Harnessing the Financial Marketplace to Motivate Energy Performance: Experience with Institutional Investor Endorsers

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ABSTRACT

A window of opportunity exists as a result of recent focus on diverse issues such as corporate social responsibility; energy supply as a statewide or national challenge; energy price volatility; and environmental management as a core business issue. The ability of energy programs to attract the attention of high-level decision-makers has never been greater, yet most initiatives and associated market activity still focus on single-building decisions, solutions, and successes.

In order to move the mandate for improved energy performance to the highest corporate level possible, the U.S. Environmental Protection Agency's (EPA) ENERGY STAR program has engaged key stakeholders in the financial marketplace. EPA is helping these financial stakeholders - including mutual funds, investment houses, pension funds, and financial research providers - to understand both the business value of energy management and how energy issues can be integrated into their investment evaluations. Simultaneously, EPA is helping CEOs, CFOs, and other corporate decision-makers use ENERGY STAR to understand and respond to the growing power of the marketplace in valuing aggressive energy management results.

This paper will describe how to engage financial stakeholders to driver superior energy performance in corporations using new tools and metrics.

Introduction

This paper describes some of EPA's key activities in the commercial and industrial sectors through the ENERGY STAR Buildings program. EPA offers ENERGY STAR to businesses and other ogranizations as a straightforward way to adopt superior energy management to realize the costs savings and environmental benefits that can result. EPA promotes a strategy for superior energy management that starts with the top leadership, engages the appropriated employees throughout the organization, uses standardized measurement tools, and helps an organization prioritize and get the most from its efficiency investments.

EPA also works closely with financial stakeholders as a result of their increasing interest in the business risks of climate change and program Partners' ability to provide company-specific performance information about climate change-related activities.

ENERGY STAR's Evolution from the Mechanical Room to the Board Room

EPA has been continually evolving Green Lights and then ENERGY STAR to reach top-level decision-makers because energy implementation is often delegated to facility managers. In the mid- to late-1990s, Green Lights evolved into the ENERGY STAR Buildings Program in order to address energy management and efficiency at a whole-building level. ENERGY STAR's

national energy performance rating system provides a uniform, impartial and reliable performance gauge for commercial building energy performance. The range of available space types has grown to include more than 50 percent of the U.S. commercial buildings market and new space types continue to be added. With this tool, program Partners have moved from single-technology or single-building approaches to managing and improving the energy performance of multi-million square foot portfolios of buildings. A careful portfolio approach leads to an ongoing cycle of assessment, goal-setting, performance improvement, and recognition of achievements and has proven to provide compelling financial returns that are valued both at senior levels within a partnering organization and by outside financial stakeholders. ENERGY STAR is working to harness these outside financial stakeholders as a market driver of further energy performance improvements and pollution prevention by Partners.

Energy and the Environment as Financial Issues

Despite the regulatory uncertainty surrounding climate change, financial stakeholder interest in environmental issues, and climate change specifically, has reached an all-time high. In November 2003, multiple state and city treasurers and comptrollers, two labor pension funds and several investment houses representing more than $1 trillion in combined investment assets convened the Institutional Investor Summit on Climate Risk at the United Nations in New York City. "The goal of [the] summit is quite basic: to develop strategies for institutional investors to protect the long-term value of their portfolios in light of the potential risk of climate change," said Denise Nappier, Connecticut's State Treasurer who co-chaired the summit. "The summit is essentially 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" (Investor Network on Climate Risk 2003).

The Carbon Disclosure Project (CDP) was launched in May 2002 to encourage corporate reporting of "investment-relevant information" on their greenhouse gas emissions. CDP annually surveys the 500 largest (by market capitalization) companies in the world as to the status of their greenhouse gas emissions activities. In 2002, the CDP included 25 institutional investors with combined assets of approximately $4 trillion. By 2003, 87 institutional investors with combined assets of $9 trillion had signed on (Carbon Disclosure Project 2004).

