



## HOUSING & ENVIRONMENT

Your Home:  
A Great Investment

# Energy Tips for Homes in Georgia

## The Georgia HOME-A-SYST Program

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Energy efficient home improvements help save energy and money!

## How can I be sure my home is energy efficient?

### 1. Check the level of insulation in your home.

#### Why do I need Insulation?

Insulation helps to save money and energy because it works to keep the cold out in the winter and the heat out in the summer. Insulation helps to increase comfort by maintaining uniform temperature and reducing moisture problems. It is especially important to check the level of insulation if your home is old and you haven't added any insulation.

#### Where should I look for insulation?

Places to look for insulation are exterior walls, ceilings, attics, crawl spaces and basements. The easiest and most affordable way to add more insulation is in the attic. To find out if there is enough, go to the attic and measure the thickness of the insulation. Check that the thickness of insulation meets the levels recommended for your area. Here in Georgia, the typical recommended insulation thickness is R-49 for ceilings (attic), R-18 for walls, and R-25 for floors (U.S. Department of Energy). See the insulation chart for more information.

INSULATION CHART		Insulation Thickness (Inches)*		
AREA	R-Value	Blanket or Batt	Loose or Blown	
			Fiberglass	Cellulose
Attic	R-49	15"	18"-23"	17"
Floors	R-25	8"	10"	9"
2x4 Stud Walls	R-18	3.5" of an R-15 with insulating sheathing	6"-7"	6"

\*Approximate thickness

### 2. Weatherize your home as much as possible.

#### How can I weatherize my home?

- Seal all openings in the shell of your home with caulk, mastic, spray-foam or weather stripping. Seal the cracks and gaps in framing along with the holes for plumbing, mechanical equipment, and electrical outlets.
- Reduce drafts coming from windows by installing storm windows or using a plastic window insulating kit sold at hardware stores. Better yet, replace your old windows with low-energy windows.
- To quickly determine if your home has an air leak, hold a lit incense stick near a closed window or door (an adult should do this). If the smoke travels horizontally (level with the floor), there is an air leak. You can also check for air leaks by turning on your air conditioner/heater and placing a feather near areas where you believe there is an air leak.
- Check to see if the damper on the fireplace is open. When you are not using the fireplace the damper should always be closed; it allows heat or conditioned air from your home to escape. If your fireplace does not have a damper, cover the fireplace opening with a snug-fitting cover.
- Confirm that all bathroom and kitchen exhaust fans vent to the outside, not just into the attic. Soffit, ridge and mechanical vents in the attic allow hot air to escape and keep your ceiling cooler. Power attic vents are not advisable; however, whole house fans can be efficient in the spring and fall.

#### How can I control excess moisture?

- Keep the relative humidity in your home below 60%. You can purchase a hygrometer (humidity gauge) to measure how humid it is in your home. Excess moisture makes your air conditioning work harder and consume more energy. It can also cause moisture problems and mold growth.



### 3. Properly maintain your heating and cooling systems.

Regular maintenance is the most important step in keeping your comfort system operating at its maximum efficiency. You should have the following heating and cooling system items inspected by a professional once per year:

- 1. Check thermostat settings and calibration.
- 2. Clean evaporator (indoor) and condenser air conditioning (outdoor) coils
- 3. Check refrigerant operating pressures and adjust charge if necessary
- 4. Clean and adjust blower components and measure for correct airflow.
- 5. Tighten all electrical connections and measure voltage and current on motors.
- 6. Check all gas (or oil) connections, gas pressure, burner combustion, and heat exchanger
- 7. Lubricate all moving parts.
- 8. Check and inspect the condensate drain.
- 9. Check controls and starting capabilities of the system.
- 10. Inspect and clean or change air filters (every 3 months).
- 11. Ask the service technician to monitor for carbon monoxide (CO) while service is being done.

