A Collaborative Strategy to Strengthen the Business Case for Industrial Sector Energy Efficiency

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ABSTRACT

This paper describes a collaboration strategy between utilities, states, other regional energy efficiency program sponsors and ENERGY STAR® to increase the pace of investment and innovation in industrial energy efficiency. The increase in consistency and efficacy of public investments in efficiency in recent years are partially due to the mutually beneficial partnerships between ENERGY STAR and key stakeholders. ENERGY STAR proposes to bring the same benefits and collaborative spirit to the industrial field.

Many efficiency programs targeting this sector are frustrated by a lack of resources that address the financial and non-energy benefits of efficiency investments. Without appropriate systems and practices, corporations will cycle through sequential periods of attention and neglect of their energy management. Those with experience in the sector have witnessed these cycles of "boom" and "bust" in corporate programs and activities. These cycles of activity do *not* provide a stable and robust market for publicly funded energy efficiency programs or the vendors of products or services. From all perspectives, these cycles undermine the value that could be realized by both corporate end-users of energy and the providers of efficiency services.

ENERGY STAR is positioned to provide leadership in the industrial sector by catalyzing and nurturing a growing recognition of the business value of energy-efficient operations, both in terms of cost management and the non-energy benefits, e.g., improved manufacturing productivity. This collaboration will provide a common platform for program administrators, practitioners, and other stakeholders to promote effective energy management among the industrial sector.

Introduction

There is great potential to increase the pace of investment and innovation in industrial energy efficiency through a national collaborative strategy that builds on the ENERGY STAR brand. ENERGY STAR has become the national symbol for energy efficiency, propelled by its success in the markets for office equipment, consumer electronics, home appliances, residential HVAC equipment, and commercial buildings. The success of this brand has resulted from collaboration among a large and diverse national network of stakeholders. Each of the participants in this network has a stake in the success of the brand. The newest challenge for ENERGY STAR is to extend the power of this collaborative success into the manufacturing sector. EPA is approaching this effort through the Industrial Partnership (IP).

The IP assists industrial-sector companies in instituting goal-oriented, productive energy management systems that result in demonstrated sustained improvements in environmental and energy performance across all their business operations (Dutrow, 2003). The IP emphasizes corporate-wide policy, goal setting, strategic approaches, and management practices. ENERGY STAR works with manufacturers to help them identify the best means of improving energy performance in their particular organization and understand the associated corporate and environmental benefits. The IP offers an attractive opportunity for companies to distinguish themselves as both environmental and energy management leaders. Over 470 firms from a wide range of industries participate in the IP, including steel, pharmaceuticals, auto assembly, brewing, food processing, semiconductors, cement, and glass.

A major barrier to improving energy efficiency in industry is the lack of support from corporate decision-makers. Such support is critical to establishing the management practices needed to sustain a continuous energy improvement program. *Persuading industries' decision-makers to prioritize and implement energy management requires establishing the business value of energy efficiency in terms of increased profit, shareholder value, productivity, labor, and security.* Making this "business case" successfully is necessary to secure a mandate from the top – in turn, empowering corporate line managers to put in place effective management practices. ENERGY STAR can help program sponsors make this case for energy efficiency and capture the attention of America's corporate decision makers.

Status of the Market

State-regulated, utility-sponsored energy efficiency programs have traditionally been delivered by utility employees or private consulting firms and staffed by technicians and engineers. These technical professionals follow conventional sales channels and focus program delivery on local plant-level engineers with whom they have established relationships and share a common language. However, staff at this level do not make the final decision regarding energy-related projects.

Today, energy efficiency programs remain focused largely on engineering and technical issues. While obstacles are present, a basic lack of technical know-how and a limited ability to understand complicated systems are *not* the primary barriers to energy efficiency in industry. In fact, for vendors of energy-efficient products and services, providing engineering and basic cost savings information is often not enough to "make the sale." Manufacturers know a great deal about their own processes and can be skeptical of an outside vendor's ability to offer valuable insights into their operations.