Since 2001, the number of shareholder resolutions focusing specifically on climate change has quintupled while the voting support levels for those resolutions have doubled.

Stakeholders regard environmental stewardship as a useful indicator for assessing overall management quality, the leading determinant of stock price performance. The theory is that a company that is able to effectively manage an issue as complex as the environment - with its multiple layers of regulatory imperatives, complicated accountability chains and multiple participants - will also be able to effectively manage its core business challenges. Energy management is one of the issues included in the broad environment category. According to Ingrid Dyott, Associate Portfolio Manager and Director of Social Research at Neuberger Berman, "Quality energy management can be an indicator of overall management acuity" (Neuberger Berman 2003).

The correlation between corporate environmental and financial performance is examined in a substantial body of professional and academic literature although the specific connection between energy management performance and financial performance has been explored less exhaustively. Recent studies by Innovest Strategic Value Advisors, a nationally recognized

financial research firm, compared the relative stock price performance of energy management leaders and laggards in three different sectors with encouraging results:

- In the grocery sector, energy management leaders as a group outperformed energy management laggards by 17 percent 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. (Innovest Strategic Value Advisors October 2002a, 1-2)
- In the commercial real estate sector, the energy management leaders outperformed energy management laggards by 34 percent over a two-year period. (Innovest Strategic Value Advisors October 2002b, 1)
- For retail companies, companies with above average energy management outperformed companies with below average performance by 71 percent over a five-year period. (Innovest Strategic Value Advisors February 2003, 2)

For financial stakeholders looking to integrate corporate environmental performance information in their investment evaluations, the availability of adequate and reliable data presents a significant challenge. There are few requirements for environmental performance disclosure and most of those requirements focus on the avoidance of negative performance; waste not released, thresholds not exceeded. Voluntary corporate reporting has increased dramatically in recent years. Four hundred eighty-seven companies published sustainability reports in 2001, up from 194 in 1995 and 7 in 1990 (Cortese 2002). While helpful, because voluntary corporate reporting isn't governed by standardized metrics or widely agreed-upon protocols, making direct company-to-company comparisons can be problematic.

Many investors and investor research services track company participation in voluntary environmental initiatives, including ENERGY STAR. Some stakeholders have observed both that the ever-growing number of voluntary programs makes tracking difficult (and expensive) and that these programs too often fail to provide a basis for gauging participants' ongoing activities and accomplishments. EPA's energy performance rating system for buildings allows participating companies to report an ongoing stream of objective performance improvement data that will be valued by investors.

Finding a Receptive Financial Community

In order to increase the corporate energy management's visibility as a financial value driver, EPA has been working closely with a growing number of institutional investors, investor research providers, and financial associations. These organizations monitor ENERGY STAR partners' commitments and achievements in improving energy performance and reducing pollution to use in their investment evaluations and financial decisions.

The socially responsible investing (SRI) market has been a leader in looking to the ENERGY STAR program for information on the value of energy efficiency. SRI funds have evolved into a major segment of the U.S. wealth management industry, accounting for 11.3 percent of all assets under professional management in the United States. Of the total $2.15 trillion in socially-screened portfolios, $1.99 trillion are found in separate accounts (those managed for individuals and institutions such as religious organizations, unions, foundations, corporations, insurance companies, universities, state and municipal governments). From 1995

to 2003, assets involved in socially responsible investing have grown 35 percent faster than all professional managed investment assets in the U.S. Investment portfolios involved in SRI grew by more than 235 percent from 1995 to 2003, compared with 174 percent growth of the overall universe of assets under professional management over the same time period. Assets in screened mutual funds grew by 11 percent from 2001 to 2003, to a total $151 billion across 200 mutual funds. (Social Investment Forum 2003, 2)

Once the exclusive province of specialized investors, mainstream firms have added SRI options to their fund portfolios to capture growing investor interest; Neuberger Berman, The Dreyfus Corporation, TIAA-CREF, The Vanguard Group, and others offer screened funds.

