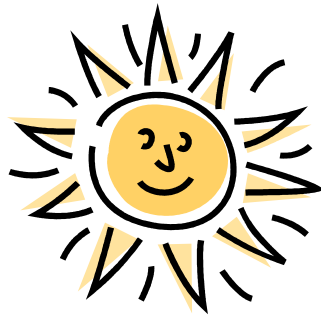


# Energy Saving Tips for Your Home and Business



*Wilton Energy Commission*

*Fall 2008*

(Adapted from the US Dept.of Energy website: [www.energy.gov/energysavingtips.htm](http://www.energy.gov/energysavingtips.htm))

Saving energy has become everyone's responsibility. Not only is it cost efficient and environmentally responsible — it's easy! This document provides some simple tips on saving energy at home and at work. Have a look, and if you need more information, just visit [WiltonEnergy.org](http://WiltonEnergy.org).

## Energy Saving Tips for Your Home and Business

### Heating & Cooling

Heating and cooling account for about 56% of the energy use in a typical U.S. home, making it the largest energy expense for most homes.

- Make sure your furnace or heat pump receives professional maintenance each year. Look for the [ENERGY STAR®](#) label when replacing your system. [ENERGY STAR®](#) labeled products can cut your energy bills by up to 30 percent.
- Place heat-resistant radiator reflectors between exterior walls and the radiators.
- Bleed trapped air from hot-water radiators once or twice a season; if in doubt about how to perform this task, call a professional.
- Clean warm-air registers, baseboard heaters, and radiators as needed; make sure they're not blocked by furniture, carpeting, or drapes.
- Clean or replace filters on furnaces once a month or as needed.
- 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 you are done cooking or bathing 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 heatloss.
- 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.

### Appliances & Electronics

Your appliances and home electronics are responsible for about 20 percent of your energy bills. These appliances and electronics include everything from clothes washers and dryers, to computers, to water heaters. By shopping for appliances with the [ENERGY STAR®](#) label and turning off appliances when they're not in use, you can achieve real savings in your monthly energy bill.

- Many appliances continue to draw a small amount of power when they are switched off. These "phantom" loads occur in most appliances that use electricity, such as VCRs, televisions, stereos, computers, and kitchen appliances. In the average home, 75% of the electricity used to power home electronics is consumed while the products are turned off. This can be avoided by unplugging the appliance or using a power strip and using the switch on the power strip to cut all power to the appliance.
- Look for the [ENERGY STAR®](#) label on home appliances, electronics and other products. [ENERGY STAR®](#) products meet strict efficiency guidelines set by the [U.S. Environmental Protection Agency](#) and the U.S. Department of Energy.
- Consider buying a laptop for your next computer upgrade; they use much less energy than desktop computers.

- There is a common misconception that screen savers reduce energy use by monitors; they do not. Automatic switching to sleep mode or manually turning monitors off is always the better energy-saving strategy.
- [ENERGY STAR®](#) computers and monitors save energy only when the power management features are activated, so make sure power management is activated on your computer.
- Unplug battery chargers when the batteries are fully charged or the chargers are not in use.
- Air dry dishes instead of using your dishwasher's drying cycle.
- When shopping for a new clothes dryer, look for one with a moisture sensor that automatically shuts off the machine when your clothes are dry. Not only will this save energy, it will save wear and tear on your clothes caused by over-drying.
- Consider air-drying clothes on clothes lines or drying racks. Air-drying is recommended by clothing manufacturers for some fabrics.
- Periodically inspect your dryer vent to ensure it is not blocked. This will save energy and may prevent a fire. Manufacturers recommend using rigid venting material, not plastic vents that may collapse and cause blockages.
- Use the cool-down cycle to allow the clothes to finish drying with the residual heat in the dryer.
- Clean the lint filter in the dryer after every load to improve air circulation.
- Don't over-dry your clothes. If your machine has a moisture sensor, use it.
- Dry towels and heavier cottons in a separate load from lighter-weight clothes.
- Wash and dry full loads. If you are washing a small load, use the appropriate water-level setting.

### 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. In your home, you can save energy while still maintaining good light quantity and quality.

