

Ohio Department of Development
Office of Community Assistance

Do **Your** Part **Home Weatherization**

Living in a Weatherized Energy Efficient Home



Weatherization Partnership

Weatherization is a PARTNERSHIP between the WEATHERIZATION PROGRAM and YOU.

As with any partnership, each partner has responsibilities. The Weatherization Program will address the heating system and mechanical equipment and reduce energy loss through the outside of the house, called the shell.

You will be responsible for maintaining the materials installed in your home and following energy saving practices.

The Weatherization Program responsibilities include:

- Answering questions about your house and life style
- Installing appropriate materials in a safe and timely manner, with the highest quality of workmanship
- Performing a final inspection

Your responsibilities include:

- Being at home during the initial and final inspections to answer questions about your house
- Allowing the Weatherization Program access to the entire house
- Caring for and protecting the weatherization materials installed
- Caring for and protecting the mechanical systems, which include exhaust fans, hot water heater, cook stove and heating units
- Carrying out the recommended energy efficiency lifestyle tips whenever possible

Do Your Part

Home Weatherization

The Weatherization Program divides the house into three parts; the mechanical systems, the outside of the house (shell), and the people and pets who live in the house.



- One part of your house is the heating and cooling system, and other mechanical equipment. Together they heat and cool your house and when properly installed, they move air and moisture around.



- Part two is the shell. When it is working properly, it keeps the cold out in the winter and the heat out in the summer.

- The final and most important part is you, the people that live with you, and your pets.

You control the mechanical equipment. You can improve the health and safety and energy use of your home by working with and following guidance from the inspector on how the mechanical equipment, shell, and people in the house must work together.



Heating and Cooling Systems

Program to do list

- Perform a heating system safety inspection that will include, but is not limited to, the inspection of: heat exchanger, safety controls, venting, flue pipe, chimney, wiring, exhaust equipment, fuel lines, ductwork, and thermostat
- In addition, the inspector will examine carbon monoxide production, combustion efficiency, and may recommend to have the humidifier cleaned.
- Test your duct system for leakage and efficiency.
- Make any necessary repairs to the distribution system.



- Blower door testing helps locate drafts and/or air leaks in your home.

Your to do list

- Set the thermostat to 68°F in the winter and 75°F in the summer. You can set it even lower or higher (depending on the season) at night or when you are not at home. You may need a higher or lower setting for health reasons or if you have a new baby or an elderly household member.
- Check the chimney for signs of moisture or decay.
- Keep a clear pathway to the furnace or room heater and keep stored items (especially those that could catch fire) away from it.
- Look over your unit from time to time. Make sure the flue pipe is securely attached to the chimney.
- Check the furnace filter monthly and change it if it is dirty. If you have central air, continue this practice year round. A dirty filter can reduce the efficiency of your unit and reduce its life.
- If you burn wood, have a professional check the chimney.
- Listen for unusual noises. They may indicate a potential problem.
- Have a professional heating contractor perform a safety inspection every year.

- Use the Heating System “Program To Do List” to make sure that your contractor performs the same type of service.
- Do not remove any materials used to seal the distribution system.
- Do not block or close any heating registers or air supply or return vents. This can affect the operation of the distribution system.

Extra Heat Sources

If you feel cold because of very low outside temperatures and you want to use an additional heat source, you should know some facts before you decide what to use. A heater that burns fuel, whether gas, wood, or kerosene, produces moisture and gases; the most dangerous gas is Carbon Monoxide (CO). Breathing Carbon Monoxide can cause flu-like symptoms, serious illness and sometimes even death.



A common household Carbon Monoxide Detector

Your to do list

- Never use unvented combustion heaters without proper ventilation.
- To allow the combustion gases to be diluted, open a window approximately two inches during use.
- Keep all room heaters (including electric room heaters) away from drapes and furniture that could catch fire.
- Use room heaters ONLY according to the manufacturer's instructions.
- Clean and maintain these heaters for proper and safe operation.
- Do not use your cook stove to heat your home. Your cook stove is not designed for heating purposes. If you have a gas stove, it produces combustion by-products, such as Carbon Monoxide (CO). These are dangerous to breathe. An electric stove would be very expensive to use as a heater.

Water Heaters

After the heating and cooling equipment, the water heater is the second biggest energy user in your home. Heating water costs the typical family \$160 to \$390 a year.

