



Natural Resources  
Canada

Ressources naturelles  
Canada



ecoENERGY  
an ecoACTION initiative

***Look for***  
***ENERGY STAR®***  
***to identify the most energy-efficient products***



Canada

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for



## Everybody is a winner!

ENERGY STAR® is the international symbol for energy efficiency – a simple way for consumers to identify products that are among the top energy performers on the market.

Products bearing the ENERGY STAR symbol help

- save energy
- save money
- protect our environment

**Depending on the type of product you are buying, choosing an ENERGY STAR qualified model can help reduce energy consumption and costs by 10 to 65 percent compared with a conventional product.**

ENERGY STAR qualified products are also good for the environment. Using energy-efficient appliances and other equipment in your home reduces greenhouse gas emissions and pollutants that cause urban smog and acid rain.

To qualify for the ENERGY STAR symbol, products must meet stringent specifications for energy consumption without sacrificing the features, versatility or quality expected of high-performing products. And ENERGY STAR qualified products often cost no more to purchase than conventional equipment.

Natural Resources Canada's Office of Energy Efficiency promotes the international ENERGY STAR symbol in Canada and monitors its use. As this booklet shows, you can find products bearing the ENERGY STAR symbol for every room in the house. So the next time you are shopping for an appliance, lighting, heating or cooling equipment, a computer, home electronics or even windows, remember to look for the ENERGY STAR symbol.

## EnerGuide and ENERGY STAR – a winning team

For more than 25 years, Canadian shoppers have relied on the EnerGuide label to compare the energy consumption of major electrical household appliances and heating and cooling equipment. ENERGY STAR and EnerGuide work hand-in-hand – when you see the ENERGY STAR symbol on an EnerGuide label, you can be sure that the product is among the most energy efficient available, thus saving you money on your energy bills.

Canada

ENERGUIDE

Energy consumption / Consommation énergétique

390 kWh

per year / par année


▼ This model / Ce modèle

372 kWh

484 kWh

<p><b>Uses least energy / Consomme le moins d'énergie</b></p> <p>Similar models compared</p> <p>Model number</p>	<p><b>Uses most energy / Consomme le plus d'énergie</b></p> <p>Modèles similaires comparés</p> <p>Numéro du modèle</p>
<p><b>Type 3</b></p> <p><b>16,5 – 18,4</b></p> <p><b>volume in ft.<sup>3</sup> / volume en pi<sup>3</sup></b></p> <p><b>00000</b></p>	

Removal of this label before first retail purchase is an offence (S.C. 1992, c. 30).  
Enlever cette étiquette avant le premier achat au détail constitue une infraction (L.C. 1992, ch. 36).



ENERGY STAR  
HIGH EFFICIENCY  
HAUTE EFFICACITÉ

The **ENERGY STAR** mark on this EnerGuide label signifies that this is an energy-efficient appliance. Its energy performance meets or exceeds the Government of Canada's high efficiency levels. Use the EnerGuide rating to determine how this appliance compares to other similar models.

La marque **ENERGY STAR** sur cette étiquette EnerGuide signifie que l'appareil est éconergétique et que son rendement énergétique satisfait ou dépasse les niveaux de haute efficacité du gouvernement du Canada. Utilisez la cote EnerGuide afin de comparer le rendement de l'appareil avec celui d'autres modèles similaires.

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## Lighting products



Lighting accounts for about 12 percent of electricity use in a Canadian home. The good news is that you can help control electricity costs by making energy-wise choices when buying light bulbs and fixtures.

In fact, installing ENERGY STAR® qualified compact fluorescent lights (CFLs) throughout your home is one of the smartest energy efficiency investments you can make.

Here's why. ENERGY STAR qualified CFLs produce the same light output as regular incandescent bulbs, but use only one third of the energy. That can make a big difference on your energy bill.

The average Canadian home has 30 light fixtures that together consume close to \$200 worth of electricity every year. Replacing just five incandescent bulbs with ENERGY STAR

qualified CFLs in high-use fixtures (lights that are turned on more than three hours a day) saves approximately \$30 a year.

