

# ENERGY SAVERS TIPS



Ways to **Save Energy** in your home





## SAVING ENERGY AT HOME

Every month you pay to power your home. You pay for electricity. You pay for heat. You pay for water. All those costs add up.

But you can save money on your utility bills. How? By making your home more energy efficient.

An efficient home uses the energy you pay for as wisely as possible, with as little waste as possible. In an efficient home, the money you spend to power your home will stay in your home instead of leaking out because of poor insulation, a wasteful air-conditioning system, or other problems.

Creating an energy-efficient home is not a change you can make overnight. It's a series of small changes you can make every day, and in every part of your home.

### ENERGY EFFICIENCY MEANS:

- Getting the most use out of each unit of energy you purchase
- Using energy wisely
- Eliminating the ways your home wastes energy

### MAKING YOUR HOME MORE EFFICIENT WILL:

- Make it more comfortable
- Make it safer
- Save you money



## YOUR ENERGY BILL:

### WHERE DOES THE MONEY GO?

Our energy bills don't come with a detailed receipt showing which appliances and systems use the most energy. But you can look for clues, like changes in your water or electric bill at different times of the year. By understanding how much energy your appliances should be using, you can figure out which systems are too costly and need to be replaced or adjusted. This tip book will make suggestions that can save you energy and money.

### A LOOK AT WHERE THE AVERAGE HOME USES THE MOST ENERGY:

|                    |             |
|--------------------|-------------|
| Space heating..... | 45%         |
| Water heating..... | 18%         |
| Space cooling..... | 9%          |
| Lighting.....      | 6%          |
| Refrigeration..... | 4%          |
| Wet cleaning.....  | 3%          |
| Electronics.....   | 5%          |
| Cooking.....       | 4%          |
| Computers.....     | 2%          |
| Other.....         | 4%          |
| <b>TOTAL:</b>      | <b>100%</b> |

Source: U.S. Department of Energy. *Buildings Energy Data Book*.



Lowering your energy costs is easy when you switch to light-emitting diodes (LEDs). Start with the lights you use most often. Any light you use more than two hours per day is a good candidate for an LED bulb.

## INSTEAD OF THIS:



## USE THIS:



## Why use LEDs?

- **LEDs make more light with less electricity.** An LED lightbulb uses only 9 watts to produce as much light as a 60-watt incandescent bulb.
- **LEDs last longer.** A 60-watt incandescent bulb usually lasts about 1,000 hours before burning out. LEDs can last 25,000 hours or more!
- **LEDs will save you money.** LEDs cost a little more, but they save so much electricity that they pay for themselves through energy savings. An LED bulb cuts energy use by 80% or more.



## WHAT YOU CAN DO:

### TURN OFF THE LIGHTS

Why? One 100-watt bulb left on overnight costs \$25 per year.

### SHOP FOR SALES

Why? Stores often have sales on LED bulbs, especially during October, which is National Energy Action Month.

### CHECK THE COLOR TEMPERATURE

Why? Lightbulbs can emit different colors of light. It's important to pick the color temperature that you like best. Lightbulbs are rated on the Kelvin temperature scale. 2000K is close to the warm glow of a candle and 6500K is the bright light of daylight. Lightbulb manufacturers separate lightbulbs into three categories: warm white, cool white, and daylight. Traditional incandescents are in the same Kelvin range as warm white bulbs.

### BUY ENERGY STAR® LIGHT FIXTURES AND LAMPS

Why? They use one-quarter of the energy that traditional fixtures use.

### KEEP LIGHTS CLEAN

Why? Dust can cut a bulb's light output by 25%.



The water heater is the **2nd**-largest energy user in most homes.

The water heater accounts for 18% of your energy bill, second only to your home's space-heating system, according to the U.S. Department of Energy.

One reason for this is that we use a lot of water. Another reason is that we actually pay twice for hot water—once for the water itself and again for the cost of heating it.

Reducing the amount of hot water you use will save money on both bills.