Program to do list

- Inspect your water heater for safety and efficiency.
- Insulate the water heater, unless prohibited by the manufacturer.
- Insulate the water pipes wherever they are accessible, especially within six feet of the water heater.

Your to do list

- Install a low flow showerhead (two gallons per minute) and faucet aerators. They could save you approximately \$22 a year for each person in your household.
- Turn your heater thermostat down to 120°F, unless you have a dishwasher without a pre-heater. This step will save you money and reduce the possibility of being burned by hot water.
- Take short showers; they use about half as much hot water as a full tub bath.
- Avoid running the water constantly when you wash dishes by hand.
- Keep a clear path to your hot water tank and keep the area surrounding it clear.

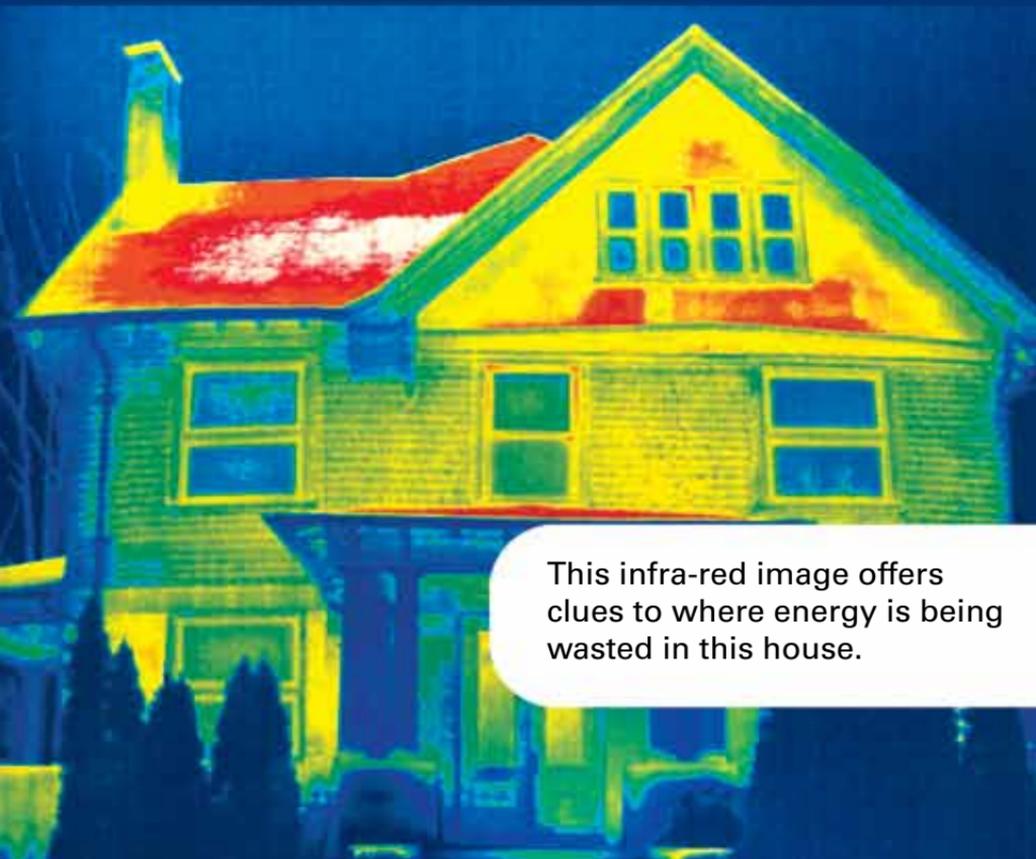


The “Shell” of the House

The SHELL of your house consists of the walls, ceilings, floors, windows, and doors. The typical house loses the majority of its heat through the openings in the shell. Heat loss through the shell of the house can be reduced through air sealing and insulation of walls, attics and floors. When these leaks are sealed, you will be more comfortable and your energy use will be reduced.

Program to do list

- Perform measurements, using tools such as a blower door; perform energy cost estimates; and inspect to determine what improvements can be made to reduce energy use and costs.
- Air seal areas of the shell prior to insulating the house. Insulate the walls using a technique called “dense pack” for the best results.
- Insulate the attic and basement/crawl space.