**CFLs come in many shapes, sizes and styles. New designs mean these energy-efficient bulbs will fit in virtually any light fixture inside or outside the home.**

Aside from their impressive energy savings, ENERGY STAR qualified CFLs are rated to last up to 10 times longer than regular incandescent bulbs, making frequent bulb changes a thing of the past – a real bonus for hard-to-reach fixtures. ENERGY STAR qualified CFLs must also meet strict specifications for quality, light colour and brightness.

**When installing CFLs outdoors, check the package for the low temperature rating to ensure that the light suits your local climate. CFLs installed outdoors should be enclosed in fixtures to protect them from the cold, wind and humidity.**

When purchasing light bulbs, keep in mind that the wattage rating is not a measure of light output, but a measure of the amount of energy the bulb uses (e.g. a 60-watt (W) bulb uses 60 watt-hours of energy per hour of use). On the other hand, light output is measured in lumens. As the accompanying table shows, a CFL uses a lot less electricity to produce the same amount of light as an incandescent bulb.

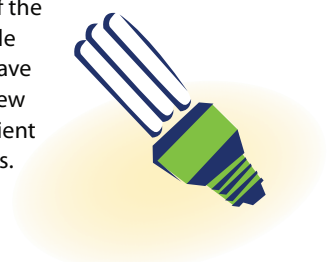
Incandescent and CFL light output by wattage		
Standard incandescent bulb (watts)	ENERGY STAR qualified CFL (approximate equivalent watts)	Minimum light output (lumens)
40	9–13	450
60	13–15	800
75	18–25	1100
100	23–30	1600
150	30–52	2600

This table is provided as a guide only. Check the product packaging to determine the equivalent wattage.

**Don't wait for your old incandescent bulbs to burn out before replacing them with ENERGY STAR qualified CFLs. The longer you wait, the more money you waste on inefficient lighting.**

CFLs contain a small amount of mercury – one fifth the amount found in a wristwatch battery and only 1 percent of the mercury used in dental fillings. Like paint, batteries, thermostats and household chemicals, CFLs should be disposed of safely, according to municipal guidelines.

Residential light fixtures are now part of the ENERGY STAR lineup in Canada. Available in hundreds of decorative styles, they have given homeowners access to a whole new assortment of fashionable, energy-efficient lighting products in various price ranges.



A fixture or luminaire is defined as a complete lighting unit consisting of a lamp and ballast (when applicable) together with the parts designed to distribute the light, to position and protect the lamps and to connect the lamps to the power supply.

Why should you consider an ENERGY STAR qualified fixture when renovating, remodeling or building a new home? One good reason is that they use one third of the energy of traditional fixtures, while distributing light more efficiently and evenly. And you don't need to sacrifice versatility: ENERGY STAR qualified fixtures are available with the same convenient features as standard fixtures, such as dimming on some indoor models and automatic daylight shut-off and motion sensors on outdoor models.

ENERGY STAR qualified torchieres (ceiling-directed floor lamps) are a great example of how new products on the market can save you money and energy. They are also a much safer lighting source than traditional torchieres.

ENERGY STAR qualified CFLs give off much less heat than the halogen lamps used in older torchieres. In addition to using a lot of energy, halogen lamps can reach dangerously high temperatures and become a potential fire hazard.

**Aside from being safer, an ENERGY STAR qualified torchiere uses about \$35 less electricity in a year than a comparable halogen fixture.**

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## Major household appliances



Your refrigerator uses electricity 24 hours a day, seven days a week – and that’s a good reason to look for the ENERGY STAR® symbol to make sure you are purchasing a top energy performer.

ENERGY STAR qualified household appliances use less energy than conventional ones, offer equal or superior performance and save you money – sometimes a lot of money. Refrigerators are big energy consumers in the home, so it pays to shop around.

The first step when buying a refrigerator is to select the right size (capacity) for your needs. Then look for the ENERGY STAR symbol to lock in long-term energy savings.