## TURN DOWN THE TEMPERATURE

Set the thermostat on your water heater to 120°F. It's one of the easiest ways to save. This change:

- **Saves energy.** Water is usually heated to 140°F; turning it down will save between 6% and 10% on your energy bill, according to the U.S. Department of Energy.
- **Prevents scalding** from extra-hot water.
- **Slows buildup** of minerals and corrosion in the water heater and in the pipes.

Leave your water heater thermostat at 140°F only if you have an older dishwasher with no booster heater. Consult your owner's manual or contact the manufacturer to find out if yours has a booster heater.

If you'll be on vacation, turn down the thermostat even further. If there's no risk of freezing, you can turn it off completely when you'll be away for several days.



## WHAT YOU CAN DO:

### INSTALL LOW-FLOW SHOWERHEADS

Why? They use one-third to one-half the water that regular showerheads use.

### TURN DOWN THE WATER HEATER THERMOSTAT TO 120°F

Why? You will save money and save yourself from scalding accidents.

### BUY A WATER HEATER THAT FITS YOUR NEEDS

Why? If you buy a new water heater that's too big, you'll pay to heat up water you don't need. That's a waste of both energy and money.

### TAKE SHORT SHOWERS

Why? They use less hot water than baths.

### FIX LEAKY WATER FAUCETS

Why? Thirty drops of water per minute can waste up to 50 gallons of water per month.

### INSTALL LOW-FLOW AERATORS ON FAUCETS

Why? They reduce the amount of water that flows from your faucet, saving both water and energy.

### LOOK FOR REBATES ON ENERGY STAR HEAT PUMP WATER HEATERS

Why? You may be able to reduce your costs by taking advantage of rebates.

# LAUNDRY

Washing machines use two types of resources: electricity to power their motors and water to do their work.

Some machines are far more efficient at using these resources. To find the most efficient, look for the ENERGY STAR label. Conventional washers can use 40 gallons of water on just one load of laundry. But ENERGY STAR-rated washers can use fewer than 10 gallons of water. They use less energy, too.



## ENERGY STAR WASHING MACHINES:

- **Cut utility bills** by an average of \$50 per year. That's a total of \$550 saved over 11 years, the average life span of a washing machine.
- **Save an average of 7,000 gallons of water** each year.
- **Come in two designs:** front-loading machines and redesigned top-loading machines. Neither has a central agitator.
- **Have a faster spin speed** to remove more water from your clothes. This helps clothes dry faster.

## WHAT YOU CAN DO:

### WASH WITH COLD WATER, INSTEAD OF HOT

Why? Hot water is necessary only for very dirty laundry.

### WASH AND DRY ONLY FULL LOADS

Why? The machines use roughly the same amount of water and energy to wash or dry one item as they do to wash or dry a full load.

### SEPARATE FAST-DRYING AND SLOW-DRYING CLOTHES

Why? It helps you use the dryer only as long as you need to.

### CLEAN THE LINT FILTER IN THE DRYER AFTER EVERY USE

Why? A clogged filter can prevent your dryer from doing its job.

### DRY CLOTHES OUTSIDE IN GOOD WEATHER

Why? Sunlight is free.

### CHOOSE ENERGY STAR WASHING MACHINES

Why? They use less than half the water and energy of standard machines.

### USE THE HIGH-SPEED SPIN CYCLE OF YOUR WASHING MACHINE

Why? It extracts more water, so your laundry won't need to dry as long.

### BUY A DRYER WITH AN AUTOMATIC SHUTOFF

Why? The dryer will sense when your clothes are dry and automatically turn off, saving energy.



Kitchens are home to appliances that use a lot of electricity, like the fridge, and ones that use a lot of water, like the dishwasher.

We use several of these appliances every day, and using them as efficiently as possible will help your savings add up quickly!

## REFRIGERATORS: A BIG PART OF YOUR ENERGY BILL

The fridge accounts for 4% of the average home's utility bill, according to the U.S. Department of Energy.

### TO SAVE ENERGY:

- Stick to the right temperature. Keep your fridge between 36°F and 38°F, and set your freezer between 0°F and 5°F.
- Keep the freezer full. It works more efficiently full than empty.
- Defrost manual-defrost models to keep them efficient.
- Unplug the second fridge, if you have one. It can cost between \$100 and \$200 a year to operate.
- Choose an ENERGY STAR model when buying a new fridge. It will be 15% more efficient than regular models.
- Check the door seals. If they're loose, replace them.

