

EXECUTIVE BRIEFING

Energy Management *and* Shareholder Value

Companies have been engaging in energy-efficiency strategies for years as a means to control costs. Increasingly, a body of evidence suggests that companies that take a systematic and strategic approach to energy management can enjoy a broad array of tangible and intangible benefits of interest to investors. As financial analysts and institutional investors come to understand this energy-value connection, energy management is becoming another measure by which they assess companies.

The elevation of energy management in investors' eyes is the result of a confluence of forces. Among them:

- **An increasingly complex and volatile energy marketplace** has placed a new emphasis on measuring and maximizing “energy productivity,” the product output or business value of every dollar of energy expenditure and use. As a result, companywide energy management has become an indicator of overall management quality and corporate performance.
- **Societal concerns about the links between electricity production and climate change** are leading some investors to press companies to improve their energy performance. For example, the Carbon Disclosure Project, representing more than \$10 trillion in investor assets, aims to serve as “a wake-up call for those companies that fail to adequately address the potential liabilities associated with climate change and for financial analysts who ignore the financial risks that these companies face.”
- **The financial disclosure and reporting requirements of Sarbanes-Oxley** require that systems be in place to monitor operational risks that could materially affect a company's financial performance. These are requiring companies to do a better job of tracking and managing financially relevant governance, environmental, and social issues typically not addressed in conventional financial analyses. For example, information about a company's climate change impacts resulting from energy use is now being considered with a seriousness rivaling financial information.
- **A recognition by investors of the increasing importance of intangibles** in calculating market value is leading some analysts to search more closely for sources of intangible value. Research shows that energy management, as an indicator of overall management quality, reputation, and other factors, can be a marker for superior intangible value potential.
- **The growth of international programs to restrict the carbon footprint of companies** participating in the Kyoto Protocol, as well as the emergence of a carbon trading market in the EU, affect U.S. companies with operations in countries bound by the treaty's requirements. Many leading U.S. companies operate under the assumption that such schemes will eventually take hold domestically as well. Planning for reductions called for under Kyoto has led to market-based mechanisms, such as carbon trading and offsets, to help companies manage emissions.

The Energy Link to Shareholder Value

Because of the relative complexity of energy and environmental issues — multiple layers of regulatory imperatives, complicated accountability chains, and multiple stakeholders — some investors regard these issues as a useful proxy for overall management quality, widely acknowledged as the most important determinant of stock price performance. The theory is that a company able to effectively manage an issue as complex as energy and the environment will also be able to effectively manage its core business challenges.

This theory has been brought to life by a substantial body of research. For example, a series of studies by Innovest Strategic Value Advisors, a financial research firm, compared the relative stock price performance of energy management leaders and laggards in three sectors. The results in brief:

- In the grocery sector, energy management leaders outperformed laggards by 17% over a three-year period. Leaders also outperformed laggards on price to earnings, price to book, return on assets, return on equity, return on invested capital, and Tobin's Q, a measure of intangible value.
- Similarly, in the commercial real estate sector, leaders outperformed laggards by 34% over a two-year period.
- And for large retailers, leaders outperformed laggards by 71% over a five-year period.

Such results likely stem from both tangible and intangible benefits that result when a company takes a strategic approach to energy. For example:

- **Reduced Operating Costs:** According to the Rocky Mountain Institute, most commercial, industrial, and institutional facilities have abundant opportunities to save up to 90% of the energy used for lighting, fan, and pump systems; 50% for electric motors; and 60% for heating, cooling, office equipment, and appliances. Most commercial and office buildings use 10% to 30% more energy than necessary. Cutting a building's energy use by 30% yields the same bottom-line benefits as a 3% increase in rental income or a 5% increase in net operating income.
- **Increased Productivity and Sales:** Increasing energy efficiency usually improves lighting as well as heating, ventilating, and air conditioning performance. Studies have shown that energy-efficient air and lighting enhance employee productivity and reduce absenteeism in offices, factories, and schools, and can increase sales in retail environments. For example, in a study by the California Energy Commission, daylighting was positively and significantly linked to higher retail sales — as much as 40% higher, compared with a non-daylit store.