ENERGY STAR qualified refrigerators, refrigerator-freezers and freezers offer remarkable advantages over conventional models. They are better insulated, have high-efficiency compressors, are better equipped to limit heat loss and boast more precise temperature and defrost mechanisms. Most use 50 percent less energy than models manufactured in the 1980s.

**If you were to replace your 1984 model refrigerator with an ENERGY STAR qualified 2007 model, you would save more than 1045 kilowatt hours (kWh) of energy per year and about \$104 in electricity costs.**

Of course, you will save money with a new ENERGY STAR qualified model only if you get rid of your old refrigerator. Moving it to the basement or garage defeats the purpose of buying an energy-efficient replacement model. Think of it this way – you won’t be plugging your old refrigerator into the wall, you’ll be plugging it into your wallet.

Check the temperature settings on your refrigerator and freezer. Keep the refrigerator temperature between 1.7°C (35°F) and 3.3°C (38°F) and the freezer compartment at -18°C (0°F) for maximum efficiency and food safety.

Average annual electricity use of new refrigerators (in kWh/year)				
	1984	1990	1997	2007
Top-mounted (16.5–18.4 cu. ft.)	1457	1044	664	475
ENERGY STAR qualified	–	–	–	406

**ENERGY STAR qualified dishwashers are at least 41 percent more economical to operate than conventional models.**



Today's dishwashers are much more energy efficient than those of past years. Believe it or not, ENERGY STAR qualified dishwashers actually use less hot water than when you do the dishes by hand.

If your dishwasher is at the end of its useful life, look for the ENERGY STAR symbol when shopping for a new model. It is your assurance of a machine that far exceeds the minimum requirement for energy efficiency in Canada and that will deliver energy and cost savings for as long as you own it.

**Eighty-five percent of the electricity required to operate a dishwasher is used to heat the water – so the less water a machine uses per cycle, the better.**



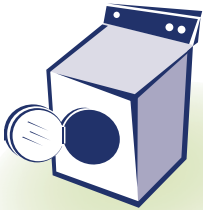
ENERGY STAR qualified dishwashers enjoy the benefits of advanced technological features and use less energy and less hot water. Several of these new dishwashers feature “intelligent sensors” that determine the length of the wash cycle and the level of hot water required for the load of dishes to be washed. They may also be equipped with a built-in heating element to raise the water temperature.

**Choosing an ENERGY STAR qualified dishwasher over a conventional model will give you on average 18 free loads of dishwashing per year.**

**Always let your dishes air dry (turn off the “heat dry” option).**

Average annual electricity use of new dishwashers (in kWh/year)				
	1984	1990	1997	2007
Standard	1213	1026	650	364
ENERGY STAR qualified	–	–	–	313

## In the laundry room



Surveys show that the average family does approximately seven loads of laundry each week. That amounts to a lot of hot water, a lot of energy and a lot of money.

Through superior design, ENERGY STAR qualified clothes washers help you save money on utility bills by using 20 to 50 percent less energy and 35 to 50 percent less water than conventional models. And they get your clothes just as clean!

ENERGY STAR qualified clothes washers feature

- sensors that prevent energy waste by matching water needs to the size of each load
- advanced high-speed motors that reduce the length of spin cycles and remove more water from clothes, so less time and energy are needed for drying

Most front-loading washers are ENERGY STAR qualified, and some top-loading designs also qualify. Whatever your preference, make sure your next clothes washer is ENERGY STAR qualified, to help ease the burden of all that laundry.

**Using the cold wash option (detergents are now formulated to make it possible to wash clothes in cold water) will mean even bigger savings from your ENERGY STAR qualified clothes washer.**

**Average annual electricity use of new clothes washers (in kWh/year)**

	1984	1990	1997	2007
Standard	1243	1218	930	374*
ENERGY STAR qualified	–	–	–	202

\* On January 1, 2007, Canada regulated a new minimum energy efficiency standard that requires clothes washers to be 21 percent more efficient than 2004 levels. The ENERGY STAR specification was also strengthened. Clothes washers must be at least 36 percent better than the minimum standard.

