

Energy Checklist

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1. No Cost and Low Cost Tips Checklist:

NO-COST WAYS TO SAVE ENERGY & MONEY

- Turn off everything not in use: lights, TVs, computers, etc.
- Check the furnace or air conditioner (AC) filter each month, and clean or replace it as needed. Dirty filters block air flow through your heating and cooling systems, increasing your energy bill and shortening the equipment's life.
- During hot months, keep window coverings closed on the south, east, and west windows. In winter, let the sun in.
- Glass fireplace doors help stop heat from being lost up the chimney. Also, close the fireplace damper when not in use.
- Activate "sleep" features on computers and office equipment that power down when not in use for a while. Turn off equipment during longer periods of non-use to cut energy costs and improve longevity.
- When cooking, keep the lids on pots. Better yet, use a microwave oven instead.
- Dress appropriately for the weather, and set your thermostat to the lowest possible comfortable setting. On winter nights, put an extra blanket on the bed and turn down your thermostat more.
- In summer, use fans whenever possible instead of AC, and ventilate at night this way when practical. Using fans to supplement AC allows you to raise the thermostat temperature, using less energy. Fans cost less to use than AC.
- About 15 percent of an average home energy bill goes to heating water. To save hot water, take five-minute showers instead of baths. Do only full loads when using the clothes washer or dishwasher.
- Switch to cold water washing of laundry in top loading in top-loading, energy-inefficient washing machines to save energy and up to \$63 a year—detergents formulated for cold water get clothes just as clean.
- Lower the temperature on your water heater. It should be set at "warm," so that a thermometer held under running water reads no more than 130 degrees.
- Only heat or cool the rooms you need—close vents and doors of unused rooms.

LOW-COST WAYS TO SAVE ENERGY & MONEY

- Install low-flow showerheads and sink aerators to reduce hot water use.
- Seal and weatherstrip your windows and doors to ensure that you're not wasting energy on heat or air conditioning that escapes through leaks to the outdoors.
- A water tank insulation wrap costs about \$20 and helps hold the heat inside. Add pre-cut pipe insulation to exposed pipes going into your water heater—it is cheap and easy to install. If you're starting with an uninsulated tank, the energy savings should pay for the improvements in just a few months.
- Duct tape works well on lots of things, but it often fails when used on ductwork! Use mastic (a gooey substance applied with a paintbrush) to seal all exposed ductwork joints in areas such as the attic, crawlspace, or basement. Insulate ducts to improve your heating system's efficiency and your own comfort.
- Storm windows can reduce heat lost by single-paned windows by 25–50 percent during the winter. As an alternative, you can improve your windows temporarily with plastic sheeting installed on the inside.

- When buying new products, look for the ENERGY STAR® label, found on more than 40 different products such as TVs, furnaces, cell phones, refrigerators, air conditioners and more.
- Incandescent light bulbs are outdated; 95 percent of the energy used goes to heating the bulb, adding unwanted heat to your home in the summer. Replace your five most used light bulbs with ENERGY STAR compact fluorescent bulbs to save \$60 each year in energy costs. These light bulbs use two-thirds less energy and last up to 10 times longer. Use dimmers, timers, and motion detectors on indoor and outdoor lighting.
- Consider safer, more efficient ENERGY STAR torchiere lamps rather than halogen torchieres, which can cause fires. Halogen bulbs are expensive to use.

THE ULTIMATE CHECKLIST: For Saving Money by Reducing Energy Bills

- **WEATHERIZE & INSULATE**

Save up to 20 percent of your heating and cooling costs.

- Warm air leaking into your home during the summer and out of your home during the winter wastes money. A handy homeowner can seal up holes to the outside by weatherstripping doors and sealing windows and other gaps along the home's foundation. A combination of air sealing and adding insulation to attics, basements, and crawlspaces provides tremendous energy savings and increased comfort.
- The easiest and most cost-effective way to insulate your home is to add insulation in the attic. If you have less than 6 or 7 inches, you can probably benefit by adding more. Most U.S. homes should have between R-38 and R-49 attic insulation. In order to achieve this, many homeowners should add between R-19 to R-30 insulation (about 6 to 10 inches).
- Other effective places to add insulation include unfinished basement walls and crawlspaces. Insulating walls can be more complex, but it can be worthwhile to do if you have little or no insulation now. Check with a contractor for advice.
- Consider the ENERGY STAR® Home Sealing Program—the government's information for sealing your home: www.energystar.gov/homesealing

- **IMPROVE YOUR APPLIANCES & ELECTRONICS**

Appliances account for about 20 percent of household energy use.

- Appliances and electronics really add up on your energy bill. When it is time to replace, remember these items have two price tags: purchase price and lifetime energy cost. When shopping for new appliances (refrigerator, dishwasher, etc.) and electronics (TV, computer, etc.), demand the ENERGY STAR label. ENERGY STAR is the government's rating program that shows you which items are more efficient than typical models. ENERGY STAR items will save you money over the product's useful life.

- **IMPROVE YOUR WINDOWS**

Efficient windows can lower your heating and cooling bills up to 30 percent.

- If your home has only single pane windows, consider replacing them with low-e coated or ENERGY STAR windows. Alternatively, storm windows can reduce your winter heat loss by 25–50 percent.

- **IMPROVE YOUR MECHANICAL SYSTEMS**

Up to half of your energy bill goes just for heating and cooling.

