



Keystone Energy Efficiency Alliance
33 Greening Life Lane
Shermans Dale, PA 17090
717-582-7484

Energy Audits and Home Performance Services

Energy audit is the term most people use for inspecting your home and recommending a list of energy saving measures or opportunities. Some auditors may do a quick walk-through audit and review of your energy bills for no charge or a small fee. Do not pay more than \$50 - \$100 for such a minimal audit. Other auditors may offer a more extensive walk-through and review of your utility bills, which may cost around \$200. These short audits can be useful if your bills aren't high or you want to get a rough idea of the key energy savings options.

During a **comprehensive energy audit**, the analyst should do a room-by-room examination of the residence, as well as a thorough examination of your heating and cooling equipment, and your past utility bills. You will be asked about how you use your house and how comfortable you are in different rooms. They should also use special equipment, such as a blower door to identify air leaks, and an infrared camera and infrared thermometer to help locate where your house is losing heat. They may use a combustion analyzer to check your heating system if it uses oil, gas or coal. **Do not select someone for a comprehensive audit if they do not use some or all of this equipment.**

A blower door is a big fan that goes in an exterior doorway and draws air in or out of your house. An infrared camera takes a heat sensing (thermographic) picture of your house, which shows areas that are not insulated and losing heat. Once the audit is complete and you receive your report, some auditors will arrange to have your work done by a professional home performance contractor, or they may be part of a company that can do the work. Complete diagnostic audits may cost around \$300-\$700

Your audit report should give a list of recommended energy measures by priority – what will be the most cost-effective things to do first. This will be the best guide to determining what measures to consider for your house. Following are some of the suggestions you can expect, but remember that each home is different.

1. Airseal and insulate (or add insulation) to your attic - usually the first place to start. Add insulation to walls and foundation.
2. Install a programmable thermostat and other controls.
3. Upgrade your heating system.
4. Replace old appliances with ENERGY STAR ® units.
5. Switch to energy efficient lighting.
6. Install storm windows and insulating curtains or shades.
7. Replace or add features to your water heater.
8. Change habits and behaviors and adopt an Energy Action Plan for your family.

Many auditors will look at not only your energy use, but also indoor air quality, moisture problems, structural issues and other health and safety features in your home. This is sometimes called a home performance (building) analysis. **It is a really good idea to have this extra analysis done because tightening up your house can create moisture and air quality problems.** It's important to find out about any safety problems before you make it tighter. If an auditor doesn't seem to understand about these issues, look for someone else.

It's important to select a qualified energy auditor or building analyst who has been trained and certified through an independent group. Ask to see his/her certifications, their local licenses, and proof of business insurance. Also ask for a list of people they have done work for. You can locate building analysts through PA Home Energy: www.pahomeenergy.com or the Energy Coordinating Agency: www.EnergyWisePA.org or www.ecasavesenergy.org. The Building Performance Institute (BPI) is the group that certifies building analysts. You can find out more about BPI certification at their site: www.bpi.org. You may also check with the Better Business Bureau about the company you are considering.

RESNET is a national group that certifies energy raters, who are analysts that certify the energy rating of new homes for the ENERGY STAR for Homes program and for energy efficient mortgages. RESNET and BPI have just started a program to certify energy auditors. To locate raters who also do audits in Pennsylvania, check RESNET at www.natresnet.org. Some raters are also certified as building analysts.

Note: Some home inspectors, whose primary business is to inspect homes when they are being sold, now also do home energy audits. They may offer only a minimal audit, and the inspectors may not be certified by BPI or RESNET, so be sure to ask for details on their services.

For more details on energy audits, check the sites listed above as well as:

[ENERGY STAR for Homes](http://www.energystar.gov/): www.energystar.gov/

[DOE EERE](http://www.eere.energy.gov/consumer/): www.eere.energy.gov/consumer/

Many auditors and building analysts have their own websites that explain more about their services.

For more on selecting an energy auditor, see the KEEA guide to "Selecting an Energy Service Contractor".

Notice: This information was prepared by KEEA partners with the intent of educating homeowners and building owners on saving energy in homes. You may copy or post this information on other websites, but please credit the Keystone Energy Efficiency Alliance as the source. Comments or suggestions can be emailed to Gloria Fultz at GSFultz@earthlink.net.