Savings generated by purchasing an ENERGY STAR qualified clothes washer can run as high as \$240 over the life expectancy (14 years) of the appliance. Look for an appliance that has water level control and you will save water and detergent as well as energy.

	Non-qualified standard model	ENERGY STAR qualified model
Annual electricity use	374 kWh	202 kWh
Annual energy cost	$374 \times \$0.10 = \$37.40$	$202 \times \$0.10 = \$20.20$
Lifetime energy cost	$\$37.40 \times 14 = \$523.60$	$\$20.20 \times 14 = \$282.80$

**Currently, there are no ENERGY STAR performance levels for clothes dryers. When shopping for a dryer, look for the lowest EnerGuide rating.**

**If you are buying a new dryer, look for one with a moisture sensor. The machine will turn off automatically when clothes are dry.**

**Bottled-water coolers use about the same amount of energy as compact refrigerators.**

Bottled-water coolers are becoming common in Canadian homes. Some models consume significantly more energy than others to deliver the same result. To avoid pouring money down the drain, look for the ENERGY STAR symbol when buying or leasing a water cooler. To qualify for the ENERGY STAR symbol, bottled-water coolers must meet strict technical requirements that place them at “the top of the class” in terms of energy performance.



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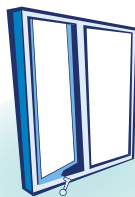
## Windows, doors and skylights



Windows, doors and skylights can add character and style to a home, but they can also be a significant source of heat loss and discomfort.

When buying a new home or replacing windows, doors or skylights for an existing dwelling, use the ENERGY STAR® symbol to help you select models that will save you money and keep your house comfortable year round.

Professionally installed ENERGY STAR qualified residential windows, doors and skylights can reduce your annual heating and cooling costs by up to 12 percent. They reduce or eliminate cold drafts and condensation on the glass in the winter, while keeping hot air out and cool air in during the summer.



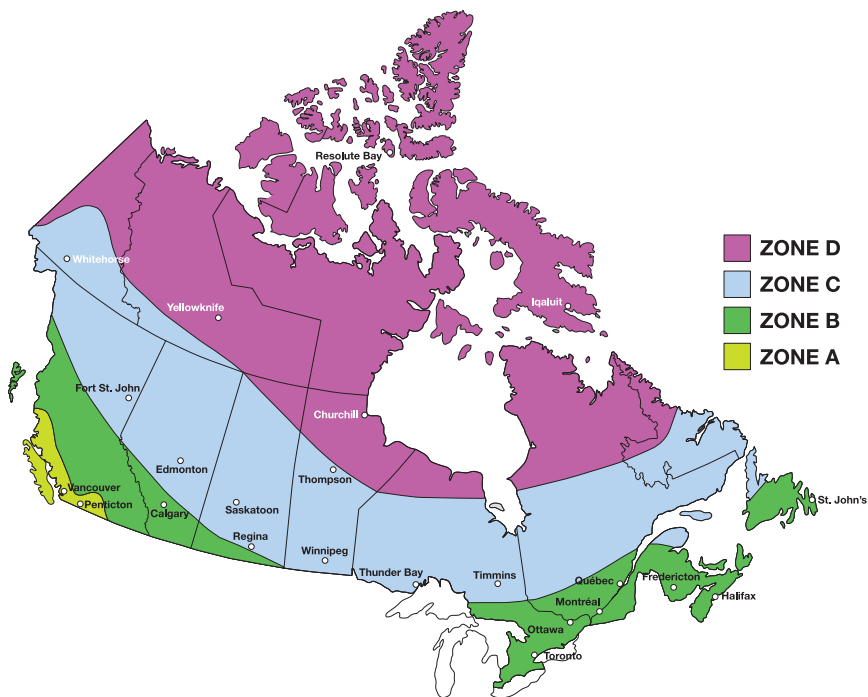
What makes the difference? ENERGY STAR qualified windows, doors and skylights have many of the following features:

- double or triple glazing with a sealed insulating glass unit
- low-emissivity (low-e) glass
- inert gas, such as argon or krypton, in the sealed unit
- low-conductivity or “warm edge” spacer bars
- insulated frames, sashes and door cores
- good airtightness

Climate conditions vary significantly from one part of Canada to another – and so do the qualification criteria for ENERGY STAR for windows, doors and skylights. To qualify, these products are tested for their thermal performance and airtightness. The colder the climate, the tougher the qualification requirements.