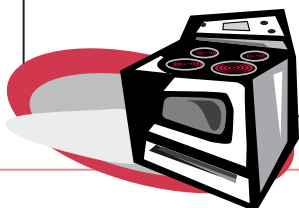
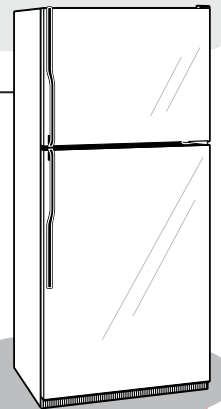


### Is my hot water heater energy efficient?

Having the proper size hot water heater for your family's needs, rather than one that is too large or small, help you to save energy. To increase your hot water heater's efficiency, try insulating the unit and pipes (being careful not to cover the thermostat or burner compartment. If your hot water heater is old (10-15 years +) or does not work as well as it should, consider buying a new one. If your hot water heater is gas fueled, be sure to specify an energy factor (ef) of 0.63 if you replace your old water heater. Also lower your water heater's thermostat to 115 degrees. Check with your utility company for water heater rebates and also ask about tankless water heaters.

### 4. Look for ways to conserve energy around the house.

- Ceiling fans increase your comfort level while decrease your energy costs.
- Ceiling fans will make you comfortable even when it is several degrees warmer in your home.
- Fix leaky faucets. Leaving a faucet dripping wastes a lot of water.
- Install a low-flow showerhead to save water.
- When washing clothes, use the coolest appropriate setting.
- Be careful not to over-dry clothes.
- Replace standard incandescent light bulbs with compact fluorescent (CFL) ones. CFL's last about 5 years under normal usage and save a lot of energy.
- Keep refrigerator coils (in the back) clean of dust; the performance and savings of your refrigerator will be improved.
- Keep only one refrigerator in the house if at all possible.
- Make sure the rubber lining around your refrigerator door stays in good shape so that your refrigerator will seal tightly.



Always make sure that your appliances are working properly.

For each statement on the left, read across to the right and check the choice under each issue (Low, Medium, High) that best describes the condition of your home's energy features. The risk ranking (low risk, medium risk or high risk) is located at the top of each column.

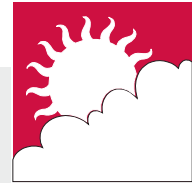
Energy Issue and Risk Ranking	Low Risk (Low Energy Costs)	Medium Risk (Medium Energy Costs)	High Risk (High Energy Costs)
<b>R e d u c i n g   E n e r g y   U s e</b>			
<b>Insulation</b> <input type="radio"/> LOW <input type="radio"/> MEDIUM <input type="radio"/> HIGH	House is properly insulated in the walls, ceilings, attic and crawlspace using the right type of insulation for climate. (see chart on page 1)	There is some insulation in the home, but not enough for Georgia's climate.	There is little or no insulation in the home. Dirty spots are seen on insulation.
<b>Weatherizing</b> <input type="radio"/> LOW <input type="radio"/> MEDIUM <input type="radio"/> HIGH	Home is properly weatherized. All seams, cracks, and openings are caulked, weather stripped or sealed. Storm windows, low-e, or plastic window kits are used.	House is somewhat weatherized, but could use more sealing such as weather stripping and caulk to make home more efficient.	Cracks, holes and loose seams allow air to escape from inside the house. Storm windows or plastic window insulating kits are not used.
<b>Heating, Ventilation, And Cooling System</b> <input type="radio"/> LOW <input type="radio"/> MEDIUM <input type="radio"/> HIGH	The HVAC system is properly maintained. Home has appropriate vapor retarders and is well ventilated. Air filters are replaced frequently.	The HVAC system is maintained only when something is broken. Ductwork has some leaks and the air filters are replaced infrequently. House could use better ventilation.	The HVAC system is not maintained. The HVAC system is placed in the direct sun and the house receives little to no shade. The ductwork is leaky and the return air filters are dirty.
<b>Water</b> <input type="radio"/> LOW <input type="radio"/> MEDIUM <input type="radio"/> HIGH	Water is not wasted. There are no leaks in the plumbing. Water is drained from the hot water heater every three months to remove sediment.	Water is sometimes wasted. There are some leaks in the plumbing. Water is rarely drained from the hot water heater to remove sediment from the bottom.	Water is often wasted. The plumbing leaks and there are dripping faucets. Water has never been drained from the hot water heater to remove sediment.
<b>Appliances</b> <input type="radio"/> LOW <input type="radio"/> MEDIUM <input type="radio"/> HIGH	Appliances are maintained and serviced when needed. The manufacturer's directions are followed when operating. A gas stove or water heater has a blue flame. The stove is kept clean to maximize efficiency.	Appliances are maintained. The stove is mostly kept clean. A gas stove or water heater has a blue flame.	The stove is dirty and is not maintained. The flame on a gas stove or water heater is yellow. <b>Warning-</b> Your appliances may be releasing harmful chemicals such as carbon monoxide.
<b>Manufactured Homes</b> <input type="radio"/> LOW <input type="radio"/> MEDIUM <input type="radio"/> HIGH	Manufactured home meets the minimum HUD Construction and Safety Standards. The home is placed on the lot to make sure it is protected from the weather. Weather stripping, insulation, skirting, and storm windows or plastic window cover kits are used.	Manufactured home meets some important safety standards. The home takes advantage of things to protect from the weather. Some weather stripping, skirting and window coverings are used.	Manufactured home does not meet any safety standards. Home is placed on a barren lot without any protection from the weather. No weather stripping, insulation, skirting, storm windows, or plastic window sheeting is used to protect the home.
<b>Lighting</b> <input type="radio"/> LOW <input type="radio"/> MEDIUM <input type="radio"/> HIGH	Lights are turned off when not in use. Daylight is let in and used to help light rooms. Compact fluorescent lamps are used. Windows, lamps, shades, and light bulbs are kept clean.	Sometimes lights are turned off when not in use. Sometimes daylight is used to help light rooms. Too much energy is wasted by not using appropriate lamps, dimmer switches, and light bulbs.	Lights are left on, even when no one is using them. Daylight is not let in to help light rooms. Windows, lamps shades, and light bulbs are very dirty.

