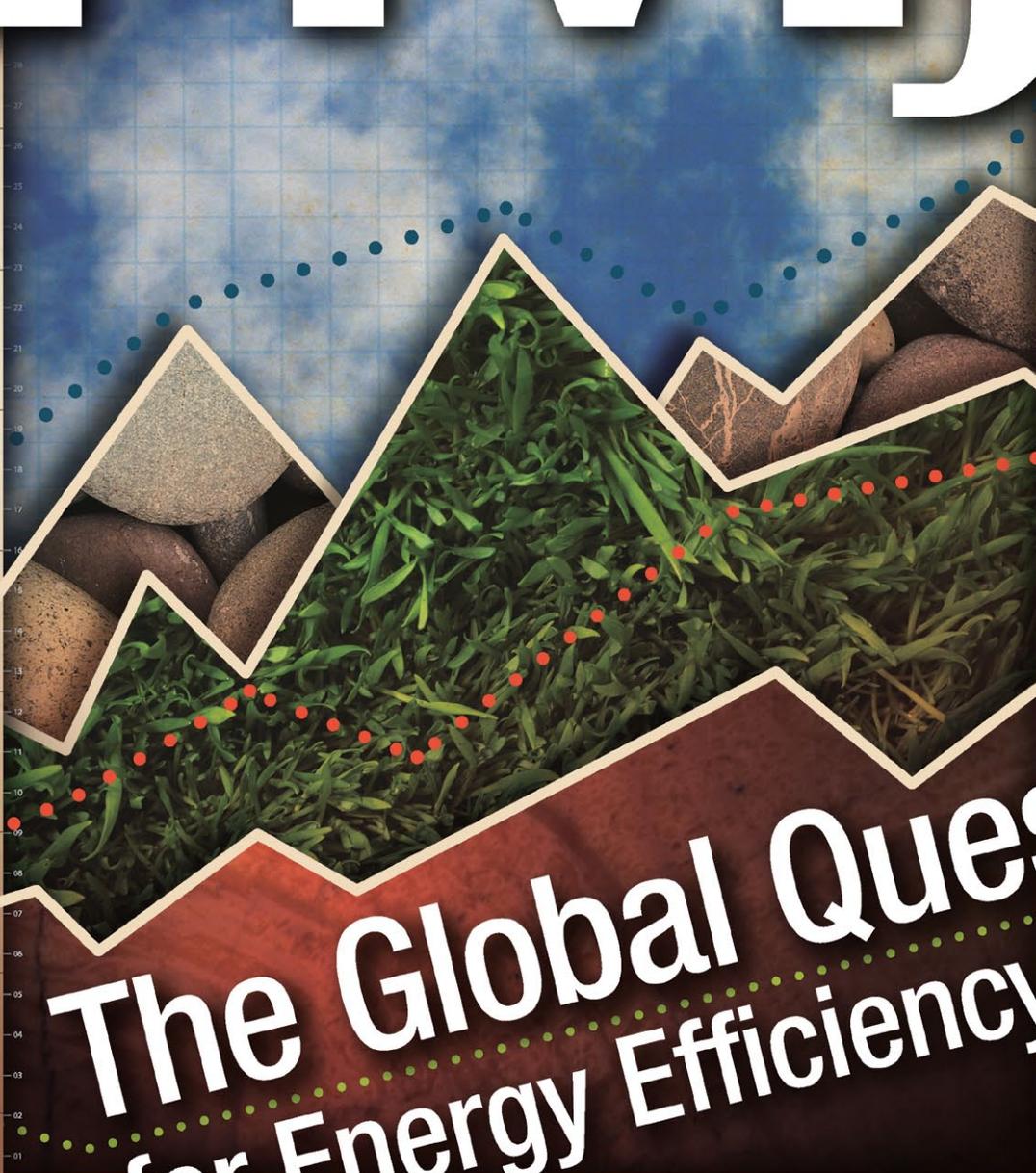


# FMJ



SAVINGS



## The Global Quest for Energy Efficiency

PAGE 50

DATE

1981 1983 1985 1987 1989 1991 1993 1995 1997 1999 2001 2003 2005 2007 2009 2011 2013



# Measure then Manage: Benchmark Your Facility's Performance

ALYSSA QUARFORTH

**T**oday's businesses face a multi-faceted challenge—how to cut costs in a down economy while continuing to differentiate themselves as market leaders. Improved energy management across your buildings' portfolio is one simple strategy that begins to address both goals.

