

Guest Column

## **Your Home's Report Card**

By Ronnie Godfrey, CGB, president, R Godfrey Homes

Your new home should have a report card. It is called the Home Energy Rating System (HERS) score. It is a compilation of the energy saving features in the home. By considering the amount of insulation, the efficiency of the air conditioning system (HVAC) and other features built into the new home and using an independent rater to do the scoring, you will know how well your home should perform relative to heating and cooling performance. The lower the score is the better. A score of .85 will earn an Energy Star rating. As an example our homes typically score in the .60's. We are now shooting to get them in the .50's.

The independent rater will perform what is called a REMRATE preconstruction audit. This involves the builder supplying information regarding the level of construction excellence that he plans to build into a home. Using a question and answer profile sheet, the builder will specify the insulation, HVAC rating, window rating, orientation (that is the direction that the house is facing), roof overhang, framing method, and energy efficiency rating of appliances and water heater. Then the builder will supply a set of plans to the rater so that he may calculate the window to wall ratio.

Next, the rater will make an onsite inspection after the HVAC rough-in and the placing of the cavity insulation but before the sheetrock is installed. This is to verify compliance with those items listed on the home's profile. Finally, an inspection is made upon completion of the home. At this time the balance of the construction items relative to energy consumption is inspected for compliance. Also at this point, the rater will perform a blower door test. He will remove an exterior door, place a temporary door with a fan built into it and with precision atmospheric testing equipment determine how much or how little air the home leaks. This determines how tight the home is built. A tighter home loses less heat in the winter and uses less air conditioning in the summer. Also it lets in less allergens and less dust.

Fortunately there are several organizations that have been set up to supply scientific data to the construction industry for the various construction

elements so that they can be quantified for the purpose of doing this rating task. Some of those entities are:

- Windows-“ National Fenestration Rating Council (NFRC) is a non-profit organization that administers the only uniform, independent rating and labeling system for the energy performance of windows, doors, skylights, and attachment products”. These are the folks that have windows tested to generate the U value and the Solar Heat Gain Coefficient numbers. These are the numbers that give an indication of how well a window will perform.
- HVAC systems- American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) mission statement reads: “To advance the arts and sciences of heating, ventilating, air conditioning and refrigerating to serve humanity and promote a sustainable world”. Their processes give us the SEER ratings on HVAC units.
- Insulation- R-Factor (Thermal Resistance Factor) - The National Commercial & Industrial Insulation Standards Manual defines R-Value as – a measure of the ability to retard heat flow. The higher the "R", the better the insulating value. ASTM International, originally known as the American Society for Testing and Materials (ASTM), tests insulation to generate the R value ratings.
- AC Ducts also have an R rating as tested by ASTM.
- RESNET is the organization that approves independent raters and the software used in compiling the data to generate a HERS score.
- There are others, but these will give you the general idea.

When you go to buy a new home, ask to see the report card on that house first. It is your best insurance that your utility bills will be lower.

Next week we will look at, first cost vs. long term operation and maintenance cost. We will explore “What is a “House That Works”?”

Philippians 4: 4-8 Rejoice in the Lord always. I will say it again: Rejoice!  
<sup>5</sup>Let your gentleness be evident to all. The Lord is near. <sup>6</sup>Do not be anxious about anything, but in everything, by prayer and petition, with thanksgiving, present your requests to God. <sup>7</sup>And the peace of God, which transcends all understanding, will guard your hearts and your minds in Christ Jesus.

<sup>8</sup>Finally, brothers, whatever is true, whatever is noble, whatever is right, whatever is pure, whatever is lovely, whatever is admirable—if anything is excellent or praiseworthy—think about such things.

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