**ENERGY STAR qualified windows, doors and skylights are certified by an accredited independent agency for their energy performance and quality.**

But don't worry – ENERGY STAR does all of the technical work for you, making it easy to identify products that will suit your climate. Simply consult the ENERGY STAR climate zone map to find the zone where you live (see the sample map on this page). Then check the ENERGY STAR label to make sure the product qualifies in your zone. To save even more money and energy, buy a product that qualifies for ENERGY STAR in a colder zone (Zone A is the mildest and Zone D is the coldest).


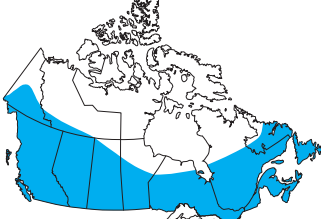


**ENERGY STAR Climate Zone Map**


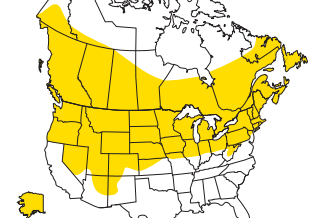
ENERGY STAR labels for windows, doors and skylights come in a variety of formats, each of which indicates the climate zone (or zones) where the product is qualified. To ensure an energy-efficient purchase, look for any of these labels in dealer showrooms, on Web sites or in product literature.

**Examples of labels for windows, doors and skylights**

**Qualified for highlighted area.  
Répond aux exigences pour les régions indiquées.**

<p><b>Canada</b></p>  <p><b>ENERGY STAR</b></p> <p>1 800 387-2000 energystar.gc.ca</p>	 <p><b>■ = Qualified/Admissible</b></p>
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**Qualified for highlighted area.  
Répond aux exigences pour les régions indiquées.**

<p><b>Canada</b></p> <p>1 800 387-2000 energystar.gc.ca</p>  <p><b>ENERGY STAR</b></p> <p><b>U.S. / É.U.</b></p> <p>1 888 782-7937 energystar.gov</p>	 <p><b>■ = Qualified/Admissible</b></p>
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 <p><b>ENERGY STAR</b></p>	<p><b>Canada • Zones</b></p> <p><b>A B C</b></p> <p>1 800 387-2000      energystar.gc.ca</p>
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If your windows are single-glazed but in good condition (i.e. they don't need to be replaced), consider installing storm windows to add an extra layer of protection. Adding a storm door can also improve airtightness around entrances.

**Look  
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## Home heating and cooling equipment



Unless you've discovered a magic heat source, well over half of your annual energy bills go toward keeping your home warm and comfortable in winter. That's not to mention the money you may be spending to cool your home in summer.

But don't despair – help is available! Heating and cooling systems that display the ENERGY STAR® symbol are guaranteed to use less energy than new non-qualified equipment – and they will use a lot less energy than old equipment that may now be installed in your home.

**Installing one of today's energy-efficient furnaces can reduce your home heating costs by up to 25 percent per year. Depending on the efficiency of your old furnace, you can recover the higher initial cost of your new high-efficiency system in about seven years.**

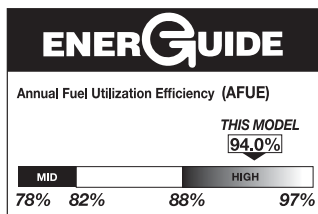
The bottom line? ENERGY STAR qualified heating and cooling systems work just as well as conventional products (or better) and will begin saving you money as soon as they are installed. Look for the ENERGY STAR symbol to make sure you are getting the best return for your heating and cooling dollars.

A new high-efficiency oil or gas furnace uses less energy – so why not start saving today?

If your heating system is nearing the end of its expected life, why wait for it to fail and leave you out in the cold? Replacing it now with an ENERGY STAR qualified model will save you money and give you peace of mind.

