

# The Boston Globe

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Thursday, December 1, 2005

## This Cold House

It is Bob Eckel's mission to stop heat—and dollars — from escaping

By Matt Viser, Globe Staff | December 1, 2005

MARLBOROUGH — Each month, Bob Eckel prowls through dozens of homes, armed with flashlights, notepads, and assorted other tools that he totes in two large bags.

But Eckel is not a burglar out to steal your money. His job is to help you save it.

Eckel is the program manager of the Conservation Services Group, which does home inspections and energy audits for residents throughout the western suburbs.

On a recent afternoon when the temperature was near-freezing, Eckel visited the home of David Sullivan, a self-described penny-pincher who would rather tell his wife and two daughters to put an extra sweatshirt on than turn up the heat.

Over two hours, Eckel combed every room of Sullivan's house and peppered him with questions. At what temperature is the thermostat normally set? (Sixty-eight degrees.) Does the family sleep with the bedroom doors closed? (Yes.) When was the water heater last checked out? (September.)

Homeowners in the Northeast who heat with natural gas can expect to pay an average of \$275 more this winter, an increase of 27 percent over last year, the federal Energy Information Administration reported last month. Those using heating oil are expected to pay \$314 more, a 25 percent increase.

Yet just like those who buy snow shovels in July and air conditioners in March, many right now appear to be planning ahead. In October, the Westborough-based Conservation Services Group did energy audits for 800 homeowners, a 45 percent increase over October 2004.

The home energy audits have been available to Massachusetts homeowners since the early 1980s, but more recently utility companies have started offering cash incentives to encourage homeowners to follow through

with the recommendations.

Most are eligible for a 50 percent rebate on up to \$1,500 to install insulation, air sealing, or other conservation measures, according to Lisa Rinkus, spokeswoman for MassSave, a consortium of energy companies that aims to make their customers' homes more efficient. Conservation Services Group manages the free audits for National Grid and NStar Electric, which services most homes in the west suburbs.

Governor Mitt Romney last week signed a bill that allows low- and moderate-income Massachusetts families to take a personal income tax deduction of up to \$800 for their winter heating costs, as well as a one-time \$600 tax credit for the purchase of energy-efficient products.

The measure also pumps \$20 million into the federal Low-Income Energy Assistance Program, which nearly 135,000 households in the Bay State took part in last year.

On the recent Marlborough audit, Eckel removed the light switch cover on an outer wall to check for insulation in the home. He looked at what kind of light bulbs the family uses, and temperature on their hot water heater. He climbed up into the attic to check the thickness of the insulation.

Eckel said when boxes and other objects are piled atop insulation, it compresses the material and reduces its effectiveness.

Eckel found that Sullivan had already taken many of the steps energy specialists recommend. He recently installed new windows, so there's no draft. He uses energy-efficient light bulbs. He turns off the heat in a room that is rarely used.

The biggest energy gluttons in the house were a pair of 20-year-old refrigerators. Replacing them would save nearly \$250 a year in electricity costs, according to Eckel's calculations. Of all appliances in a house,

refrigerators typically consume the most electricity.

Eckel also recommended that Sullivan insulate several walls and install an insulated doorway to the attic.

The cost of the work would be \$1,350, he said, and National Grid would foot half the bill. It would save nearly \$500 a year — keeping warmth in during the winter, and cold air from escaping in the summer.

The Sullivans took advantage of Thanksgiving sales and purchased two refrigerators last week. But with one daughter getting ready to go to college, David Sullivan said adding the insulation just doesn't fit in their budget right now.

His wife and daughters may need to keep those sweaters out for one more year.

## Energy-saving tips

To share stories about what you have done to save energy in your home, visit the Globe West message board online at [www.boston.com/westtalk](http://www.boston.com/westtalk).

Some ideas

Holiday lights with light-emitting diodes (LEDs) use one-10th the energy of typical mini-lights.

When it's cold, keep draperies and shades on south-facing windows open during the day and closed at night. When it's hot, close the window coverings during the day to keep out the heat.

Adding or installing insulation is the best way to improve a home's overall energy efficiency and can save up to 30 percent on heating and cooling costs.

Insulate hot water pipes and ducts wherever they run through unheated areas.

Seal the largest air leaks in your house — the ones that whistle on windy days or feel drafty. Check around windows, doors, and unfinished spaces behind cupboards and closets. Caulk leaky windows.

Avoid running water continuously while doing dishes, washing, brushing teeth, or shaving. Take (short) showers instead of baths. Repair leaky faucets. Water heater thermostats

should be kept at 120 degrees Fahrenheit. Also, low-flow showerheads and faucet aerators can reduce hot water consumption by half.

Keep your freezer tightly packed, adding bags of ice as needed to fill space. Set your freezer at 5 degrees Fahrenheit and your refrigerator between 30 and 40 degrees Fahrenheit.

Don't peek in your oven as you cook. A significant amount of heat escapes every time the door is opened.

Use kitchen and bathroom ventilating fans only when they are needed.

Plant deciduous trees on the south and west sides of the house to provide shade in the summer and sun in winter. Plant evergreens on the north and west to deflect wind in winter.

Air conditioning and heating systems should be professionally serviced each year. Filters should be changed every month.

Turn off your computer at night, on weekends, and when left unused for an extended period.

When operating efficiently, a gas flame should be blue. If a gas flame is yellow, have it checked.

Wash full loads of laundry and use cold water whenever possible. Always clean a dryer's lint filter, and dry only full loads of laundry.

Install a programmable thermostat so you can adjust the temperature according to your needs. If programmed properly, these thermostats can save as much as 10 percent on heating costs.

Replace old appliances with high-efficiency models. Energy Star-rated products can save 10 to 15 percent over standard products.

Replace regular light bulbs with energy-efficient bulbs, called compact fluorescents. These "cfls" use 75 percent less energy and last 10 times longer than incandescent bulbs. Replacing five light bulbs with cfls could save \$100 a year.

Keep the fireplace damper closed unless a fire is burning.

*SOURCE: Mass-Save*