Environment is the fourth most common screen for screened investors, after tobacco, alcohol, and labor relations.

It's noteworthy that even the most progressive and environmentally focused SRI firms consider corporate financial fundamentals first and foremost in the investment process. Investors will not purchase and hold companies with glowing environmental credentials if those companies aren't viewed as sound financial performers.

Investors as Motivators of Corporate Action

Many of the institutional investors with which EPA is working have regular interactions with their corporate holdings about issues of importance. Several of these investors have made ENERGY STAR participation and energy performance the subject of these dialogues.

In 2003, Citizens Advisers, Inc., management firm for Citizens Funds, launched an ENERGY STAR Partner Awareness Campaign. "Recognizing environmental sustainability is vital to financial performance, the campaign will inform non-participating companies in our portfolios about the ENERGY STAR Partner program, highlight performance measures and encourage participation," said Joanne Dowdell, Citizens' director of corporate responsibility. "Roughly 18 percent of our holdings are EPA ENERGY STAR Partners," noted Dowdell. "We would like to see that number double, and will work hard toward that goal," she added (Citizens Funds 2003, 2). Citizens Advisers is continuing the campaign in 2004. As in 2003, Citizens is sending letters to its investment holdings encouraging them to join ENERGY STAR and report on the financial and environmental value of their energy management activities.

The Dreyfus Premier Third Century Fund called on its holdings to participate as well: "In response to mounting concerns about global climate change, we are encouraging companies in our funds to focus on energy efficiency at their facilities… One simple action companies can take is to join EPA's ENERGY STAR program. Through ENERGY STAR, companies voluntarily partner with the EPA to evaluate and improve their energy efficiency. The end result is significant energy cost reductions and enhanced environmental exposure" (The Dreyfus Corporation 2003).

Other investors and funds have been active as well. Neuberger Berman's SRI Group dedicated its entire Spring 2003 fund newsletter to briefing shareholders and holdings on the ENERGY STAR Program and encouraging holdings to participate. In both 2003 and 2004, institutional investors attended ENERGY STAR's annual Partner of the Year Awards dinner and reported that it provided a valuable forum for meeting with companies and learning more about their environmental activities.

The Financial Strategy: Tools and Messages for Decision Makers

EPA has been reaching out to different market sectors to help them understand how energy management links to their core business objectives. Too often, energy efficiency was regarded as a single-building, facility-level issue that didn't have the potential to impact a Partner's bottom line. This outreach has been crucial both in helping capture the attention of senior corporate management and in communicating Partners' successes to outside financial stakeholders.

Business Messaging: Financial Value Equivalents for Energy Cost Savings

Many ENERGY STAR partners have learned the value of presenting their commitment and success at saving energy and preventing pollution in the most compelling terms possible. Often, projects are more readily funded if both opportunities and past successes are cast in terms best understood by financial decision makers. ENERGY STAR has evolved business-side metrics that resonate with CEOs and CFOs, and help facility managers get their projects the same consideration as other key business-related decisions:

- In commercial office properties, owners and appraisers divide net operating income (gross rents minus expenses) by cap rate to calculate asset value. Based on this approach, for each $1 invested in energy performance improvements, the asset value can conservatively increase by $2 to $3 in a setting where tenants pay utility bills, making conventional energy-oriented calculations impossible (United States Environmental Protection Agency 2001a).
- In the hospitality sector, the key financial drivers are occupancy and room rates. A 10 percent reduction in energy consumption for a full-service hotel is equivalent to increasing occupancy points by 1.04, or increasing the daily average room rate by $1.35 (representing a 1.6 percent increase). Each $1 invested in energy efficiency improvements in hotel properties can yield $1.85 to $2.78 in increased asset value if viewed as the equivalent of increased occupancy or room rate (United States Environmental Protection Agency 2001a).
- In retail property, total sales and profit margin on sales are key drivers. A 10 percent reduction in energy costs for a supermarket is equivalent to a six percent increase in profit margins or a seven percent increase in earnings per share. The same 10 percent reduction in energy costs is equivalent to increasing sales by $60 per square foot (United States Environmental Protection Agency 2001a).

