

A stylized graphic of a house outline in blue and grey. The house has a gabled roof, a chimney on the left side, and two rectangular windows. A blue path leads from the bottom left towards the house. The background is white.

Saving Energy at Home:

101 Tips



A Message from the Director



Dear Fellow New Yorker:

Energy and heating costs are a major concern of many older New Yorkers and we must do everything we can to help reduce these costs. I am pleased to share with you this booklet that provides helpful tips and advice to help with lessening some of the burdens associated with escalating energy related costs.

The State Office for the Aging, as part of Governor Paterson's state-wide, multi-agency public information education campaign called HeatSmartNY, will continue to work to provide New Yorkers facing increased home heating costs with the tools and assistance they need to get through the winter months. I hope that you find this information useful, and please do pass it along to friends, neighbors or family members who may also benefit from using some of the tips.

Cordially,

A handwritten signature in black ink that reads "Michael J. Burgess". The signature is fluid and cursive.

Michael J. Burgess
Director



Saving Energy at Home: 101 Tips

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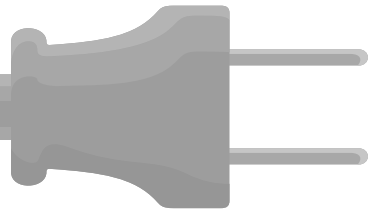
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Saving Energy at Home:



101 Tips

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Audit:

A home energy audit is a good first step to assess how much energy your home consumes and to evaluate what measures you can take to make your home more energy efficient. An audit will show you problems that may, when corrected, save you significant amounts of money over time. During the audit, you can pinpoint where your house is losing energy. Audits also determine the efficiency of your home's heating and cooling systems and they show you ways to conserve hot water and electricity.



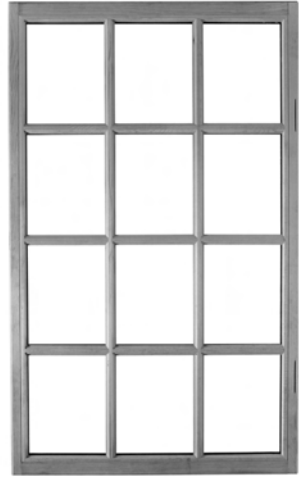
A professional auditor uses a variety of techniques and equipment to determine the energy efficiency of a structure. Thorough audits often use equipment such as blower doors, which measure the extent of leaks in the building, and infrared cameras, which reveal hard-to-detect areas of air infiltration and missing insulation.

Energy audits can be free to qualified individuals. Contact your local Office for the Aging for details.

If you don't know their telephone number, call the New York State Office for the Aging Help Line at 1-800-342-9871.

Windows:

- Upgrade leaky windows. It may be time to replace them with more energy efficient models or to at least invest in weather stripping and storm windows.
- Weather stripping prevents air from leaking through gaps around doors and the moving parts of an operable window.
- 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.
- Install tight-fitting, insulating window shades on windows that may feel drafty after weatherizing.
- Close your curtains and shades at night; open them during the day.
- Keep windows on the south side of your house clean to let in the winter sun.
- Install exterior or interior storm windows; storm windows can reduce heat loss through the windows by 25% to 50%. Storm windows should have weather-stripping at all moveable joints; be made of strong, durable materials; and have interlocking or overlapping joints.
- Repair and weatherize your current storm windows, if necessary.



Doors:



- Check doors and foundation for drafts and use insulation as needed. Test air leaks by using an incense stick next to windows, doors, electrical boxes, and plumbing fixtures, electrical outlets, ceiling fixtures, attic hatches and other locations where there is a possible air path to the outside.

If the smoke stream travels horizontally, you have located an air leak that needs caulking, sealing, or weather stripping.

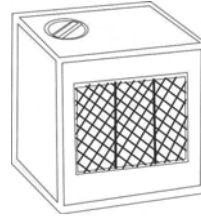
- A ¼ inch gap at the base of a three-foot wide exterior door leaks as much air as a three inch hole in the wall of your home.
- Weather stripping should be applied to the tops and sides of any door frame.

Attic:

- The attic is one of the places where you often find the biggest air leaks, which can increase your energy bills and make you uncomfortably hot in summer and cold in winter. It is also a place that is generally accessible, making it easier to air seal and insulate to improve your home's comfort and overall energy performance.

