

Heating & Cooling

Heating and cooling account for about 56% of the energy use making it the largest energy expense for most. A wide variety of technologies are available for heating and cooling and they achieve a wide range of efficiencies in converting their energy sources into useful heat or cool air. When looking for ways to save energy, be sure to think about not only improving your existing heating and cooling system, but also consider the energy efficiency of the supporting equipment and the possibility of either adding supplementary sources of heating or cooling or simply replacing your system altogether.

- Use fans during the summer to create a wind chill effect that will make your home more comfortable. If you use air conditioning, a ceiling fan will allow you to raise the thermostat setting about 4°F with no reduction in comfort.
- Turn off kitchen, bath, and other ventilating fans within 20 minutes after use to retain heated air.
- Install a programmable thermostat that can adjust the temperature according to your schedule.
- Insulate your hot water heater and hot water pipes to prevent heat loss.
- Insulate heating ducts in unheated areas such as attics and crawlspaces and keep them in good repair to prevent heat loss of up to 60 percent at the registers.
- Heating can account for almost half of the average family's winter energy bill. Make sure your furnace or heat pump receives professional maintenance each year.
- Summerize your fireplace – for starts, make sure that the pilot light is off on your gas fireplace during summer months. Make sure you use a fireplace plug or draft stopper (reduces the energy loss up the chimney). Homes with fireplaces can use 30% more energy than homes without.
- Barbecue – Operating a natural gas BBQ costs more than 50% less than propane and does not heat up your home.

Insulation & Air Sealing

You can reduce your heating and cooling costs by as much as 30 percent through proper insulation and air sealing techniques. These techniques will also make your home more comfortable. Reducing your home heating and cooling bills begins with conducting a home energy audit to assess where your home may be losing energy through air leaks or inadequate insulation.

- Conduct an [energy audit](#) of your home to find air leaks and to check for the proper level of insulation. Common sources of air leaks include cracks around windows and doors, gaps along baseboard, mail chutes, cracks in brick, siding, stucco or foundation, or where any external lines (phone, cable, electric, and gas) enter the home.
- To test for air leaks on your own, on a windy day, hold a lit candle next to windows, doors, electrical outlets, or light fixtures to test for leaks. Also, tape clear plastic sheeting to the inside of your window frames if drafts, water condensation, or frost are present.
- Plug air leaks with [caulking](#), sealing, or [weather stripping](#) to save 10 percent or more on your energy bill.
- Adequate insulation in your attic, ceilings, exterior and basement walls, floors, and crawlspaces, as recommended for your geographical area, can save you up to 30 percent on home energy bills.
- Installing storm windows over single-pane windows or replacing them with ENERGY STAR windows can reduce heat loss from air leakage, and reflect heat back into the room during the winter months to save even more energy. In cold climates, ENERGY STAR windows can reduce your heating bills by 30 to 40 percent

Lighting & Daylighting

The quantity and quality of light around us determine how well we see, work, and play. Light affects our health, safety, morale, comfort, and productivity. You can save energy while still maintaining good light quantity and quality.

- Use dimmers, motion sensors, or occupancy sensors to automatically turn on or off lighting as needed and prevent energy waste.
- Install fluorescent light fixtures for all ceiling- and wall-mounted fixtures that will be on for more than 2 hours each day.
- Consider light wall colors to minimize the need for artificial lighting.
- Use compact fluorescent light bulbs (CFLs) in place of comparable incandescent bulbs to save about 50 percent on your lighting costs. CFLs use only one-fourth the energy and last up to 10 times longer.
- Turn your lights off when you leave a room. Standard, incandescent light bulbs should be turned off whenever they are not needed. Fluorescent lights should be turned off whenever you'll be away for 15 minutes or more.

Winter

This winter, save money and stay warm. Keep your energy bill and your pollution output low this winter by taking a whole-house approach to heating.

- Set your thermostat as low as is comfortable.
- Programming your thermostat from 72 degrees to 65 degrees for eight hours a day while no one is home, or while everyone is tucked in bed, can cut your heating bill up to 10 percent.
- Weatherize - caulk and weather-strip any doors and windows that leak air.
- Properly maintain and clean heating equipment and Replace furnace filters regularly.