Industrial business managers are increasingly financial managers and attorneys rather than technical professionals. Energy efficiency programs need to communicate in compelling terms to these new decision makers. The benefits of increased labor productivity, labor reductions, better safety, better environmental performance, or even energy security mean more to financial managers and attorneys than kW savings, which tends to be the typical approach.

Energy management is often neglected by industry because it is neither a priority for senior management, nor is it seen as a controllable cost. Without strategic information on the benefits of controlling the amount and timing of energy use, other more pressing issues (e.g. labor, healthcare benefits, foreign competition) take priority. *Energy management becomes*

energy crisis management. Prices go up, the management wants something done, some projects are completed, the prices go back down, and management moves on to something more pressing. Very few companies have a management plan and process for energy similar to supply chain management, human resources management, or product delivery. Those with experience in the sector have witnessed these cycles of "boom" and "bust" in corporate programs and activities. These cycles of activity do *not* provide a stable and robust market for publicly funded energy efficiency programs or the vendors of products or services. From all perspectives, these cycles undermine the value that could be realized by both corporate end-users of energy and the providers of efficiency services. Added on is the barrier of access and visibility to CEOs and CFOs who operate at a national level. In larger companies, a project to improve energy efficiency in a utility service area or a state often lacks the scope needed to motivate action by single decision-makers.

California's *Large Customer Needs and Wants Study* highlights the need to change strategy and tactics clear (XENERGY Inc. for Pacific Gas & Electric Company, 2001). Conducted among industrial experts and decision-makers from the hospital, biotechnology, semiconductor, aerospace, and fruit and vegetable processing sectors, the report shows that the industrial sector does not believe that its needs are well understood by utilities. The use of standard offer programs as the main vehicle to encourage energy savings was cited as an example of the lack of long-term commitment given to large industrial customers. Instead, industry asked to develop mutually beneficial partnerships with utilities and receive strategic and tactical guidance on energy efficiency opportunities. Specific "needs" included 1) industry-specific programs that emphasize increased productivity; 2) strategic guidance focused on high-level executives; and 3) tactical guidance for facility managers within complex industries, along with education on making the business case for energy efficiency activities.

For ENERGY STAR and other program sponsors, programmatic outcomes will be less than they could be unless we establish a greater level of sustained corporate attention to energy management. Discussions with several utilities and program implementers revealed important market barriers to programs and a need for moving beyond the program status quo (ENERGY STAR, 2002). Most report that the strict payback criteria applied by the majority of industrial facilities severely limits the amount of efficiency investments by this sector. Program sponsors do not, generally, believe they have a great deal of expertise in the "language of business" to help them make a stronger case for efficiency. And while satisfied with the technical analysis tools that the United States Department of Energy (DOE) and others provide, these groups are seeking ways in which they can introduce new perspectives into the industrial efficiency market and forums in which they can discuss and examine successful approaches to efficiency.

A Natural Alliance

Strategy

Partnerships between ENERGY STAR and local program implementers have dramatically raised the identity and viability of energy efficiency programs. They have also focused the attention of numerous private sector stakeholders on the promise and potential for energy-efficient products and services. ENERGY STAR's labeled products program, for

example, was developed with industry input and support for marketing and consumer awareness activities. It provides a national platform based on a well-defined specification to promote qualified products. The program has integrated well with an increasing number of utility and state efforts to target resources toward promoting qualified products. This is largely due to the flexibility of the brand, the network connections with market actors, product training materials, and communication and promotional templates that can be adapted for local use. In short, the ENERGY STAR partnership provides tools, resources, and a network to aid local efforts to promote ENERGY STAR. This same relationship can function to move energy efficiency forward in the industrial sector.

