

Do-it-Yourself Home Energy Audit

Save More ways to with a HOME ENERGY AUDIT

Wiregrass Electric Cooperative
A Touchstone Energy Cooperative



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For more information visit



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Do-it-Yourself Home Energy Audit

Touchstone Energy® Home



1. Infiltration Control to Prevent Air Penetration

Uncontrolled air leakage (infiltration) is one of the largest and most preventable energy wastes in the home. The potential energy savings from reducing drafts in a home may range from 5 to 30 percent per year.

Make a list of obvious air leaks. First, check areas such as gaps along the baseboard or edge of the flooring and at junctures of the walls and ceiling. Then, check electrical outlets, wall-switch plates, window frames, weather stripping around doors, fireplace dampers, attic hatches, and wall- or window-mounted air conditioners. Also, look for gaps around pipes and wires, foundation seals and mail slots. Lastly, check to see if caulking and weather stripping are applied properly, leaving no gaps or cracks, and are in good condition.

✓ **Does your home allow air to flow around any of the above-mentioned areas?** Yes No

If so, use one or more of the three following products to prevent air leakage around any problem areas: caulking, expanding foam and/or weather stripping.

For most indoor applications, a good quality latex caulk is satisfactory; and for exterior applications a silicone or polyurethane caulk will perform better.

2. Exhaust Systems In Kitchen & Bathrooms

These systems should be in place to control moisture levels in certain areas of your home, such as bathrooms and kitchens.

✓ **Are exhaust systems in place?** Yes No

If these systems are in place, ensure they are operable and used regularly. If these systems are not in place you should contact a local professional electrician to possibly install kitchen and bathroom exhaust systems.

3. Attic Ventilation

Attics can reach up to 150°F in the summer. The hotter your attic gets, the harder it is to cool the area below it. Check your attic ventilation.

✓ **Are your soffit vents blocked?** Yes No

✓ **Are bath, stove and dryer vents vented into the attic?** Yes No

Make sure you go out back and look at the roof. Look for the turbine-style vents or a continuous-ridge vent.

✓ **Do you see a continuous ridge vent or a turbine, dome or box style vent?** Yes No

4. R-38 Attic Insulation

Attic insulation protects your home against heat loss in the winter and heat gain in the summer. Heat loss through the ceiling of your home could be very large if the insulation levels are less than the *current* recommended minimum. When your house was built, the builder likely installed the amount of insulation recommended at that time. However, it may now be inadequate. If joists in your attic are visible, you need insulation.

✓ **Are the joists visible?** Yes No

Commonly used insulation materials are blown-in cellulose, closed cell foam, and fiberglass batts or blown-in loose fill fiber-glass. The depth of insulation in the attic determines its R-value. We recommend 10-12 inches of batt or 13-17 inches of blown-in insulation. This gives you an equivalent R value of 30-38.

Here are the various R-values for different ceiling/roof areas.

- Conventional Ventilated Attic - R-38. This R-rating can be reached by installing any combination of fibrous, cellulose, mineral wool or closed cell foam insulation.
- Roof/Ceiling Combinations - Minimum R-25.
- Knee Walls - R-19. Knee wall insulation should have a covering to keep the insulation in place without compressing it on the unconditioned side.

✓ **Are the minimum R-values being met?** Yes No

5. R-16 Wall Insulation (Includes Exterior House Wrap)

Checking a wall's insulation level is more difficult. Select an exterior wall and turn off the circuit breaker or unscrew the fuse for any outlets in the wall. Be sure to test the outlets to make certain that they are not "hot" by plugging in a functioning lamp or portable radio. Once you are sure your outlets are not getting any electricity, remove the cover plate from one of the outlets and gently probe into the wall with a thin, long stick or screwdriver. If you encounter a slight resistance, you have some insulation there. You could also make a small hole in some unobtrusive place to see what, if anything, the wall cavity is filled with. Ideally, the wall cavity should be totally filled with some form of insulation material. Unfortunately, this method cannot tell you if the entire wall is insulated, or if the insulation has settled.

✓ **Did you feel resistance from insulation?** Yes No

6. Energy-Efficient Water Heater

Water heating is your second largest energy user.

✓ **Do you have leaky faucets?** Yes No

✓ **Do you have leaking pipes under the house?** Yes No

✓ **Are any exposed hot water pipes uninsulated?** Yes No

✓ **Is your water heater's thermostat on the medium or lower setting?** Yes No

The water heater should be set at 120°F or on medium. You can double check the accuracy of your thermostat by checking the hot water temperature at any faucet. The average life span of an electric water heater is 10 to 13 years. If your water heater is in that age range; you should consider replacing it with a new, energy-efficient electric water heater.

7. High-Efficiency Electric Heat Pump

Heating and cooling your home is your largest energy user. Proper maintenance on your system can help you save money year after year. Inspect your heating and cooling equipment annually, or as recommended by the manufacturer. Locate your heating and cooling system. Then find the air filter:

✓ **Is the air filter soiled?** Yes No

✓ **Has it been more than 30 days since your air filter was changed or cleaned?** Yes No

Keep your thermostat on 78°F or higher in the summer and 68°F or lower in the winter. For every degree below 78°F in the summer, or above 68° in the winter, your cooling costs could increase by 3 percent.

