

August 6, 2006

YOUR HOME

Battening the Hatches With an Energy Audit

By [JAY ROMANO](#)

WITH no end in sight to increasing energy costs, homeowners are well advised to make sure their houses are energy-efficient. And the best way to do that is with a home energy audit.

“An energy audit helps identify your problem areas,” said Mike Rogers, a senior vice president of GreenHomes America in Amherst, N.Y. “And for most homes, air leakage and duct leakage are two of the biggest things that waste energy.”

When his company performs an energy audit, Mr. Rogers said, the auditor starts by looking at a full year’s worth of utility bills. “We get a picture of what the home uses month by month,” he said.

After that, he said, the auditor determines if the heating and cooling equipment is the proper size and checks the windows, caulking, insulation and weatherstripping.

“Then we get into the meat of the diagnostics,” Mr. Rogers said.

That starts with the use of a blower door — a large fan fitted into an exterior doorway. The space around the fan is sealed, windows and other exterior doors are shut, and the fan is turned on to blow outward.

“Basically, we create the equivalent of a 20-mile-per-hour wind blowing from all four directions against the house,” Mr. Rogers said. “And with that, we can identify exactly where the leaks are.”

In addition to being able to feel leaks around windows, baseboards and openings for heating, electrical and plumbing lines, the auditor will use a smoke pencil to locate less obvious leaks.

“We will also do an infrared scope of the walls,” Mr. Rogers said, using a device that can detect differences in surface temperature caused by air infiltration inside walls. “You can actually see areas of the walls where air is moving through. And that helps us determine where there is insufficient insulation.”

To confirm how much insulation is inside the wall, the auditor will use a borescope, a flexible optical scope that can be inserted into the wall cavity through a small hole.

After identifying how heat is being lost, Mr. Rogers said, the auditor will check the heating system itself.

“We measure how the furnace and hot water heater are burning and drafting,” he said. “In as many as 25 percent of homes, we find some sort of pre-existing combustion or venting problem.”

At the end, the auditor will recommend repairs. The audit takes about 90 minutes and costs about \$250.

Do-it-yourselfers can find tips at energystar.gov/homesealing. New York residents looking for an energy auditor can consult GetEnergySmart.org, the State Energy Research and Development Authority's Web site, or they can call (877) 697-6278.

Bill Hoffner, the owner of Hoffner Conservation, an energy auditor in Norwich, Conn., said that once an audit identifies where a house is losing heat, those areas should be caulked, insulated or sealed.

"Air sealing is something that homeowners can do themselves with some weatherstripping, sealant and a caulking gun," he said. "You can easily save \$50 to \$100 a year by spending \$50 on materials."

But he added that homeowners who seal their houses themselves should still have a professional check the heating system and water heater for proper venting and combustion.

Another way homeowners can save money is to replace incandescent bulbs. "Every incandescent light you replace with a fluorescent can save you money," Mr. Hoffner said. "A fluorescent bulb uses less electricity and lasts 10 to 15 times longer than a normal bulb."

And while installing high-efficiency windows can save money, that may not provide the biggest savings. "You might be better off installing an \$80 storm window than a \$400 replacement window," Mr. Hoffner said.

[Copyright 2006 The New York Times Company](#)

[Privacy Policy](#) | [Search](#) | [Corrections](#) | [XML](#) | [Help](#) | [Contact Us](#) | [Work for Us](#) | [Site Map](#)