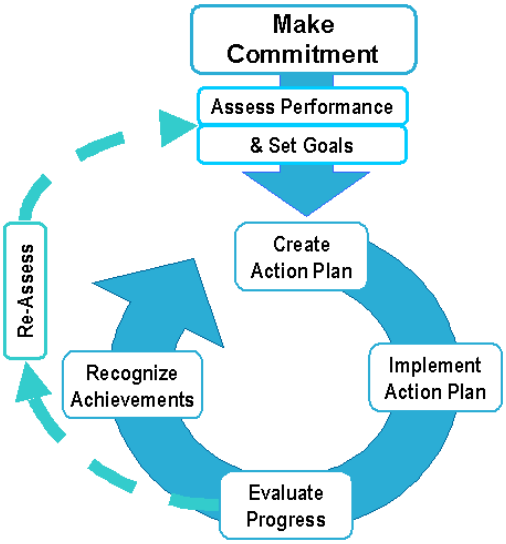
In each case, EPA has been helping organizations quantify their success in improving energy performance and efficiency in core business terms. Doing so helps energy projects compete with other corporate funding needs and also helps the financial community view energy efficiency and pollution prevention initiatives more favorably, which will result in more coverage of these initiatives in media, annual reports, and other non-energy venues. This type of messaging is particularly important for the mainstream investor community, which may not value energy efficiency on its own merits.

The Financial Value Calculator: Casting Energy Performance in Financial Terms

ENERGY STAR developed a simple tool called the Financial Value Calculator (FVC) to assist businesses in understanding and communicating the value of energy cost reductions. That same insight is valuable for financial stakeholders as well. FVC is specifically designed to analyze the financial impacts of energy investments and savings at an organization-wide level.

ENERGY STAR's Guidelines for Energy Management, shown in Figure 1, outlines a process designed to drive continuous energy performance improvement and recognition. The FVC can be used at multiple stages in that process. At the "Make Commitment" stage, FVC can provide quick insight into a Partner's potential value proposition of achieving various energy performance improvements. At "Assess Performance & Set Goals," FVC outputs can help turn a general corporate commitment to environmental and fiscal responsibility into an actionable budgetary commitment as it helps define the scale of the financial opportunity in terms that will resonate with senior management. More refined FVC analysis can be performed again as energy projects are completed, providing corporate investor relations and communications department's information they can use in characterizing both commitment and success in the "Recognize Achievements" phase.

Figure 1. ENERGY STAR Guidelines for Energy Management



FVC requires only two initial pieces of company-specific data: total portfolio square footage and the annual energy cost associated with that square footage. For publicly traded companies, the total outstanding number of stock shares, company earnings per share, and price-to-earnings (PE) ratio are also required. Consider an example from the Corporate Real Estate Sector. Table 1 shows the initial data input screen. Several assumptions are included for various financial parameters including tax rate and analysis term. These can be modified with further analysis iterations, allowing increasing company-specific precision, or left as defaults. This example assumes internal financing of any capital expenditures, so financing period and cost of capital are left blank.

Table 1. FVC Initial Data Input Screen

Company Name: ABC Corp.		Sector: Corporate Real Estate	
Corporate Building Portfolio Information		**Default Calculator Information**	
Total Annual Utility Bill for Buildings	$16,155,000	Analysis Term (years)	10
Commercial Building Floor Space (Sq. Ft.)	7,180,000	Discount Rate	11%
Energy Cost Intensity ($/Sq. Ft.)	$2.25	Depreciation Method	Straight Line
		Depreciation Period (years)	10
Shareholder Information		Financing Period (years)	
Total Outstanding Common Shares	70,000,000	Cost of Capital (if financed externally)	
Earnings per Share	$1.50	Tax Rate	41%
P/E Ratio	15.50	Capitalization "Cap" Rate	10%

