



HOME ENERGY AUDITS

Homeowners with high heating costs may wish to consider a professional energy audit. A professional auditor uses various techniques and equipment to determine the energy efficiency of a structure.

Before the audit, write down any problems (such as drafty rooms or condensation) and gather your energy bills from the last year. The auditor will measure the house and note doors, windows and other openings. You will also be asked about your lifestyle – the temperature at which the thermostat is set, the number of people in the house during day and evening, which rooms you use, etc.

Most professional auditors will use a **blower door test** to determine how airtight your home is. A blower door is a powerful fan mounted into the frame of an exterior door. When the fan exhausts air out of the house, it lowers the air pressure inside, allowing outside air to flow in through unsealed cracks and openings. The auditor may use a smoke pencil to locate these drafts.

The best blower door tests will use a *calibrated* door with instruments to measure the amount of the air pulled out of the house. This equipment will not only identify the air leaks, but also quantify the overall tightness of any air-sealing job.

A second type of test offered by professional energy auditors is **thermography** – infrared scanning. This test measures variations in temperature to identify heat leaks and areas where insulation is needed. It can also determine if existing insulation has been installed incorrectly or if it has settled. Interior scans are usually more accurate than exterior surveys, because there is less air movement to deal with.

The auditor will use special video or still cameras that make images of heat variations in the building's "skin." Various infrared sensing devices may also be used to measure the temperature of a given spot, but these instruments alone will not provide the necessary detail for a complete home energy audit.

Don't contract with a professional energy auditor, the U.S. Department of Energy suggests, until you have obtained and checked several references; checked with the Better Business Bureau; made sure the auditor uses a calibrated blower door; and made sure they do thermographic inspections (or contract with another company to conduct one).

For more information, visit www.eere.energy.gov/consumer/your_home/energy_audits/index.cfm/mytopic=11160.