

Financial Benefits of ENERGY STAR Buildings



What are ENERGY STAR Labeled Buildings?



ENERGY STAR is a voluntary public-private partnership program. The Environmental Protection Agency (EPA) supports ENERGY STAR in the commercial sector to help businesses and other organizations monitor, understand, and reduce building-wide energy use, as well as assess the financial impact of improved energy performance.

The EPA awards the ENERGY STAR label to owners of buildings with ratings in the top 25% of energy efficiency perfor-

mance ratings nationally. To receive the ENERGY STAR label, the owner of the building must verify that it has earned a rating of 75 or higher based on 12 consecutive months of data. In addition, the building must conform to current industry standards for thermal comfort, air ventilation, control of indoor air pollutants, and illumination. Through 2005, more than 2,500 buildings had earned the ENERGY STAR, including more than 1,000 office buildings.

Many building owners find

that the ENERGY STAR rating process helps them identify opportunities to cost-effectively reduce waste and achieve significant energy savings. Some also attribute value to the recognition provided by the ENERGY STAR label. For example, Equity Office Properties has stated that “the ENERGY STAR label signals to its tenants and investors that it has capitalized on an extraordinary opportunity to make its buildings environmentally and fiscally sound.”

Comprehensive Framework:

- Demonstrate commitment
- Use proven measurement tools
- Educate staff, peers, community
- Provide motivation and recognition
- Normalize building energy consumption
- Benchmark for comparison

Direct Energy Savings

An important benefit from energy efficiency is direct energy savings, resulting in lower energy bills. ENERGY STAR labeled buildings, when compared to an analogous subset from the national stock, were found to use 40% less energy. These energy savings are equivalent to about \$0.50 per square foot per year in lower energy costs. For a 100,000 square foot office building, this trans-

lates to an annual energy bill that is \$50,000 below that of an average building. And, as energy costs increase over time, so would your savings figure.

The energy savings potential from ENERGY STAR labeled buildings, and the value of the energy savings, will vary across the country. Estimates made by the EPA calculated a national cost differential per square foot per year

of \$0.62 for the country. Cost savings in each of the nine regions was estimated to range from a low of \$0.38/square foot in the West South Central region to \$0.90/square foot in the West North Central region.

Did You Know:

- Your peak electricity use usually occurs during a time of day when rates are at their highest. If you are charged a “demand rate” on your electric bill, you pay a fee based on your peak amount of electricity consumption. Lowering your peak rate of usage can save big!



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Higher Occupancy Trends

Changes in occupancy have a potentially large financial impact for building owners and managers. For example, a one percent increase in occupancy in a 100,000 sf building renting at \$30 per square foot would be worth \$30,000 per year. To achieve such savings through energy efficien-

cy in a building with annual energy costs of \$1.50/sf would require as much as a 20% reduction in energy use.

Several factors lead ENERGY STAR buildings to be associated with higher levels of occupancy. First, these buildings are more likely to have energy-efficient lighting and

ventilation systems, and advanced energy management and control systems. These technologies have been demonstrated to improve occupant comfort and attitude toward occupied space. Increased tenant satisfaction can lead to higher occupancy and greater profitability.

Increased Asset Value Trends

Interviews with REIT managers explored the link between increased energy performance and asset value. These managers are finding that the marketplace is starting to recognize the added value of ENERGY STAR. They are finding that these buildings are more competitive, more valuable, and more profitable. Purchasers are more likely to recognize and pay the increased building value resulting from the decreased energy use and increased net operating income. This is true for both lenders and investors.

Lower energy consumption yields higher net operating income (NOI). If

the market recognizes an increased NOI from energy cost savings at a capitalization rate of 8.5, a \$0.50/sf annual reduction in energy costs would result in asset valuation increase of \$5.90/sf. Currently lower capitalization rates imply even larger increases in building value from energy efficiency savings. In San Diego, a building operator reported that an energy efficiency upgrade cut annual operating costs by more than \$0.50/rentable square foot. This increased the building's value by almost \$4 million.

Additional Benefits

Analysis of data on ENERGY STAR labeled buildings identified other benefits:

- Better operations and maintenance
- Peak load, demand charges, and tiered rate structure savings
- Emissions reduction benefits
- Hedge against price fluctuations

While the financial value of these additional benefits is not quantified, they nonetheless lend additional weight to the value of ENERGY STAR ratings.