- Turn your heating or cooling down every night and whenever you leave home. Better yet—install an ENERGY STAR programmable thermostat and save about \$100 each year; it adjusts the temperature automatically for you.
- When it's time to replace your hot water tank, buy the most efficient one possible. Consider a tankless, on-demand system (these won't work for everyone, so talk to your installer).
- An ENERGY STAR qualified furnace, when properly sized and installed, along with sealed ducts and a programmable thermostat, can save up to 20 percent on heating bills.
- When buying a new AC unit, look for a SEER (Seasonal Energy Efficiency Rating) of 13 or higher on central systems and the ENERGY STAR label on room units. In arid climates, evaporative coolers are much more efficient (and less costly) than AC. They also add needed moisture to the air, while AC units further dry the air.

- Adding area heaters to warm just the occupied rooms in your home will enable you to keep the rest of your home at cooler, more economical temperatures.
- **LANDSCAPE**
Save \$100-\$250 each year.
 - Trees that lose their leaves in the fall give protection from the summer sun and permit winter sunlight to reach and warm your home. Plant trees on the south, east, and/or west sides of your home. Be sure to shade the AC unit. Create a windbreak with evergreen trees and shrubs to stop chilling winds.

2. Myth Busters:

MYTH: Setting your thermostat back during the day doesn't save money because your heating system has to work so hard when you get home to warm the house back up (or cool it down).

RULE OF THUMB: Depending on the climate where you live and the efficiency of your home, including levels of insulation, you should be able to set your thermostat back several degrees for 8 hours a day which will reduce the number of times your heating or cooling system needs to cycle on during the day – and that saves significant energy. It's true that when you come home and turn up your thermostat, your heating or cooling system will run for a longer period of time to get your home up to its optimal temperature. But you'll still have saved more energy (and money) over the 8 hours your system worked less intensely – so go ahead and set your thermostat back.

Recommendation: Turn your thermostat back several degrees every night and when you leave home. Better yet - install a programmable thermostat. It will remember to turn the thermostat up and down based on your schedule, so you never have to remember. This can save you about \$100 each year.

MYTH: Replacing your old windows is the most cost-effective energy improvement you can make to reduce your home energy bills.

RULE OF THUMB: Replacing windows is not the most cost-effective way to reduce your energy bills. The actual amount of your savings depends on how leaky your old windows are, how many windows your older home has, how tight and well-insulated your home is, and how efficiently the heating system operates. The biggest benefits from replacing windows are improved comfort, aesthetics, and added resale value.

Recommendation: If you're planning to replace your windows, make sure you get ENERGY STAR® windows. This small incremental increase in cost will pay you back in lower energy bills, as ENERGY STAR rated windows are significantly more energy efficient than windows without the ENERGY STAR® label.

MYTH: Basements and crawlspaces don't need to be insulated, since they are primarily below grade and we don't live in them.

FACT: According to the Department of Energy, an uninsulated foundation can result in a large heat loss from an otherwise tightly sealed, well-insulated home. It can also make rooms below grade uncomfortable. Foundation insulation can result in lower heating requirements and may help avoid water vapor condensation problems. However, a poorly designed foundation insulation system can cause many problems such as radon infiltration, moisture problems, and insect infestation. [Learn more.](#)

For more information on insulating a crawl space, [click here.](#)

MYTH: Tightening up ductwork doesn't save energy because the ducts are normally located inside the house, so any air that leaks out will leak into the house anyway.

FACT: In homes that have a forced air furnace, sealing leaky ducts will put heat where you want it, making you feel more comfortable quickly when the heating or cooling kicks in. Sealing ductwork also will balance the system so it operates more efficiently and more safely. Fixing ductwork problems pays multiple dividends. When sealing ductwork in places that are accessible, using mastic (a gooey grey substance that is put on ductwork joints with a paint brush) rather than duct tape (which often starts to come off within a year), is your best bet.

Myth: It is better to let your vehicle idle than turn the engine off – turning the engine back on uses more fuel than idling.

Fact: Idling uses more fuel than turning off your engine and restarting it. As a rule of thumb, turn off your engine if you will be idling for more than 30 seconds. David Champion, Senior Director of Auto Testing for Consumer Reports, told the Alliance to Save Energy, "You should not turn your engine off at a traffic light. However, if you are stuck at a train crossing or bridge opening, and it is likely you are going to be parked for a number of minutes, you should turn off your engine."

Myth: Parking a vehicle in the shade will stop fuel evaporation and loss.

Fact: According to API, technical changes to vehicle fuel systems have virtually eliminated fuel evaporation loss. David Champion, Senior Director of Auto Testing for Consumer Reports, told the Alliance to Save Energy that a small amount of gas does evaporate from older vehicles (1974 or older). According to the [EPA](#), avoid poorly fitted or missing gas caps to decrease evaporation loss.

Myth: Buying premium gasoline improves mileage.

Fact: Premium gasoline contains higher octane grades. The octane number measures a fuel's resistance to engine knocking or pinging – abnormal combustions that could damage the engine. According to [Consumer Reports](#), most engines are designed for an octane rating of about 87 (regular gasoline); engine performance does not increase with a higher octane level than recommended. On the other hand, engines designed to run on premium gas can run on regular gas, without knocking, but with a decrease in fuel efficiency.