- Have your insulation checked. Measure the depth of existing insulation using a ruler. If there are less than 7 inches of fiber glass or rock wool or 6 inches of cellulose, you could probably benefit from an upgrade. Insulating ceilings, walls, attics, floors, crawl spaces and basements to recommended standards can reduce heating and cooling costs by 5% to 25%.

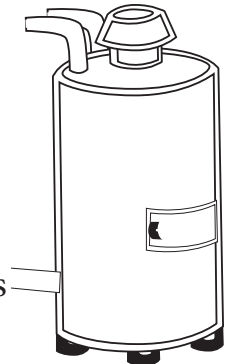
Furnace:



- Have the furnace cleaned yearly so it is working efficiently.
- Clean warm-air registers, baseboard heaters, and radiators as needed; make sure they're not blocked by furniture, carpeting, or drapes.
- Clean furnace filters monthly. Dirty filters restrict airflow and increase energy use.
- If your furnace is more than 15 years old, replace it with an ENERGY STAR qualified furnace, which is 15% more efficient than a conventional furnace. If you have a boiler, consider replacing it with an ENERGY STAR qualified boiler that is 10% more efficient than a new, standard model.
- If your heat pump is more than 10 years old, replace it with an ENERGY STAR heat pump, which uses at least 20% less energy than a standard new model.

Hot Water Heater

- Turn the water heater down to 120 degrees or “normal” setting when home and to the lowest setting when away. On the water tank itself, turn temperature down to 55 degrees. Standard setting is 60 degrees from the factory. This results in 15% reduction in costs for heating water.

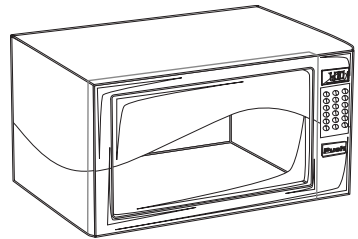


- If you are a very low user of hot water consider a tankless heater.

- 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 the first 6 feet of the hot and cold water pipes connected to the water heater.
- 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.
- Although most water heaters last 10-15 years, it's best to start shopping for a new one if yours is more than 7 years old. Doing some research before your heater fails will enable you to select one that most appropriately meets your needs.

Appliances:

- Wait until after 7:00 p.m. to use major appliances such as your clothes washer and dishwasher.



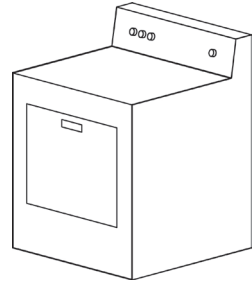
- Let your dishes air dry. A dishwasher uses more energy to dry dishes than to wash them. If your dishwasher doesn't have an automatic air-dry switch, turn off the control knob after the final rinse and prop the door open to let moisture escape.
- Locate the washing machine close to your hot water tank, if possible, to reduce the heat lost in long pipe runs. Insulate exposed pipes.
- When possible, wash clothes in cold water. About 90% of the

energy use in a clothes washer goes to water heating.

- Use Energy Star heating systems. All Energy Star products are 40% more efficient.
- Place all major appliances on energy-savings setting.
- If you need to purchase a natural gas oven or range, look for one with an automatic, electric ignition system. An electric ignition saves natural gas because a pilot light is not burning continuously.
- Use the self-cleaning oven feature only when necessary. Start the self-cleaning cycle immediately after the oven is used to take advantage of pre-existing heat.
- Size matters. Don't use your range oven to cook a small meal. A smaller appliance—a toaster oven or microwave, for example—is a wiser choice.
- A microwave can reduce the energy you use cooking by about two-thirds, while a toaster oven can cut energy consumption in half.
- Pan size matters too. You don't want the pan to be hanging over the edge of the burner, and you also want the pan to be fully heated by the burner. Choose a pan that matches the size of the burner.
- Pick your pan carefully; choose sturdy cookware that conducts heat well (such as copper-bottomed pots) and that won't warp.
- Unplug it. Even when not in use, some appliances may still be consuming "phantom" or standby energy. (Do you really need the clock on the rice cooker?)
- Put a lid on it. It decreases time on the burner.