If you have a High Risk, follow the recommendations in the Low Risk column and throughout this publication.



## Historic Home Repairs and Improvements

14.5 percent of the homes in Georgia were built before 1950. Some of the problems associated with homes of this age include poor insulation, old plumbing, and outdated electrical systems. Some of these problems can be remedied relatively easily, but if your home is historic, you may want to first seek the advice of a trained professional working in Historic Preservation to make sure that any changes you make are compatible to the house. The planning office in your town should be able to help you. Or, contact the State Historic Preservation office for information, (404) 656-2840.



## Home Repairs and Improvements Help to Save Energy and Money

When you locate areas where energy can escape from your home, decide what it will take to repair it. Think if you have the right skills and tools, time and money to do the job yourself, or if you will need to call a contractor. If you contact a professional, remember that many utility companies will do an audit to determine your home's energy problems for free.

## Special Note for Owners of Manufactured Housing

Manufactured housing (MH) is the fastest growing sector of the U.S. single-family home market and Georgia is the third largest MH market. The previous tips apply to MH's as well. If you plan to buy a new MH, look for the EPA's ENERGY STAR® certification. Protect your home from the summer's heat by planting a tree line on the south face and by placing the home in a way to avoid the morning and afternoon sun on the largest area of windows. Awnings may also be useful to help block the sun in the summer.

## Energy Tips Overview

**The best way to lower heating and cooling bills in your existing home is to:**

- Weather-strip doors and windows
- Install storm windows
- Seal ductwork with mastic
- Add insulation, particularly in the attic
- In the cold months, lower the thermostat to 68° during the day and 60° at night.
- During the hot months of the year, raise your thermostat setting to 74° and use fans to make your home more comfortable.
- Install an Energy Star® programmable thermostat
- Purchase home appliances with the EPA Energy Star® label, an energy efficiency rating for the most efficient appliances.

**If you are purchasing a new home:**

- Look for a home that has the Energy Star® label
- For new home construction, ask your builder to take advantage of the "Energy Right Program." This is a cash incentive for builders that attain a Home Energy Rating System of four stars or better.



### For more information:

Call your local Cooperative Extension Service Office. Visit our website at [www.gafamilies.com/housing](http://www.gafamilies.com/housing)  
Visit the Energy Star website at [www.energystar.gov](http://www.energystar.gov)

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