

## **Reduce Your Carbon Footprint—Use Electricity Wisely**

### **\* In the Attic**

#### Door or Hatch

Weather-strip or insulate your attic door or hatch to prevent air from escaping from the top of your house.

#### Insulation

Check current insulation levels, and properly insulate a new or existing home. Insulate ceilings, walls, and floors over unconditioned crawl spaces.

#### Vents

Attics must be ventilated to relieve heat buildup caused by the sun. If necessary, improve attic airflow by adding or enlarging vents.

### **\* In the Basement**

#### Heating Unit

As much as half of your household energy use goes to heating and cooling. Replacing older equipment with more efficient equipment will help reduce your carbon footprint and your energy costs.

Tune up your heating system in the fall to make sure that it will operate at maximum efficiency during the cold winter.

#### Air Conditioning Unit

Check and clean or replace air filters every month. Clean the outside condenser coil once a year.

Schedule periodic maintenance of cooling equipment by a licensed service representative. A "tune up" in the spring will help the air conditioner run at maximum efficiency during the hot weather.

#### Water Heater

Decrease your carbon footprint and reduce your water heating bill by 10 percent by lowering the water heater temperature from 140°F to 120°F. (Keep the temperature at 140°F if you use an older dishwasher without a temperature booster.)

Once a year, drain a bucket of water from the bottom of the water heater tank. This gets rid of sediment, which can waste energy by "blocking" the water in the tank from the heating element.

Locate water heaters as close to the points of hot water usage as possible. The longer the supply pipe, the more heat is lost.

Insulate your hot water supply pipes to reduce heat loss. (Hardware stores sell pipe insulation kits.)

For older water heaters, consider buying a water heater insulation kit, which reduces the amount of heat lost through the walls of the tank.

### **\* In the Bathroom**

#### Sink

To conserve water, use sink stoppers instead of letting water run while shaving.

#### Vanity Lights

Bathroom vanity lights are one of the most used fixtures in the average home. Use energy-efficient lighting, which can provide bright, warm light while using less energy and generating less heat than standard bulbs.

#### Shower

Taking an 8-minute shower every day can indirectly create as much as 1,368 pounds of CO<sub>2</sub> each year. By reducing your shower time to 6 minutes, you can eliminate 342 pounds of CO<sub>2</sub> from your annual total.

Install a new low-flow shower head to help you conserve water and save energy-and save more than \$75 each year on energy costs.

#### Toilet

A leaky toilet can waste 200 gallons of water per day. Be sure to repair all toilet and faucet leaks promptly.

#### Vent Fan

An ENERGY STAR® qualified ventilation fan will control moisture in the air while saving energy. These fans are much quieter than standard models. Fans with efficient lighting and fan motors use 65 percent less energy on average than standard models, saving \$120 in electricity costs over the life of the fan.

### **\* In the Bedroom**

#### Humidifier

In the winter, the air is normally dry inside your house, which is a disadvantage because people typically require a higher temperature to be comfortable than they would in a humid environment. Therefore, efficient humidifiers are a good investment for energy conservation.

#### Lighting

Provide task lighting over desks, tool benches, etc., so that activities can be carried on without illuminating entire rooms.

Replace incandescent bulbs with energy-efficient lighting.

#### Outlets

Unplug any battery chargers or power adapters when electronics are fully charged or disconnected from the charger.

#### Cordless Phone

ENERGY STAR® qualified cordless phones that feature switch-mode power supplies and "smart" chargers will reduce your carbon footprint and add to your energy savings.

### **\* In the Dining Room**

#### Light Switch

Remember to always turn off the lights when leaving a room. Turning off just one 60-watt incandescent bulb that would otherwise be on for eight hours a day can save about \$15 per year.

#### **Thermostat**

Install a programmable thermostat to automatically adjust your home's temperature when you're away or sleeping.

#### **Heating**

Locate the heating thermostat on an inside wall and away from windows and doors. Cold drafts will cause the thermostat to keep the system running even when the rest of the house is warm enough. Set the thermostat as low as comfort permits. Each degree over 68° F can add 2-3 percent to the amount of energy needed for heating.

