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POWERLINES

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Efficiency tips for older homes

If you're interested in improving the efficiency of an older home, start by prioritizing the invisible upgrades that make a home more comfortable and efficient.

Many older homes are not properly insulated. Insulation has several benefits beyond sealing your home and keeping outdoor air from seeping in. It reduces outdoor noise, makes your home quieter and improves your overall comfort.

Always properly air seal before you insulate. Older homes with pocket doors, coved ceilings, dumbwaiters, doors to attic spaces and laundry chutes allow indoor air to escape through the cavities, gaps and cracks around these classic features. Sealing off open cavities around those features often requires fastening plywood, rigid foam or drywall into place, and then caulking around the edges.

Keep an eye out for framing features that cause drafts. Balloon framing is a type of construction where wall studs run all the way from the foundation to the roof, allowing air to flow freely through those spaces. Second floors with knee wall attics on both sides are notorious for air leakage. Open cavities allow air to flow horizontally between the attic spaces, making the home uncomfortable and inefficient. Seal off the open cavities in the floor framing and insulate attic spaces.

Dense-packed cellulose or closed-cell foam insulation can be sprayed into exterior walls. Skilled contractors can remove pieces of siding and drill holes to fill the wall cavities from the outside of the home. For brick or stone homes, holes can be drilled from the inside and then patched and painted. Insulating walls from the inside of the home requires more time and effort in preparation and cleanup, but having well-insulated walls is worth it.

Knob and tube wiring—commonly used from the early 1880s to the 1930s with no grounding wire—should be replaced prior to insulating walls and attics for safety purposes. Contact between insulation and knob and tube wiring can create a fire hazard.

Considering the cost of replacing windows, it may be better to invest in air sealing and insulation first. Then, consider storm windows to keep the charm of the original windows, such as leaded glass and stained-glass windows, in good condition.

People often think new windows are the best way to improve a home's efficiency. Considering the cost of replacing windows, it may be better to invest in air sealing and insulation first. If your home has leaded-glass or stained-glass windows, consider installing storm windows to help keep the windows in good condition.

Once you've addressed the envelope of your home, consider appliance improvements. Replace an old electric water heater with a heat pump water heater. This upgrade can save a family of four an estimated $550 a year and more than $5,600 over the lifetime of the water heater, according to Energy Star.

Invest in high-efficiency heating and cooling equipment. A mini-split heat pump, also known as a ductless heat pump, is a more efficient option than electric baseboard heating and provides the benefit of air conditioning.

Older homes don't have to be inefficient. Show your home some love and invest in energy-efficient upgrades.

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Energy Use 101

Fluctuations in your home's energy use are perfectly normal, especially as the seasons change. Weather is often the primary reason electric bills rise and fall, but if your bill seems unusually high, there could be other factors at play. Here are some common culprits to consider:

Heating and Cooling (HVAC) System: Weather heavily influences how much energy your HVAC system uses, but a malfunctioning unit can really throw your power bill out of whack. Check for low refrigerant, the heat and air being on simultaneously, a broken thermostat, a clogged filter, vents that are obstructed or closed, inadequate duct insulation, a disconnected duct, outdoor unit coils that are obstructed, worn-out equipment and poor home weatherization.

Water Heater: The water heater is a major energy user, second only to the HVAC system.

Check for a leaking hot water faucet or pipe, leaking water heater, burned out element, malfunctioning thermostat, a thermostat set too high or unnecessary hot water use.

Well Pump: Check for a waterlogged pump, leaky pipes, corroded or sticking points, irrigating lawn or garden, filling ponds and seasonal pool use.

Appliances: Check for a dryer filter or vent that could be clogged, an extra refrigerator that could be running in a hot location, a refrigerator or freezer that is low on refrigerant and whether you are cooking and washing more than usual.

Did you notice lighting didn't make the list? With the invention of LEDs, lighting is a decreasing part of most residential energy bills, but it's still a great idea to turn lights off when not in use.