If your company pays its own energy bills—whether for a leased portion of a building or an entire campus—reducing your buildings' energy consumption directly improves profitability and protects your bottom line against rising energy costs. At the same time, energy efficiency lowers your environmental

impact and differentiates your company as an environmental leader. If energy costs are included in the rent paid for leased space, the company can still benefit from energy efficiency by providing a quality workplace for employees and demonstrating environmental stewardship. Furthermore, there's evidence that buildings that are unnecessarily high consumers of energy may be discounted upon sale, whereas energy efficient buildings may have enhanced asset value.<sup>1</sup>

The magnitude of the opportunity is huge. Energy costs typically represent the largest controllable operating expense in commercial buildings—about 30 percent of total operating costs.<sup>2</sup> As much as 30 percent of energy consumed in a building is also used unnecessarily and can be reduced through low cost energy management strategies. Energy consumption is most likely the largest contributor to your company's environmental footprint, and the first step to going green. In aggregate, commercial buildings' energy consumption accounts for about 17 percent of total U.S. greenhouse gas emissions.<sup>3</sup>

What does this mean for corporate real estate professionals? Across every sector of the real estate industry, leading practitioners recognize the opportunities that lie in energy management, and are taking active steps toward reducing energy use.

### The value of benchmarking your facilities

The first and most important step in the energy management process is benchmarking—establishing a baseline of energy consumption to understand current building performance then monitoring performance on a continual basis. Benchmarking multiple buildings in your company's real estate portfolio provides a solid understanding of portfolio-wide performance, enables you to make better-informed decisions about energy management, and affords visibility into the aggregate effects of your energy management strategies.

You can take a closer look at each facility to understand which are demonstrating superior energy performance and which are falling short of expectations—then target limited energy efficiency investment dollars

to those buildings that will reap the greatest benefits from the project. By quantifying the cost savings from low-cost energy management strategies over time, you will be better equipped to convince senior management to increase the pool of funds available for more expensive upgrades.

Beyond the internal cost-saving benefits of benchmarking, commercial buildings in many local and state jurisdictions are now actually required to benchmark and disclose building energy performance. New York City, Washington, D.C., and the states of California and Washington are among the locations now mandating benchmarking, with other jurisdictions in the process of developing similar policies. Starting the benchmarking process now will put you in a better position in the future.

### Leveraging ENERGY STAR® across your portfolio

The U.S. Environmental Protection Agency's ENERGY STAR program offers a free, online benchmarking tool called Portfolio Manager in which corporate real estate professionals can track energy and water consumption and GHG emissions savings. As of midway through 2010, more than 160,000 buildings representing more than 19 billion square feet had been benchmarked in Portfolio Manager.

Using Portfolio Manager is simple. It requires collecting only the most basic of information—your building's address and year built, space use and occupancy, and monthly energy use. Once you input the initial data, it requires just a few minutes each month to add data from your most recent energy bills to the tool. To get started, you can review the EPA's background information, take a free online training, download a quick reference guide and register for a user account, all at [www.energystar.gov/benchmark](http://www.energystar.gov/benchmark). All data is kept confidential and accounts are password protected.

Metrics computed by Portfolio Manager include annual energy and water usage and costs, usage and costs per square foot, weather-normalized energy intensity, consumption reductions and financial savings. Portfolio Manager also calculates the greenhouse gas emissions associated with your buildings, including direct emissions (from on-site fuel combustion) and indirect emissions (produced by an external source such as an electricity power plant, but attributable to energy consumed on-site). This is useful if your company has set emissions reduction or carbon footprint goals.

For many types of buildings—including offices, banks, retail stores, warehouses, hotels and data centers—Portfolio Manager also



rates energy performance on a scale of one to 100. This ENERGY STAR rating is the industry standard for measuring energy performance in the commercial real estate market. To generate it, Portfolio Manager compares buildings' data to an unbiased, independently collected data set<sup>4</sup> and normalizes for factors that affect energy consumption outside of the owner/operator's control, such as weather. The result is a simple, standardized metric of a building's true energy performance that can be used to compare it to similar buildings nationwide. The rating allows practitioners to more easily communicate building performance to others within their organization or externally in the market.

Buildings earning a rating of 75 or higher are performing in the top 25 percent of all buildings nationwide and may qualify for the ENERGY STAR label—the national symbol for superior energy efficiency. ENERGY STAR buildings generally use 35 percent less energy and produce 35 percent less greenhouse gas emissions than an average building. In addition to having lower operating costs and environmental impacts, energy efficient buildings also demonstrate greater value, as evidenced by case studies and empirical research<sup>5</sup> that link the ENERGY STAR label to higher rents, sales prices and occupancy. You may be surprised by which buildings qualify for the ENERGY STAR—the newest buildings with more advanced technology may not perform as well as older buildings that are operated efficiently.

