

## **Energy Saving Tips and Techniques**

### **Cooking**

- Use toaster ovens, crockpots, and microwaves. When you are cooking small to medium-sized meals, they use less energy than the stove or oven.
- Keep the inside surface of your microwave clean. It will cook your food more efficiently.
- Use the smallest pans possible. It takes less energy to heat them.
- For electric burners, use pots that fit the size of the burner.
- Use lids. They help the food cook more quickly by keeping the steam in the pot or pan.
- Keep conventional oven-preheating time to a minimum. Only preheat if you are baking bread or pastries.
- Don't peek! You lose heat every time you open the door or lift the lid.
- Keep racks clear. Foil on oven shelves blocks heat and costs money.
- Use glass or ceramic pans in ovens. They heat faster than metal pans - that's why brownie recipes call for 350 degrees F for a metal pan, but 325 degrees F for a glass pan.
- Remember: Always take care when cooking. It is the number-one cause of home fires in the United States.

### **Dishwashing**

- Wash only full loads. It costs exactly the same to wash one dish as a whole load.
- Air-dry dishes. If the dishwasher has an air-dry feature, use it.
- Fill dishwasher with detergent right before running. Dry detergent may cake, while liquid detergent can leak.
- Fill the dishwasher according to manufacturer's instructions. This will allow the flow of water to properly clean the dishes.
- Use energy saving cycles whenever possible.
- Use water-temperature boosting feature. If the dishwasher has a booster heater, then you also can lower the temperature on your water heater. It takes less energy for the booster heater to heat the water needed to wash the dishes at 140 degrees F than it takes to keep all the water in the water heater at 140 degrees F. Check the dishwasher's manual for the recommended minimum water temperature.
- And if you wash by hand - rinse dishes in groups rather than one at a time & don't leave the water running.

### **Laundry**

- Wash laundry in cold water instead of hot. Hot water only needs to be used for dirty loads.
- Wash and dry only full loads. The machine uses about the same amount of water whether you wash a full load or just one item.
- Separate your laundry into loads of slow and fast drying clothes.
- Don't add wet items to a load in the dryer that has already been started.
- Clean the lint filter after every load. Clogged filters drive up drying costs.
- Check your outside dryer exhaust vent. Make sure it opens and closes freely. If it doesn't close tightly, outside air is getting into your house through the dryer and you will need to replace the exhaust vent.
- Dry clothes outside in good weather. Sunlight is free.
- Use the moisture sensor feature on your dryer (if there is one). This way, you won't over-dry your clothes.
- Buy Energy Star washers and dryers. Qualified washers use about half the water and electricity of standard washers.

### **Lighting**

- Turn off lights when you are not using them. One 100-watt bulb left on all night costs about \$25 over 12 months.
- Switch from incandescent light bulbs to compact fluorescent lamps (CFLs). With an incandescent bulb 90% of the energy used is wasted as heat- only 10% is converted to light. CFLs use about a fourth as

much as electricity and last ten times longer than incandescent bulbs. The EPA estimates that a typical household would save \$80 each year by switching to CFLs throughout the house

- Put compact fluorescent bulbs in hard-to reach fixtures. You won't have to replace them for about 5 years.
- Replace halogen torchieres with energy star-labeled compact fluorescent torchieres. They're cheaper to operate and safer to use.
- Keep bulbs clean. Dust can cut light output by as much as 25%.
- Check sales. Especially during National Energy Month - October - stores often have sale prices on fluorescent bulbs.
- Use task lighting - concentrate the light where you need it and reduce background light levels.

### **Refrigerator**

- Check refrigerator temperatures. You're losing money if they're lower than 37-40 degrees F for fresh food and 0-5 degrees in your freezer. To check the temperature put one thermometer in a glass of water in the center of the refrigerator and another between packages in the freezer. Read them after 24 hours.
- Defrost manual-defrost refrigerators. Frost makes these models less efficient-and helps spoil food.
- Cover and wrap food. Uncovered foods and liquids release moisture and drive up electricity costs.
- Let hot food cool before putting it in the refrigerator. Then the refrigerator will use less energy.
- Keep the freezer full. It is more efficient than a freezer that is almost empty. You can put plastic containers filled with water in the freezer to fill up the space.
- Check the refrigerator door seals. Close the refrigerator door on a piece of paper that is half in and half out of the refrigerator. If you can remove the paper easily without opening the door, you may need to adjust the door latch or replace the seals.
- Got a second, older refrigerator? Unplug it! Remember: It can cost about \$130 a year to keep it plugged in. And always remove the door when you unplug the refrigerator so that children cannot accidentally be caught inside.
- Buying a new refrigerator? Get an Energy Star model. Replacing a refrigerator bought in 1990 with a new Energy Star model would save enough energy to light the average household for over four and a half months.

### **Programmable Thermostats**

- Consider buying an Energy Star programmable thermostat for your heating and cooling systems. You can easily program the thermostat to automatically adjust heating and cooling according to your schedule. Of course, you can adjust a manual thermostat yourself, but the convenience, comfort, and energy savings of a programmable unit may be worth the cost.
- If your heating or cooling equipment is more than 10 years old, you can reduce your energy use significantly with a new high-efficiency Energy Star unit. Consider an electric heat pump, which for moderate climates is the most efficient way to heat and cool, all in one.

