



## Frequently Asked Questions About Our Services

Contact: Larry Gorman

(505) 269-2969

[lgorman3@comcast.net](mailto:lgorman3@comcast.net)

[www.buildingenergysolutions.com](http://www.buildingenergysolutions.com)



### Mission

Building Energy Solutions Inc. supports the Building America Program and Energy Star Homes Program by performing the required HERS Ratings, equipment sizing

calculations and testing and inspection of the new home.

***We also successfully apply this same technology, and now with thermographics, to increasing the energy efficiency of the existing home.***

### What is a HERS Rating?

The HERS Rating is a score used to compare the energy efficiency of different homes.

All features of the building affecting energy consumption are analyzed by computer software, which estimates the energy consumption and generates the "HERS Rating" score. The Building America threshold score is 88. The Energy Star Homes threshold score is 86. A score of 80 is said to represent current construction practices, which do not comply with these standards. For each point above 80, these scores represent about a 5% savings in energy consumption for heating, cooling, and domestic hot water.

In addition to producing a more efficient home, the Building America Program also requires features to provide adequate fresh air to occupants. Building America requires any combustion appliances within the home to be sealed combustion or power vented for occupant safety. Additional information on this program in New Mexico may be found at <http://www.bapartner.com/>.

U.S. Department of Energy



Program Partner

More information on the Energy Star Homes Program may be found at [http://www.energystar.gov/index.cfm?c=new\\_homes.hm\\_index](http://www.energystar.gov/index.cfm?c=new_homes.hm_index).



### Why do I need a HERS Rater?

The HERS Rater will assure that the components of the home work together as an efficient system, assuring energy conservation and comfort.

If the HERS Rating does not produce the desired score, the rater will have suggestions to increase the score. If requested, the evaluation of features may also include a cost/benefits analysis that will estimate the payback of features such as better windows, more insulation, etc.

### Why require testing and inspections?

Testing and inspections will assure that you receive the quality of installation that you are paying for.

Both Building America and Energy Star Homes require testing of air leakage through the building envelope (the separation between the heated space and the outside) and the air distribution system (ducts) to assure that the air, which you are paying to heat and cool does not escape the home. The equipment used is commonly known as the blower door and duct blaster. Both consist of fans and sophisticated instrumentation to measure pressure and airflow. Building America also requires documented inspection

before insulation is installed to assure that draft stop materials are in place to minimize air leakage and maximize effectiveness of insulation.

### **Why be concerned about sizing of heating and air-conditioning equipment?**

The equipment will not operate efficiently unless it is properly sized for the load.

We provide the Air Conditioning Contractors of America (ACCA) "ACCA Manual J" calculations. These are the calculations, which determine "right sized" heating and cooling equipment for your home.

Money saved on properly sized equipment often pays for air sealing and other extras associated with energy efficient homes.

### **I thought bigger heating and air conditioning equipment was usually better.**

No, oversized equipment will increase energy use and decrease equipment life.

Frequent cycling of heating and cooling equipment does not allow the equipment to achieve the efficiency that it is designed to deliver and increases maintenance costs.

### **What is included in the heating and air conditioning system design?**

Sizing of equipment and ducts sizing, duct insulation, fresh air intake system.

ACCA Manual J calculations are performed to properly determine the equipment sizing for your home. Duct

sizing is determined using ACCA Manual D. Without a properly engineered distribution system to deliver the required amount of fresh and conditioned air to each room, comfort may be compromised and the designed efficiency of the equipment may not be achieved.

### **What is included in the heating and air conditioning installation inspection?**

Verification of specified duct, register sizes, and specified duct insulation. Measurement of airflow to each room. Inspection to verify that the ducts and insulation are properly installed.

### **Why go to all this extra trouble? Any new home will be built to code and inspected by the code authority.**

There have usually been building codes and code inspectors, but the facts are that there are many homes that are not adequately inspected and the codes have never addressed all the issues.

Currently we are more aware of environmental issues and the ever-increasing cost of heating and cooling fuels. Here are some facts from the Environmental Protection Agency:

- ❖ The average home is responsible for more air pollution than the average car. If one household in 10 used ENERGY STAR qualified heating and cooling equipment, the change would keep more than 17 billion pounds of pollution out of the air.
- ❖ The average family spends \$1,300 a year on energy bills, with nearly half of that spent on heating and cooling. Energy-efficient heating and cooling

equipment, sized and installed correctly, with properly sealed ducts, can save consumers as much as 20% of their annual energy costs.

- ❖ Replacing a heating system is one of the biggest investments a homeowner will make. Proper sizing and installation is key to maximizing the system's efficiency, which in turn maximizes the savings and comfort of the home.
- ❖ Sealing your home "envelope" – the outer walls, ceiling, windows and floors--can help increase the energy-efficiency of your home. This includes adding insulation, especially to the attic; sealing air leaks to stop drafts and get full performance from your insulation; and, choosing ENERGY STAR labeled windows when replacing old windows.
- ❖ Effective air sealing, combined with the right amount of insulation, can save up to 10 percent on energy bills. Energy used in our homes often comes from the burning of fossil fuels at power plants; so sealing your home helps protect the environment.

### **If you are not building a new home but still interested in saving energy, consider this.**

Most of the technology and services described here originated from investigations of high utility bills and indoor air quality complaints in existing homes. If you are interested in remodeling or otherwise improving your existing home, or purchasing an existing home, it is important that you contact us for additional information before you begin your search.