Source: ENERGY STAR Financial Value Calculator Version 1.52. 2004

FVC users have two options for beginning energy efficiency analysis. They may take a corporate investment approach and specify values for two of the three following parameters: initial investment ($), annual energy savings ($), or target internal rate of return (%). Or users may select a percentage of the total portfolio square footage that is to be upgraded, an annual energy savings percentage level and an initial investment level ($/SF) required to achieve that level of energy cost savings. In this example, a 10 percent annual cost reduction is achieved through upgrades in 100 percent of the square footage. Many ENERGY STAR Partners are able to achieve reductions up to 10 percent with a combination of no-cost/low-cost operations and management strategies and perhaps some limited capital expenditure. This example uses a very conservative estimate of $.30 per square foot of initial investment in energy management to achieve the 10 percent savings target.

Table 2 illustrates the income statement side implications of this efficiency initiative. The 10 percent annual energy cost savings is $1.6 million. For a corporate real estate example, this annual savings becomes new income. After allowing for depreciation on any new equipment purchases and taxes, the company can claim $826,059 in new annual net operating income. Using a cap rate of 10 percent (specified in the initial defaults) produces an increased asset value of $8.2 million.

Table 2. Income Statement Impacts

ABC Corp.	
Energy Cost Savings	$1,615,500
Expenses	
Depreciation (ignoring salvage value)	$215,400
Interest Payments	-
Total Expenses	$215,400
Income Before Taxes	$1,400,100
Income Taxes	$574,041
Increased NOI	$826,059
Increased Asset Value	$8,260,590

Source: ENERGY STAR Financial Value Calculator Version 1.52. 2004

Table 3 captures the bottom-line financial value of this investment. Even with the conservative initial investment estimate of $2.1 million, this example offers a 75 percent internal rate of return and is the equivalent of boosting earnings per share by 1.2 cents or 0.79 percent. Even the simple payback is compelling at less than 18 months.

Table 3. Financial Summary

Initial Investment	$2,154,000
Annual Utility Savings	$1,615,500
Increased Earnings per Share (EPS)	1.2 cents
Percent Increase in EPS	0.79%
Internal Rate of Return	75%
Payback Period (in years)	1.3
Net Present Value	$6,630,680

Source: ENERGY STAR Financial Value Calculator Version 1.52. 2004

Finally, FVC allows businesses to analyze the financial implications associated with changes in their ENERGY STAR benchmarking scores. ENERGY STAR's Leaders Initiative specifically recognizes Partners that have benchmarked 100 percent of their eligible portfolio space and then improved their portfolio-wide average benchmark score by 10, 20, or 30 points. The FVC will help companies understand the financial opportunities and rewards associated with these performance improvement levels.

Focused Messages for Financial Audiences

EPA is working to better inform the financial community of businesses' successes in ENERGY STAR. Companies can respond to a short, 10-question template to create brief, compelling descriptions of their energy management commitments and successes. ENERGY STAR gathers these pieces and shares them with a distribution list of more than 300 interested financial stakeholders on a regular basis. A recent example of a shared success story is included below:

"Verizon is a two-time winner of EPA's ENERGY STAR Partner of the Year Award. They used EPA's national energy performance rating system to benchmark the energy performance of more than 220 buildings totaling 26 million square feet. Verizon completed full energy audits on more than 100 of their largest facilities and implemented more than 15,000 separate energy management projects. Their efforts in 2002 generated $15 million in annual energy cost savings and avoided 150,000 metric tons of carbon dioxide emissions. Verizon is currently working with EPA to develop a benchmarking tool for telecommunications central office facilities, the most energy intensive of all commercial space types. The release of this tool will allow Verizon to expand its benchmarking and performance improvement efforts throughout its central office facilities" (United States Environmental Protection Agency 2004).