#### Air conditioner

Set your thermostat to 78° F, or as high as comfort permits. When the weather is mild, turn off the AC and open the windows.

#### **Vents**

Close heating vents and radiator valves in unused rooms. Make sure that drapes, plants, or furniture do not block registers for supply or return air.

#### Exterior

### **\* At the Front Door**

Install storm doors at all entrances of the house.

Weather-strip and caulk around all entrance doors and windows to limit air leaks that could account for 15-30 percent of heating and cooling energy requirements.

### **Outdoor Lights**

Install photoelectric controls or timers to make sure that outdoor lighting is turned off during the day. If using energy-efficient light bulbs, make sure that they are compatible with the controls.

### **Porch Light**

Install energy-efficient lighting in the front porch light-one of the most-used lighting fixtures in a home. If your porch light is connected to a timer or photocell, make sure the new light bulbs are compatible with the controls.

### **\* In the Garage**

Keep the overhead door of an attached garage closed to block cold winds from infiltrating the connecting door between the house and garage.

#### **Car**

A vehicle emits 12,100 pounds of CO<sub>2</sub> per year on average. You can reduce your carbon footprint by combining trips and using mass transit, walking or biking when possible. Also keep your car well-maintained to maximize its fuel efficiency, safety, and reliability.

To have a big impact, consider purchasing a hybrid car. A 4-cylinder hybrid with automatic transmission and 2-wheel drive emits nearly 40 percent less CO<sub>2</sub> per mile than a sports utility vehicle with automatic transmission, an 8-cylinder gasoline engine, and 2-wheel drive.

Vehicles in the United States average 231 miles per week. There are many ways to reduce your weekly mileage and shrink your carbon footprint. Try carpooling, using public transportation, and combining errands.

Keep your vehicle in good condition to maximize its efficiency. Schedule regular tune-ups, change the oil and filter every 3,000 to 5,000 miles, and make sure the tires are properly inflated.

#### Windows

Double-glazed windows (two panes of glass separated by a sealed air space) cut heat transfer by 40-50 percent. In extremely cold regions, triple glazing could be economically justified.

Single-glazed windows should have storm windows. A wood or metal frame storm window provides a second thickness of glass and a layer of still air that reduces heat transmission markedly.

### **\* In the Kitchen**

#### **Dishwasher**

Appliances account for as much as 20 percent of your energy bill. Newer, more efficient models save energy and water. If replacing your dishwasher, an ENERGY STAR® model can reduce your carbon footprint and save more than \$25 a year in energy costs.

#### **Sink**

To conserve water, repair any leaky faucets promptly. Hot water leaking at a rate of one drip per second can waste up to 1,661 gallons of water in one year-and wastes up to \$35 in electricity or natural gas.

#### **Refrigerator/Freezer**

If your current refrigerator was made before 1993, it uses twice as much energy as an ENERGY STAR® model. A 1992 top-freezer model with 19-21 cubic feet indirectly emits as much as 754 pounds of CO2 per year. A 2002 side-by-side model with 19-21 cubic feet indirectly emits as much as 442 pounds of CO2 per year.

Replacing an older model with a new ENERGY STAR® model can eliminate hundreds of pounds of CO2 each year and save \$45-\$65 per year on your electric bills.

#### **\* Other tips:**

Keep your refrigerator at 37°- 40° F and your freezer at 5° F. Vacuum the condenser coils (underneath or behind the unit) every three months.

Check the condition of door gaskets by placing a dollar bill against the frame and closing the door. If the bill can be pulled out with a very gentle tug, the door should be adjusted or the gasket replaced.

Do not put uncovered liquids in the refrigerator. The liquids give off vapors that add to the compressor workload.  
Microwave

Use your microwave oven whenever possible. It draws less than half the power of its conventional oven counterpart and cooks for a much shorter amount of time.

#### **Range/Oven**

Only use pots and pans with flat bottoms on the stove. Use the right-sized pot on stove burners. A six-inch pot on an eight-inch burner wastes more than 40 percent of the burner's heat.