## WHAT YOU CAN DO:

### USE YOUR DISHWASHER

Why? You can save 5,000 gallons of water each year and \$40 in utility costs by using a dishwasher instead of washing dishes by hand, according to ENERGY STAR.

### WASH ONLY FULL LOADS OF DISHES

Why? It costs exactly the same to wash one dish as it does to wash a full load of dishes.

### CHECK YOUR REFRIGERATOR TEMPERATURE

Why? You lose money if you keep it too cold. To check, put one thermometer in a glass of water in the center of the refrigerator and another between packages in the freezer. Read them after 24 hours. The temperature should be between 36°F and 38°F in the refrigerator and 0°F and 5°F in the freezer.

### USE THE AIR-DRY OPTION ON DISHWASHERS

Why? It saves energy and keeps the machine from using a heating element to bake your dishes dry.

### SCRAPE DISHES INSTEAD OF PRERINSING THEM

Why? Dishwashers made in the past 5 to 10 years can clean even heavily soiled dishes without prerinsing.

### USE MICROWAVES AND SLOW COOKERS TO COOK SMALL MEALS

Why? They use less energy than the stove or oven.

### KEEP THE INSIDE OF YOUR MICROWAVE CLEAN

Why? It improves the efficiency of your microwave.

### USE LIDS WHEN YOU COOK

Why? They keep steam in and help food cook faster, which saves energy.

Each of your appliances has two price tags. The first is the price you pay for it at the store. The second is the price you pay to run it over its lifetime.

Over time, the cost of running your appliance will add up. Usually, this price is higher than the price you pay at the store.

Choosing the most energy-efficient appliances will help reduce operating costs. The yellow EnergyGuide label on the appliance will show you how much energy it will use. But also look for the ENERGY STAR symbol. It's only on appliances that meet strict energy-efficiency standards.

## ENERGY STAR: A LABEL FOR SAVINGS

Products with the ENERGY STAR label meet strict energy-efficiency guidelines set by the U.S. Environmental Protection Agency and the U.S. Department of Energy.

Before you go to the store to buy a new appliance, see if the program certifies the type of machine you need. ENERGY STAR-certified products include:

- Clothes washers
- Clothes dryers
- Dehumidifiers
- Dishwashers
- Refrigerators
- DVD players
- Heating equipment
- Room air conditioners
- Home audio equipment
- Freezers
- Televisions
- Light fixtures
- Cooling equipment

## WHAT YOU CAN DO:

### ALWAYS BUY ENERGY STAR APPLIANCES

Why? They're more efficient than other appliances, and they'll cost less to operate.

### THINK ABOUT CONFIGURATION

Why? It matters. Fridges with freezers on top are most efficient. Front-loading washers are more efficient than top-loading machines.

### LOOK AT THE ENERGYGUIDE LABEL WHEN YOU'RE SHOPPING FOR AN APPLIANCE

Why? It will show the appliance's second price tag: its operating cost. It will also give comparisons to similar machines.

### DON'T LOOK AT JUST ONE APPLIANCE

Why? It's better to compare how efficient different machines are than to look only at one option.

### GET THE RIGHT SIZE

Why? Oversize appliances waste energy. Choose an extra-large dishwasher or fridge only if you have a large family that needs it.

### LOOK FOR HIGH-EFFICIENCY FEATURES

Why? Things like soil-sensing detectors on dishwashers and automatic shutoffs on clothes dryers save energy and money.

### RECYCLE OLD APPLIANCES

Why? It reduces waste. Fridges and other appliances can be used for scrap metal or other uses. Find a real recycling program, not one that resells inefficient secondhand machines.



Americans spend more money powering home entertainment systems, computers, and other electronics when they're off than when they're in use.

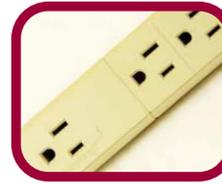
Living rooms are where most of the electronics in our homes can be found. We watch TV, turn on the computer, and pick up the phone from our living areas—and the costs add up, even when those electronics are off. In fact, Americans spend more money powering home entertainment systems, computers, and other electronics when they're off than when they're in use.