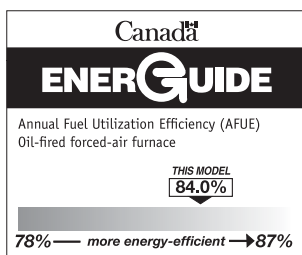
To qualify for ENERGY STAR:

- Gas and propane furnaces must have annual fuel utilization efficiency (AFUE) ratings of 90 percent or higher. That means they use about 35 percent less energy than older models and at least 12 percent less energy than conventional gas furnaces.



**Save additional energy and money by installing a programmable thermostat. Setting your home's temperature back a few degrees when you're at work or asleep overnight provides optimal savings.**

- Oil furnaces must have an AFUE of 83 percent or higher. In October 2008, the AFUE requirement for oil furnaces will increase to 85 percent.
- Oil- and gas-fired boilers must have an AFUE of 85 percent or higher (many units are also used to heat domestic water as an integrated system).



Before replacing your furnace, make sure your home is properly sealed against air leaks. By sealing the home first, you'll be able to reduce its heat load requirement and purchase a more accurately sized furnace or boiler. The right-sized equipment will run at peak efficiency, saving you even more money.

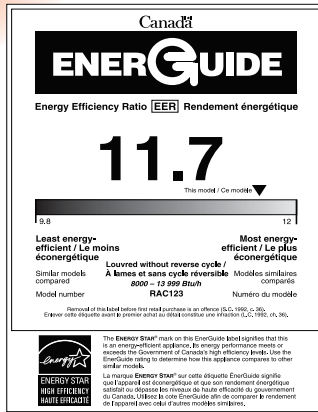
**Keep your furnace well maintained and change or clean furnace filters every few months. Dirty air filters block airflow and can damage the heat exchanger.**



## Not all air conditioners are created equally – some models use far more energy than others to get the job done.



Significant improvements have been made in air-conditioning technology over the past 15 years. Although many Canadians consider this equipment to be a necessity, it doesn't have to be a drain on your budget.

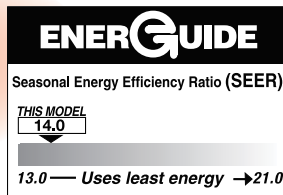


You can achieve affordable, efficient and effective home cooling on hot summer days by looking for the ENERGY STAR symbol when shopping for an air-conditioning system.

The ENERGY STAR symbol is your assurance that a room air conditioner is at least 10 percent more energy efficient than conventional models.



An ENERGY STAR qualified central air conditioner is about 8 percent more energy efficient than a non-qualified system. With either option, choosing ENERGY STAR ensures you will come out ahead.





A heat pump can provide year-round climate control in some regions of Canada, heating your home in winter and cooling it in summer.

Installing an ENERGY STAR qualified heat pump that is sized correctly for your home can deliver substantial energy savings, increase household comfort and reduce pollution and greenhouse gas emissions.

An air-source heat pump absorbs heat from the outdoor air in winter and transfers it to your home; in summer, the cycle is reversed. ENERGY STAR qualified air-source heat pumps are about 6 percent more energy efficient for heating and about 8 percent more efficient for cooling than standard models.

A properly installed unit will ensure that your new air conditioner or heat pump performs at ENERGY STAR stated levels. Ask your installer to check your new unit for the proper refrigerant level and air flow. For split systems, ENERGY STAR qualified units must have matched indoor and outdoor units. Set your air conditioner at 25°C when you are home and higher when you go out (a programmable thermostat makes this easy to do). For each degree you operate an air conditioner below 25°C, you use 3 to 5 percent more energy.

**When replacing an air conditioner or a heat pump, make sure you dispose of the old one properly so chlorofluorocarbons (CFCs) are recycled and reused. Never send an old air conditioner to a landfill site.**

Ground-source heat pumps use the thermal energy of the ground or groundwater to provide a source of heating or cooling for a home. ENERGY STAR qualified systems, depending on the category, are typically 10 to 50 percent more energy efficient than non-qualified equipment.