The value of energy efficiency efforts is twofold. First, insightful information about a company's financial performance and environmental leadership is reaching an audience of influential and interested financial stakeholders. Secondly and just as valuable, the Partner's effort to draft such a piece has often required high-level, cross-functional internal communications: A facilities manager will need to speak with both the investor relations and

corporate communications departments. That dialogue may be the first time either of those departments is aware of a corporate energy efficiency activity; the process of communicating success to investors helps raise internal awareness and support for further efficiency activities.

Conclusion

Institutional investors are increasingly interested in corporate energy and environmental performance information as a factor in overall financial performance and as an indicator of management acuity. Market transformation programs can provide a rich basis for investors wishing to track these issues. But programs must keep investors' perspectives in mind. Program sponsors and designers need to ensure that their programs provide a basis for understanding and differentiating the performance of participating companies. Single-building efficiency programs will not provide a sufficient scale of performance impact for a financial stakeholder audience. Similarly, program accomplishments must be framed in key business terms and/or financial equivalents as well as in environmental terms. By doing so, market transformation efforts can find new and influential allies eager to encourage and recognize higher levels of environmental performance. And while only publicly traded companies are directly responsible to institutional investors, these same lessons apply to programs that want to capture the attention and focus of senior decision-makers within privately held companies as well.

References

Baue, W. 2003. "Institutional Investors Send Wall Street Wake-Up Call to Address Climate Risk" SocialFunds.com. November 25, 2003.

Carbon Disclosure Project. 2004. "Carbon Disclosure Project Report 2." Available online: www.cdproject.net/. Farringdon Road, London.: Carbon Disclosure Project.

Citizens Funds. 2003. "Investor Focus: Summer 2003." New York, NY: Citizens Funds, Inc.

Cortese, A. 2002. "The New Accountability: Tracking the Social Costs," *The New York Times*. March 24.

Dreyfus Corporation. 2003. "Shareholder Newsletter." New York, NY: The Dreyfus Corporation.

Innovest Strategic Value Advisors. 2002a. "Energy Management & Investor Returns: The Retail Food Sector." New York, NY.: Innovest Strategic Value Advisors.

Innovest Strategic Value Advisors. 2002b. "Energy Management & Investor Returns: The Real Estate Sector." New York, NY.: Innovest Strategic Value Advisors.

Innovest Strategic Value Advisors. 2003. "Energy Management & Investor Returns: The Retail Merchandising Sector." New York, NY.: Innovest Strategic Value Advisors.

Investor Network on Climate Risk. 2003. "Institutional Investor Summit on Climate Risk: Final Report" New York, NY.: Investor Network on Climate Risk.

Neuberger Berman Socially Responsible Investing. 2003. "Visions: Spring 2003." New York, NY: Neuberger Berman Management, Inc.

Social Investment Forum. 2003. "2003 Report on Socially Responsible Investing Trends in the United States." Washington, DC.: Social Investment Forum.

United States Environmental Protection Agency. 2004. "ENERGY STAR Financial Newsletter: April, 6 2004." Washington, DC.: The United States Environmental Protection Agency.

United States Environmental Protection Agency. 2004. "ENERGY STAR Financial Value Calculator Version 1.52." Available online: http://www.energystar.gov/index.cfm?c= assess_value.bus_financial_value_calculator. Washington, DC.: The United States Environmental Protection Agency.

United States Environmental Protection Agency. 2001a. "The Financial Power of ENERGY STAR for Commercial Real Estate." Washington, DC.: The United States Environmental Protection Agency.

United States Environmental Protection Agency. 2001b. "The Financial Power of ENERGY STAR for Hospitality." Washington, DC.: The United States Environmental Protection Agency.

United States Environmental Protection Agency. 2001c. "The Financial Power of ENERGY STAR for the Supermarket Industry." Washington, DC.: The United States Environmental Protection Agency.