The living room is ripe for other energy-saving measures as well, especially if it has multiple windows, a fireplace, or several air vents.

## POWER STRIPS: A SMART WAY TO SAVE

Your electronics can draw energy even while they're off—and that costs you money. Power strips help prevent this energy waste.

- **Plug electronics into a power strip.** Flip the switch off when you're not using the equipment.
- **If you have many electronics, group them** onto several power strips. Put things you use at the same time, such as the computer and printer, on the same strip.
- **Put power strips in easy-to-reach places.** They won't save energy if you don't use them regularly!
- **Don't put your TV on a power strip.** Many TVs need to be reprogrammed if they're completely turned off, making them a bad fit for power strips.
- **Make use of advanced or smart power strips.** They automatically turn off the power to certain appliances when not in use.



## WHAT YOU CAN DO:

### TURN OFF THE TV WHEN NO ONE IS WATCHING

Why? It's the easiest way to save.

### USE THE SLEEP FUNCTION

Why? An average household can use 60% less energy to power electronics just by using the sleep mode.

### UNPLUG POWER ADAPTERS AND CHARGERS

Why? When cell phones, digital cameras, or laptops are done charging, the charger still draws energy unless you unplug it.

### CHECK YOUR AIR VENTS AND REGISTERS

Why? If they're blocked by furniture or drapes, the air you pay to heat or cool won't reach the rest of the room.

### CONSIDER YOUR WINDOW COVERINGS

Why? They should be closed during the day in summer to keep the heat out and open during the day in winter to let sunlight warm your home.

### SHUT THE FLUE ON YOUR FIREPLACE

Why? An open flue lets air escape from your home, wasting energy. If you never use the fireplace, have it sealed up permanently.

### WEATHER-STRIP WINDOWS

Why? Windows are a common location for air leaks. Seal them up with weather stripping or caulk for a more efficient home.



In some areas, watering the yard can account for **50%** of a home's total water use in summer months.

When it comes to the outdoors, most families like to use a lot of water—for the lawn, the garden, and even washing the car.

Learning to use less water outside makes a big impact on your bills. You can save tens of thousands of gallons by taking simple steps, such as selecting a better watering system and not mowing too often.

## WATCH THAT SPRINKLER

Sprinklers can use more than 260 gallons of water per hour—and the bills add up quickly.

### TO SAVE WATER:

- **Check your aim.** The sprinkler should water your lawn, not a nearby yard or sidewalk.
- **Use a drip hose instead of a sprinkler,** if possible. Sprinklers spray water onto the tops of plants, where it evaporates. Drip hoses deliver water to a plant's roots.
- **Water early in the morning or late at night,** when temperatures are lower.
- **Check the forecast.** Never water when it's going to rain.
- **Install an automatic shutoff device** if you have an irrigation system.



## WHAT YOU CAN DO:

### LET YOUR GRASS GROW

Why? Taller grass loses less water to evaporation than short grass. Mowing too frequently means your yard will need more water.

### USE A SHUTOFF NOZZLE WHEN WATERING

Why? It saves water when you use a hose to water plants.

### PLANT TREES THAT LOSE LEAVES ON YOUR HOME'S SOUTH SIDE

Why? Deciduous trees will protect your home from the summer sun, and then after the leaves fall they'll let the winter sun help heat your home.

### RETHINK YOUR OUTDOOR LIGHTS

Why? You'll save energy by switching to efficient outdoor lights. Also consider installing a motion sensor to increase security and savings.

### DON'T HOSE DOWN THE DRIVEWAY, GARAGE, OR SIDEWALK

Why? Using a broom instead saves water.

### CHOOSE DROUGHT-RESISTANT PLANTS

Why? If maintained properly, a landscape of drought-resistant and native plants will use less than half the water of a traditional yard.

### USE A BUCKET OF WATER TO WASH A CAR

Why? It uses less water than a hose.



Heating your home accounts for 45% of an average home's energy bill—the single biggest energy expense in your home.

Most homes have a furnace or boiler to power the heating system. These systems are regulated by a thermostat, which tells the system how much energy to use—and controls the temperature of your home.