In a quick assessment of existing efficiency activities, including interviews with several utility and state program sponsors, ENERGY STAR found that few industrial programs broaden their focus from specific technologies to address the role of corporate management in improving energy efficiency. Those that include this systems approach primarily offer some individual analysis and/or assistance in evaluating current practices. The existing energy efficiency programs, which address industry, could be collectively strengthened by a collaborative strategy that addresses the following issues:

- Information exchange through public forums
- Focus on states, utilities, and energy efficiency organizations as primary collaborative actors
- Metrics developed to measure performance
- A framework to reward improvements in energy performance

The authors propose to create a network – comprised of ENERGY STAR and other program sponsors – that will address the needs identified by industry above. ENERGY STAR has the ability, on a national level, to support a sustained initiative, while program sponsors can share success stories on approaches and strategies. As a group, the network can become a venue for exchange of the best available information on the business value of energy efficiency and best management practices. This network would also facilitate collaborative approaches to specific industries and individual companies – engaging and supporting national-level corporate decision-makers on issues that have the potential to affect their companies unilaterally.

Positioned to Move

ENERGY STAR is positioned to provide leadership in creating a national platform for making the business case for energy efficiency that speaks to the industrial sector. The experience of program sponsors, derived from close customer relationships, adds strength to such an initiative, in turn benefiting local programs.

ENERGY STAR will catalyze recognition of the business value of energy-efficient operations and provide guidance on the management practices that enable companies to capture that value. ENERGY STAR will provide an effective approach and an expanded reach through the following activities:

- Bringing stakeholders – including industrial organizations, utilities, regional energy efficiency groups, state energy offices – together to more systematically make the business case for industrial efficiency
- Spur the development of metrics that will help make a more forceful business case (as opposed to an engineering case) for energy efficiency and provide the means for participants to judge their progress toward a common goal
- Create forums through which stakeholders can work on common issues to advance the "state-of-the-art" in industrial efficiency, and encourage best management practices to sustain continuous improvement
- Provide national, high-level recognition of organizations that have made superior and ground breaking advances in implementing efficiency – (in the case of utilities, energy offices and regional entities) or through improvements in their own facilities (in the case of private industrial organizations)

Regional industries can be effectively targeted through programs provided by the energy efficiency community, which can leverage a national program to get local results. Program sponsors can tailor their program messages to address local sub-sectors, tackle specific economic conditions, and focus on pressing regional energy-related concerns. They have the contacts and experience that will successfully address opportunities for instituting energy management in plants and enable participants in national programs to achieve their goals.

Wisconsin's Focus on Energy Industrial Program, for example, was shaped by the general spirit of ENERGY STAR and is based on the premise that energy efficiency is profitable for business. The goal is to recruit partners to the energy management process, then help them to adopt an action plan and implement energy efficiency improvements. The program seeks out direct relationships with industrial partners, trade allies, and affiliated support programs, as well as opportunities to foster relationships between these groups.

Developing the Industrial Brand Platform

The proposed network of industrial program sponsors and strategy for collaboration creates an important mechanism for influencing the development of the ENERGY STAR brand platform in the industrial sector. The basic elements of the platform are 1) the business case for energy efficiency; 2) best management practices to sustain continuous improvement; and 3) recognition of achievement.

Our vision is that a wide-range of program sponsors from around the country will select from and incorporate these basic elements throughout program offerings. For example, program sponsors could use information on the business case for energy efficiency in several different program elements – overall program messaging, marketing and communication materials, and public education. In this section of the paper, we explore each of these elements:

The Business Case for Energy Efficiency

Establishing the business case is essential to instituting effective energy management. Support for a program of aggressive corporate energy management needs to be made at

several levels in the company from the shop floor to the boardroom. However, making the case at the top levels of the corporation is the biggest challenge and has been the most neglected element (Figure 1).