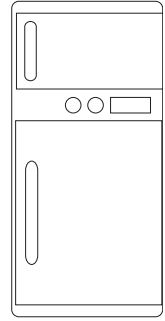
Dryer:

- Consider air-drying clothes on clothes lines or drying racks. Air-drying is recommended by clothing manufacturers for some fabrics.



- If you need to use a dryer have it on for 12 minutes or so then open the dryer door and take out clothes one piece at a time, shake each one out and hang on the dryer door while you shake each additional one. Getting rid of the steam is the key! Put them all back in one at a time and restart the dryer. This is time consuming, but it does dry the clothes in half the time.
- Don't over-dry your clothes. If your machine has a moisture sensor, use it.
- If your dryer has an automatic cycle, use it because drying more than needed wastes energy and wears out clothes.
- Dry towels and heavier cottons in a separate load from lighter-weight clothes.
- Use the cool-down cycle to allow the clothes to finish drying with the residual heat in the dryer.
- Make sure your dryer's outside vent is clear and clean.
- You should check and clean your dryer exhaust vent occasional and remove lint. This will also prevent possible fires.

Refrigerator:



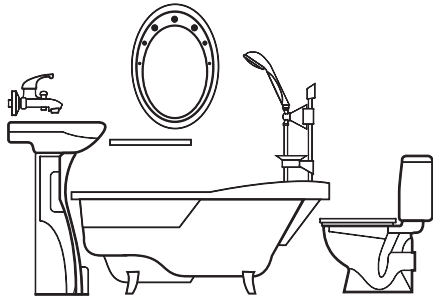
- Your refrigerator accounts for 11 percent of your household's total energy consumption. Consider getting rid of your second refrigerator, or only run when needed.
- Your refrigerator or freezer will work harder when placed next to a heat source such as a radiator, heating vent, washer, dryer or furnace.
- Look for a refrigerator with automatic moisture control. Models with this feature have been engineered to prevent moisture accumulation on the cabinet exterior without the addition of a heater. This is not the same thing as an "anti-sweat" heater. Models with an anti-sweat heater will consume 5% to 10% more energy than models without this feature.
- Don't keep your refrigerator or freezer too cold. Recommended temperatures are 37° to 40°F for the fresh food compartment of the refrigerator and 5°F for the freezer section. If you have a separate freezer for long-term storage, it should be kept at 0°F.
- To check refrigerator temperature, place an appliance thermometer in a glass of water in the center of the refrigerator. Read it after 24 hours. To check the freezer temperature, place a thermometer between frozen packages. Read it after 24 hours.
- Regularly defrost manual-defrost refrigerators and freezers; frost buildup increases the amount of energy needed to keep the motor running. Don't allow frost to build up more than one-quarter of an inch.

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- Make sure your refrigerator door seals are airtight. Test them by closing the door over a piece of paper or a dollar bill so it is half in and half out of the refrigerator. If you can pull the paper or bill out easily, the latch may need adjustment or the seal may need replacing.
 - Cover liquids and wrap foods stored in the refrigerator. Uncovered foods release moisture and make the compressor work harder.
 - A freezer that is too big for your needs wastes energy and money. A rule of thumb is to allow 130 liters of freezer capacity per person.
 - Take a look at your kitchen. If the oven is close to the fridge, see if you can move the fridge. Ideally, the refrigerator should be at opposite ends from the oven. The heat from the oven will cause the fridge to work harder.
 - Clean refrigerator coils twice a year, more often if you have pets. Condenser coils are located at the bottom or rear of your refrigerator. If they are allowed to accumulate dust and dirt as much as 25 percent more energy is required to maintain proper temperature.
 - Select a refrigerator with a freezer on top. A side-by-side unit uses up to 20 percent more energy. The Energy Guide label will help you choose the most efficient model.

Bathroom:

- Use exhaust fans only when needed in order to keep in warm or cool air.

- Open an empty, half-gallon cardboard milk carton and hold it up to the showerhead while it's fully on. If it fills in less than 10 seconds, your shower could use an energy-efficient showerhead. You'll get the same pressure with a smaller volume of water, and you'll save energy too.



If it fills in less than 10 seconds, your shower could use an energy-efficient showerhead. You'll get the same pressure with a smaller volume of water, and you'll save energy too.