- 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.
- Exterior lighting is one of the best places to use CFLs because of their long life. If you live in a cold climate, be sure to buy a lamp with a cold weather ballast since standard CFLs may not work well below 40°F.
- Turn off decorative outdoor natural gas lamps; just eight such lamps burning year-round use as much natural gas as it takes to heat an average-size home during an entire winter.
- Use outdoor lights with a photocell unit or a motion sensor so they will turn on only at night or when someone is present. A combined photocell and motion sensor will increase your energy savings even more.
- Consider using LED or 4-watt minifluorescent / electro-luminescent night lights. Both lights are much more efficient than their incandescent counterparts and are cool to the touch.
- If you have torchiere fixtures with halogen lamps, consider replacing them with compact fluorescent torchieres. Compact fluorescent torchieres use 60% to 80% less energy, can produce more light (lumens), and do not get as hot as the halogen torchieres. Halogen torchieres are a fire risk because of the high temperature of the halogen bulb.
- Take advantage of daylight by using light-colored, loose-weave curtains on your windows to allow daylight to penetrate the room while preserving privacy. Also, decorate with lighter colors that reflect daylight.
- Recessed downlights (also called recessed cans) are now available that are rated for contact with insulation (IC rated), are designed specifically for pin-based CFLs, and can be used in retrofits or new construction.
- Use 4-foot fluorescent fixtures with reflective backing and electronic ballasts for your workroom, garage, and laundry areas.
- Consider three-way lamps; they make it easier to keep lighting levels low when brighter light is not necessary.
- Use task lighting; instead of brightly lighting an entire room, focus the light where you need it. For example, use fluorescent under-cabinet lighting for kitchen sinks and countertops under cabinets.
- 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.

- During winter, open curtains on your south-facing windows during the day to allow sunlight to naturally heat your home, and close them at night to reduce the chill you may feel from cold windows
- Installing a skylight can provide your home with daylighting and warmth. When properly selected and installed, an energy-efficient skylight can help minimize your heating, cooling, and lighting costs.

### Water Heating

Water heating can account for 14%–25% of the energy consumed in your home. You can reduce your monthly water heating bills by selecting the appropriate water heater for your home or pool and by using some energy-efficient water heating strategies.

- Wash only full loads of dishes and clothes.
- Take short showers instead of baths.
- Lower the thermostat on your hot water heater to 120° F.
- You might qualify for tax credits or rebates for buying a solar water heater. Visit the [Database of State Incentives for Renewable Energy](#). Web site and see.
- Buy a new energy-efficient water heater. While it may cost more initially than a standard water heater, the energy savings will continue during the lifetime of the appliance. Look for the [EnergyGuide label](#).
- Drain a quart of water from your water tank every 3 months to remove sediment that impedes heat transfer and lowers the efficiency of your heater. The type of water tank you have determines the steps to take, so follow the manufacturer's advice.
- If you are in the market for a new dishwasher or clothes washer, consider buying an efficient, water-saving [ENERGY STAR®](#) model to reduce hot water use.
- Insulate the first 6 feet of the hot and cold water pipes connected to the water heater.
- Insulate your natural gas or oil hot-water storage tank, but be careful not to cover the water heater's top, bottom, thermostat, or burner compartment. Follow the manufacturer's recommendations; when in doubt, get professional help.
- Insulate your electric hot-water storage tank, but be careful not to cover the thermostat. Follow the manufacturer's recommendations.
- Take more showers than baths. Bathing uses the most hot water in the average household.
- Lower the thermostat on your water heater; water heaters sometimes come from the factory with high temperature settings, but a setting of 120°F provides comfortable hot water for most uses.
- Repair leaky faucets promptly; a leaky faucet wastes gallons of water in a short period of time.
- Select a shower head with a flow rate of less than 2.5 gpm (gallons per minute) for maximum water efficiency. Before 1992, some showerheads had flow rates of 5.5 gpm, so you might want to replace them if you're not sure of their flow rates.
- If heating a swimming pool, consider a swimming pool cover. Evaporation is by far the largest source of energy loss in swimming pools.

### Insulation & Air Sealing

You can reduce your home's 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.
- Installing new, high-performance windows will improve your home's energy performance. While it may take many years for new windows to pay off in energy savings, the benefits of added comfort and improved aesthetics and functionality may make the investment worth it to you.
- Remember that new windows must be installed correctly to avoid air leaks around the frame. Look for a reputable, qualified installer.
- Remember, the lower the U-value, the better the insulation. In colder climates, a U-value of 0.35 or below is recommended. These windows have at least double glazing and a low-e coating.
- You can use a heavy-duty, clear plastic sheet on a frame or tape clear plastic film to the inside of your window frames during the cold winter months. Remember, the plastic must be sealed tightly to the frame to help reduce infiltration.
- 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.
- Close fireplace dampers when not in use. A chimney is designed for smoke to escape, so until you close it, warm air escapes.

### Landscaping

A well-designed landscape not only can add beauty to your home but it also can reduce your heating and cooling costs. On average, landscaping for energy efficiency provides enough energy savings to return an initial investment in less than 8 years. If you were already planning to landscape, these tips provide an ideal way to beautify your home while saving on your monthly energy bill.