Figure 1. Making the Business Case: An Empowering Approach

Source: Adapted from Anderson. 2003

The business case, or *value*, is often made in financial terms. It is often said that in industry, "It's all about making money." However, "money" is discussed in different terms at various levels in the corporation. The starting point for measuring such benefits is usually quantifying the cost savings. This is useful for describing the magnitude of a particular project's benefits, but it does not speak to the issue of return on investment or the potential to create corporate value at the organizational level.

Capturing a more complete picture of the *business value* requires extending the analysis of benefits to the following types of issues:

- Best practices for plant improvements, such as steam trap renovations, can allow plant throughput rates to be increased. This makes the plant more productive and profitable
- Aggregate potential benefits across the corporation are an important consideration. An individual energy efficiency project, however noteworthy, may have only limited impact on corporate financial performance. The aggregate impact of corporate-wide efforts can be significant when compared to the returns from other available investment opportunities
- Linking energy management to environmental leadership can enhance a company's reputation – a key determinant of market value and stock price in mainstream investment houses
- Socially responsible investment (SRI) is an emerging force in the investment world. With a total of roughly $3 trillion invested globally through some form of SRI screen, corporate performance in the area of environmental protection and other social concerns is taking on ever-greater importance

The last two issues touch on exciting new trends that warrant further discussion. Two recent studies by Innovest, the financial research firm, looked at the correlation between energy management performance and shareholder value (Innovest Strategic Value Advisors. October 2002). These reports analyzed the commercial real estate and retail food sectors using degrees of participation in ENERGY STAR as a measure of energy management. The findings show that those companies most active in ENERGY STAR have stock that outperformed laggards by almost 35 percent over the last two years. The study goes on to conclude, "By making energy efficiency a top priority, companies can reduce costs, increase productivity, improve customer satisfaction, increase property values, and enhance their reputation as a responsible corporate citizen." (Innovest Strategic Value Advisors. November, 2002).

The network will create a forum for key stakeholders and partners to discuss developing unbiased information on the benefits of energy investments. While energy savings are the easiest part of any financial analysis, the benefits are difficult to quantify in dollar terms and are the "deal-makers" in decisions regarding energy investments. These benefits include improved product quality, increased labor productivity, labor reductions, improved safety and environmental performance, and even energy security. Other areas where information development is needed include the following:

- The added value to program sponsors to promote the business case, e.g., business retention, expanded program reach, long-term relationships with companies
- The processes and mechanisms by which corporations make decisions regarding facility or capital improvements and how those lessons translate into workable strategies for the efficiency community
- A greater understanding of the metrics by which industrial facility managers judge and communicate their success in improving plant efficiency and production

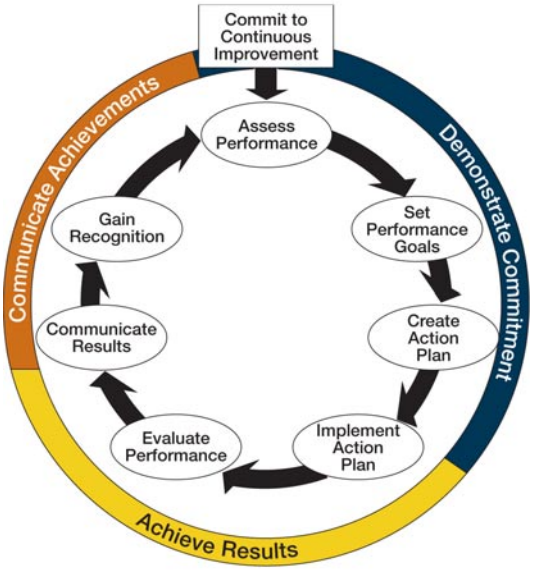
Establishing Energy Management Practices

ENERGY STAR developed a Strategic Energy Management System based on end-user experience with management practices (Figure 2). This is a comprehensive managerial approach to energy management that has seven key elements that promote a commitment to continuous improvement. These elements reflect approaches and observations from successful management programs of ENERGY STAR partner corporations.