This infra-red image offers clues to where energy is being wasted in this house.

Your to do list



- Do not remove the insulation.
- Do not walk on the insulation.
- Do not stack anything on the attic insulation.
- Check the attic for leaks during rain and when it is cold. Repair the roof if any leaks are found.
- Do not block attic vents.
- Keep the attic hatch to the living area closed to prevent moisture from entering the attic.
- During the summer close your shades and drapes to help block the sun's heat during the day. During the winter open shades and drapes to allow the sun to help warm your home. Also during the summer keep windows closed during the hottest hours of the day and open windows opposite one another for cross ventilation during early morning hours and at night.
- As much as possible during the summer, use heat-generating appliances and cook in the early morning and evening hours when it is cooler.

Moisture and Indoor Air Quality

It is important to control the amount of moisture present inside your house. Too little moisture can lead to breathing problems, increased growth of bacteria and viruses, dry skin, and increased static electricity. Too much moisture can also lead to the growth of mold and mildew, asthma and related breathing problems, and the rotting and decay of parts of the building.

Program to do list

- Cover any exposed ground in crawl spaces with polyethylene.
- Vent bathroom fans, kitchen fans, and clothes dryer to the outside.
- Repair minor plumbing leaks.
- Repair minor roof leaks and damaged gutters.
- If necessary, install additional controlled ventilation.

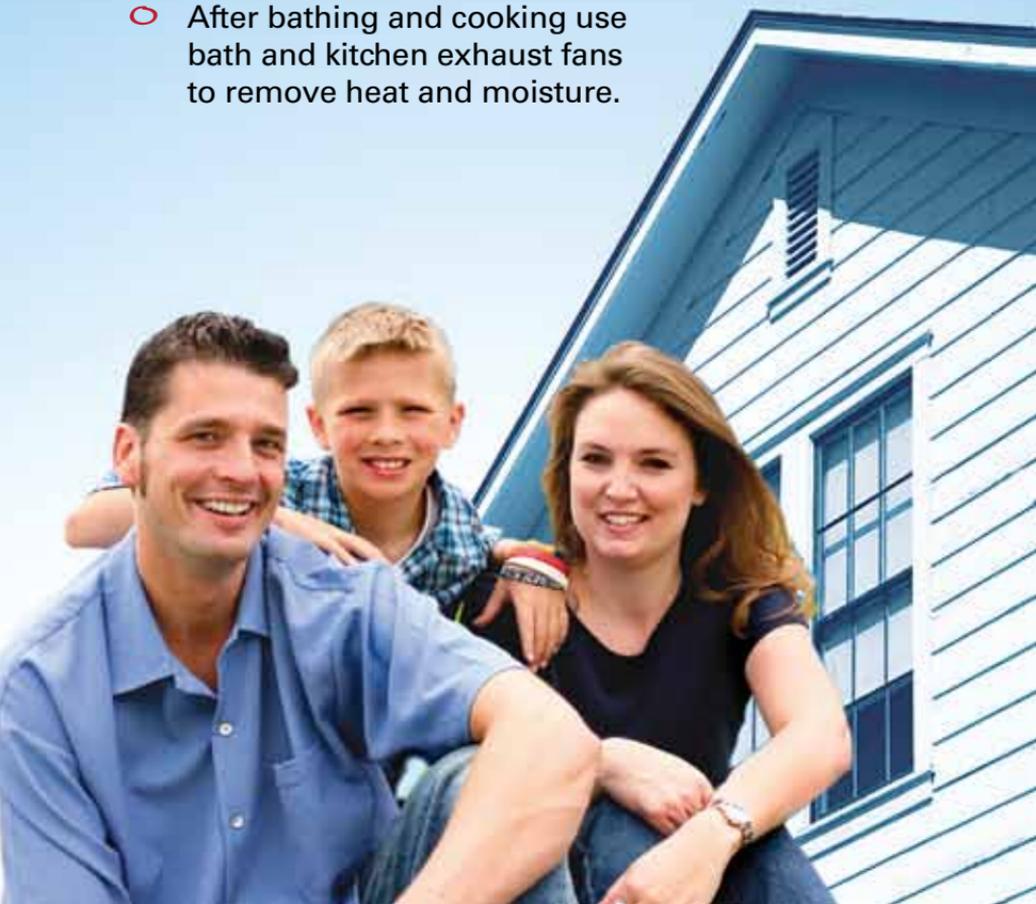
Your to do list

- Use an accurate relative humidity gauge to monitor indoor moisture levels.
- Try to keep the moisture level between 40 to 50 percent.
- Use a dehumidifier to reduce indoor moisture levels.
- Cover pots when boiling water or cooking, and use the exhaust fan if you have one.



