

What is a Home Energy Audit?

A home energy audit (or survey) evaluates an existing home to determine where and how energy is being lost, what systems are operating inefficiently and what cost-effective improvements can be implemented to enhance occupant comfort, make the home more durable and lower utility costs.

RESNET has defined three types of energy assessments for existing homes which range in complexity from a simple but effective walk-through survey to a performance audit using diagnostic equipment and computerized data analysis to a comprehensive home energy rating utilizing the most sophisticated modeling software to produce a home rating score on the HERS Index. These options, listed from least complex to most complex are explained below.

Home Energy Survey

A Home Energy Survey is a visual inspection and does not include the use of diagnostic testing equipment. Its purpose is to assess the general energy performance of an existing home including:

- Building envelope features (windows, doors, insulation, ducts) and ages
- Heating, cooling and ventilation equipment types, characteristics and ages
- Appliance and lighting characteristics
- Comfort complaints
- Visible moisture issues
- Visible health and safety issues

The Home Energy Survey Professional (HESP) will request a review of utility use and billing history to better understand potential opportunities for savings. A report of the complete assessment is provided, including basic recommendations for improving the home's energy efficiency, as well as low-cost do-it yourself tasks. It also includes information on relevant utility-based programs that may incentivize the homeowner to take action. A Home Energy Survey takes approximately one hour to complete.

Building Performance Audit

A Building Performance Audit includes all of the inspections provided in the Home Energy Survey and also includes diagnostic testing using specialized equipment such as a blower door, duct leakage tester, combustion analyzer and infrared camera to determine:

- The amount and location of air leaks in the building envelope



- The amount of leakage from HVAC distribution ducts
- The effectiveness of insulation inside walls and ceilings
- Any existing or potential combustion safety issues

A Building Performance Auditor (BPA) conducts a whole-house evaluation and performs computer software analysis to identify and prioritize proposed treatments for improvement. The detailed report will provide suitable retrofit recommendations and specifications and guide the homeowner to the appropriate RESNET Qualified Energy Smart Contractors who can perform the work. A Building Performance Audit takes 3-4 hours depending on the size of your home.

Comprehensive HERS Rating

A Comprehensive HERS Rating is the most in-depth performance audit of an existing home. It consists of the evaluation, diagnostic testing, cost-effective recommendations and work specifications contained in a Building Performance Audit.

In addition, a Comprehensive HERS Rating includes a computerized simulation analysis utilizing RESNET Accredited Rating Software to calculate a rating score on the HERS Index. The report will also contain a cost/benefit analysis for the recommended improvements and expected return on investment. Comprehensive HERS Ratings of existing homes will be required to qualify loan applicants for certain federally sponsored mortgage products.

(from http://www.resnet.us/main/what_is_a_home_energy_audit)