



Do-It-Yourself

Home Energy Check-Up

This guide will walk you through a simple inspection to spot ways to cut energy waste and lower your energy bills at home.

This walk-through should take 30-60 minutes to complete.

Page 4 has information about professional energy inspections.

What You'll Need

Dust mask & Gloves

Flashlight

Screwdriver

Ladder

Incense stick

Tape measure or Ruler



Important Safety Information

Attics and crawl spaces can contain a variety of materials you'll want to avoid contact with. Be sure to wear appropriate safety equipment. Use caution around:

Asbestos: Some older homes still have asbestos around pipes, air ducts, and heating equipment, in siding and roofing materials, and in vermiculite attic insulation. It may look like a grey or white material. Asbestos is dangerous when the fibers are released and inhaled into the lungs - if you suspect anything contains asbestos, leave it alone. Limit access to the area and do not disturb or touch it.

Fiberglass Insulation: Use a dust mask, goggles, and gloves to protect lungs, eyes, and skin from fiberglass particles.

Wiring: Turn off electricity at the breaker before probing for insulation in the vicinity of any wiring. Consult an electrician if you see bare wires or electrical connections not contained within covered boxes.

Lead Paint: If your home was built prior to 1978, installing windows, scraping paint, or disturbing walls can stir up fine particles of lead from paint applied decades ago. That dust can settle onto carpets and furniture where it may cause health problems. If you plan to make any improvements to an older home, read more about lead paint safety at epa.gov/lead.

Air Leaks

Air leaks can waste a lot of energy and cause uncomfortable drafts. To find them, follow these steps:

1. Close all exterior doors and windows.
2. Turn off all combustion appliances such as gas burning fireplaces or water heaters.
3. Turn on your clothes dryer and kitchen and bathroom fans, or use a large fan to suck the air out of one window. This will pull air in through the leaks, making them easy to detect with an incense stick or damp hand. Look in these places:

- ✓ Along the edge of the flooring
- ✓ Plumbing penetrations under sinks
- ✓ Around doors & windows
- ✓ Wall and ceiling junctions
- ✓ Fireplace dampers
- ✓ Wall or window air conditioners
- ✓ Electrical outlets & switch plates in walls
- ✓ Attic & crawl space hatches
- ✓ Pet doors

Seal Air Leaks to Save Energy

The materials required to seal most air leaks are inexpensive and available at your local hardware or home improvement store.

Weather stripping blocks air leaks around doors and windows that open. It comes in rolls or strips with adhesive backing. Choose weather stripping that will fill the space without interfering with the operation of the door or window.

Caulking or sealant can be used to stop leaks around doors, windows, and baseboards, and to seal around plumbing or electrical penetrations.

Door sweeps stop drafts on the bottom edges of exterior doors.

Windows

If your home feels drafty in cold weather or uncomfortably warm from the summer sun, you may be losing energy through your windows.

- ✓ Inspect your windows. Look for any fogging between the panes, which indicates a broken seal.
- ✓ Note the frame type and the number of glass panes. Upgrading from single pane or double-pane aluminum framed windows can cut energy waste.

Rebates for Replacement Windows

If it's time for new windows, choose ENERGY STAR® qualified windows with a U-value of 0.30 or lower.

Visit crpud.net/rebates to see if you qualify for rebates on the installation of new windows.

Help Your Existing Windows Waste Less Energy

If replacing windows is not in your budget, don't despair. There's plenty you can do to improve the performance of your existing windows:

Window coverings, like blinds and curtains can help reduce cold winter drafts, and block out the summer sun.

Storm windows create an insulating air space when installed. They're more affordable than new windows, but won't eliminate drafts from the frame.

Indow Windows are thermal window inserts that press into your existing window frames. Indow Windows are much like storm windows, but are easier to install and require no hardware.

Insulator film is an inexpensive option for temporary use in the winter months. This thin, clear plastic is installed with double-sided tape and a hair dryer, creating an insulating air space on the inside of your windows. Take care when removing the double-sided tape to avoid damaging the paint.



Central Forced Air Heating Systems

A properly maintained heating system can use 30-50% less energy than a poor performing one.