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## Fans and dehumidifiers

### Ceiling and ventilation fans

ENERGY STAR® qualified ceiling fans move air up to 20 percent more efficiently than standard models. If your ENERGY STAR qualified ceiling fan doesn't include lighting and you wish to add it, be sure to purchase an ENERGY STAR qualified light kit, with either pin-based or screw-based compact fluorescent lights.

**A 60-watt ceiling fan costs between 10¢ and \$2 to operate monthly, while an air conditioner can cost between \$7.50 and \$41 a month. Fans don't actually cool a room; they cool you by circulating air.**

A ceiling fan with lighting must be 50 percent more energy efficient than a standard fan/light combination to qualify for ENERGY STAR, and must move air up to 20 percent more efficiently than a standard model.

ENERGY STAR qualified ventilation fans, such as those found in range hoods and bathrooms, typically use about 65 percent less energy than standard models. Better blade design enables them to move more air more efficiently, and their high-performance motors last longer. A minimum one-year warranty is required, and noise levels cannot exceed strict criteria depending on the type of fan.

**If a ventilating fan contains a light fixture, the total lamp wattage must not exceed 50 watts. Fans with a night light must use a bulb that consumes 4 watts or less.**

## Residential dehumidifiers

Portable residential dehumidifiers may also display the ENERGY STAR symbol if they perform at high levels of energy efficiency. Depending on the model and capacity, ENERGY STAR qualified dehumidifiers use 20 to 60 percent less energy to remove the same amount of moisture as similar-sized standard units.

The energy efficiency of a dehumidifier is measured by its energy factor (EF), or the amount of water it removes per kilowatt hour of energy used. The EF is usually found on the nameplate of the unit. To qualify for ENERGY STAR, standard-capacity dehumidifiers (up to 35.5 litres (L) of water removal per day) must have EFs between 1.20 and 1.60, depending on their capacity. On June 1, 2008, requirements change to an EF of 1.80, for dehumidifiers with a capacity of between 25.5 and 35.5 L/day.

Product capacity (litres/day)	Energy factor under test conditions (litres/kWh)
<b>Standard-capacity dehumidifiers</b>	
≤ 11.8	≥ 1.20
> 11.8 to ≤ 16.6	≥ 1.40
> 16.6 to ≤ 21.3	≥ 1.50
> 21.3 to ≤ 35.5	≥ 1.60
> 25.5 to < 35.5 – As of June 1, 2008	≥ 1.80
<b>High-capacity dehumidifiers</b>	
≥ 35.5 to ≤ 87.5	≥ 2.50

The following table can be used as a guide when selecting a standard-capacity dehumidifier for residential use.

Area to be dehumidified		Humidity conditions* (moisture accumulation in litres/day)		
Square metres	Square feet	Damp <sup>1</sup>	Wet <sup>2</sup>	Very wet <sup>3</sup>
46	500	6	7	8
93	1000	8	9	11
139	1500	10	12	14
186	2000	12	15	18
232	2500	15	18	21
279	3000	18	22	24

<sup>1</sup>Space feels damp and has a musty odour, especially in humid weather. Damp spots may appear on walls and floor.

<sup>2</sup>Space feels and smells wet. Walls or floor sweat, or seepage is present.

<sup>3</sup>Walls sweat and the floor is almost always wet.

\*If the dehumidifier capacity is not measured in metric units, remember that two pints are equivalent to approximately one litre.

**New ENERGY STAR criteria are being phased in for dehumidifiers, making it tough for this equipment to qualify for the international symbol of energy efficiency.**



## Home entertainment equipment

### Is that television really turned off?



Even when turned “off,” most consumer electronics continue to consume energy. Referred to as **standby power**, this uninterrupted supply of electricity powers such features as clocks, timers and remote controls that are always on or ready. Some types of equipment (such as cable set-top boxes) are always ready to receive information. Products with external power supplies (such as laptop computers) also draw standby power as long as the power supply or battery charger is plugged into an outlet, even if the device itself is turned off or fully charged.

