

## Local couple shows off energy-efficient home

By JAIME CONE  
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DUMMERSTON — After the time and money they invested into their 1906 cape-style house, John and Barbara Evans opened their home on Kipling Road to the public Saturday.

The couple wasn't showing off a new addition or a renovated kitchen; instead, they proudly displayed their energy-efficient home.

"The year we moved in, I cranked up the space heater," said John Evans. Now 10 years later, Evans has done away with space heaters completely.

The house is so effective at keeping cool in the summer and warm in the winter that the couple doesn't even need to use the air conditioner they purchased for the bedroom.

"I just turn on this vent, and it sucks all the warm air out of the room," John Evans said, flipping a switch by the bedroom door. With a quiet whooshing sound, air began to move through a vent above the door frame.

"It only takes 20 minutes or so before it goes from being hot to a very livable space," Evans said.

With the help of Thermal House, a Jamaica company that uses building science principles and methods to diagnose and improve energy efficiency in buildings, the Evanses finished the bulk of their home improvement projects two years ago.

Their house was recognized by Efficiency Vermont as one of 2010's Best of the Best, receiving a home performance honorable mention.

They're so pleased with the results that they wanted to show other home-

owners how to improve the Evans' house.

"I wanted to get some new ideas, and I learned some things," said Mark Haughwout of Wilmington.

"I wanted to see what we could do better," he added.

One of the goals of the tour was to give homeowners a better idea of what they can do on their budget and time frame.

"Sometimes (energy-efficiency) can be sort of an abstract idea, and the whole idea (of the open home) is to make it real, so the average homeowner can see what the owners have done and what they still might want to do," said Alexandra Tursi, public relations representative for Efficiency Vermont.

For the Evanses, their home improvement projects have brought about great changes in lifestyle and their pocketbook.

They invested just a little more than \$20,000 into the effort.

They are currently using 700 gallons less fuel oil each year than before, which is a decrease of more than 50 percent.

Their electricity bill has dropped by about 40 percent for an annual savings of about \$3,000 per year.

"The payback will take about seven years," said Evans.

The process began with an energy audit, which Evans said he would strongly recommend for anyone thinking about renovating their home for energy-saving reasons.

It allows you to figure out where the biggest problems are and how you can get the most out of your money, Evans said.

The Evanses called Thermal House to do their energy audit. They displayed infrared photos taken of their home to determine where the most heat was leaking

and where cold air was coming in.

One photo of the inside of the house shows a blue area above a fireplace, signifying where cold air is leaking into a living room that otherwise glows orange.

The outside shows a mostly blue house that turns orange from the bottom of the first floor down to where the basement meets the ground.

To fix the loss of heat in the basement, Thermal House sprayed a soy-based insulating foam on the walls.

"The part that's underground is insulated by the ground itself," explained Keith Abbott, president of Thermal House. The part that needed to be insulated was the section of wall that peaked above the ground's surface.

A dirt subfloor was covered with a sheet of plastic to keep moisture from entering the air.

"It was never a problem to have dirt floors in old houses because any moisture would draw to the outside," said Abbott. "When you seal a house up, you trap in that moisture. It moves from wet to dry, and in turn gets pulled up into the house."

The moisture could have led to mold and mildew. Even though the plastic cover doesn't make the house more energy-efficient, it addresses air quality issues that could have occurred later.

"Our motto is 'do no harm,'" Abbott said.

There were other concerns that caused the Evanses to work on their home as well.

"The environmental motivation was a strong one for us," said John Evans.

"What us professionals have known for a long time is now being widely discussed as a worthwhile investment, and it's



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owners how to begin the process of creating a more comfortable and energy-efficient living space.

Representatives from Efficiency Vermont and Thermal House attended the event and showed curious visitors what had been

actually a good investment for the country," said Abbott.

"It reduces our consumption of foreign oil," he added. "Put all these things together, and it just makes great sense."

The biggest chunk of energy use in the United States is not consumed by transportation, Abbott pointed out, but buildings.

Efficiency Vermont and other programs provide financial incentives to homeowners who complete certain projects.

For tightening up your house or improving its insulation, Efficiency Vermont offers a maximum \$2,500 rebate, according to Jeff Manney, project manager for Efficiency Vermont.

"It's important to focus on the type of renovations that are going to save you money," Manney advised. "Instead of redoing your kitchen, improve energy efficiency, save money, and then put that money into other projects."

As for the Evanses, they said they would like to replace their front door but are, for the most part, finished with big projects on their home.

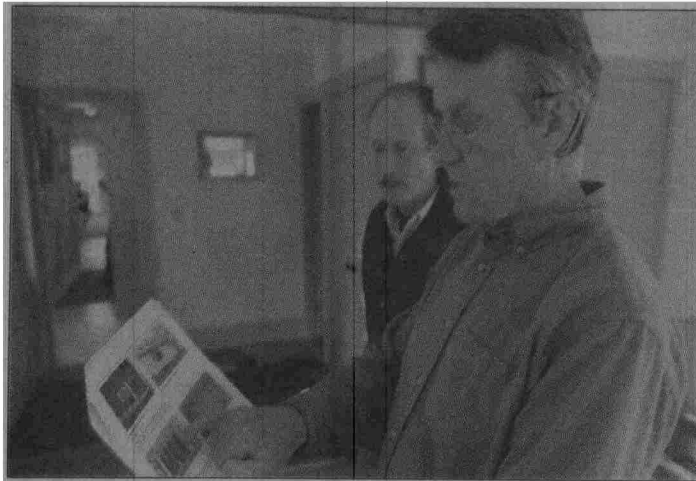
John Evans had some simple advice that almost any homeowner can follow.

"You would be surprised how much you can save by turning down the thermostat two degrees," he said, adding that a programmable thermostat costs only \$40 and can be programmed to turn down the heat at night and

while the owners are at work.

"It really works," he said. "It's the easiest, cheapest way to cut costs. And turn down the heat a few degrees — buy a nice sweater that you don't mind wearing."

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Chris Bertelsen / Reformer  
Will Wohnus of Thermal House looks on as homeowner John Evans points to thermal images taken during the energy audit of Evans' home. The images, which display cold areas in blue and warm areas in red, showed where large amounts of heat were escaping from the house.