- Landscaping your home for energy efficiency can reduce your heating and cooling bills, the largest component of your home's energy use. Your overall landscaping strategy will depend on your regional climate.
- Plant trees to shade your home, reducing your cooling costs in the summer months. Typically, newly planted trees will begin shading windows in their first year and will reach your roof in years 5-10.
- Planting shrubs, bushes, and vines next to your house creates dead air spaces that insulate your home in both winter and summer. Plant so there will be at least 1 foot (30 centimeters) of space between full-grown plants and your home's wall.
- During winter, dense, low-lying trees and shrubbery on the north and northeast sides of your home can help protect your home against wind chill.

### Summer

This summer, save money and stay cool. Keep your energy bill and your pollution output low this summer by taking a whole-house approach to cooling.

- If your air conditioner is old, consider purchasing a new, energy-efficient model. You could save up to 50% on your utility bill for cooling. Look for the [ENERGY STAR®](#) and [EnergyGuide labels](#).
- Keep in mind that insulation and sealing air leaks will help your energy performance in the summertime by keeping the cool air inside.
- Plant trees or shrubs to shade air conditioning units but not to block the airflow. Place your room air conditioner on the north side of the house. A unit operating in the shade uses as much as 10% less electricity than the same one operating in the sun.
- Don't place lamps or TV sets near your air-conditioning thermostat. The thermostat senses heat from these appliances, which can cause the air conditioner to run longer than necessary.
- Consider using an interior fan in conjunction with your window air conditioner to spread the cooled air more effectively through your home without greatly increasing your power use.
- Don't set your thermostat at a colder setting than normal when you turn on your air conditioner. It will not cool your home any faster and could result in excessive cooling and, therefore, unnecessary expense.
- Set your thermostat as high as comfortably possible in the summer. The less difference between the indoor and outdoor temperatures, the lower your overall cooling bill will be.

- Whole-house fans help cool your home by pulling cool air through the house and exhausting warm air through the attic. They are effective when operated at night and when the outside air is cooler than the inside.
- For air conditioners, look for a high Seasonal Energy Efficiency Ratio (SEER). The current minimum is 13 SEER for central air conditioners.
- During the cooling season, keep the window coverings closed during the day to prevent solar gain.

### 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.

- During the heating season, keep the draperies and shades on your south facing windows open during the day to allow the sunlight to enter your home and closed at night to reduce the chill you may feel from cold windows.
- Set your thermostat as low as is comfortable when home.
- By resetting your programmable thermostat from 72 degrees to 65 degrees for eight hours a day (for instance, while no one is home or while everyone is tucked in bed) you can cut your heating bill by up to 10 percent.
- Weatherize your home—caulk and weatherstrip any doors and windows that leak air.
- Properly maintain and clean heating equipment.
- Replace furnace filters regularly.
- Check the insulation in your attic, ceilings, exterior and basement walls, floors, and crawl spaces to see if it meets the levels recommended for your area.

### Automobile

Your fuel costs. Pollution. Our country's dependence on foreign oil. The vehicle you choose to drive and how you drive it affect all of these issues. To minimize these effects, please look at these ways to improve your vehicle's fuel efficiency.

- Consider buying a highly fuel-efficient vehicle. A fuel-efficient vehicle, a hybrid vehicle, or an alternative fuel vehicle could save you a lot at the gas pump and help the environment. See the [Fuel Economy Guide](#) for more on buying a new fuel-efficient car or truck.
- Combine errands into one trip. Several short trips, each one taken from a cold start, can use twice as much fuel as one trip covering the same distance when the engine is warm.
- Replace clogged air filters to improve gas mileage by as much as 10% and protect your engine.
- Get regular engine tune-ups and car maintenance checks to avoid fuel economy problems due to worn spark plugs, dragging brakes, low transmission fluid, or transmission problems.
- Keep tires properly inflated and aligned to improve your gasoline mileage by around 3.3%.
- Use the grade of motor oil recommended by your car's manufacturer. Using a different motor oil can lower your gasoline mileage by 1%-2%.
- Check into telecommuting, carpooling and public transit to cut mileage and car maintenance costs.
- Reduce drag by placing items inside the car or trunk rather than on roof racks. A roof rack or carrier provides additional cargo space and may allow you to buy a smaller car. However, a loaded roof rack can decrease your fuel economy by 5%.
- Clear out your car; extra weight decreases gas mileage.
- Avoid high speeds. Above 60 mph, gas mileage drops rapidly. The <http://fueleconomy.gov/> Web site shows how driving speed affects gas mileage.
- Aggressive driving (speeding, rapid acceleration, and hard braking) wastes gas. It can lower your highway gas mileage 33% and city mileage 5%.
- Idling gets you 0 miles per gallon. The best way to warm up a vehicle is to drive it. No more than 30 seconds of idling on winter days is needed. Anything more simply wastes fuel and increases emissions.

