

Going Green With



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How Efficient is your Home? Find out with a Home Energy Audit

Do you know how energy efficient your home is? Ignoring inefficiencies in your home is like letting money blow out the window. In fact, air leaks in an old home could be equivalent to leaving the bottom sash of a double-hung window open all year. Conducting a home energy audit that will diagnose problems and recommend improvements is the first step to reduce energy consumption. There are two approaches to performing energy audits- scientific and nonscientific.

The unscientific approach takes 2-3 hours. The auditor will make a thorough visual inspection of the house. The auditor relies on knowledge about the assumed efficiencies of insulation, appliances, and other components of the home.

The scientific approach takes 4-6 hours and ranges in price from \$350 to \$500. This approach uses diagnostic equipment, in addition to the visual inspection, to identify and record inefficiencies. One component of a scientific audit is the blower door test. The blower door consists of a fan mounted in an airtight frame temporarily set in an exterior door. With the fan running and all exterior doors and windows closed, air is pulled through any holes in the building envelope. The auditor can then pinpoint leaks by holding a smoke stick in front of potentially leaky areas and observing the air movements.

Other tools used in a scientific audit include: Duct Blaster- used to identify leaks in duct work; Infrared Thermograph- uses a colorful display to reveal heat gain/loss; Combustion Analyzer- measures efficiency of furnaces; Flue-Gas Monitor- makes sure the furnace flue's gases are not being sucked back down into the living space; and Electricity Usage Monitor- measures efficiency of appliances.

With both methods, once the auditor has completed the inspection of the home, he or she will recommend improvements that need to be done to the home to increase its efficiency. It is important to remember that an energy audit in itself will not save you any money. You must implement the recommended changes in order to reap the benefits of a more energy efficient home.

Professional energy auditors can obtain certifications from CMC Energy Services (www.cmcenergy.com), Building Performance Institute (BPI; www.bpi.org), or The Residential Energy Services Network (RESNET; www.natresnet.org). These companies maintain searchable databases where you can find an energy auditor in your area. Most utility companies will provide energy audits for their customers. SCI REMC has a free nonscientific audit available to their members that includes a thermograph analysis. Websites such as www.touchstoneenergysavers.com, www.lowermymonthlyelectricbill.com and www.energystar.gov offer tools to help you do your own energy audit. Regardless of who does the audit, it is important to examine the energy efficiency of your home and stop the flow of money out the window.

If you have questions or comments please send them to: askus@sciremc.com.

Sources

Kolle, J. (2009). Every House Needs an Energy Audit. *Green @ Home* , 88-93.

US Department of Energy. (2009, February 24). Home Energy Audits. Retrieved July 22, 2009, from Energy Savers: http://www.energysavers.gov/your_home/energy_audits/index.cfm/mytopic=11160