

Home Energy Assessments – Save Money and Add Value

By Jerry Pfeuffer, Marietta Inspection Services

As energy costs rise, homeowners who take steps to make their home more energy-efficient will enjoy lower utility costs, as well as a more comfortable living environment. In addition, by investing in energy-saving improvements, homeowners can improve their home's energy efficiency rating (*HERS* rating) and its resale value relative to less energy-efficient properties.

The Cost of Energy Inefficiency

Most homes (particularly older homes) are not very energy efficient. In winter, cold air invades through drafty doors and windows, while heat is lost through poorly-insulated ceilings and walls. In summer, these same deficiencies increase cooling costs. In addition, a typical home loses over 20% of heating and cooling air flow through leaks in its air duct system. Strategic energy-related upgrades (heating and air systems, insulation and energy-efficient appliances) can result in home operating cost savings of 20% to 30% compared to homes of similar age, size and construction. In most homes, this equates to hundreds of dollars in annual cost savings, which, in turn, increase the home's market value.

Cost savings and enhanced property value are not the only benefit of an energy-efficient home. Studies by the Environmental Protection Agency (EPA) and the Department of Energy (DOE) have shown that energy-efficient homes have better indoor air quality. Better indoor air quality results in healthier occupants.

Home Energy Rating System (HERS)

The *Home Energy Rating System* (HERS) is an energy-use index that provides an objective measure of a home's energy efficiency. The rating system enables the comparison of homes in terms of their overall energy efficiency. The HERS is used in the *EarthCraft* and *Energy Star* certification programs for newly-constructed homes. As HERS ratings on resale properties become more common, they will become increasingly important to homebuyers. Real estate multiple listing services now enable agents to include a home's HERS rating in a listing. When selling your home, a strong HERS rating can differentiate your home from the competition.

The data gathered from a *Home Energy Assessment* (see below) is input into a computer program and translated into points - the HERS Index. The home receives a score from 1 to 100, depending on its energy efficiency relative to a baseline rating. The lower the HERS score, the more energy-efficient the home is.

Home Energy Assessment

The starting point for increasing your home's performance, energy efficiency and value is an energy assessment. An assessment involves a detailed on-site inspection of a home by a certified energy rater (like Marietta Inspection Services). During the assessment, the energy rater reviews the home and measures its energy characteristics, such as insulation levels, window efficiency, window-to-wall ratios, heating and cooling system efficiency, solar orientation of the home and water heating system. Diagnostic testing to determine air infiltration and duct leakage rates is also performed on the home

An estimate of the home's energy costs is provided in a report listing cost-effective options for improving the home's energy rating. Potential improvements are then computer modeled to determine feasibility and estimate a return on investment (ROI). Once the recommended improvements are made, the home should be retested to verify the improvements were made correctly, to re-analyze the expected operating costs of the home and to calculate the new (and improved) HERS Index value.

In most cases, energy efficiency can be substantially increased by implementing relatively low cost upgrades, such as lighting, air duct sealing, and increasing insulation levels. While more expensive, upgrading HVAC equipment, appliances and windows may be warranted by the energy/cost savings that can be achieved. The cost to improve an older home is usually higher than that of a newer home, but is often warranted by the energy savings opportunities. Deriving the optimal combination of improvements and developing an implementation plan is part of the assessment service.

The Energy Assessment Investment

Like a standard home inspection, the cost of a home energy assessment varies based on the age and size of the home. The cost, however, is typically between \$400 and \$1,000 (including a reassessment and updated rating). The cost for an average energy assessment is returned in potential energy savings in less than a year for older homes and in less than two years for a home constructed more recently. Marietta Inspection Services offers a 15% discount to clients and friends of Sage Real Estate Advisors.

A professional energy assessment is recommended if you are experiencing uneven temperatures in your home or if you have seemingly high utility bills. An assessment is also a good idea if you have allergic symptoms or frequently smell "musty" odors. If you are considering increasing insulation levels or upgrades to heating, air conditioning or water heating equipment, an energy assessment will help you make the proper equipment choices.

Tax Credits and Mortgage Programs

The federal government offers a number of income tax credits relating to home energy efficiency improvements. Consult your tax advisor concerning these programs and your eligibility. There are also mortgage programs that enable homeowners to include the cost of energy-efficient home improvements into a refinance. For more information, on these programs, ask one of Sage's mortgage lending resources.

Jerry Pfeuffer with Marietta Inspection Services, LLC is a certified HERS energy rater and an Energy Star Partner. His company performs residential energy assessments and home inspections in the Metro Atlanta area. If you would like to learn more about residential energy assessments or would like to schedule an assessment for your home call Jerry at 404-518-5525 or visit www.mariettainspections.com.