Making Your Home More Energy Efficient

Most folks work hard for their money. Why sit by while it slips through the cracks? There are simple and inexpensive steps that you can take to make your home more energy efficient and these solutions often bring big returns. As a bonus, they benefit the environment as well as the family piggy bank. In this article we look at some simple and inexpensive ways to reduce energy consumption in the home. Lowe's is happy to provide this information as a service to you.

Insulating Your Water Heater

If you always have plenty of hot water, you may be able to get by with lowering your water heater's thermostat setting. Just don't lower it below 120° F. Electric heaters benefit most from this approach to saving energy. Timers are also available which allow you to make the water heater conform to your water usage schedule. They prevent the water heater from trying to maintain hot water during periods when it is never used.

A little insulation can save a lot of money.

Water heaters are insulated, but you can always add to that. For a small investment, you can significantly reduce the amount of heat lost by the unit, particularly if your water heater is located in an unheated area. Inexpensive insulating blanket kits for water heaters are available; or, if you wish, you can make your own. If you make your own you will need a roll of duct tape and faced fiberglass insulation.

- Cut strips of insulation the same length as the circumference of the water heater.
- Wrap the insulation horizontally around the unit using duct tape to seal the seams where they meet.
- Make cutouts to leave the thermostat, controls and drain faucets exposed.
- If you have an electric water heater, cut a cap of insulation to fit the top. Provide slits for the water inlet and outlet pipes.
- If you have a gas water heater, do not cover the burner access or the flue collar. Leave about 2" of exposed area around the flue collar.
- Tape any remaining joints and seams.

Pipe Wrapping

Do your water pipes pass through an unheated area? Do they run under your house or from an unheated utility room? If so, insulate your pipes—at least the hot water pipes. Uninsulated hot water pipes lose heat and cause your water heater to to work harder. While the same is not true of cold water pipes, insulating them can prevent them from sweating and dripping in heated areas, or freezing in unheated areas.

Wrap your pipes to conserve energy.

Easy to use, pre-formed foam pipe insulation sleeves are available. These sleeves have a slit down their length and just snap in place on the pipes. Cut them to length to fit as closely as possible at all ends, corners and junctions. With a little imagination, you can cut miters and angles in the material in such a way that the insulation completely covers any junctions. Cover the slits and joints with vinyl duct tape.

Replacing Furnace Filters

People in the heating and air conditioning business are always talking about the importance of changing furnace filters. There must be a reason.

Most furnace filters are inexpensive, disposable and easily replaced. There is no good reason to neglect them. On the other hand, clogged filters reduce airflow through the heating/cooling system, forcing the unit to work harder. Severely clogged filters can cause the unit to overheat and can lead to premature compressor damage in air conditioning systems.

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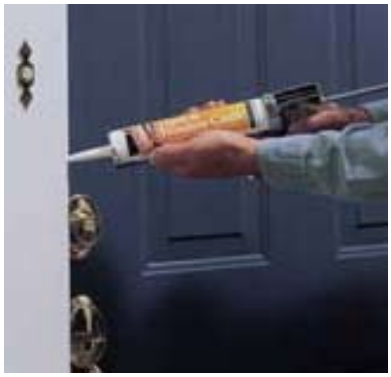
Check your furnace filter monthly. In fact, some people say that if you are going to go to the trouble to pull it out and look at it, you might as well go ahead and replace it. If you use the more expensive disposable filters designed to filter out allergens and extremely small particles, you may want to hold the filter up to make sure light still comes through it easily, but even these filters should be replaced at least every three months.

Self-charging electrostatic filters that require no electricity are available. They filter out extremely small particles and last for several years. This type of filter should be cleaned by rinsing from the clean side once a month.

Cover Those Windows and Seal Those Doors

Heat lost through windows and doors represents a significant chunk of most heating bills. Some sources estimate that loss through windows alone could account for up to 35 percent of heating bills. If you are tired of watching your hard earned money slip through the cracks, there are things that you can do:

- Check around windows and doors with a candle or a light piece of thread on a windy day to determine where drafts are. This will reveal problem areas in need of immediate attention.
- Remove and replace damaged caulk and weather-stripping. Self-stick foam and rolled rubber weather-stripping are easy to install, and can contribute greatly to your home's efficiency.
- An inexpensive method of weatherizing windows involves attaching thin, clear plastic film to the window trim inside of the house using two-sided tape. The film is then stretched taut using heat from a blow dryer to remove wrinkles and creases.
- Decorate your windows with efficiency — closed shutters, window shades, blinds, curtains and lined draperies. All contribute to energy savings by helping to insulate windows.
- For a long-range solution, consider installing efficient replacement windows, or storm windows and doors.