If your company occupies space in a multi-tenant building, you might coordinate with the landlord and other tenants to collect aggregate energy data and benchmark the building as a whole—giving it the opportunity to earn an energy performance rating and potentially qualify for the ENERGY STAR label. When approached about participating in an energy benchmarking initiative (with the ultimate goal of improving efficiency and reducing operating costs), your landlord or fellow tenants may be willing to supply their utility bills. If this isn't practical, you can still use Portfolio Manager to benchmark your portion of the building and monitor its weather-normalized energy intensity.

### A portfolio-wide approach to energy management

Typically, accountability for setting up and maintaining a building's data in Portfolio Manager falls to an on-site building operator or facility manager, though companies sometimes manage the benchmarking process centrally for all or a group of buildings. Because the tool is online, it can be used no matter your organizational structure, with property managers and others sharing information from various sites and with varying levels of access rights to the data.

The ability to share building performance data with outside parties facilitates organizations such as IFMA to monitor the collective progress of their members through voluntary initiatives. When you've finished benchmarking, be sure to share your building with the IFMA master account to participate in

the IFMA Energy Challenge: ENERGY STAR (visit [www.ifma.org/sustainability](http://www.ifma.org/sustainability) for more information).

In addition to rating individual buildings, Portfolio Manager generates a weighted -average energy performance rating for a portfolio and compares it to the portfolio's baseline. A large portfolio can also be grouped into sets of buildings that correspond to your company's geographical regions, facility types or any other cluster you wish to monitor together to view performance from a variety of perspectives.

Citi Realty Services has found value in the portfolio-wide approach, having initiated an ENERGY STAR benchmarking program in 2008 (see sidebar).

"Citi's initial approach to resource management was to focus on the largest consumers of energy in the portfolio. After having completed the benchmarking, it became apparent that simply chasing large users for opportunities did not address the effectiveness and efficiency with which those facilities were consuming energy," said Christian Magliano, senior vice president, global sustainability. "The benchmarking process clearly outlines that some of our mid-sized and smaller facilities presented the largest opportunities for energy savings. When viewed across the portfolio, expense savings returns were maximized by sending resources to those buildings rated lowest, rather than simply the largest."

## ENERGY STAR success story: Citi Realty Services

Citi Realty Services manages a corporate real estate portfolio of more than 12,500 facilities and 80 million square feet across 101 countries. In 2009, these facilities spent more than US\$300 million dollars on energy. With a variety of facility types in differing climate conditions, operating on schedules that range from banking hours to 24 hours a day, the challenge to improve energy performance was daunting.

In 2008, Citi began utilizing Portfolio Manager to create a level plane upon which to assess performance. The program

has grown in the past two years to include 100 major corporate facilities and more than 2,000 branch locations globally, with ENERGY STAR labels for 54 U.S. sites.

To date, Citi's buildings have shown an 11-point portfolio average ENERGY STAR rating increase since their baseline. Most recently, Citi made a public commitment to reduce energy consumption by 20 percent by 2015—as measured in Portfolio Manager.

### Demonstrating results

If your company has a strategic energy management program in place, you'll likely have something to show for it. Portfolio Manager can be used to produce reports, charts and graphs that demonstrate energy, financial, and emissions savings to senior executives. These reports can also supply material for annual reports, sustainability reports and public disclosure requirements.

Proving that your company is proactively reducing its environmental impact may also attract a new generation of customers and employees, who want to know what businesses are doing to combat climate change and reduce resource consumption and waste.

In the current economic situation, successful companies will capitalize on strategic energy management in their real estate portfolio, a cost-cutting measure with the added benefit of environmental sustainability. **FMJ**

### Notes

1. Reducing energy consumption leads to lower operating expenses, and a higher net operating income (NOI). Increased NOI has the potential to enhance asset value. For example, reducing energy costs by \$10,000 per year might translate to a \$10,000 increase to NOI. If the capitalization rate is 5%, the potential increase to asset value is \$200,000 (\$10,000 divided by 0.05).
2. BOMA 2008 Experience Exchange Report.
3. Inventory of U.S. Greenhouse Gas and Sinks: 1990-2005.
4. The Commercial Buildings Energy Consumption Survey (CBECS), administered by the U.S. Department of Energy's Energy Information Administration (EIA).
5. Various reports produced between 2008 and 2010 cite this link, including "Income, Value and Returns in Socially Responsible Office Properties" (Pivo and Fisher, 2010); "High Performance Green Building: What's It Worth?" (Washington State Department of Ecology, 2009); and "Doing Well by Doing Good?" (Eichholtz, Kok, and Quigley, 2009).



Alyssa Quarforth is the ENERGY STAR program manager for commercial properties with the U.S. Environmental Protection Agency. Additional information on ENERGY STAR can be found at <http://www.energystar.gov>.

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