✓ **My thermostat is set at _____ degrees.**

8. R-19 Floor Insulation

Floor insulation keeps inside temperatures in check. Go into the basement or check in your crawl space:

✓ **Is the floor (ceiling of the basement or crawl space) insulated?** Yes No

✓ **In your crawl space, is the ground covered with plastic?** Yes No

9. Heating and Cooling Ducts

Proper duct system design is critical. Air leakage from your duct work reduces energy efficiency and costs you money. Feel for air leaks around the joints. Check your insulation for soiled areas, this may indicate leaks.

✓ **Is the ductwork kinked or crimped?** Yes No

✓ **Do you feel escaping air?** Yes No

✓ **Is the duct work insulated?** Yes No

✓ **If you have insulation, was it soiled?** Yes No

✓ **Are your doors hollow?** Yes No

✓ **Have you placed weather-stripping around your door?** Yes No

✓ **Do you see gaps and crevices?** Yes No

✓ **Are your windows single pane?** Yes No

✓ **Double or Single Pane w/Storm Windows**

Windows provide our homes with light, warmth and ventilation, but they can also negatively impact a home's energy efficiency. You can reduce energy costs by installing energy-efficient windows in your home. Check around all windows or any place where two exterior surfaces meet.

✓ **Metal Insulated Doors**

An exterior door can contribute significantly to air leakage in a home—as well as some heat transfer—if it's old, not properly installed, and/or not properly air sealed. This can result in energy losses. The most efficient exterior doors are insulated or solid doors. Check for air and light filtering through gaps around the door frame.

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Touchstone Energy[®]

HOME ENERGY AUDIT

MORE WAYS TO SAVE ENERGY!

- Make sure you purchase energy-efficient appliances. Most appliances are equipped with a label that will allow you to compare their energy use with that of similar products.
- Wash dishes and clothes only when you have a full load.
- Keep drains and filters clean so that your dishwasher, washer and dryer can work effectively.
- Use your microwave or small kitchen appliances when you can. They use a lot less energy than your conventional stove or cook top. Bake more than one dish at a time when possible. Use your appliances wisely.
- Timers can be placed on your water heater so that water is heated only when you need it.
- Use flow restricters on your shower heads. The less hot water you use, the more money you save.
- Use insulating shades and window coverings to reduce the amount of heat lost or gained through your windows.
- Use ceiling fans to help circulate air throughout your home during the summer and winter months. In the winter, remember to run the fan in reverse so that the warm air is forced down.
- Use lower-watt bulbs in lamps when you are able. New fluorescent bulbs can really cut costs.
- Consider a programmable thermostat if you are away from home during the day. It will automatically adjust the temperature to your comfort level before you return.
- Keep your damper closed on your fireplace when it's not in use.



COUNT YOUR SAVINGS!

Now that you've completed your Do-it-Yourself Home Energy Audit, we're ready to see what changes will save you money on your monthly electric bill. Just look at your answers on the other side and follow the action items listed below. Items with an asterisk may require professional assistance.

- | | |
|--|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> Straighten crimped duct work* <input type="checkbox"/> Seal duct leaks with mastic or vinyl-back duct tape <input type="checkbox"/> Insulate duct work with R-4 to R-6 batt insulation <input type="checkbox"/> Call my HVAC contractor for an overall inspection of my heating and cooling system* <input type="checkbox"/> Change my air filter monthly <input type="checkbox"/> Set thermostat to recommended temperatures <input type="checkbox"/> Keep a one-foot clearance around my central air conditioner or heat pump <input type="checkbox"/> Install water heater blanket around my electric water heater <input type="checkbox"/> Buy molded foam sleeves to wrap hot water pipes with <input type="checkbox"/> Add R-11 batts to ceiling of basement and crawlspace* <input type="checkbox"/> Set water heater to appropriate temperature | <ul style="list-style-type: none"> <input type="checkbox"/> Add ___ inches of insulation in the attic (Consult a professional if you are considering using blown-in insulation. If adding more batt insulation, make sure you add unfaced insulation so that moisture doesn't build up between layers.)* <input type="checkbox"/> Insulate attic recesses <input type="checkbox"/> Use a Styrofoam board or box to insulate attic opening <input type="checkbox"/> Replace single pane windows with storm or double pane windows <input type="checkbox"/> Replace old caulk with new <input type="checkbox"/> Install weather-stripping where needed around windows and doors <input type="checkbox"/> Replace hollow or uninsulated doors with solid wood or insulated models <input type="checkbox"/> Make sure attic ventilation is adequate* <input type="checkbox"/> Cover dirt floor of a crawl space with plastic covering <input type="checkbox"/> Dust refrigerator coils and replace damaged seals |
|--|--|