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No-cost, Low-cost Home Energy-saving Tips

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Energy prices are on the rise.
Heating your house and running
your appliances likely are costing
more than ever.

If you are looking for a few ways
to save money at home, but are
not ready for major renovations,
this checklist may help.

It covers easy-to-do, low-cost or
no-cost money-saving measures
to make your home more energy
efficient today.

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No-cost Tips

- **Use thermostat setbacks.** Turning down the thermostat when your home is not occupied or at night can save about 1 percent for each degree the thermostat is lowered for an eight-hour period. For example, lowering the thermostat from 72 to 65 at night is expected to save you \$70 if heating your home costs \$1,000 per year.
- **Turn off appliances when they're not being used.** Appliances still draw energy even when they are off or in standby mode if they have a clock or light to tell you they are powered up. Appliances actually have two costs: purchase cost and the cost to operate the appliance for its lifetime. When purchasing new appliances, you need to consider both costs. Energy-efficient models cost less to operate when on and in standby mode. This saves you money in the long term.
- **Turn off lights when you leave the room.** Five 100-watt incandescent light bulbs left on for five hours a day cost \$91.25 to run for a year at 10 cents per kilowatt-hour. Lights also have an additional cost in the summer. They produce heat. If left on, they cause your air conditioner to operate more to cool the house.
- **Let the sun heat your house for free.** In winter, open drapes or shades in the morning on south-facing windows and then close them at night. In the summer, make sure the drapes or shades are closed during the day to reduce cooling costs.
- **Shut off air conditioning at night.** Open the windows to allow the cool night air into your house. Close the windows and window treatments in the morning to maintain the cooler temperatures.
- **Wash only a full load of dishes in the dishwasher.** Do not use the dry cycle. Allow dishes to air dry or towel dry them instead.
- **Use cold water with cold-water detergents to wash clothes.** Wash only full loads.
- **Hang clothes to dry.** Be careful if hanging clothes indoors to avoid excess moisture and mold issues.
- **Heat only the rooms or zones in your house that are being used.** Close off heat in rooms that are not occupied. Energy experts do not recommend thermostat setbacks and zone heating for homes using heat pumps.
- **Set the temperature on your electric water heater to 120 °F (49 °C).** If you leave the house for long periods of time, turn the water heater off. You don't need to have hot water in the house when you are on vacation.

- **Keep the cooling coils on the refrigerator clean.** Make sure air can flow around the refrigerator and freezer freely. Keep the refrigerator and freezer fully stocked; they use less energy when full.
- **Use smaller appliances when possible.** Use a toaster oven or microwave whenever possible.
- **Keep lids on pans when cooking.** Think about this old adage: "A watched pot never boils." Water will boil faster and food will cook faster when covered because heat is not lost to surrounding air, saving you money.
- **Close the flue damper on fireplaces.** Leaving the damper on a fireplace open is like leaving a window open.

Low-cost Tips

- **Replace incandescent light bulbs with compact fluorescent bulbs (CFLs).** CFLs use 75 percent less energy to produce the same amount of light and last 10 times longer. By replacing a 100-watt incandescent bulb with a CFL, you could save \$60 during the life of the CFL bulb. The more bulbs you replace, the more money you will save.
- **Install an insulated blanket on your hot water heater.** The blankets generally cost around \$20 and can pay for themselves easily in the first year in energy savings.
- **Install insulation on the hot water pipe that leaves the water heater.** Insulating can raise hot water temperatures in pipes 2 °F to 4 °F,

allowing you to have a lower setting on the water heater. It also will help conserve water by lowering waiting times for hot water at the tap.

- **Reduce air leaks into and out of the house.** One of the largest heat losses in a home is air leaks. Install a fresh bead of caulk or weather-stripping around the windows and doors. Install insulating gaskets behind outlet covers and switch plates.
- **Ensure your furnace is running as efficiently as possible.** Have a certified technician service the furnace periodically. Check the filter at least once a month and clean or replace it as needed.

Additional Tips

- **Check insulation levels in the attic and walls.** Do you have at least 15 inches of insulation in the attic and is the attic entry area insulated? Make sure the foundation or basement wall also is insulated at least 4 feet below the ground surface to at least an R-10. You wouldn't want your walls to be un-insulated. Why would you let your foundation go without insulation? Heat is lost to cold and frozen soil.
- **Install insulating window treatments.** The R-value (insulating ability) of windows is low even with triple glazing. By properly installing quilted drapes or blinds, you can increase the insulation value of these areas significantly. Room air must be restricted from reaching the window to achieve maximum insulating value.

- **When replacing appliances, look for the Energy Star label.** The initial cost of these appliances will be higher, but those costs will be recovered due to lower operating costs. Front-loading washing machines save energy costs both for washing and drying. They use smaller amounts of water and, since they have high-speed spin cycles, they also reduce energy spent on drying.
- **Install an ENERGY STAR programmable thermostat.** With a programmable thermostat, you can achieve thermostat setbacks with little effort on your part. The thermostat can turn down automatically when you go to bed and be programmed to turn on before you get up in the morning.
- **Plant trees.** A longer-term project is to plant deciduous trees on the south side of your house. The trees provide shade in the summer, lowering cooling costs, and when they lose their leaves in winter, they allow the sun to heat your house naturally. Plant evergreens on the north side to help block winter winds.

These are easy things you can do to save money.

For more information on cost-saving measures, go to the NDSU Extension Agricultural and Biosystems Engineering Web site,

www.ndsu.edu/energy

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For more information on this and other topics, see www.ag.ndsu.edu

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