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Developing Habits for Practical Energy Conservation

You can reduce your energy expenditures simply by developing energy saving habits:

- Showers usually require less hot water than baths. Additional savings can be realized by installing simple water-saving shower heads. This will reduce water consumption, which is good for everyone. The primary benefit is lower heating bills brought about by using less energy to heat less water.
- Use heat-generating appliances such as washers, dryers or ovens during the cooler hours of the morning or evening. This reduces the load on your air conditioner in the summer, and actually helps heat the house in the winter.
- Electric cooktops are energy drains. Use the appropriate burner for your pan size. Also, flat bottom pots make better contact and conduct heat from the elements more efficiently than pots with warped or rounded bottoms.
- Wash only full loads of clothes when possible and clean your dryer's lint filter after every load.
- Consider replacing incandescent bulbs with compact fluorescent bulbs. Fluorescent bulbs put out approximately four times as many lumens per watt. For example, a 25 watt fluorescent bulb provides as much light as a 100 watt incandescent bulb. Fluorescent bulbs also last about ten times as long!
- In the summer, keep drapes and curtains closed on the sunny side of the house. In the winter, open those drapes and curtains on sunny days to take advantage of the sun's heating power. Close all drapes, blinds or shades at night in winter to make use of their insulating properties.

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- Use an exhaust fan to pull excess heat and humidity out of the kitchen and bathroom in the summer. Be aware, however, that exhaust fans can rapidly pull the heat from your house in the winter.
- Perhaps the most often quoted hint for saving energy in the home is to set thermostats at 68° F in the winter and 78° F in the summer.

Ceiling Fans

Ceiling fans can save energy in both the summer and winter. In the summer, fan blades should revolve in a counterclockwise direction. Since moving air feels cooler, using ceiling fans in the summer allows you to raise the thermostat temperature, reducing the workload of your air conditioner. Air conditioners use considerably more energy than ceiling fans.

In winter months, set your ceiling fan at its slowest speed and reverse it in order to gently push warm air down from the ceiling without generating a breeze.

Energy Saving Gadgets

Programmable thermostats help reduce energy costs by lowering energy use during those times when you do not need it. In the winter, for example, your house does not need to be quite as warm when you are away at work, nor does it need to be as warm when you are asleep in bed. A programmable thermostat can tell your home's heating system to gear up for your arrival after work, or to knock off a bit until an hour or so before you get up in the morning.

Programmable units range from simple timer-like devices to elaborate multifunction units which can provide special instructions to your climate control system based on the day of the week. Once programmed, these thermostats work behind the scenes.

Programmable thermostats regulate house temperature.

Fireplace Dampers and Doors

Believe it or not, a burning fireplace can actually rob your house of heat by drawing it up the flue! Still, not many people who enjoy their fireplace would be willing to trade it in for smaller heating bills. Fortunately, there is a middle road which allows people to have their fireplace and heat it too:

- If you do not use your fireplace, you may want to seal off and insulate the chimney. Be sure, however, to provide some ventilation for the flue. If you fail to provide ventilation, condensation will form in the chimney. If you seal off your chimney, you also have to remember to remove the insulation if you ever decide to use the fireplace.
- Check to make sure that your damper is in good working order.
- Add glass doors to reduce heat loss as the fire dies down.
- Consider installing a combination tube and glass door insert. The glass door seals the face of the fireplace, and the tube and blower mechanism makes more efficient use of the heat generated by the fire.
- If you use your fireplace a lot, consider adding a well-designed fireplace heater insert. These units come with blowers and thermostats. They are designed to significantly increase the heating efficiency of the fireplace while maintaining the classic fireplace atmosphere.

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By choosing ENERGY STAR for every application in your home, you can save up to 20 percent or about $400 per year on your energy bills. ENERGY STAR recommends sealing the envelope that surrounds your living space: the ceiling, outer walls, windows and floors. Appliances account for about 20 percent of your household's energy consumption, with the refrigerator and clothes dryer being the biggest culprits. A typical household does nearly 400 loads of laundry per year, using about 40 gallons of water per full load with a conventional washer. An ENERGY STAR qualified clothes washer uses 18-25 gallons per load, saving you 7,000 gallons of water! An ENERGY STAR refrigerator uses less energy than a 75-watt bulb, saving you between $30-$70 a year.