- Install a flow restrictor on your shower. This device can cut the cost of taking a hot shower in half. It generally costs less than a dollar, is easily inserted into the showerhead, and cuts the flow of water virtually in half.

- Take showers instead of baths. A shower saves four to five gallons of water.

- Be aware of your water use habits. Don't let water run constantly while you're shaving. Turn off the tap when you brush your teeth and save 7-12 liters of water per minute.

- Be sure your faucets are shut off tightly, especially the hot water. Repair leaking hot water faucets. A leak of one drop per second wastes over 250 gallons of hot water a month. It's a simple, low-cost job to do.

- Make sure that your bathrooms have good ventilation fans. This will ensure better indoor air quality and moisture control. Energy Star fans use 65% less energy and run quieter. Adding a programmable timer or humidistat control will help maintain ventilation without excessive energy use.

Fireplace:

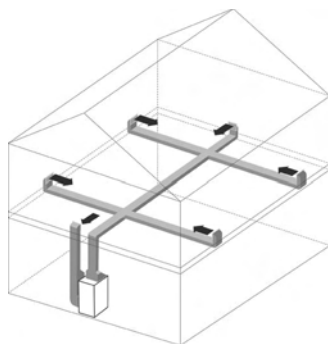
- If your gas fireplace has a continuous burning pilot light, it should be turned off during the summer or when you are away for a long time.



- When the wood burning fireplace is not in use, keep the flue damper tightly closed. A chimney is designed specifically for smoke to escape, so until you close it, warm air escapes—24 hours a day. Keeping the damper open is like keeping a 48-inch window wide open during the winter; it allows warm air to go right up the chimney. Remember to write a note that the chimney is blocked off.
- If you never use your fireplace, plug and seal the chimney flue.
- Install tempered glass doors and a heat-air exchange system that blows warmed air back into the room.
- Check the seal on the flue damper. Make it as snug as possible.
- Add caulking around the fireplace hearth.

Ducts:

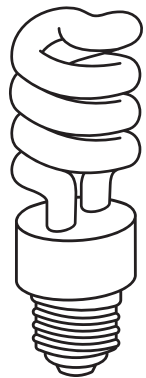
- Dust, lint and other debris can block your air vents and reduce the efficiency of your furnace.
- Insulate duct work that run through unheated areas like crawl spaces, basements and garages.



- Check your ducts for air leaks. First, look for sections that should be joined but have separated and then look for holes.
- If you use tape to seal your ducts, avoid cloth-backed, rubber adhesive duct tape, which tends to fail quickly. Researchers recommend other products to seal ducts: mastic, butyl tape, foil tape, or other heat approved tapes. Look for tape with the Underwriters Laboratories logo.
- Ducts that don't work properly can create serious, life-threatening carbon monoxide (CO) problems in the home. Install a CO monitor to alert you to harmful CO levels if you have a fuel-burning furnace, stove or other appliance, or an attached garage.
- Long-Term Savings Tip: You can lose up to 60% of your heated air before it reaches the register if your ducts aren't insulated and they travel through unheated spaces such as the attic or crawlspace. Get a qualified professional to insulate and repair ducts.

Lights:

- The wattage rating tells how much electricity a bulb uses, not how bright it is. Compact fluorescent light bulbs are a bright idea. They use less electricity and last up to 10 times longer than incandescent bulbs.
- Standard incandescent bulbs use only 5 to 8 percent of their energy to produce light. The rest is dissipated as heat.
- Purchase LED bulbs for your holiday decorations. These lights use up to 90 percent less electricity.



- Lamps placed where the light can reflect off at least two walls, such as in a corner, provide the most light for you money.
- Look for the ENERGY STAR label when purchasing lighting products.
- Turn off the lights in any room you're not using, or consider installing timers, photo cells, or occupancy sensors to reduce the amount of time your lights are on.
- 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. Use a desk top lamp instead of any overhead.

Miscellaneous:

- Unplug electronics, batteries chargers and other equipment when not in use. Taken together, these small items can use as much power as your refrigerator.
- Turn off all unnecessary lights, electronics and equipment. Don't leave on computers or laptops.
- Move your favorite chair so that it is not near the drafty window in the house.
- After you are done using the oven, shut it off and leave the door open if you need the house warmed.
- Try turning down the heat a degree at a time to find a comfortable level while wearing warm, light-weight clothing. (Polar fleece or light weight wool are good options.)

