



10 STEPS TO SAVE ENERGY FOR YOUR HOME

1. **Stop Air Leaks.** In winter, air leaks rob your house of heat and can make it too dry. In summer, air leaks can make your house too humid and drive up air conditioning bills. As much as 40% of your heating and cooling costs can be due to air leaks.

Seal the biggest sources of air leaks first: attic doors, whole house fans, holes in the floor and ceiling for plumbing and wiring, electrical coverplates, and gaps in the wall.

2. **Insulate Your Home.** Insulating the ceiling, walls and floor of your home will cut energy waste, lower utility bills and improve comfort.

If there is less than 6 inches (R-19) of ceiling insulation, bring levels up to a minimum of 10 inches (R-30). Before insulating, be sure to use caulk or expanding foam sealant to stop air leaks between the house and attic.

Adding insulation to outside wall cavities can reduce heat flow and air leaks. Consult with a knowledgeable professional about blowing insulation into the wall cavities.

Install insulation (R-11 to R-19) between floor joists and place a plastic ground cover over bare earth underneath your home to reduce moisture in the crawl space. Also insulate hot and cold water pipes in the crawl space for freeze protection.

3. **Cut Hot Water Bills.** Hot water costs can be over \$400 a year for the average family. Simple conservation measures can often trim that bill by 30%.

Wrap an insulation jacket around the water heater. Also insulate all hot water pipes and the two feet of cold water pipe nearest the tank.

Set the water heater temperature at 120° to 140° Fahrenheit (Low to Medium). This saves energy and reduces the risk of scalding.

Install low-flow showerheads and faucet aerators. These provide a forceful spray, yet reduce the water wasted down the drain.

Verify that your home/business is leak-free, Read your water meter before and after a two-hour period when no water is being used. If the meter does not read exactly the same, there is a leak.

Repair dripping faucets by replacing washers. If your faucet is dripping at the rate of one drop per second, you can expect to waste 2,700 gallons per year which will add to the cost of water and sewer utilities, or strain your septic system.

Check for toilet tank leaks by adding food coloring to the tank. If the toilet is leaking, color will appear within 30 minutes. Check the toilet for worn out, corroded or bent parts. Most replacement parts are inexpensive, readily available and easily installed. (Flush as soon as test is done, since food coloring may stain tank.)

Retrofit all wasteful household faucets by installing aerators with flow restrictors.

Operate automatic dishwashers and clothes washers only when they are fully loaded or properly set the water level for the size of load you are using.

Consider installing an instant water heater on your kitchen sink so you don't have to let the water run while it heats up. This will reduce heating costs for your household.

Insulate your water pipes. You'll get hot water faster plus avoid wasting water while it heats up.

Never install a water-to-air heat pump or air-conditioning system. Air-to-air models are just as efficient and do not waste water.

Install tank-less type natural and propane gas water heaters. This greatly reduces the usage of fossil fuels by a water heater. If you own a tank type heater, it uses gas to keep the water in the tank about 120 degrees even if you're not using hot water, not at home, or on vacation. The tank-less type heater only uses gas when you use hot water, and the gas valve is variable to only use enough gas to heat the water for the task at hand.

4. **Seal and Insulate Ducts.** Many homes lose as much as 30% of their heated and cooled air through duct leaks. When located in the attic or crawl space, duct leaks can also be a source of harmful dust, mold, excess humidity, and toxins such as pesticides and radon.

Use a smoke pencil or incense to find duct leaks. Seal leaks with mastic or an approved duct tape. Insulate ducts in unheated areas after sealing leaks.

If your furnace or heat pump is located in an interior closet, make certain that there are not air leaks between the return air plenum and the attic or crawl space.

5. **Tighten Up Windows.** In winter, windows let heat out; in summer, they let sunlight and heat inside.

Stop air leaks around the edges of windows and doors by caulking the trim to the wall, then weather-strip the sashes.

Adding storms over single-pane windows further reduces heat loss. Be certain to weatherize the primary windows before adding storms. Storm doors are not generally recommended for energy savings.

6. **Shade Your Home.** Shading a house keeps it cooler in summer, saving on air conditioning costs. Shading the outside air conditioning unit helps it run more efficiently, but don't block airflow to the equipment.

You'll also save by preventing sunlight from passing through windows. Consider using a trellis, awning, or sunscreen. Sunscreens, similar to insect screening, have a special weave that blocks sunlight. They are ideal for shading east, south, and west windows. Closing curtains and shades during summer days will also keep your house cooler.

A tree can reduce your home's need for air conditioning by keeping it shaded and by cooling the surrounding air through evaporation of moisture. Trees also absorb atmospheric carbon dioxide (CO₂) - as much as 30 pounds per tree each year.

Deciduous trees shade summer sun, and in winter drop their leaves and allow sunlight to warm the house. Trees help save energy, protect the environment, provide homes for wildlife, and increase property values up to 15%.

7. **Buy Efficient Appliances.** When you buy appliances, make certain they are energy efficient. An efficient model may cost more to buy, but its energy savings will quickly repay the extra cost. Energy efficient appliances also give off less waste heat, which will keep your home cooler in summer.

Use the *EnergyGuide* label to compare appliances and to choose an appliance that is energy efficient.

Consider replacing an old, inefficient refrigerator. High efficiency models can lower your electric bills up to \$150 each year.

8. **Trim Lighting Costs.** While lighting costs for homes are usually less than for heating, cooling, and hot water, you can still cut energy waste. Start with lights that are used for four or more hours each day - usually security lights and those in the kitchen or family room.

Use fluorescent lights whenever possible in areas where general lighting is needed, such as kitchens, family rooms, and baths. A compact fluorescent is a special light bulb that screws into a standard incandescent socket but which lasts 10 times longer, saves over \$40 in electricity costs, and eliminates 500 pounds of atmospheric pollutants.

Outside security lighting can be expensive. Two 150-watt floodlights cost over \$60 more each year to operate than an energy efficient high pressure sodium outdoor light.

9. **Heat and Cool Wisely.** Keeping your heating and cooling equipment serviced and operating it properly saves energy and extends its life.

Programmable thermostats, automatically adjust the temperature setting and can save you energy and money. Choose a model which suits your lifestyle and particular heating and cooling equipment.

When you have to replace equipment, select energy efficient models that are the correct size for your home. Consult with your local utility or state energy office.

10. **Save Energy on the Road.** The average American automobile spews its weight in pollutants into the atmosphere each year. More than 80% of auto travel is for trips of less than 3 miles. Walk, ride a bicycle, use mass transit, and group errands to minimize driving. Auto emissions account for about 60% of ozone pollution in our cities - drive less and save our air.

Keep your auto properly tuned and its tires inflated to reduce pollution and save fuel. When your auto air conditioner is serviced, insist that the mechanic recycles the chlorofluorocarbons (CFCs) used for the refrigerant - release of CFCs into the atmosphere contributes to the depletion of the earth's protective ozone layer.

When buying a new automobile, choose a fuel efficient model. Over its life, a car that gets 35 miles per gallon will save around \$3,000 and 30 tons of pollution compared to a model that gets 18 miles per gallon. Every gallon of gas you save prevents 20 pounds of CO₂ from polluting the planet.