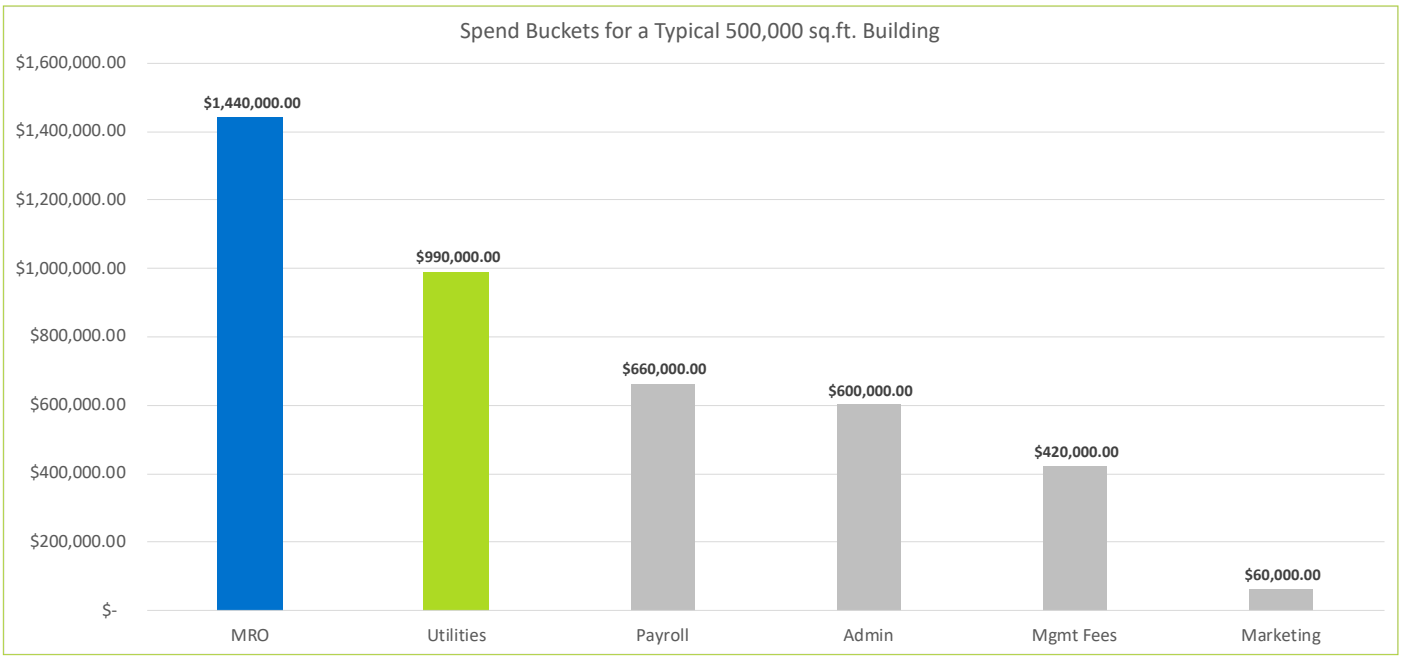
Energy Impact Best Practices

How do you create sustainable properties?

Energy isn't a trivial expense for commercial real estate operations—it's a big one that makes a major impact on property values and investor returns. Waste, errors and mismanagement in energy management compound the problem. Utilities can run about $1 million annually for an average 500,000-square-foot building, and costs continue to climb. In fact, kWh electricity rates are estimated to rise 15-60% through 2028.

Because energy affects all three elements of property management values—rental rates, operating expense reduction and asset valuations—determining how to control energy consumption and its costs has become a core element of property management today.



The good news is that these costs can be controlled, if an effective energy management and sustainability strategy is created and employed.

Many building operators already gather energy consumption metrics for satisfying GRESB® and ENERGY STAR® reporting requirements. That's a good start, our experience with commercial property portfolios across the U.S. indicates that the best way to drive appreciable and consistent improvement in these scores is a comprehensive, portfolio-wide energy strategy, one capable of improving not only sustainability scores but also operating income, tenant satisfaction and comfort, and asset marketability.

The main drivers for formulating a cohesive energy strategy include:

- Operating costs. An energy strategy offers building owners and operators opportunities to reduce utility and maintenance costs and identify outliers across their portfolio. Utilities—which include electric, gas, water and sewer—account for 20-30% of controllable spend, making this an attractive category for enhancing operating income. U.S. office buildings typically spend about $2.50 per square foot on utilities.
- Valuations. Better energy management can produce fewer rental concessions, potentially higher rents and increased market valuations. These benefits can extend to leases that are heavy on recoveries and event triple net leases, as reduced utility costs directly benefit tenants.
- Efficiency. An energy strategy extends to staff labor, including the time that finance and AP staff spend manually scanning and keying utility bills, which can be among the most complex and error prone invoices an organization receives. Duplicate payments and late fees are additional factors that an energy strategy can address. Many companies invest in invoice automation and electronic procurement to manage spend centrally, streamline invoice processing, and reduce costly errors.
- Tenant experience. This includes opportunities to increase tenant comfort, reduce complaints and make a property more appealing to prospective tenants. ENERGY STAR® scores also can impact tenant satisfaction and an asset's marketability.
- Investor expectations. Many investors are using environmental, social and corporate governance criteria as part of their decision-making progress. More than 75 institutional investors, collectively representing over $18 trillion of institutional capital, for example, use GRESB data and analytical tools to benchmark, improve and communicate environmental performance.

Build an Energy Strategy

So how do you get started? Key areas of focus for your energy strategy should include utility expense management, energy intelligence and energy automation. Each of these concepts optimizes a different aspect of your energy operations, and they come together to form a cohesive energy strategy.

