

## HOME ENERGY SCORE

## Providing the Home Energy Score

After completing the Sim Training and scoring your first home with a mentor, you are ready to begin scoring homes on your own. This document reinforces information from the training and mentoring sessions to help you make sure each Home Energy Score assessment is accurate.

## Getting Started

Always be sure you select the appropriate type of assessment for each Home Energy Score. Assessments can be categorized in the following ways:

### Official Assessment Types:

- ▶ **"Initial"**: when a house is being scored for the first time.
- ▶ **"Final"**: usually provided after improvements are made and when no other work is expected.
- ▶ **"Corrected"**: to fix a mistake from a previous initial or final score. There should never be more than one "corrected" score: Pay extra attention to ensure everything is accurate before generating the label.

### Unofficial Assessment Types:

- ▶ **"QA"**: when a quality assurance provider is rescoreing a home.
- ▶ **"Test"**: to gain familiarity with the Tool and/or see how different features affect scores.
- ▶ **"Alternative EEM"**: To provide recommendations other than those automatically generated by the Scoring Tool. For more information, see the Data Entry Guidelines (p. 11).

## Data Inputs Matter

Show your client you are professional and pay close attention to details. Avoid data entry errors. In particular, double check:

- ▶ **Home Address.** The homeowner will see this on the report, so use correct capitalization and punctuation. Use the embedded Google address verification in the web interface.
- ▶ **Summary Page.** Before generating the label, the Tool will provide a summary of your inputs. Be sure to review the data listed and correct any errors.

### Accurately measuring conditioned floor area is vital to creating an accurate Score.

A home's energy use depends on a variety of factors, one of which is its size. Larger homes have more surface area, which translates into greater energy requirements for heating and cooling. A home's Score is based on estimated annual energy use, not energy per square foot; so, given all other things equal, a larger home will score lower than a smaller home.

### Use Available Resources to Ensure Accurate Scores

All reference and training documents are accessible to every Assessor under the "Resources" menu of the Home Energy Score Portal. These are a few particularly useful references.

**Data Entry Guidelines.** Provided in the "Congratulations" email for completing the Sim, this document is a handy reference guide.

**BuildingCenter.org.** This web site can help you determine HVAC equipment age when it is not readily apparent.

**Assessor Calculator.** This Excel document is required to de-rate insulation, estimate equipment efficiencies, and average values of components that vary throughout the home.

## Don't Cut Corners

You are helping to build nationally comparable data and ratings of home energy performance. This information can be used to determine financing options as well as home value. It is vital for the program's success and your client's trust that the assessment is completed fully and carefully. The following data points are particularly important in terms of how they can impact a Score and recommendations.

- ▶ **Measure the conditioned floor area.** Do not rely on public records or online resources for conditioned floor area - these do not reflect *conditioned* area as the Scoring Tool defines it. Any space with duct registers or radiators should be included as conditioned space. This is not the same measurement as the foundation/floor area.
- ▶ **Appropriately de-rate equipment efficiencies using the Assessor Calculator.** The Assessor Calculator should be used to do this accurately. Do not rely on installation dates for equipment efficiency, especially for high efficiency equipment. Even if the home has particularly low efficiency equipment, you should not go below allowable efficiency minimums (See Table 1) **unless** an even lower number is warranted due to actual measurements.
- ▶ **Use a compass to determine house orientation.** An online map can also help ensure accuracy.
- ▶ **Assess the foundation type accurately.** This is important for calculating an accurate score, especially if a blower door test has not been conducted on the house.

## Time-Savers

A Home Energy Score Assessment is not an energy audit. It is meant to be a timesaving and cost-saving tool to provide homeowners and buyers reliable home energy information. To keep the assessment short:

- ▶ **Combined roof area must be at least as big as combined foundation area.** Consider, "If you removed the floor and walls and allowed the top of the house to drop on the ground, how much area would it cover?" The combined foundation area can be smaller than the combined attic area if there is a vaulted or cathedral ceiling.
- ▶ **Save time by estimating where appropriate.** It is sufficient to estimate the sizes of windows within 6 inches on each side, or measure a few representative windows to estimate the area of the rest. Enter data on the predominant window types.
- ▶ **Characterize the two largest HVAC systems in the house.** If there are more than two heating / cooling systems, collect data on the two that provide conditioning to the largest portions of the house. If there is more than one water heater, characterize the larger system.

**Table 1. Minimum Equipment Efficiencies**

Even if a home's equipment is very inefficient, it is very unlikely that the efficiency level is lower than the minimum values shown here. Do not enter values lower than the following minimum efficiency values for each type of equipment **unless** actual measurements show that the efficiency is worse than the minimum provided here. As always, use the appropriate heating efficiency for the equipment! Efficiency minimums: BPI standard 2400.

Equipment, Efficiency Unit	Value
Combustion Furnace, AFUE	0.70
Combustion Boiler, AFUE	0.60
Heat Pump, HSPF*	6.5
Heat Pump / Air Conditioner, SEER*	9
Room Air Conditioner, EER	8
Evaporative / Swamp Coolers, SEER*	28
Gas fired storage water heater, EF	0.50
Oil fired storage water heater, EF	0.45
Electric storage water heater, EF	0.86
Electric heat pump water heater, EF	2.0
Electric furnace / baseboard heater, EF	0.99
Water heater integrated with boiler, EF	N/A

\*Remember: HSPF and SEER are different.

### Other Important Reminders

- ▶ **Make conservative assumptions.** If you cannot see properly applied sealants, assume ducts are unsealed. Assume the house is not professionally sealed unless you have evidence otherwise. If you cannot see insulation, assume it is poorly installed.
- ▶ **Only single family homes or townhouses / duplexes** can be assessed with the Home Energy Score. Do **not** use the Tool on **mobile homes or apartments**.
- ▶ If there is a **half-story** (e.g. Cape Cod style), round up the number of stories above grade.
- ▶ A **walkout basement** should be considered a basement, not a story above grade.
- ▶ Single pane windows with **storm windows** should be characterized as double paned windows.
- ▶ If you cannot see **wall insulation**, use the R-value estimation chart on page 7 of the Data Entry Guidelines.
- ▶ Instantaneous and on-demand **water heaters** should be characterized as storage type heaters while using the manufacturer's specified Energy Factor.

### New doesn't mean efficient.

Don't assume a home has been professionally air sealed just because it's new. Air sealing needs to be documented: for example, homes labeled as ENERGY STAR or LEED-certified should be considered professionally air sealed.

### Follow these Tips & Keep in Touch

To ensure Home Energy Scores are high quality, DOE requires at least 5% of homes be re-scored by a QA provider. If you follow the tips outlined in this handout, you are much more likely to pass these QA reviews.

Please contact your partner or U.S. DOE if you have questions or concerns. U.S. DOE periodically runs webinars for Assessors covering common challenges and answering questions.

### Questions?

Reach out to us at [assessor@sra.com](mailto:assessor@sra.com) if you have questions. Watch for occasional messages from this email address – we don't contact you often, but when you do it's important! Be sure to list us as a trusted contact and carefully review our messages.