- ✓ Check your furnace filters. They should be cleaned or replaced monthly during the heating and cooling season.
- ✓ If your ductwork runs through an unheated space such as a basement or crawl space, it should be insulated.
- ✓ The joints between the sections of ductwork should be completely sealed with mastic, not duct tape. Open or damaged joints should be repaired.
- ✓ Check for air leaks around each air register.



Help Your Central Heat Work Better

Keep it maintained: Central heating systems work best when they are properly maintained. Schedule an HVAC tune-up with a local heating contractor. When it's time for new equipment, visit crpud.net/heating-systems to learn about rebates for energy-efficient heat pump systems.

Test and seal your ducts: Most duct systems leak. You can earn a rebate when you have your system tested and sealed by a Performance Tested Comfort Systems (PTCS) certified contractor.

Zonal Heating Systems

- ✓ Check to see if baseboards or wall heaters are clean and dust free.
- ✓ Consider installing electronic or programmable thermostats if you don't have them.
- ✓ Ensure that zonal heaters in unoccupied rooms are turned off.

Ductless Heating & Cooling Systems Provide Summer A/C & Winter Savings

If you heat with baseboards, ceiling cables, or wall heaters, consider installing a ductless heating and cooling system. Ductless systems are easily installed, much less expensive to operate, and they provide summer cooling. Learn about rebates for ductless systems at crpud.net/ductless.



Water Heating

Water heating can account for up to 20% of your utility bill. A well-insulated hot water system with low-flow faucets and showerheads will maximize energy savings.

- ✓ Check to see if faucets and showerheads are low-flow models. Showerheads and kitchen faucets should be 1.5 - 2.2 gallons per minute (GPM). Bathroom faucets should be 0.8 - 1.5 GPM. If the GPM rating isn't shown on the faucet, turn it on and put a bucket under the fixture. Collect the water for 60 seconds, then measure the amount of water you collected.
- ✓ If your hot water pipes are not insulated and run through an unheated area such as a crawl space, insulating them can cut heat loss and reduce hot water use.

Ways to Cut Hot Water Energy Waste

- ✓ Install low-flow showerheads.
- ✓ Use your dishwasher, but run full loads.
- ✓ Install low-flow faucet aerators.
- ✓ Take short showers instead of baths.
- ✓ Fix or replace leaky faucets.
- ✓ Wash laundry in cold water.

If you plan to be gone for a week or longer, shut your water heater off at the breaker. Leave time for the water to heat up when you return home.

Insulation

If your home isn't well insulated, you'll lose a lot of heat through your ceiling, walls, and floors. If your home was built before 1980 and has not had an insulation upgrade, it is probably time for one!

Attic

- ✓ Measure the depth of the insulation in the attic above the heated spaces in your home. If there is less than 5 inches, you need more insulation. (Unheated spaces such as garages and covered patios don't need attic insulation.)
- ✓ If your attic and crawl space hatches are located within a conditioned space, they should be well insulated, their edges should be weather stripped, and they should close tightly.

Walls

- ✓ To check for insulation in your exterior walls, shut off the breaker to a wall switch, then unscrew the cover plate and shine a flashlight between the wall and the edge of the electrical box, or use plastic utensil to probe gently next to the box. Be careful not to damage electrical wiring.



Floors

- ✓ Look in your crawl space to see if your floors are insulated. They should be, and the insulation should fill the space between the joists and be held up against the floor with twine, wire, or lath.

Adding Insulation to Improve Efficiency

Insulation upgrades are a common do-it-yourself project. Insulation projects often qualify for rebates, so check with our Energy Experts before you do the work.

Is it time for a professional weatherization inspection?

Following the steps in this guide will help you identify areas for improvement. For a more thorough analysis, consider scheduling a professional inspection. Your heating fuel determines which organization will provide the inspection:

- ✓ **If you heat with electricity**, our partners at Efficiency Services Group will conduct a free in-home weatherization evaluation. To schedule an appointment, call **(888) 883-9879** or email rebates@esgroupllc.com.
- ✓ **If you heat with natural gas**, the Energy Trust of Oregon provides free Home Energy Reviews. To schedule a review, call **(866) 368-7878** or visit energytrust.org.
- ✓ **If you heat with oil, butane, propane, kerosene, or wood**, contact the Oregon Department of Energy about the State Home Oil Weatherization (SHOW) program. Call **(800) 221-8035** or visit oregon.gov/energy.