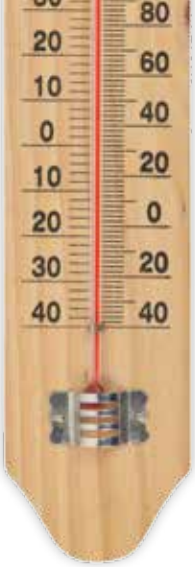

CONDUCT A HOME ENERGY AUDIT

By Mae Smith

Do you feel a cold wind blowing down your neck reminding you it is winter in Wyoming?

If sitting on your living room sofa when this blast of cold air chills you, then a home energy audit may be in order.

You can conduct one or contact a local utility company or a private contractor for a more thorough, industry standard audit. Several utility companies offer free audits, and others charge a fee.

Professionals usually have the equipment and technology, such as a blower door (to create a negative pressure in the home to pinpoint leaks), or a thermographic scan (shows areas of heat loss).

Find Air Infiltration

Heating and cooling are usually the biggest consumers of energy in the home (on average more than 50 percent!). Become a detective and try to track down the biggest robber of your energy – air infiltration!

Simple Exterior Fixes

- Check and fix if necessary the outside clothes dryer vent. It is often clogged with lint, and the flap cannot close, creating a huge hole into your home. (Photo 1)

Photo 1

Photo 2

Photo 3

Photo 4 - good

Photo 5 - bad

- Check for cracks in the trim of windows and doors. These can be caulked to seal the gap. (Photo 2)
- Check to make sure doors and windows seal tight. If they don't, add weather stripping (Photo 3) or a storm window or door.
- Check for holes around pipes and electric lines entering your home. These can be sealed with spray foam. (Photos 4 and 5 of good v. bad)
- Look for siding that needs replaced.

Photo 6

Investigate Inside House

A blower door makes finding air leaks inside a home much easier (Photo 6), but you can still locate leaks without this equipment. On a windy day, light a candle or incense stick and hold in front of the areas you are checking for leaks. Watch the smoke or flame for movement. Be very careful not to catch anything on fire while conducting these tests.

Areas to check inside the house:

- Check around plumbing, ducting, or electrical wiring and seal with caulk (Photo 7). Be sure to check under sinks.
- Air can often infiltrate through electrical outlets. Foam gaskets can be installed behind outlet and switch plates.
- Check your windows and doors from the inside. If leaky, seal with caulk, plastic film, weather stripping, or door sweeps. Weather stripping loses its effectiveness if painted.
- Check recessed lights and the attic entrance. Note: If you see spider webs, there may be an air leak (Photo 8). "Spiders like airflow so you are not necessarily a bad housekeeper – spiders are just good webmakers." Joe Parrie – Carbon Power & Light
- Water heaters and furnaces require a flue to vent gases out of the home – a large, unavoidable hole outside. Newer, more efficient models use a forced vent system that reduces air infiltration.
- Check to make sure fireplace dampers are closed when not in use.

These leaks may seem very small but, when you add them up, they could be the equivalent of leaving a door or window open year-round. YIKES!

Insulation to the Rescue

Once air infiltration is stopped, consider insulating pertinent areas. Insulation is usually the best energy-saving investment if the amount in your house is inadequate. Only 20 percent of homes built before 1980 are well-insulated. Since warm air rises, adding insulation in the attic is usually the most cost-effective way to make a home more comfortable year-round. Measure your attic insulation. If it is less than R-30 (11 inches of fiberglass or rock wool or 8 inches of cellulose), you could probably benefit from adding more. The recommended level for attic insulation in Wyoming is R49-R60 except in Platte and Goshen counties with recommended levels of R38-R60.

USEFUL WEBSITES

Energysavers.gov

www.togetherwesave.com

Photo 7

Photo 8

Potential Energy Hogs

With air infiltration locked out, focus on other home energy burglars.

If an appliance needs replacement, consider buying one that has an ENERGY STAR label. These meet or exceed Environmental Protection Agency energy efficiency standards.

Refrigeration

- If your refrigerator or freezer has a rounded top – it needs to go to the recycling center!
- If your freezer is not full, fill the void with frozen jugs full of water. This will reduce loss of cold air when opened. If you have multiple freezers or refrigerators, try to consolidate and unplug any not being used.
- Keep coils clean on your refrigerator and freezer.

Lighting and electronics

- Turn off lights when you leave a room and electronics when not in use.
- Replace incandescent bulbs with more energy-efficient compact fluorescent bulbs or LEDs.

Water heating

- Turn the hot water heater down to 120 F.
- Consider washing and rinsing clothes in cold water.
- Replace your standard showerhead with a low-flow showerhead.
- Consider a hot water heater insulation wrap.

Home heating

- Replace your furnace filter monthly.
- Consider a programmable thermostat or manually turn down heat at night or when away.

Outdoor electricity hogs

- Outdoor water tank heaters use a lot of energy and usually run around the clock. Make sure they are being used effectively.
- Plugging in a vehicle in the winter consumes a lot of electricity. Consider putting your vehicle engine heater on a timer; it should only take two hours to heat an engine.

With an hour and a tube of caulk or spray foam, homeowners can make a lot of progress in reducing energy bills by thwarting the biggest culprit – air infiltration. With a little more detective work, time, and investment, your house can be much more energy efficient – saving money and increasing peace of mind.

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