Set your thermostat at 68°F in the winter and 78°F in the summer to save energy.

Consider replacing an old furnace, especially if yours is more than 15 years old. New high-efficiency furnaces are far more efficient than older models. Consider purchasing a heat pump for dependable and efficient heating. Cold-climate heat pumps are now available as well.

## PROGRAMMABLE THERMOSTATS

Programmable thermostats automatically adjust your home's temperature to maximize your savings by turning down the heat while you're away during the day and while you sleep at night.

Used properly, a programmable thermostat can save up to \$150 a year, according to ENERGY STAR.

If you use a programmable thermostat, make a schedule and stick to it. Program it to lower the heat two hours before you go to bed and increase it just before you wake. Lower the heat during the day if no one will be home for four or more hours. This doesn't apply to heat pumps, which operate most efficiently when they stay at a consistent temperature.

The thermostat will let you change the schedule. But don't do this too frequently or you won't save as much money as you should.

## WHAT YOU CAN DO:

### TURN THE THERMOSTAT DOWN 5°F

Why? Turning it down one degree saves about 2% on your heating bill. Turning it down five degrees saves about 10%. Install a programmable thermostat for gas or oil heating and it will do the work for you.

### HAVE A PROFESSIONAL INSPECT AND TUNE UP YOUR FURNACE

Why? Oil-burning furnaces should be checked every year. Gas-burning ones should be checked every two years.

### IF YOU USE A SPACE HEATER, BE SAFE!

Why? Old or improperly used space heaters can be very dangerous. Make sure yours meets the latest safety standards, turn it off when you sleep, and use it only in an open area.

### CHECK FILTERS

Why? Forced-air furnaces and heat pumps have filters that need to be cleaned or replaced monthly.

### CHECK AIR VENTS, RADIATORS, AND REGISTERS

Why? If they're blocked by furniture or drapes, heat won't get into the rest of your home.

### CLEAN THE AREA AROUND YOUR FURNACE

Why? It decreases the chance of fire and improves airflow.

### WEAR A SWEATER INSTEAD OF TURNING UP THE HEAT

Why? Turning up your thermostat decreases your savings.

### NEVER USE THE KITCHEN STOVE TO HEAT YOUR HOME

Why? It's very dangerous! Stoves aren't designed for heating large areas: doing so lets toxic chemicals into your home and is a fire hazard.

### CONSIDER THE NEEDS OF EVERYONE WHO LIVES IN YOUR HOME

Why? Elderly people and people with medical conditions can have greater heating needs—and should adjust their thermostat to meet them.

# COOLING

Cooling your home is just as important as heating it—and the cost can be nearly as high in some parts of the country.

Before you turn on the air conditioner, reduce your need for cooling. Use fans and natural ventilation first. Turn on the air conditioner only if these measures aren't enough. Make sure your air conditioner is running as efficiently as possible, too.

## SIZE MATTERS

When you buy a new air conditioner, make sure to get one that's the right size for your home. Don't base the size of a new system on the size of an old one—it could have been the wrong size.

**If you buy one that's too big**, it won't remove the humidity from your home and it will turn on and off more frequently than a system of the proper size. This increases wear and shortens its life span.

**If you buy one that's too small**, it won't be able to cool your home enough on the hottest days of summer.

**For a central air-conditioning system**, your contractor should base the new equipment on the amount of heat your home gains during the summer, which he or she can calculate with specialized software.

**For room air conditioners**, check EnergyStar.gov for sizing recommendations. ENERGY STAR suggests a 14,000 BTU model, for example, for a space of 550 to 700 square feet.



## WHAT YOU CAN DO:

### CLEAN FILTERS MONTHLY

Why? Dirty or clogged filters block airflow and reduce efficiency.

### USE A FAN FIRST

Why? Fans don't use as much energy as air conditioners, and they are effective.

### INSTALL ROOM AIR CONDITIONERS CORRECTLY

Why? If the unit isn't installed tightly, cooled air will escape from your home.

### PLACE YOUR ROOM AIR CONDITIONER PROPERLY

Why? If the thermostat of your unit is near electronics or appliances that produce heat, it will read higher than it should. Put the unit in a shaded window where it won't be heated by sunlight.