- Take turns organizing social visits with friends on the hot days of the summer and the cold days of the winter so to allow someone's home the break in heating and cooling.
- Close off unused rooms and turn off the heat in those rooms.
- Wear layers of clothing to keep warm, put them on early in the day and before you feel chilly for better results.
- In the winter go out to get the mail when you are going out anyway, that way you save the door from being opened twice.
- Keep blinds or drapes closed at night. If needed, use a blanket to cover the windows to keep the heat out in the summers, and cold out in the winter.
- Remove window air conditioning units in the Fall. They are drafty, and they suck the heat right out of your house. You have to do something to stop that draft. If you are unable to remove the air conditioner consider buying an insulated jacket that goes on the exterior. They are still drafty but better than nothing.
- Heat rises so use registers to direct warm air-flow across the floor.
- In natural gas appliances, look for blue flames; yellow flames indicate the gas is burning inefficiently and an adjustment may be needed.
- Consider house sharing either temporarily, or as a long term plan to save money.
- Never turn your thermostat way up or way down to speed up the heating or cooling process. This will force your unit to work harder, stay on longer and use more energy.
- Use your ceiling fans to help move air. In the winter, run them

clockwise to help circulate heat that has gathered near the ceiling. In the summer, reverse them to run counterclockwise to cool.

- During the winter months, don't forget to keep the garage door tightly closed as much as possible. In doing so, you'll retain warmer air against the garage-side wall of the house and it will act as a buffer against the colder outdoor air.

Additional information:

Budget Billing: Budget billing spreads monthly payments over the year allowing you to pay similar amounts each month. While the overall amount due at the end of the year will be the same, the amount due will be spread out over a greater period of time rather than the 3-4 winter months. The plan makes the amount due more predictable and affordable. It is an effective way to deal with high gas bills. Every utility in New York offers budget billing. To learn more, contact your utility company.

Low Income Programs: If you are on a fixed income or are a person with a low income, there are programs available to help you pay your heating bills and winterize your home. Contact your natural gas company or the local office for the aging.

Resources:

Heat Smart, NY
www.HeatSmartNY.org
Hotline: 1-877-NY-SMART

Division of Housing & Community Renewal
www.nysdhcr.gov

The Division of Housing & Community Renewal offers the Weatherization Assistance Program (WAP) to those who fall under 60% of the State median income level. Contact one of their regional offices near you to apply.

**New York State Energy Research
and Development Authority**
www.nyserda.org

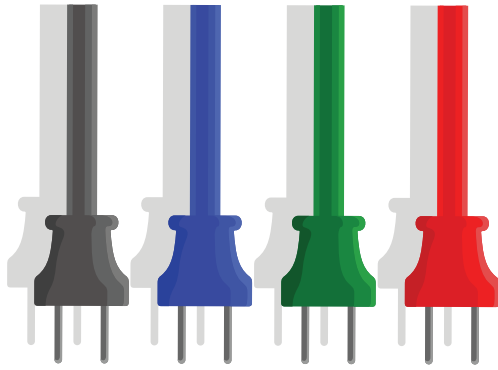
New York State Energy Research and Development Authority (NYSERDA) offers incentives to those looking to make their home more energy efficient and provides similar services to the commercial and industrial sector. NYSERDA also offers an incentive for solar and wind installations.

Office of Temporary and Disability Assistance
www.otda.state.ny.us

The Office of Temporary and Disability Assistance operates HEAP is a federally funded program that issues heating benefits to supplement a household's annual energy cost. HEAP also offers an emergency benefit for households in a heat or heat related energy emergency. Additionally, HEAP offers a furnace repair and/or replacement benefit for households with inoperable heating equipment.

New York State Office for the Aging
www.aging.ny.gov
Help Line 1-800-342-9871

Weatherization Referral and Packaging Program (WRAP). The WRAP program provides energy conservation, emergency weatherization services and referrals to weatherization programs for HEAP eligible households. Emergency weatherization could include adding insulation, repair or replacement of windows, doors and repairs to furnaces and roofs.



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