

General Questions

1. What types of ratings can an ASHRAE labeled building receive?

New buildings will be eligible to receive an *As Designed* rating—an *In Operation* rating will be available once the building has at least one year of data on the actual energy use of the building. Existing buildings would be eligible to receive both an *As Designed* and *In Operation* ratings.

The *As Designed* (asset) rating provides an assessment of the building based on the components specified in the design—including mechanical systems, building envelope, orientation and daylighting. The asset rating will be based on the results of a field inspection and a building energy model, and can be updated when improvements are made to the building.

The *In Operation* (operational) rating provides information on the actual energy use of a building based on a combination of the structure of the building and how it is operated. Information learned through subsequent years of operational labels can provide building owners and operations and maintenance staff with valuable insight into how the building performs, opportunities for improvement and where similar buildings fall in comparison. The operational rating should be updated every two years.

2. When can I expect the program to be operational and how much will it cost?

A pilot program of the *In Operation* label was launched in late 2009, with participation by key building community organizations. Twenty-five buildings are being rated in the operational pilot, which is scheduled for completion in June 2010. The *As Designed* pilot will be launched during the summer of 2010, with a widespread, full launch of the program expected in early 2011.

The cost of the program has yet to be determined, though the pilot programs will be able to help determine an appropriate fee.

Administrative costs to ASHRAE will likely be a few hundred dollars, with additional fees for an energy simulation (asset) and site visits (operational).

3. How is the rating determined?

The *In Operation* (operational) rating will require an on-site energy audit conducted by a certified assessor. Roughly 30 hours will be required to complete the assessment including the calculations, paperwork and time on-site.

The *As Designed* (asset) rating will require an energy simulation performed by a certified building modeler. A site visit may be required to verify as-built conditions for the building.

4. Who is the target audience for ASHRAE's Building EQ program?

ASHRAE's Building EQ program is focused on a variety of audiences with varying levels of technical needs. The label itself will be the most visible aspect of the program. It will be simple to understand and targeted at the general public. It could be used for posting in a building lobby and could satisfy compliance with many of the programs being developed at the state and local level requiring display of energy use.

The certificate will contain additional information of a technical nature that will explain the score on the label and provide information useful to the building owner, prospective owners and tenants, and operations and maintenance personnel. This includes much of the value added features described above.

The documentation accompanying the label and certificate will provide the background information useful for engineers, architects and technically savvy building owners or prospective owners in determining the current state of the building and opportunities for improving its energy use.

5. How does the ASHRAE program fit in with current proposals in Congress?

The proposed language being considered in Congress is the result of ASHRAE's work with advocates and the real estate community to develop a program that can address the national need to save energy and allow for the private sector to develop specific labels and programs that meet the industry's specific needs. Based on lessons learned in the EU and elsewhere, the labeling implementation committee found that it is critical that government be involved in the development and implementation of a labeling program. By laying the ground rules and minimum criteria that should be part of a label, government can assure that the labels developed in the private sector remain technically robust and address the overall national goals of reducing energy use in buildings. Government has a critical role in determining when the label should be required, how and when it should be shared with critical audiences, and the minimum technical requirements to achieve national goals.

6. What related activities is ASHRAE pursuing?

In conjunction with the development of the labeling program, ASHRAE is developing the tools and re-sources to support widespread adoption of the label. This will include educational programs, instruction manuals, technical guidance and advocacy materials.

For example, ASHRAE developed a Building Energy Modeling Professional certification, which was launched in January 2010. Such a certification provides a method for assuring a cadre of individuals with the requisite body of knowledge is available to produce the data needed for the asset portion of the label.

ASHRAE has also examined the criteria for and selected Provisional Assessors to assist in the Operational Pilot of the building energy label. An additional certification of energy assessors will be launched in early 2011.

Finally, ASHRAE began an effort to expand the Commercial Building Energy

Consumption Survey (CBECS) as it serves as the current baseline for the energy consumption of existing buildings. The Society is working with other building community members to advocate for increased funding for the Energy Information Administration (EIA) to expand existing datasets.

Technical Questions

Energy Use and Comparisons

1. What is the relationship between 90.1 and Building EQ?

90.1 provides minimum requirements for energy efficiency in new commercial buildings and is a standard, whereas bEQ is a voluntary energy rating program that applies to both new and existing buildings. Furthermore, bEQ provides both an asset, based on simulation, and an operational rating, based on measured energy use.

2. How is renewable energy input taken into account?

Renewable energy is deducted before the building is rated so as to obtain credit for displacing utility-purchased energy.

3. What data base are these buildings being compared to?

Buildings in the Building EQ program will be compared to a scale that is tied to net-zero energy use and energy use for the building type as obtained from Energy Star data, which is in turn based on CBECS data.

4. How is the median EUI obtained?

ASHRAE is using the CBECS database to obtain the median EUI for each building type. That median is then used to normalize the EUI of the labeled building, and the resulting numerical score is converted into the letter grade.

Measurements and Calculations

5. How are multiple and partial occupancies handled?

Multiple occupancies can be entered into Portfolio Manager subspaces of the main building. Partial occupancies are noted in the Portfolio Manager entry.

6. Will the energy auditors/assessors verify that the buildings are providing occupancy health and comfort (i.e. comply with Standards 55 and 62.1)?

Yes, they will – through measurements of key ventilation and thermal comfort quantities.

7. How is the Operational Rating adjusted to reflect differences in operational hours?

The varying occupancy/operational hours are entered into Portfolio Manager, which normalizes the building's energy use to account to this.

8. Is the audited date normalized for weather conditions for the Operational Rating?

Yes, it is normalized for weather and selected operating conditions through the Energy Star Portfolio Manager.



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