



October 11, 2008

Prepare your home for a cozy winter

Energy audit can help identify problems

By Hannah Crowley, Free Press Staff Writer

As the leaves fall, Vermonters' minds turn to raking, apple pies and the upcoming winter's heating costs, not necessarily in that order. Old homes with antique windows and creaky floorboards are part of Vermont's charm. But with the Energy Information Administration estimating the price of crude oil to fluctuate around \$112 a barrel in 2009, that charm slides easily into fear.

Extra precautions against the cold are an easy step that can reap major benefits. Winterizing your home can cut a heating bill as much as 20-30 percent in some instances. The first step is to learn how efficient, or inefficient, your home is with an energy audit.

Logan Brown, of Efficiency Vermont, says the benefit of an audit is "the most important message we can get to people." An audit will cost anywhere between \$300 and \$500, but can save money in the long run by diagnosing costly inefficiencies in a home's infrastructure.

Energy auditors are certified with Home Performance with Energy Star, a national program sponsored by the U.S. Environmental Protection Agency and the U.S. Department of Energy. The program features a whole-house approach to improving energy efficiency and comfort at home in an environmentally conscious manner.

Check your insulation

The auditor will check insulation levels, making sure insulation is continuous and properly installed. Vermont homes should have an R-38 level of insulation in their cap, "R" meaning resistance value. This equals roughly 12 inches to 13 inches of insulation. Insulation can settle over time or become ineffective due to humidity or improper installation.

The auditor will also perform a variety of tests to determine how well sealed a home is. Emerson Wright of Home Depot in Williston identifies the four biggest heat-loss culprits as windows, basements, attics and doors.

"Older windows are usually single glazed," Wright says, "and made with metal that conducts the cold."

An auditor can figure out where heat is leaving a home and how quickly. One method is the blower door test, in which a giant fan is sealed into a door frame creating a vacuum effect and depressurizing the home. With a combination of pressure-sensing devices and measurements, the auditor can determine whether or not a building is airtight.

"If I took your home and filled it with water and turned it upside down, where the water would pour out is where the air comes out," Brown says.

After diagnosing a home's problems, an auditor will recommend what action homeowners can take to improve their efficiency. Some suggestions may be costly, some not, but the primary benefit is the identification of trouble spots. "An audit shows people where the problems are and helps them prioritize," Brown says.

Get a tuneup

Another step Efficiency Vermont stresses is having your home heating system tuned up each year.

"You wouldn't drive your car for 10,000 miles without getting a tuneup," says Matt Cota, executive director of the Vermont Fuel Dealers Association. "Well, it's the same thing with the furnace in your basement, making sure its maintaining its highest level of efficiency."

Peter Bourne's company, Bourne's Energy, performs hundreds of tuneups annually for Vermont homes.

"We have to clean them out. Technicians get into the unit and vacuum out any buildup, creating a better heat transfer, replace the filters, making sure its a clean product, removing residue," Bourne says.

The checkup continues with a series of steps verifying functionality and safety and concludes with the use of diagnostic equipment to be certain the system is running at its most productive.

Make the fix

Once a home's heating system is running as efficiently as possible, it must be buttoned up to hold in that precious and costly warmth. There are inexpensive and easy ways that homeowners can insulate their homes against the winter. Drafts coming in from electrical outlets can be quelled with electrical outlets and switch sealers, which cost less than \$3 for 14 outlet covers. Wright, of Home Depot, recommends covering outside outlets first, as they tend to be the draftiest.

Window insulation kits are another way to buttress often-insufficient panes. The kits come with double-edged tape that is applied around the molding, and plastic is then placed on top and sealed with heat from a blow dryer. The layer added by the plastic is a dead air space, creating natural insulation, Wright says.

Expandable foam can be spread around any incoming piping or electrical facets. This will prevent cold air from coming in and warm air from leaking out.

Efficiency Vermont's also recommends lowering the thermostat, emphasizing that each degree a home's thermostat is lowered roughly equates to a 3-percent savings on an energy bill. Homeowners can do this manually or by buying a programmable thermostat. Costing anywhere between \$25 and \$50, the thermostat can be set to automatically lower and raise your home's temperature during the evening or during work hours.

Contact Hannah Crowley at 651-4835 or hcrowley@bfp.burlingtonfreepress.com.