### SET THE THERMOSTAT AT 78°F IN SUMMER

Why? The smaller the difference between the inside and outside temperatures, the lower your cooling bill will be.

### CHOOSE NEW WINDOWS WITH A LOW-E COATING

Why? Much of your home's heat enters through the windows. Low-E helps block that heat. Also look for ENERGY STAR-rated windows.



Heating and cooling account for more than **50%** of the average energy bill, according to the U.S. Department of Energy.

Heating and cooling needs vary by season, but the same tactics apply. A tightly sealed home keeps the air you heat or cool inside and the outdoor air outside.

If you plan to live in your home for a long time, think about planting trees that will lose their leaves every fall on the west and south sides of your house. In the summer they'll shade your home from the sun, and then in the winter they'll let the sun heat your home.

## CHOOSE ENERGY-EFFICIENT SYSTEMS

The easiest way to find an efficient heating or cooling system is to look for the ENERGY STAR label. But there are also a few other indicators of how efficient a system is.

**For furnaces or boilers**, look for a high annual fuel utilization efficiency (AFUE), which is a ratio of how much heat the machine creates compared to the amount of energy it consumes. The higher the AFUE, the more efficient the system.

**For central air conditioners**, look for a seasonal energy efficiency rating (SEER) of 14.5 or higher. This is the cooling output divided by the power input. The higher the number, the more efficient the air conditioner.

**For room air conditioners**, look for a high combined energy efficiency ratio (CEER), which is the cooling output divided by the power input. Choose a unit with a CEER of 10.8 or higher. The higher the CEER, the more efficient the machine is. ENERGY STAR models save the most energy.

## WHAT YOU CAN DO:

### In the Summer

#### USE FANS

Why? They use less energy than air conditioners and can be very effective.

#### USE CEILING FANS

Why? They're more effective than other fans. Running a ceiling fan will allow you to set the thermostat four degrees higher with no noticeable change in comfort.

#### CLOSE SHADES AND WINDOWS DURING THE DAY

Why? It keeps out sunlight and heat. Open them at night to help ventilate your home.

#### SET THE THERMOSTAT AT 78°F

Why? It helps save energy. Use a fan before turning down the air conditioner.

### In the Winter

#### KEEP DRAPES OPEN DURING THE DAY

Why? It lets the sunlight heat your home. Close them at night to keep the heat in.

#### REPAIR WINDOWS

Why? Cracks in windows let cold air into your home, driving up your energy bills. Install weather stripping if your window is loose.

#### INSTALL STORM WINDOWS

Why? They pay for themselves by keeping out cold air and preventing moisture from collecting on the windows.

#### USE TIMERS INSTEAD OF LEAVING LIGHTS ON

Why? If you don't like coming home to a dark house in the short days of winter, save energy by using timers, motion detectors, and daylight sensors.

Sealing and insulating your home can reduce your heating and cooling costs by as much as 30%, according to the U.S. Department of Energy.

Heat naturally flows from warm areas to cool ones. If your home isn't well sealed, the air you pay to heat and cool can flow right out of your home.

Several areas are prone to air leaks: the attic, basement, windows, doors, baseboard moldings, electrical outlets, wall- or window-mounted air conditioners, and dropped ceilings above bathtubs and cabinets.

## HOW TO FIND AIR LEAKS

A home's biggest air leaks are usually in big areas, such as the basement or attic. But small leaks also add up.

To find air leaks, look for daylight around the frames of windows and doors. If you see light, there's an air leak.

You can also light a stick of incense and use it to locate leaks. Hold it in areas you think are drafty. Moving air makes the smoke waver, showing you where there's an air leak. Or you can also put water on your hand and hold your hand near potential air leaks; the water will make you more sensitive to cool air.

## WHAT YOU CAN DO:

**CAULK CRACKS AND GAPS LESS THAN ¼ INCH WIDE**  
Why? Caulk is flexible and a good way to seal air leaks. Apply it when the outdoor air temperature is above 45°F and not very humid, or the caulk may not dry properly.