Although the standby power consumption of most devices is relatively small, the number of devices that require such power is large – and growing. In the average Canadian home, 40 percent of all electricity used to power home electronics is consumed while the products are in standby mode. That’s costing you money, and it’s placing an unnecessary strain on our electricity infrastructure.

A typical Canadian household can have upwards of 20 pieces of equipment that use standby power at the same time. Although each device uses a relatively small amount of electricity, their combined consumption represents, on average, 10 percent of household electricity consumption – the equivalent of operating a second refrigerator.

Because consumer electronics spend more time turned off than on, the ENERGY STAR® criteria for these types of equipment are based on power consumption in standby or sleep mode. To qualify for ENERGY STAR, home electronic products must use only a fraction of the energy that conventional products use when turned off.

ENERGY STAR qualified electronics consume up to 50 percent less electricity than conventional products when they are turned off. Imagine the savings in electricity and greenhouse gas emissions if everyone bought ENERGY STAR qualified products!

Look for the ENERGY STAR symbol on TVs, VCRs, DVD players and audio equipment. You'll get the same high quality and functions at a fraction of the overall energy cost.

**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. Also, unplug battery chargers and external power supplies when they are not being used or plug them into a power bar that can be turned off when not needed.**





## Home office equipment



**Computers are a common feature in Canadian homes today – but convenience comes at a cost.**

Whether members of your household use a computer to work at home, bank and shop on-line, surf the web, or stay in touch with family and friends, this one piece of equipment probably gets used every day.

Unfortunately, computers can use a lot of power. One way to minimize their impact on your electricity bills is to choose a computer system and other home office equipment that carry the ENERGY STAR® symbol.

**An ENERGY STAR qualified computer in sleep mode uses only a fraction of the electricity used by a typical model without enabled power management features. Computers that operate in low-power mode much of the time not only save energy, but also run cooler and last longer. So make sure these features are activated.**

ENERGY STAR qualified computers, monitors, printers, fax machines, copiers and other business machines automatically switch to sleep mode when they are turned on but have not been actively used for a preset period of time. Some of these products are required to have two sleep modes to qualify for ENERGY STAR. The first mode kicks in after 15 to 30 minutes of inactivity. Then, after a longer period of inactivity, an even lower-wattage, deep-sleep mode, takes over.

**ENERGY STAR qualified computers manufactured after July 20, 2007, will help you save even more energy and money thanks to a new ENERGY STAR specification that includes, for the first time, strict energy efficiency requirements in active mode, as well as sleep mode.**





The new specifications make it tougher to qualify for ENERGY STAR. Desktop computers must be at least 80 percent efficient in active mode. This means that only 20 percent of the energy supplied to the computer is wasted as heat (non-qualified models are typically only 65 to 70 percent efficient). As well, it can use no more than 95 watts (W) of power in the idle state (when the computer is not actively processing but has not gone into sleep mode), 4 W in sleep mode and 2 W in deep sleep, or standby, mode.

**Plug your home office equipment (computer, monitor, speakers, printer, scanner, etc.) into a power bar that can be easily turned off when the equipment is not in use. A computer that runs 24 hours a day uses between \$75 and \$120 worth of electricity each year.**

Laptops can also qualify for ENERGY STAR. To meet the new specification, a laptop must have an ENERGY STAR qualified external power supply that's, on average, 35 percent more energy efficient than a conventional model. As well, a laptop must use no more than 22 W of power in idle state, 1.7 W in sleep mode and 1 W in standby mode.

If you're not in the market for a completely new system, consider replacing just the monitor. An ENERGY STAR qualified liquid crystal display (LCD) flat panel monitor can be up to 65 percent more energy efficient, in sleep and active modes, than the old cathode ray tube (CRT) monitors that were standard equipment until a few years ago.

**Are you buying a new computer? Consider a laptop. Laptops are designed to be more energy efficient than desktops due to their size and portability. Laptops may seem to be more expensive, but remember that you are getting both a processing unit and a monitor, and you will save money on energy costs.**



# Learn more

The Office of Energy Efficiency of Natural Resources Canada offers information to help Canadians become more energy efficient at home, at work and on the road.

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