Program sponsors are well positioned to develop regional and sector-specific information to address unique opportunities, activities, and issues around the country. Programs at this level often incorporate energy audits within plants and provide one-on-one assistance to companies.

Wisconsin's Focus on Energy staff developed a business case study, added technical components, and emphasized voluntary participation in response to a poll of potential participants in support of their industrial program (Giffen, et al., 2001). A newly created "Practical Energy Management" manual and half-day seminar have also been well received by industry and is sold out through Spring 2003. Well-suited for small industries, it contains all the "Best Practice" tools for companies and a framework for them to use to institute their own energy management program.

Figure 2. Strategic Energy Management System



Source: U.S. Environmental Protection Agency, ENERGY STAR program

Recognition of Achievement

Given the strong, positive ENERGY STAR brand position, companies and program sponsor partners are interested in recognizing the accomplishments of industrial efficiency projects. ENERGY STAR's existing awards program recognizes demonstrated leadership in energy efficiency – specifically looking at organizational commitment and strategic energy management plans, energy tracking and benchmarking, and achievements and communication. The network will be well positioned to develop additional means of acknowledgment and extend recognition opportunities to the program sponsors who engage industrial companies through their programs.

In addition to recognition within the ENERGY STAR award opportunities, stakeholders in this network can structure efforts to leverage the emerging efforts to establish the market recognition of the value of superior corporate energy management. The results of two recent Innovest studies have been discussed as examples of the value that the market is placing on environmental leadership. The issues of environmental leadership, social responsibility and corporate citizenship are boardroom issues to which ENERGY STAR can speak.

Conclusion

A collaboration between ENERGY STAR (providing leadership on the national level) and states, utilities, and other program sponsors (providing leadership on the local/regional level) has the exciting potential to capture lost opportunities for energy efficiency in the industrial sector. Existing industrial programs will be strengthened through a collaborative strategy that achieves two key results. First, the business case needs to be made at the

corporate level for investments in energy efficiency. This requires demonstrating the value of these investments in financial and other business metrics. Second, an effective energy management program should be implemented to combat the "boom" and "bust" cycles that result from default crisis management approaches.

The ENERGY STAR national platform draws diverse groups together to forge relationships that leverage their different strengths and resources and build a shared vision toward common objectives. In 1998, ENERGY STAR began working with industry stakeholders (i.e. retailers, manufacturers, market transformation groups, and utilities) to encourage and foster their participation in promoting high-efficiency equipment that qualifies for the ENERGY STAR label. Many of these organizations differed in their approach, timing, and prioritization of promoting the benefits to consumers. ENERGY STAR began worked with constituents, both individually and as a group, to 1) identify individual and common issues; 2) foster a dialogue among stakeholders and explore solutions; and 3) develop collaborative efforts to address promotion of ENERGY STAR qualified products. The ENERGY STAR brand has been strengthened by working closely with industry stakeholders to build trust, buy-in, and belief in the ENERGY STAR platform.

Partners in the energy efficiency community have helped ENERGY STAR significantly amplify its impact on the market in the areas of products, housing, and commercial buildings. This collaborative strategy in the industrial sector will enable program implementers to address and take action on common barriers that have typically resulted in under-investment in energy efficiency. Most importantly, it will create a strong collective voice that builds on the ENERGY STAR brand to make the business case for energy management at the decision-maker level. The following activities are anticipated in the building of the network:

- Providing a national platform and messaging which program sponsors can use to develop and strengthen their industrial sector activities
- Building the business case for energy management by developing and sharing resources and case studies among Network participants
- Developing tools & resources – that may include developing the link between productivity and energy performance, modifying existing tools, and others
- Organizing national forums through which stakeholders can discuss common issues regarding industrial sector efficiency
- Creating high-level, national recognition for leaders in energy efficiency

ENERGY STAR will work in the coming year to initiate these activities, gather input from the energy efficiency community, and develop the messaging behind the business case for the industrial sector.

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