- **Reduced Regulatory Costs:** U.S. government mandates on companies to reduce air emissions began with electric utilities but are expected to extend to commercial and industrial facilities. Companies that make reductions on their own terms and schedules will occupy a superior competitive position compared to competitors.
- **Increased Energy Security:** Deregulation, security concerns, and a fragile transmission infrastructure are increasing energy price volatility, with negative financial impact on some companies. Those that more tightly control and aggressively reduce energy consumption can minimize exposure to such volatility.
- **Enhanced Image:** Companies known for aggressive and proactive environmental policies stand to gain reputational advantages among customers, employees, regulators, the media, and others. This can benefit companies in a number of ways, including: reduced pressure from activists, increased ability to attract and retain employees, improved community relations, enhanced reputation as a well-managed company, and increased appeal to socially responsible investors and portfolio managers — a \$2.1 trillion market comprising \$1 of every \$9 invested in the U.S.
- **Improved Reliability:** Energy management practices help to ensure the reliability of equipment and manufacturing processes, thereby reducing risks and costs from equipment and process failures and production delays.

How Energy Efficiency Affects the Bottom Line

Here are some examples of how strategies and comprehensive energy-efficiency measures can affect business valuation and profitability.

- Energy use represents the single largest operating expense in an office property. Reducing energy use 30% is equivalent to increasing net operating income and building asset value by 5%.
- Businesses that lead in energy efficiency use about 30% less energy than their competitors. Reducing energy use 30% lowers operating costs by \$25,000 per year for every 50,000 square feet of typical office space.
- U.S. hotels spend close to \$4 billion on energy every year. Reducing these costs by just 10% is equivalent to a \$0.62 average daily rate (ADR) increase for limited-service hotels and a \$1.35 ADR increase for full-service hotels.
- Every \$1 a nonprofit healthcare organization saves on energy is equivalent to \$20 in new revenues for hospitals or \$10 for medical offices. For-profit hospitals, medical offices, and nursing homes can boost earnings per share by a penny by reducing energy costs just 5%.

The Path to Superior Energy Management

Reaping the benefits of energy management practices requires taking a systematic and comprehensive approach. By moving energy from the operational into the strategic realm, companies can take maximum advantage of all opportunities — across departments, facilities, and business units. Says The Conference Board: “The true value of the centralized strategic approach is the ability to aggregate the value of multiple small savings, many of which individually may not appear to merit attention. Such aggregation is what frequently provides the leverage to move a process forward as a management priority.”

Effective energy management systems differ for every company, based on its sector, location, and the nature of its operations, but generally include the following:

- **Senior management commitment and leadership** helps articulate the importance of energy issues to the company and drives performance. In leadership companies, senior management provides a clear vision and defined targets, and oversees implementation of the energy management strategy. Firms without a well-defined policy and structured energy management program usually achieve much smaller improvements and financial benefits.
- **Performance assessments** enable a company to establish an energy baseline and to benchmark energy performance. Establishing an energy baseline enables companies to more effectively prioritize areas for improvement, create performance goals, calculate cost savings from efficiency efforts, and identify trends.
- **Performance goals** are essential for tracking and measuring success, and for benchmarking both internally and externally. There are many to choose from, such as energy use per square foot of building space, average load factors, or energy use per unit of production. Without such metrics and tracking systems, an energy program will not be as effective.
- **Action Plans** ensure a systematic process to implement energy performance measures. Corporate and facility-based action plans ensure that operation and management practices are followed and that technology upgrades are properly sequenced.
- **Improved operations and management practices** can deliver significant energy savings with little or no costs. Conducting building and facilities tunes-up should be done before installing new technology.
- **Technology upgrades** can be done throughout buildings and operations, and may involve the whole range of energy-consuming equipment and fixtures. Technology upgrades should be implemented in the proper sequence to ensure proper sizing and to avoid conflicts with other facility systems.

Tips for Making the Case

- **Speak dollars, not BTUs.** Communications to senior management should have specific savings goals measured in monetary terms, demonstrating the objective of lowering operating costs and improving profitability.
- **Make the case with metrics.** Use common financial metrics such as net present value, simple payback, internal rate of return, and hurdle rate.
- **Focus on life-cycle costs.** Focus on internal rates of return rather than a project's initial costs to demonstrate that energy projects may be better investment alternatives than capital allocated for process improvements.
- **Provide real-world proof.** Offer evidence to support targeted savings, such as results from a pilot energy-management program implemented at a company facility. This can help demonstrate the relatively short payback of energy projects along with their significant savings.
- **Compare to the competition.** To appeal to management's desire to achieve a competitive edge, use benchmarking data to compare the company's energy performance to that of similar companies or operations.
- **Relate energy to security and risk.** Explain how investing in technologies and practices that reduce energy use can enhance the company's energy security and help insulate it from risks associated with supply and price uncertainties.