### WEATHER-STRIP DOORS AND WINDOWS

Why? It's an easy way to seal leaks. Compression and V-strip weather stripping are good for windows. For doors, either replace the threshold or attach a door sweep to seal the air gap at the bottom of the door.

### USE INSULATING BLINDS, SHADES, OR CURTAINS

Why? Windows are a frequent source of air leaks. Interior window quilts or cellular shades can reduce the draft and increase the insulation when they're drawn closed.

### FIND PROGRAMS IN YOUR AREA

Why? The Weatherization Assistance Program helps low-income families across the United States insulate and weatherize their homes. State energy offices and utility companies also frequently offer programs.

### INSULATE YOUR WATER HEATER TANK

Why? If your water heater uses a tank, it can easily lose heat through the walls of the tank.

### KNOW HOW MUCH INSULATION YOU HAVE

Why? Only 20% of homes built before 1980 are well insulated, according to the U.S. Department of Energy.

### SCHEDULE A BLOWER DOOR TEST WITH AN ENERGY AUDITOR

Why? Blower door tests measure how airtight a home is. An energy auditor can assess energy efficiency and make recommendations for improvements.

SAMPLE

Every year, more than 25,000 residential fires are associated with the use of space heaters, according to the U.S. Consumer Product Safety Commission.

Your home uses energy in many places and for many machines—and you must take care to operate each of them as safely as possible.

Decreasing your energy use means making changes throughout your home. Make each change as safely as possible and install some additional safety features, such as carbon monoxide alarms, to keep your family safe at home.

## SPACE HEATERS: SAFETY FIRST!

Every year, fires and carbon monoxide poisonings are caused by space heaters. More than 300 people die in these fires. Each year 6,000 people are treated at emergency rooms for burns associated with space heaters, mostly in nonfire situations.

It's important to buy the safest space heater possible and always think about safety while using it.

### MAKE SURE YOUR SPACE HEATER:

- Meets the latest safety standards. These standards were recently updated for greater safety.
- Is used only in an open area. Air needs to circulate around the space heater. Use it only on level, hard, nonflammable surfaces.
- Is at least three feet away from flammable items. Any closer is a big fire danger!
- Is not an unvented gas or kerosene heater. These are very dangerous. If you do have one, always keep the doors open when you use it to keep pollutants from building up.

## WHAT YOU CAN DO:

### BUY SMOKE DETECTORS

Why? You should have one on every level of your house and one outside each sleeping area. Replace the batteries twice each year.

### GET A CARBON MONOXIDE ALARM

Why? This odorless gas is deadly and can be produced by defective heaters.

### KNOW THE SYMPTOMS OF CARBON MONOXIDE POISONING

Why? It's deadly. Symptoms include dizziness, headache, nausea, irregular breathing, and confusion. If you think you have the flu but feel better when you leave the house, carbon monoxide could be the culprit.

### NEVER LEAVE AN ENGINE RUNNING IN AN ATTACHED GARAGE

Why? The fumes can be toxic. Never leave a snowblower, lawn mower, car, or anything else with an engine running in the garage—even if the door is open!

### KEEP THE AREA AROUND YOUR FURNACE CLEAR

Why? The furnace needs air to do its job. Never store anything flammable near your furnace—it's a fire hazard.

### OPEN WINDOWS AND USE FANS AROUND CHEMICALS

Why? Not ventilating your home or garage when you're using chemicals can cause health problems.

### NEVER INSERT METAL OBJECTS INTO AN APPLIANCE

Why? Doing this—putting a knife in a toaster, for example—puts you at risk of being shocked. Unplug the appliance first.





Energy savings vary by region and by family. The following is a list of key sources used in preparing this book:

**The American Council for an Energy-Efficient Economy**  
[www.aceee.org](http://www.aceee.org)

**The U.S. Department of Energy**  
[www.energy.gov](http://www.energy.gov)

**The U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy**  
[www.eere.energy.gov](http://www.eere.energy.gov)

**ENERGY STAR®**, a joint program of the U.S. Department of Energy and the U.S. Environmental Protection Agency  
[www.energystar.gov](http://www.energystar.gov)

**Alliance to Save Energy**  
[www.ase.org](http://www.ase.org)

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