



Energy Use Benchmarking

Buildings Benchmarking in Portfolio Manager

-  267,016 Properties
-  28.2 Billion ft²
- 40%** Market Penetration

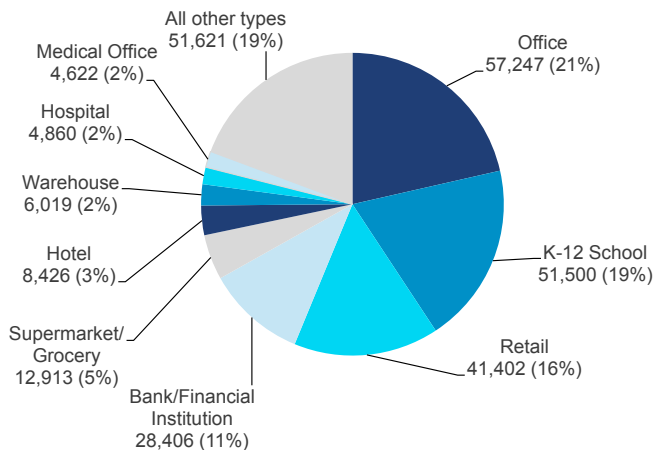
The U.S. Environmental Protection Agency's (EPA) ENERGY STAR Portfolio Manager is changing the way organizations track and manage energy. As of December 2011, organizations have used Portfolio Manager to track and manage the energy use of over 260,000 buildings across all 50 states, representing over 28 billion square feet (nearly 40% of the commercial market). Because of this widespread market adoption, EPA has prepared the DataTrends series to examine benchmarking and trends in energy and water consumption in Portfolio Manager. To learn more, visit www.energystar.gov/DataTrends.

Who is benchmarking?

Many different types of organizations use Portfolio Manager to benchmark the energy use of their buildings. Office, K-12 School, and Retail buildings are the most prevalent, accounting for close to 60% of those benchmarked, followed by Bank/Financial buildings. In the chart below, "All other types" includes multifamily buildings, colleges, malls, fire stations, and many more.

Benchmarking by Building Type

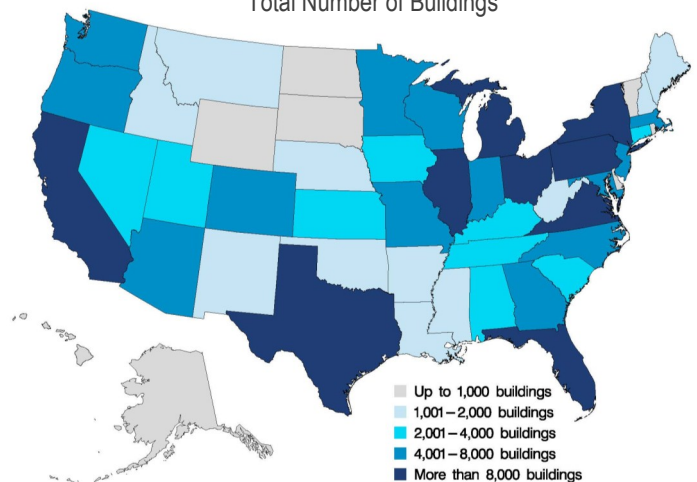
Number of Buildings



The number of buildings benchmarked in Portfolio Manager has grown dramatically over the past 10 years, almost doubling just since 2009. These buildings range widely on just about any measure, including size, location, age, building activity, and energy consumption.

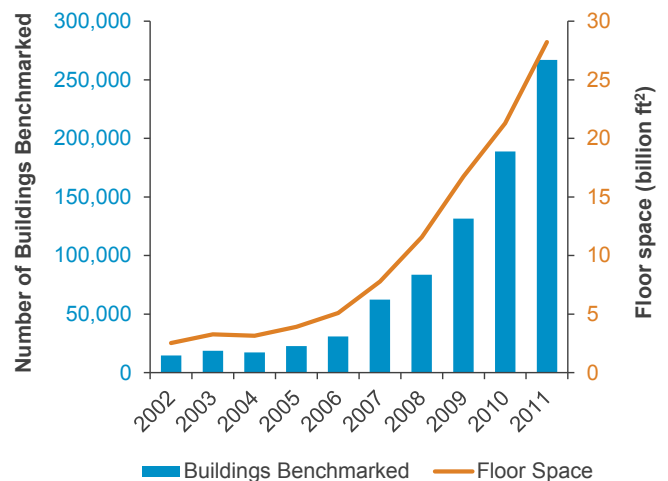
Benchmarking by State

Total Number of Buildings



Growth in Benchmarking

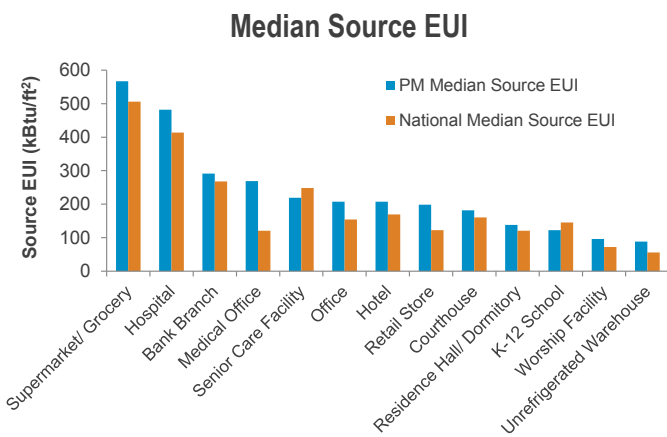
Total Number of Buildings



Note: Number and floor area of buildings benchmarked includes cumulative data through 2011. Analysis of energy use and business activity includes buildings benchmarked between 2006 and 2012. The data is self reported and has been filtered to exclude outliers, incomplete records, and test facilities. Portfolio Manager is not a randomly selected sample and is not the basis of the ENERGY STAR score. To learn more, visit: www.energystar.gov/DataTrends.

