

California Getting Real Energy

Car dealers are required to disclose a car's fuel efficiency rating to consumers. Now, in California, building owners will be required to disclose the building's energy efficiency rating to buyers and lessees. As of Jan. 1, commercial buildings in California are required by law to participate in the U.S. Environmental Protection Agency's Energy Star Portfolio Manager program.

Energy Star has been around since 1992 and is seen on anything from kitchen appliances to HVAC equipment. Energy Star Portfolio Manager is a program that serves commercial building owners. In 2009, California utilities will be submitting building information to the Portfolio Manager, significantly growing EPA's already robust database. Beginning January 1, 2010, building owners must disclose their building's energy efficiency rating and benchmark data to buyers, lessees, and lenders.

Energy Star rates buildings on a scale from 1 to 100. The scale rates a given building against similar buildings within its class. The rating system adjusts for climate, but not for the age of the building. Buildings within the top quartile are eligible to be recognized as an EPA Energy Star Building and can use the Energy Star label.

Energy Star's benchmarking system balances relative simplicity with meaningful adjustments to account for differences in buildings. By simply entering the building's zip code into Portfolio Manager, EPA pulls weather data from the National Oceanic and Atmospheric Administration's national database, allowing the building's relative energy consumption to be benchmarked against buildings in similar climates.

A building in Chicago will always consume more energy than a similar one in San Diego, but the Windy City structure is not penalized for energy consumption that can be attributed to cold weather.

Property owners will be burdened with the disclosure but can also benefit. Buildings that fare well in the survey will allow their owners to more likely capture a "green premium" when the property sells or rents.

Analysis of these data will yield opportunities of energy savings and ultimately improve net operating income. If the property is in the top 25% of similar buildings nationwide, it can be recognized as an Energy Star Building.

In addition to power consumption data, the following building specific information is required to complete the benchmarking process:

- Zip code (climate)
- Gross floor area
- Space Use Classification
- Weekly operating hours
- Number of main shift workers
- Number of personal computers
- Percent of air conditioned gross floor area
- Percent of heated gross floor area

Again, these data are used to appropriately benchmark one building to another. A call center in which the space-per-occupant ratio

is 100 sq ft per person will consume more energy than a law office, with a space-per-occupant ratio of 250 sq ft per person.

In large multi-use buildings, each use is classified separately and makes a pro rata contribution to the building's footprint. In a large building where the ground floor is retail, and upper floors are occupied by office, hotel, and a data center, each use is parsed out, and all of the data for each space use must be collected and entered separately.

For simple buildings, management staff or a building engineer can provide this data. For more complex buildings, building owners will seek professional assistance. In the event that the building owner wants to receive recognition by EPA as an Energy Star Building, these data need to be verified by a licensed professional engineer.

In California, the great building census is coming soon. Understanding how the process works will create opportunity for building owners—and for engineers. Benchmarking of buildings is only the first step.

EPA Portfolio Manager is a great tool for understanding how investments in more efficient buildings can save significant money and can increase net operating income. EPA estimates that 30% of energy used in buildings is wasted; just eliminating the waste through smarter energy management will yield a fantastic return on investment.

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