of a switch.
- ✓ When you buy a new appliance, ask yourself if all the options are necessary. Will you really use the timer on your new coffee maker, for example, or a remote control for a fan? Each of these functions uses standby power to keep the unit ready for use.
- ✓ Some products, such as stoves and microwaves, have an energy saver mode that turns off unnecessary displays. Do you really need another clock in the kitchen?




In your entertainment centres

- ✓ When you shop 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.
- ✓ 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, and the sound system, not just the TV. TVs and compact audio products in Canada draw only 0.5 W of standby power in “off” mode. However, while no one is watching, TV peripherals consume a significant amount of electricity when left on: DVD and Blu-ray Disc players consume up to 25 W, set-top boxes (HD, DVR, cable or satellite) up to 31 W, and game consoles up to 150 W). Ask your TV service provider for ENERGY STAR qualified equipment. ENERGY STAR set-top boxes have features that reduce their energy use.
- ✓ If you have home electronics that are used infrequently, such as extra TVs, DVD players or audio systems, plug them into power bars that can easily be turned off to avoid consuming standby power. Despite energy efficiency improvements, entertainment devices remain among the biggest culprits when it comes to standby power consumption.
- ✓ Check the owner’s manuals to ensure you are taking full advantage of energy-saving features that may be built into your electronics. If a professional installs your systems, ask for the most energy-efficient set-up possible.

In your home office

- ✓ Look for ENERGY STAR qualified products when you purchase a new computer, printer or other office equipment. Competitively priced, ENERGY STAR qualified products are widely available.
- ✓ For example, an ENERGY STAR qualified computer (July 2009 specifications) uses 30 to 60 percent less energy than a non-qualified model, depending on how it is used. 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 desktop computers can reduce air-conditioning loads, as well as noise from fans and transformers.
- ✓ Make sure to activate the power management features of your ENERGY STAR qualified computer, monitor or laptop (see the user's guide for instructions). Letting the equipment "sleep" will reduce your electricity bills, and it takes only a few seconds for a computer to "wake up" when you need it.
- ✓ Turn off your computer when it's not being used. Most electricity waste occurs when it's left on overnight, on weekends or for extended periods of inactivity during the day.
- ✓ Allow your computer's power management feature to turn off the monitor after a certain period of inactivity.
- ✓ Plug your home office equipment 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 that has surge protection will protect your equipment from fluctuations in electric current, such as surges and spikes.



AVAILABILITY OF ENERGY STAR LABELLED CONSUMER ELECTRONICS AND OFFICE EQUIPMENT

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

The Office of Energy Efficiency (OEE) of Natural Resources Canada 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, large energy end-users and procurement professionals recognize the benefits of ENERGY STAR to consumers.

ENERGY STAR technical specifications are frequently revised. Up-to-date specifications can be found at energystar.nrcan.gc.ca/specifications.

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