- **The total life-cycle costs** of operating the equipment — not just its purchase price — must be considered when conducting cost analyses for technology upgrades. The calculations used to determine a project's effectiveness are key. Less-sophisticated companies make energy-management investments based on simple cost-benefit analyses, while leadership firms are better able to incorporate long-term financial benefits and intangible factors into their decisions. This means they might accept a longer payback period or larger upfront expense in return for greater long-term financial rewards.
- **Staff training and incentive programs** are another key to success. Reaching targets and goals ultimately depends on the motivation and capability of people who implement actions. This requires ample training, ongoing communication, reward and recognition programs, and the integration of energy goals into performance evaluations at every level of the company.

Overcoming Obstacles

Despite the clear benefits of company-wide energy management strategies, such initiatives can face challenges inside companies. Examples include:

- **Lack of a corporate vision, policies, and commitments** supporting energy efficiency hamper efforts to implement leadership practices.
- **Decentralized decisionmaking** on energy management, combined with lack of responsibility for energy use at facility and departmental levels, can lead to a lack of accountability on energy strategy.
- **Higher hurdles for capital budgets** make it difficult to access the capital needed to implement efficiency projects. Because management often views energy as an uncontrollable cost, a multimillion-dollar electricity budget can be approved at lower levels of management, while a capital investment of the same size must be sold several levels higher.
- **A lack of understanding** of the energy-environment connection can lead to energy management efforts being viewed mainly from an operational standpoint, without regard for the larger issues — for example, how energy use affects a firm’s climate footprint or stakeholder reputation.
- **Difficulty in capturing “soft” savings.** Energy managers often lack the tools to assess the intangible benefits of energy improvements, such as reduced operation and maintenance costs, improved worker productivity, or reduced downtime.

Nonetheless, several strategies can help companies to overcome such barriers:

- **Relying on existing metrics** helps gain support. For example, “six sigma” is a process that senior management understands. As a result, it can be a useful avenue for selling energy projects because of easy definitions that translate the project into financial terms.
- **Educating and keeping contacts updated** is another key. Personal relationships are important to the success of energy management programs and the ability to communicate how such programs are contributing to corporate value. If senior management is engaged, selling energy-management projects internally can be much easier.
- **Engaging investor relations staff** helps overcome barriers. Some energy managers meet regularly with IR departments to help them understand the value of energy management initiatives to socially responsibility investors and overall reputation.
- **Gaining recognition for company efforts** builds support. Company participation in EPA’s ENERGY STAR program, for example, provides an easily understood “success story” that can be communicated to employees, customers, and investors.

Where to Begin

Following are some helpful organizations and resources:

- **Alliance to Save Energy** (www.ase.org) offers an Industrial Energy Efficiency Clearinghouse, with an introduction to the technologies, management strategies, training, and financing opportunities available to industrial energy users.
- **DOE Industrial Technologies Program** (www.eere.energy.gov/industry) offers an extensive database of best practices in corporate energy management.
- **Energy Ideas Clearinghouse** (www.energyideas.org) offers more than 5,000 energy-efficiency resources.
- **GreenBiz.com** and **ClimateBiz.com** are free, content-rich resource centers on business practices and leadership practices, with links to thousands of tools, resources, and organizations on energy and climate.
- **The Conference Board** (www.conference-board.org) has produced a series of reports on strategic energy management.

The ENERGY STAR Program

U.S. EPA's ENERGY STAR program offers a variety of tools and resources to help companies align the energy performance of their facilities and operations with their business goals. They include:

- Guidance on developing a corporate energy management program
- National energy performance rating systems for benchmarking facilities to similar facilities and tracking portfolio-wide improvements
- Sector-specific technical resource manuals and guidance on prioritizing investments
- Calculators for evaluating upgrades
- Plant energy auditing information to understand improvement opportunities
- Profiles of technologies and practices of top-performing buildings
- Corporate purchasing guidelines for ENERGY STAR-labeled products
- Peer-to-peer networking opportunities
- Award and recognition programs for leadership companies

For more information, visit www.energystar.gov.



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Produced by GreenBiz.com, a program of
The National Environmental Education
& Training Foundation (NEETF), under
a grant from the U.S. Environmental
Protection Agency's ENERGY STAR program.

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