Utility expense management

The foundation of an energy strategy is simply understanding and documenting energy consumption across properties, and that's the heart of utility expense management. Automated utility expense management solutions provide a low upfront investment to use utility bills for data analysis and insights. They can help relieve your staff of low-value efforts like scanning and keying complex utility bills, and they validate the bills' accuracy while providing valuable portfolio benchmarking.

Energy intelligence

As an extension of utility expense management, energy intelligence is fueled by real-time data from your properties. Building owners can compare demand against consumption charged by utility providers, which drives incremental but powerful changes.

Energy automation

The idea here is to maximize building performance with energy automation technology that prevents HVAC system problems by proactively detecting faults and providing different types of alerts. Moreover, you can automate your heating and cooling to optimize tenant comfort and minimize wasted HVAC costs.

Go Slow for Best Results

There are several options for rolling out an energy strategy. In our experience, the easiest is an incremental approach that begins with analyzing your utility process and leads to significant operational upgrades of assets. However, a more aggressive approach that includes building retrofits might be the best fit with some organizations' culture and budgets.

An incremental strategy starts by focusing on gaining visibility across the portfolio. Energy intelligence has been shown to reduce costs by 2-5% just by providing visibility into consumption and demand. The insight you gain from increased visibility informs specific changes to HVAC schedules that reduce waste. Installing real-time metering is a low-cost way to deliver this visibility.

After implementing energy intelligence, building owners and operators can identify their highest cost/highest ROI assets as candidates for energy automation. In most properties, the savings exceed 10-15% and ROI comes within 1-2 years.

Utilize Software as a Solution

Retrofits pose problems of expense and disruption. This makes software-driven energy strategies the most attractive option in many cases. Software solutions can net 10-20% savings across a portfolio, with low upfront costs and no tenant disruption. Yardi has documented tangible payoffs for a software-driven energy strategy, including:

- Cost savings. The most obvious benefit is operational cost savings. Building owners implementing software-driven energy strategies can save almost $0.40 per square foot. In a 300,000 square foot building, that amounts to $110,000 more for the bottom line, every year. Energy intelligence software typically nets 2-5% savings across a portfolio. Energy automation technology for HVAC equipment can produce typical returns of 10-15%. A Yardi client realized over 4.4 million kWh of annual energy savings and 1.4 MW of demand response capacity at a 1.8-million-square-foot Class A office campus.
- Higher property value. Energy savings produced by more efficient energy management drop straight into operating income and significantly boost building value and cap rates. An energy strategy can add about $45 of value per square foot for a typical 500,000-square-foot office building in Manhattan, N.Y., through average rental increases, energy savings and maintenance savings. If an office building's cap rate is 7%, for example, an increase in income of $110,000 would raise the asset's value by a substantial $1.6 million.
- Better occupant experience. A strategy that employs energy optimization software can maintain internal building temperatures by heating or cooling the premises with the minimum amount of energy required considering occupancy, weather and other conditions. This translates into increased tenant comfort, fewer complaints and higher retention.
- More effective property marketing. Operational improvements enabled by energy management software can play a major role in attracting high-quality tenants. As Principal Real Estate Investors noted in a research paper, "In an increasingly competitive market where demand for green real estate continues to grow, investments in higher-performing buildings have emerged as a method for enhancing returns and gaining a competitive advantage over industry peers."
- Investor and regulatory compliance. A growing number of institutional investors, the kind of people and funds who provide most of the money to U.S. real estate companies, are requiring real estate companies to establish and meet sustainability objectives. Principal Real Estate Investors said, "As regulations to mitigate climate change begin imposing minimum energy performance standards, non-green buildings could become riskier investments." Furthermore, cities such as New York, San Francisco, Seattle and Austin, Texas, have enacted laws requiring public disclosure of energy-use data. California requires building owners to report information on energy use from all energy meters using ENERGY STAR® Portfolio Manager®. A software-enabled strategy can help building owners set up multiple measurement criteria for mixed-use properties, gather and submit data to satisfy multiple regulations and utility providers, and accommodate a mix of vendors and regulations that require each property to be set up differently in a portfolio.

The American Council for an Energy-Efficient Economy reported in December 2017 that the average office building can save 18% of its whole building energy use through the installation of software-enabled smart technologies. A Lawrence Berkeley National Lab report from November 2013 found a median energy savings of 17% from the use of energy information systems. Yardi documented that energy optimization software produced annualized savings for electricity and steam of 675,000 KwH and 2,500 Mlbs, more than 24% higher than initially proposed, for a 1.9-million-square-foot building.

Consider the Future

Yardi believes the next five to seven years will mark significant progress on the ability to manage energy spend. This will not only include invoice automation of utility bills, but also extraction of data from bills to benchmark and analyze trends and opportunities. In addition, Yardi believes the industry will make substantial progress in real-time demand tracking, alerts and scheduling to catch and correct spikes and outliers more quickly. As Christopher Perry of the American Council for an Energy-Efficient Economy noted in 2017, "Smart systems can provide building operators with real-time energy consumption data to help them identify savings opportunities. On a larger scale, smart buildings have the potential to help quantify energy savings and transform the energy efficiency industry."

So how do you implement a successful energy strategy? Embrace new technology as an opportunity to implement a comprehensive energy strategy that gives you full visibility and insight into your portfolio's energy spend. This helps you make the most appropriate decisions for specific properties, and across your entire portfolio. An energy strategy helps property owners manage large, diverse portfolios with maximum efficiency and value while lowering risk.

Contact us to discuss the Yardi solution that's right for you.

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