### **Summer**

- Install a programmable thermostat. Make sure it is programmed to automatically turn down the heating or cooling when you are not home and when you're sleeping.
- Use ceiling fans. They make people feel about four-degrees cooler than the actual temperature.
- Cover your waterbed. It may cause as much electricity as your refrigerator. To save more than 30% of that cost, make the bed routinely and cover it with a comforter.
- Turn off ceiling fans when you are not in the room. The fans cool you, not the air.
- Reverse the ceiling fan motor in summer.
- Set thermostat at 78 degrees F or higher if you use the ceiling fans. You save 3-5 % on your air conditioning cost for each degree you raise the thermostat.
- Clean filters. Check the furnace and air filters monthly or as recommended by the manufacturer. Clean or replace them as needed.
- Use the "Auto Fan" setting.
- Buy an Energy Star air conditioner. It can save you up to 10% over one that doesn't have the label. However, have an air conditioning technician or energy auditor determine the right size unit for the space.

## **Water Heaters**

- About 14% of household energy use goes for heating water.
- Save energy by setting your water heater to the lowest temperature that provides you with sufficient hot water. Set it to 140 degrees F, or normal, if your dishwasher does not have a booster heater. Otherwise, set the temperature to 120 degrees F or low.
- Many new water heaters contain insulating materials that make them highly efficient. If yours doesn't, wrap it in an insulating blanket to hold in heat. Also, insulate the first five feet of water pipes leading from your water heater. Don't cover controls or the pressure relief valve on an electric water heater. Don't block the controls, air intakes, or flue on a gas water heater.
- Next time you're in the market for a new dishwasher or clothes washer, choose an Energy Star® model. They use less energy and hot water than other models.

## **Weatherizing & Insulating**

- Tiny cracks and leaks in a typical home can add up to a hole the size of a wide-open window. You can seal these leaks with a few inexpensive items from your local hardware or home supply store.
- Check for leaks in air ducts when your furnace or air conditioner is on. Pay special attention to the cold air return ducts. Seal leaks with "mastic" tape, which is more durable than duct tape. Some ducts may be difficult to access. Contact your local utility or equipment contractor for advice or assistance.
- On a windy day feel for leaks around windows, air conditioners, and door frames. Also check any areas where wiring or plumbing goes through floors, ceilings, or exterior walls.
- Use weatherstripping around air conditioners, doors, and window frames. Use silicone caulk where window frames meet the wall or where wiring or plumbing cut through ceilings or walls.
- Focus your weatherizing and insulating efforts on these five areas: Ceiling Insulation, Wall Insulation, Heating and Cooling Ducts, Doors and Windows, Wiring and Plumbing Perforations
- Insulation's effectiveness is measured by its R-value. The higher the R-value, the better the insulation keeps heat out in summer and in during winter.
- Ask your utility or insulation contractor about the R-value recommended for your area. Also ask your utility about weatherization/insulation rebates, loans, and services.
- Insulate all air ducts that pass through areas that aren't heated or cooled.
- Insulating attics, basements, and crawl spaces could be do-it-yourself projects, but be sure leaks are sealed first. (Follow manufacturer's guidelines. Wear gloves and a respirator mask to protect yourself if using fiberglass insulation.)
- Walls are more difficult to insulate-get a contractor to do the job.

## **Winter**

- Install a programmable thermostat. Use it to automatically control the heat when you are not home and overnight while you are sleeping.
- Check if cold air is getting into your house. If your house is drafty, you may need additional insulation. Contact your local weatherization program, state energy office, or utility company to see if they perform energy audits.
- Use drapes. Where windows face the sun, keep the drapes open in the day but close all the drapes at night. Keeping the drapes closed will reduce drafts and you'll reduce heating costs.
- Repair windows. Even a crack drives fuel bills up. Got a loose window? Install weather-stripping. It helps keep cold air out of the house.
- Install storm windows. And remember to put them down once winter begins. They pay for themselves by keeping cold air out and preventing moisture from collecting on the windows.
- Close storm doors. Seal air leaks by caulking and weather-stripping doors.
- Curb fireplace costs. Call a professional chimney sweep to perform your annual fireplace inspection.
- If you have a crawl space under your home, close the foundation vents in the winter.
- Turn your thermostat down five degrees. Each degree saves about 2% on your heating bill. So that's about \$50 on a \$500 heating bill. If you install an automatic thermostat, it will do the work for you.
- Have a professional tune up and inspect your furnace. An oil-burning furnace should be checked once a year, a gas-burning furnace every two or three years.. This can save you up to 10% on your heating costs.
- If you have a warm-air furnace or heat pump, check the filter each month. Clean or replace the filters as needed.

- If you have hot water or steam heat, check water levels. A furnace dealer can tell you how to add more water. Ask the dealer for more tips to make your system work better.
- Clear the area around your furnace. This lessens the chance of fire and improves airflow.
- Make sure heat can get into the room. Keep furniture and drapes from blocking radiators, heating registers, and return vents.
- Never use the stove to heat your home! It is expensive and very dangerous.