

conserving improvements to the home, conduct additional estimates of annual purchased energy consumption with the home reconfigured to include those improvements sufficient to consider interactions among improvement options.

(b) Estimates completed by each HERS provider under paragraphs (a)(3) and (4) of this section must be—

(1) Based on the minimum rated features set forth in § 437.104 of these guidelines;

(2) Conducted using the standard operating assumptions established in § 437.105;

(3) Conducted using an energy analysis tool that has been certified for accuracy under § 437.200.

(c) Each HERS provider shall compare the estimates provided under paragraph (a) of this section to determine the energy efficiency rating of the home and

if applicable, the energy efficiency rating of the home with proposed conservation measures installed.

(d) To encourage the use of energy efficient appliances, each HERS provider may provide additional information on estimated appliance energy consumption of the appliances in use in the rated home. This information will not change the rating procedure set forth in this section.

§ 437.101 Rating point score and star rating.

(a) Point score. The reference home has a score of 80 points on a 0 to 100 point scale. A rated home with the same annual purchased energy consumption as its associated reference home also has a score of 80 points. Every 0.05 decrease in the ratio (from 1:1) of the rated home's annual purchased energy consumption to the reference home's

annual purchased energy consumption translates to an increase in the rated home's score of 1 point. An increase of 0.05 in the ratio translates to a decrease in the rated home's score of one point. Equation 1 is used to calculate the point score.

Equation 1

Point score = $100 - ((ER/EC)/.05)$

Where—

ER=Estimated purchased energy consumption for heating, cooling and water heating of rated home (Btu).

EC=Estimated purchased energy consumption for heating, cooling and water heating of reference home (Btu).

(b) Star rating. The rated home will be given a star rating between one and five-plus stars, determined by the numerical score and the corresponding number of stars depicted in Table 1;

TABLE 1.—SCORE AND STAR SCALES FOR RATED HOMES

Score	Stars	Annual purchased energy consumption
0–39	One	> 3.0×Reference house.
40–59	Two	> 2.0 and < 3.0×Reference House.
60–79	Three	> 1.0 and <= 2.0×Reference House.
80–85	Four	> 0.70 and <= 1.0×Reference House.
86–91	Five	> 0.40 and <= 0.70×Reference House.
92–100	Five Plus	>= zero and <= 0.40×Reference House.

(c) Homes that utilize no purchased energy due to the use of technologies such as wind generation or photo voltaic power systems will require no calculations and will automatically be given a 100 point score and a five-plus star rating

§ 437.102 Rating report.

(a) For each rating conducted under this part, a report is to be prepared containing the following information:

(1) The numerical rating score determined in § 437.101;

(2) The star rating determined in § 437.101;

(3) The estimated annual purchased energy consumption by fuel type of space heating, space cooling, domestic hot water, and all other energy use, and the total of these four estimates;

(4) The estimated annual energy cost by fuel type of space heating, space cooling, domestic hot water, and all other energy use, and the total of these four estimates;

(5) The name of the accrediting body certifying the accuracy of the energy analysis tool under § 437.200.

(6) The margin of estimating error accepted by the accrediting body certifying the energy analysis tool;

(7) The level of accreditation, stated as either basic compliance or full

accreditation determined under § 437.205 (a) and Guidelines compliance; and

(8) Whether infiltration was tested using diagnostic equipment or estimated by the HERS provider.

(9) Any available and pertinent prior energy consumption data.

(b) If ratings are conducted to evaluate energy saving improvements to the home, in addition to the information set forth under paragraph (a) this section, each rating report must include—

(1) The estimated annual energy cost savings available with the home reconfigured to include those improvements;

(2) The discount rate applied to, and present worth value of, the energy cost savings; and

(3) The financing interest rate and life of the measure used by the HERS provider to determine the present worth value.

(c) The rating report must also provide either:

(1) The estimated appliance energy consumption of the rated home; or

(2) Information that additional energy savings related to appliance use may be attainable and that the information available on Energy Guide labels and from other recognized sources may be

used to consider the energy efficiency of appliances.

(d) If the rating is a projected rating for a to-be-built home, conducted under § 437.104(d) the rating shall be identified as a rating based on plans.

(e) For each rating conducted under these guidelines, the following items are to be prominently displayed on all reports and labels:

(1) Date of the rating;

(2) Annual estimated energy costs for heating, cooling, water heating and all other use;

(3) Rating point score; and

(4) Star rating.

§ 437.103 Reference home configuration.

(a) To conduct each rating under this part, each HERS provider shall establish a reference home that is used in an annual purchased energy consumption comparison with the rated home. The reference home is a hypothetical home configured using—

(1) The same shape and size as the rated home;

(2) The same area of surfaces bounding conditioned space as the rated home, but not including surfaces that neither gain nor lose heat;

(3) All enclosure elements that meet, but not exceed, the requirements, expressed as U and U_o values, of