Plate Pal is a device that provides information on current temperature and humidity levels in the home.

- Repair plumbing leaks immediately.
- Repair damaged gutters and keep them clean of leaves and debris.
- Use the bathroom fan or slightly open the window when showering.
- Close your foundation vents in the summer.
- Don't hang clothes inside to dry.
- Don't disconnect the dryer venting.
- Don't run humidifiers unless the relative humidity in your house is low.
- Don't put a pot of water on your woodstove unless you have measured the humidity in your house and it is low.
- Don't bring firewood inside to dry.
- After bathing and cooking use bath and kitchen exhaust fans to remove heat and moisture.



Appliances

The Weatherization Program does not make major repairs to appliances, but helps your appliances run their best and makes them last longer which can save you money.

PURCHASING NEW APPLIANCES



When you purchase new appliances, look for the Energy Star® Label. The U.S. Department of Energy and the U.S. Environmental Protection Agency have identified Energy Star® appliances as highly energy efficient products, which exceed federal standards.

For more information, contact the U.S. Environmental Protection Agency at: 1-888-Star-Yes (1-888-782-7937).

If you have access to the Internet, visit the Energy Star® Web site at: www.energystar.gov.

Refrigerators

The refrigerator uses 20 percent of the average home's electricity. Take a few minutes to make sure your refrigerator is operating properly.



Your to do list

- Check to see if the temperature is set correctly: 38°F to 40°F for the refrigerator compartment, and 0°F to 5°F for the freezer. Check the temperature in both compartments with a thermometer to make sure they are not running too cold and wasting energy.
- Clean the dust off the condenser coils at the back or bottom of your refrigerator with a soft brush or vacuum. Dirty coils make the compressor run more and use more electricity.
- Make sure the refrigerator fan is clean.
- To prevent air leaks, the strip around the refrigerator door must have a tight seal. Keep the strip clean and in good condition. If it is not, contact a local repair service, the manufacturer, or a hardware store to get a new one.
- Maintain a "full" freezer, if necessary add bags of ice to fill empty space. If your freezer is a manual defrost model, make sure to defrost on a regular basis. The thicker the frost, the harder the refrigerator must work.
- Use the "Energy Saver" switch if your refrigerator has one.

Cook Stove

Your stove is not a huge energy user, but there are a few things you can do that will save some money. You should also be aware of these safety issues:



Program to do list

- Test your gas-fired cook stove to ensure it is operating properly, and make any necessary adjustments or repairs.
- Teach you how to clean your cook stove burners properly.

Your to do list

- Clean your cook stove on a regular basis.
- Turn on the oven's self-cleaning cycle just after baking, while the oven is still hot. Make sure there is ventilation during the self-cleaning cycle.
- Use a microwave. It uses less than half the energy of a conventional electric oven.

Washer & Dryer

Approximately 90 percent of the cost of washing can be attributed to heating water.



Program to do list

- Vent your clothes dryer to the outside to reduce indoor moisture.

Your to do list

- Wash your clothes in cold water instead of warm or hot. By using a cold water detergent in cold water, your clothes will be as clean as if you had washed them in warm water. Using cold water also extends the life of your clothes.
- Use a cold rinse cycle. It does not affect the cleaning results.
- Avoid using more detergent than necessary. Too much detergent may require extra rinsing.
- Wash full loads, but be careful not to overload!
- Remove the lint from the dryer trap between loads.
- Do not use "Heat Knappers" to recover heat from the dryer vent hose. They direct too much moisture into your home.
- Do not disconnect your dryer vent.

Now that your home has been weatherized

After the weatherization work is complete you should notice some changes. Your energy consumption should be less and, depending upon the heating season and fuel costs, this should mean lower utility bills. If you take care of the materials installed and follow the energy saving practices, you should enjoy a more comfortable and safe home for years to come.

If you have questions about the work done on your home contact:





*Weatherization
Works*

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