



# All About Energy Ratings:

## *How an Energy Rating Comes to Be*

### What Exactly Is a Rating, Anyway?

A home energy rating is a standard measure of a home's energy efficiency. The uniform, national "Star" rating system developed by Energy Rated Homes of America has been adopted in several states where there are energy mortgages.

Homes are rated from 1 Star to 5 Stars, with 4 Stars or higher considered energy efficient.

Recognized by banks and the secondary mortgage market as an accurate measure of a home's efficiency, a home's Star rating is used as the basis to qualify buyers for special loan programs that reward energy efficiency.

### Your Order, Please

A homeowner, buyer, seller, Realtor, builder, lender or utility can order a rating.

### Completing the Checklist

The first step involves a visit to the property by the certified energy specialist who completes an "Energy Checklist."

The checklist requires detailed information about the property, including:

- \* **basic house facts:** style, age, square footage, number of bedrooms, measurements of walls and ceilings, type of floor or basement, etc.
- \* **construction details:** types of walls and foundation, condition of the ceiling, roof, attic and basement; method and adequacy of ventilation, blower door test results, etc.
- \* **drawings & photos:** building footprints; sketches and measurements of building components; and photos of all sides of the house, heating and hot-water systems, a typical window, an interior basement wall, unfinished spaces, and any unusual conditions.

- \* **windows & skylights:** style, size, number, how many layers of glass, orientation, features, etc.
- \* **insulation:** type, thickness and total area in the walls, ceilings, foundation, floors and slab edges (typically determined by visual inspection and the use of a probe in building openings).
- \* **space and hot-water heating systems:** manufacturers, ages, model numbers, type of fuel, where sited, number of heating zones, and any special features (insulation blankets, dampers, setback thermostats, etc.)
- \* **utility information:** names of electric utility and oil and/or gas dealers; availability of natural gas; type of fuel for range and clothes dryer; cords of wood, if used; and owner's authorization, if available, for the release of billing records.

### Determining the Rating

Next, the energy specialist enters the data into a computer. The computer program analyzes the information and assigns points for the various components depending on whether they are positive or negative factors for the area's climate.

Because the Star rating system is a "performance-based" system that allows flexibility in meeting energy standards, all information is taken into account in determining the rating. No single feature or building technique is required; instead, each item is assigned points, and the total number of points is what determines the rating.

For example, a house with 50% of its windows facing south will receive more points than that same house in the same spot with only 25% of its windows facing south - but not if those windows are shaded by pine trees. Similarly, it's possible for an older house with 4" of wall insulation to rate higher than a new house with 6" of wall insulation if there are enough other energy-saving features to compensate for the thinner walls.

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## A Star is Born

After all the information is analyzed, the program assigns points for the various building components, then adds them together to determine the final score and Star rating. The rating includes details on:

- ★ **Current Energy Costs:** In addition, taking into account the specific electric utility involved and the average cost of other fuels used (oil, gas, propane, etc.), the program computes the average monthly energy costs the occupants will pay based on the present condition of the home. (For accuracy, these estimates are compared to the actual costs paid by previous occupants whenever possible.)
- ★ **Potential Energy Savings,** if the home rates less than 4 Stars. This section includes:
  - ★ a list of the most cost-effective improvements, along with the estimated costs (materials and labor) needed to bring the home up to 4 Stars;
  - ★ the projected energy costs after improvements are made to illustrate how much the owners will save; and
  - ★ the additional mortgage amount (based on current interest rates) the buyer would pay if the suggested improvements are financed through the mortgage.
- ★ **Benchmark Comparison:** For comparison purposes, the rating also lists the average energy costs for a typical home of the same style, square footage and fuel type as the one being rated. This serves as a benchmark to determine whether the home in its current condition is better or worse than average.

Unlike an energy audit, an energy rating evaluates the efficiency of a house, not the

occupants, because the rating is meant to stand over time and to be transferable to subsequent owners or occupants. It is based on the average number of occupants for a house of a particular size and the average amount of energy they consume.

This is particularly important to keep in mind with energy cost estimates. After all, the projected costs for a two-bedroom home may be exceeded if five people live in the house.

## Wrapping It Up

Once the "as is" rating is completed, the Energy Rating sheet, the Star certificate and the supporting documentation are printed out. The original is mailed to the person who ordered the rating, with copies sent to the other parties involved (lender, builder, buyer, seller, Realtor, etc.).

A subsequent inspection also is conducted on homes that are upgraded to 4 Stars through an Energy Improvement Mortgage to prove to the lender and buyer or owner that the suggested improvements have been made satisfactorily.

## The Rating In Use

Lenders use the rating information to qualify a buyer for an Energy Mortgage that requires energy ratings. A homeowner can use the rating to determine which energy improvements are the most cost-effective.

## For More Information

**Contact:**

*\***Advice that makes sense:** When recommending energy improvements, certified HERS raters suggest cost-effective upgrades that will yield the best return for the owners. For example, if only a few points are needed to reach 4 Stars, raters typically recommend a programmable thermostat because it is relatively inexpensive. And in some cases, raters may not recommend the top-of-the-line heating system because of its high cost. In any case, the buyer/owner is informed of all their options so that they can make the best decision.*