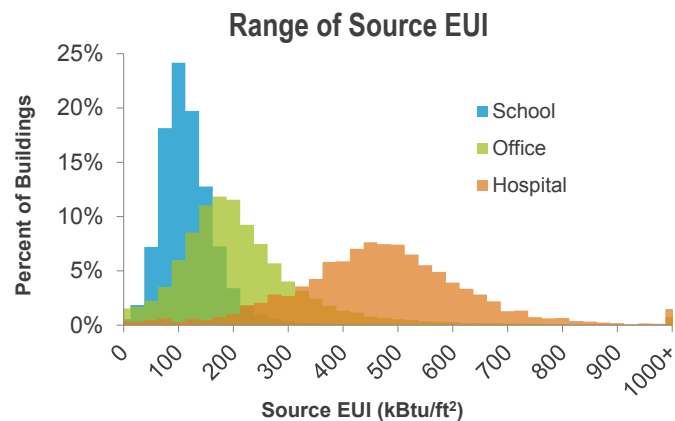
How does energy use vary among buildings?

Energy use intensity (EUI) varies widely among buildings. One of the key contributing factors is building activity. Supermarkets have relatively high EUI due to refrigeration loads, while warehouses, with less equipment and fewer workers, tend to have low EUI. The median EUIs in Portfolio Manager are similar to the median EUIs derived from the Department of Energy's nationally representative Commercial Building Energy Consumption Survey (CBECS), which forms the basis of most of the ENERGY STAR energy performance scales. These scales produce a 1-to-100 peer group comparison, accounting for differences in climate and business activities.



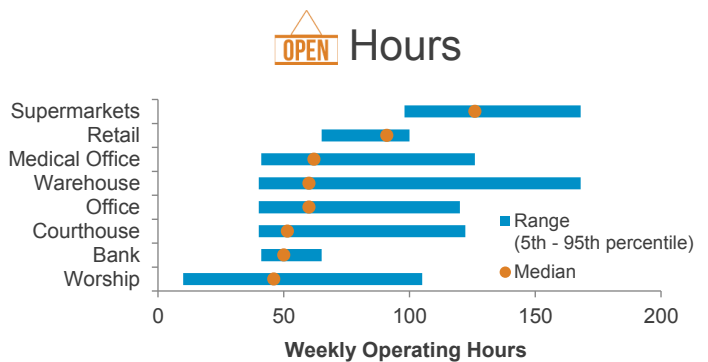
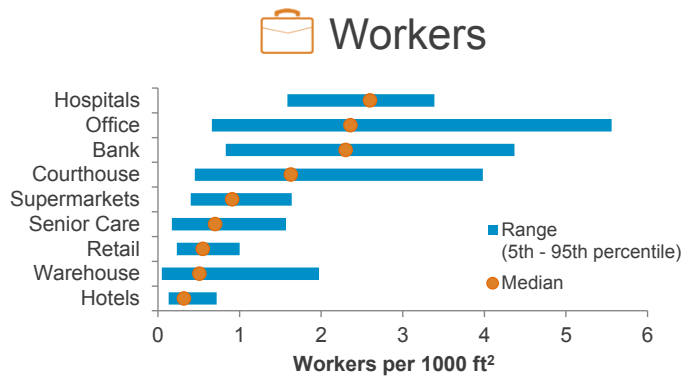
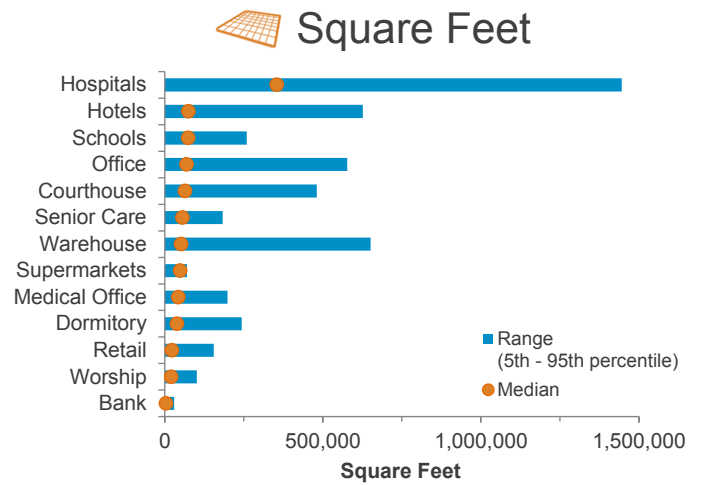
Some building types excluded due to inadequate data and/or EUI values beyond this range

Each median represents the value in the middle of a distribution, but the full range of energy use within each property type can be much larger, as shown in the figure below for School, Office, and Hospital. Hospitals have the highest median of these three, and also the largest range. The EUI values for Office and School are less widely distributed.



How do size and business activity vary by building type?

There is a wide variation in operating characteristics among property types benchmarking in Portfolio Manager. The graphs below illustrate the variation in size, worker density, and operating hours. These figures show the difference not only in median values, but also in the range. For example, Hotels and Retail stores have a much smaller number of workers on average than Offices *and* the range in their values is smaller.



What is Source Energy? Source energy is the amount of raw fuel required to operate your building. In addition to what you use on-site, source energy includes losses from generation, transmission, and distribution of energy. Source energy enables the most complete and equitable energy assessment. Learn more at: www.energystar.gov/SourceEnergy.