Develop the habit of "lids-on" cooking to permit lower temperature settings. Keep reflector pans beneath stovetop heating elements bright and clean.

Begin cooking on highest heat until liquid begins to boil. Then lower the heat control settings and allow food to simmer until fully cooked.

Cook as much of the meal in the oven at one time as possible. Variations of 25°F still produce good results and save energy.

Rearrange oven shelves before turning your oven on-and don't peek at food in the oven! Every time you open the oven door, 25° to 50°F is lost.

#### **Trash**

Recycle your newspapers, plastic and glass containers, and paper products. By cutting the amount of waste you produce in half, and doubling the amount of recycling in your household, you can save about 1,200 pounds of CO2 per year.

Laundry Room

#### **Clothes Dryer**

Using your dryer 10 times a week indirectly creates more than 800 pounds of CO2. Use the moisture sensor option so that the dryer turns off automatically when clothes are dry. This can help you reduce indirect dryer CO2 emissions by 15 percent. Or, dry your clothes on a clothesline outside.

#### **Clothes Washer**

Follow detergent instructions carefully. Adding too much detergent actually hampers effective washing action and may require more energy in the form of extra rinses.

Wash only full loads of laundry. Wash clothes in cold water. Sort laundry and schedule washes so that a complete job can be done with a few cycles of the machine carrying its full capacity, rather than a greater number of cycles with light loads.

If you're looking to buy a new washing machine, consider using a front-loading or horizontal axis machine. These new units use 30 percent less water and 50 percent less energy to make hot water and wash clothes than regular washing machines.

## **Living Room**

### **Ceiling Fan**

In the winter: If your ceiling fan has a switch that allows you to reverse the motor, you can operate the fan at a low speed in the opposite direction. This produces a gentle updraft, forcing warm air near the ceiling down into the living space.

In the summer: Run the blades counter-clockwise (downward) to cool more efficiently. Turning up the thermostat by just two degrees and using your ceiling fan can lower AC costs by up to 4-6 percent over the course of the cooling season. Don't forget to turn the ceiling fan off when you leave the room.

### **Fireplace**

Make sure your fireplace has tightly fitting dampers that can be closed when the fireplace is not in use. Seal hidden air leaks in your chimney. If you have a gas fireplace, turn off the pilot light when not in use.

### **Lamps**

Put lamps in corners of rooms where they can reflect light from two wall surfaces instead of one. Use compact fluorescent bulbs in fixtures that are on for more than two hours a day. Compact fluorescent bulbs use up to 75 percent less electricity. They also last about 10 times longer.

### **Entertainment Center**

The average home uses 25 electronic products, accounting for up to 15 percent of household electricity use. TVs, DVD players, video games, and cable boxes can create more than 1,600 pounds of CO<sub>2</sub> each year. Turning these products off when they're not being used can save 240 pounds of CO<sub>2</sub>.

Better still, switching to electronic equipment with the ENERGY STAR® label will help save additional energy even when they are turned off.

### **Windows**

In warm weather, close your blinds and curtains during the hottest part of the day. During cold weather, keep curtains open during the daylight hours to take advantage of the sun's warmth.

## **Office**

### **Computer and Monitor**

Computers indirectly create nearly 500 pounds of CO<sub>2</sub> per year. Turning them off when not in use will save 43 pounds.

Do not use a screen saver when your computer monitor is active. Instead, let it switch to sleep mode or turn the monitor off.

### **Printer, Fax, Copier**

Save energy and space with a multi-function device that combines several capabilities-such as print, fax, copy, and scan. Enable power management features for additional savings. Turn off machines when not in use.

Set office equipment to automatically switch to sleep mode. This will help equipment to save energy, to run cooler, and to last longer.

When purchasing new home office products, look for the ENERGY STAR® label to save energy.

### **Power Strip**

Use a power strip as a central "turn off" point when you are finished using equipment. This will help eliminate the standby power consumption used by office equipment even when it is turned off.