

### DataTrends

### **ENERGY STAR Certification**



The U.S. Environmental Protection Agency's (EPA) ENERGY STAR Portfolio Manager tool is changing the way we recognize the most energy efficient buildings. As of December 2012, organizations across the country have used Portfolio Manager to earn certification for more than 20,000 top performing buildings, representing more than 3 billion commercial square feet. ENERGY STAR certified buildings use an average of 35 percent less energy and emit 35 percent fewer greenhouse gas emissions than typical buildings. To learn about all of the ways organizations are using Portfolio Manager to track and manage energy and water use, visit www.energystar.gov/DataTrends.

# What is an ENERGY STAR certified building?

An ENERGY STAR certified building meets strict energy performance standards set by EPA and uses less energy, is less expensive to operate, and produces fewer greenhouse gas emissions than its peers. To qualify for this annual award, a building must be verified to earn a score of 75 or higher on EPA's 1 to 100 energy performance scale, indicating that the building performs better than at least 75 percent of similar buildings nationwide.



Of the more than 20,000 ENERGY STAR certified buildings, roughly 30 percent have earned the ENERGY STAR in multiple years. The average score of these buildings increases as the number of certifications increases, suggesting that improvement persists year after year and that there is value in repeat certification.

## What are the greenhouse gas reductions of certified buildings?

Certified buildings not only perform better than typical buildings, they also have reduced their greenhouse gas emissions by an average of 10 percent since first benchmarking in Portfolio Manager. Collectively, they reduce 1.8 million metric tons of  $CO_2e$  every year, equivalent to the emissions from the annual electricity use of more than 270,000 homes. Reductions are greater for those with starting scores in the bottom 25 percent as these buildings had to improve the most to reach the score of 75 or higher that is required for ENERGY STAR certification.



Greenhouse Gas Savings



What is the ENERGY STAR score? The ENERGY STAR score is a 1-to-100 assessment of a building's energy efficiency, as compared with similar buildings nationwide, adjusting for climate and business activity. Learn more: <u>www.energystar.gov/benchmark</u>

#### How do certified buildings vary by age and type?

ENERGY STAR certified buildings have been built as early as 1820 and as recently as 2011 and represent a range of building types. Most buildings that earn certification were built between 1980 and 2010, though more than one-third of all certified buildings were built in or prior to 1980. Buildings of all ages can become top energy performers.



#### **Do ENERGY STAR certified** buildings show improvement?

On average, buildings certified through December 2012 increased their 1 to 100 score by 9 points and decreased energy use 10 percent since they started benchmarking in Portfolio Manager. Every type of building that can earn a 1 to 100 score improved, from 4 points for residence halls to 17 points for hotels.



#### Are lower-performing buildings improving to earn certification?

One-third of ENERGY STAR certified buildings scored below 75 when they began using Portfolio Manager, indicating that EPA is motivating improvement through the ENERGY STAR program. On average, these buildings improved by 23 points and reduced energy use by 21 percent.



#### What is the financial value of **ENERGY STAR certification?**

ENERGY STAR certified office buildings command significantly higher rents, higher and less volatile occupancy rates, and higher selling prices than otherwise similar conventional buildings. Key findings from a recent U.C. Berkeley study show:

Better Financial Performance: A one-dollar per square foot savings in office building energy costs increases cash flow by \$0.95 and asset value by \$13 per square foot.

Higher Rent: The effective rent (including occupancy) of ENERGY STAR certified buildings is 6.5 percent higher.

**Higher Selling Prices:** The transaction price for ENERGY STAR certified buildings is 12.9 percent higher.

At the portfolio level, real estate investment trusts with a greater percentage of ENERGY STAR certified properties perform better on key measures of operating performance; they also tend to have higher stock returns and face lower market risk. For more information on all of this research, see reports by Eichholtz, Kok, et.al. at www.NilsKok.com/research.



The ENERGY STAR mark is a symbol of top performance. ENERGY STAR buildings use 35 percent less energy and cost 35 percent less to operate than their peers.

