

Energy Efficiency in the Home

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Homeowners can take many steps to increase the energy efficiency of the home, thereby saving money and making the home a more comfortable place to live. To help make your home more energy efficient, follow the guidelines below.

- **Block Heat Gain and Loss**
- Shade the east and west windows and walls outside with trees, shrubs, vines, roof overhangs and awnings.
- Use interior window treatments—shades, blinds and curtains—to keep heat inside in the winter and outside in the summer.

- **Seal Energy Leaks**
- Caulk around windows, door and cracks, both inside and outside, to stop air leakage.
- Add weather stripping (or replace old) to outside door threshold.
- Foam seal or add insulation behind electrical outlets on the outside walls of rooms.
- Maintain proper insulation in your ceilings (R-19—R-30), walls (R-11 for 2x4 stud walls, R-19 for 2x6 stud walls, and R-3 for concrete walls), and floors (R-11).

- **Control Energy Use**
- Use ceiling fans to circulate air and make you feel cooler. Remember to turn fans off when the room is unoccupied.
- Turn lights off when you leave a room.
- Avoid frequent opening and shutting of doors.
- Turn television off when not in use.

- **Cooling and Heating Tips**
- Keep cooling temperature set at between 78 and 80 degrees F. Each degree below 78 can cause you to increase your cooling costs by 8% per degree.

- Keep fan setting on “auto” not “on.”
- Consider installing a programmable thermostat. A programmable thermostat can turn off the air conditioning while you are away and then cool the house before you return. Heating and cooling bill savings can range from 6-20% but depend on your habits. The cost of a programmable thermostat will be between \$30 and \$150 for non-heat pump systems, and \$80—\$250 for heat pump systems.
- If you do not have a programmable thermostat and you will be away from your home for four hours or more, set the thermostat higher, up to 80—82 degrees, then lower the temperature once you return.
- Change your air conditioner filter monthly (or every three months, depending on the filter) so that your system runs efficiently. One way to remember to check it is to check it when your electric bill comes each month.
- Have your air conditioning system serviced once yearly.
- Keep thermostat set between 65 and 68 degrees F in the winter.
- Wear extra clothes or use blankets during heating season to reduce costs.

- **Water/ Water Heating Conservation Tips**

- Encourage family members to take short, cool showers, not “hour showers.” Remember, hot water costs you in energy dollars!
- Inspect sinks and bath tubs/showers for water leaks. Repair leaky faucets as quickly as possible.
- Wash full loads of laundry and dishes. Use the coolest water setting for clothes when possible.
- Install low-flow shower heads and use water restrictors in faucets.
- Keep water heater set at 120 degrees F. If your dishwasher has an automatic temperature booster, this will heat the water hot enough to clean dishes. If not, you can set your water heater to 140-150 degrees F. Just use caution if used by small children or the elderly.
- Drain water heater half way once a year.
- Cover your water heater with a special insulation jacket to reduce heat loss.
- Plant landscape according to watering needs and water only when needed.

- **Lighting Tips**

- When replacing light bulbs, replace incandescent bulbs with compact fluorescents. A compact fluorescent bulb uses one-fourth of the energy of an incandescent bulb and lasts over 10 times longer. In addition, compact fluorescent bulbs give out much less heat than incandescent bulbs (90% of the energy of an incandescent bulb goes toward producing heat), thereby reducing your cooling bill.
- Keep light fixtures clean to get maximum light.
- Select the lowest wattage bulb that provides the desired lighting for the needed tasks.
- Use motion /occupancy sensors in bathrooms, hallways, garages, and outdoors.
- Light-colored interior surfaces increase lighting efficiency when using natural or artificial lighting by reflecting light rather than absorbing it.
- Use task lighting in kitchen or other work areas instead of lighting an entire room.

- **Appliance Tips**

- Use a thermometer to check your refrigerator. The refrigerator should be set at 37—40 degrees F. The freezer section should be set between 0 and 5 degrees F. A full refrigerator/freezer will cost less to operate than an empty one.
- Clean and check the condenser coil on the refrigerator at least once a year.
- Minimize the number of times the refrigerator door is opened. Poor habits can waste 50 to 120 kWh per year.

- Defrost manual-defrost freezers regularly.
- Refrigerators with the freezer on top use less energy than side-by-side models (7—13% less). Those with freezers on the bottom are even more efficient.
- Chest freezers (top loading) are 10-25% more efficient than uprights (front loading).
- Consider replacing your refrigerator if more than 6 years old.

- Avoid continually opening your oven door to look at your food. Check the food through the window or use a timer.
- Clean the lint filter in your dryer each time you use it. This will help clothes dry faster, thereby reducing the amount of time and energy used to operate the dryer.
- When possible, hang clothes out to dry.
- Keep range-top burners and reflector pans clean so that they will reflect heat better.
- Defrost foods in the refrigerator before cooking to reduce cooking time (and for food safety reasons).
- Use pots and pans with flat bottoms that will contact the burners. Slightly rounded pots and pans reduce cooking performance.
- Use the smallest pot or pan that will do the job and match the pan size to the burner element.
- Use microwave oven and pressure cookers to prepare meals whenever possible.
- Use the dry-air setting to dry dishes if available. If not, turn the control knob off after the final rinse and prop open to door to air dry dishes. (Avoid doing this if you have high humidity problems in your home.)