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Business & Energy in the 21st Century...

Navigating Energy Management: A Roadmap for Business

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That energy is essential is a given—without it no company would be in business. Thus all businesses must manage energy to an extent, if only to ensure its availability. Beyond that basic need, decisions relative to energy options and opportunities will depend on how significant the cost and environmental effects of energy are to business operations, broader business strategy and positioning considerations and, for some, new market opportunities.

From the purchasing department to the board room, businesses today are more focused on “managing” energy than at any other time in recent decades. Energy is increasingly seen as a strategic business concern, whether it be:

- Guaranteeing a reliable supply to support critical business processes ranging from manufacturing operations to assuring the integrity of key company data;
- Maximizing efficiency to reduce use, cost and environmental impact; or
- Developing new products or services to take advantage of a dramatically changing energy marketplace.

Missed Opportunities?

When The Conference Board began its Business & Energy in the 21st Century project in 2002, research showed that while there had been successes in corporate energy management—whether measured by assuring reliable supplies at predictable costs, increasing energy efficiency and thus reducing its cost, or identifying new business opportunities—many companies were approaching energy management in an unsystematic fashion, or not at all. This suggested the strong possibility that business opportunities were being missed.

Given rapidly rising energy costs, growing concern about global competition and supply, and a generally increasing sensitivity to the whole notion of “energy security” (whether at a company or national level), The Conference Board sought to develop a “roadmap” for energy planning and management for businesses.

The Roadmap Is a Guide, Not a Recipe

This Roadmap is intended to guide companies in identifying energy-related business opportunities and developing the strategic framework for realizing them; it is not intended to be a “cookbook” approach for implementation.

- There is no single “strategy” for energy. Each company will develop a unique approach based on its perception of risks and opportunities, specific targets, available resources, schedule, etc.
- Each company has a unique culture and will develop its own management approach to realize energy opportunities.
- Extensive information on managing energy strategically is available. Organizations such as the Alliance to Save Energy, and government agencies in the United States have developed and posted guidance and tools which companies can adapt to their own needs. Energy service organizations and numerous consulting and engineering firms also offer expertise tailored to the needs of any business. A partial listing of resources for advice and guidance appears at the conclusion of the Roadmap report. (See Editors Note below).

- It is comprehensive, intended to help companies avoid missing potential benefits by addressing opportunities for enhancing:

- Energy supply,
- Energy efficiency, and
- Energy products and services.

- It is scalable and can be applied at the level of an individual process or facility, or enterprise-wide.

It should be noted too that while the roadmap is unique in its focus on energy planning and management, the overall logic and approach is consistent with established approaches to strategic planning and management across a variety of disciplines. The uniqueness—and value—of this project is its focus on energy and the fact that it represents the collective wisdom of many companies consolidated in a format that will be useful for many others.

The Roadmap: A Summary

There are four steps in the overall process:

- Step 1: Initial Assessment
- Step 2: Design the Process
- Step 3: Evaluate Opportunities
- Step 4: Implementation

Editors Note: In the summer of 2002 The Conference Board launched the Business & Energy in the 21st Century project with a grant from ENERGY STAR and support from several member companies. While energy was an important issue at the outset, it has catapulted to a much higher level of national and global attention during the three-year life of the project. In the course of the project much was learned about corporate energy management through research, meetings and conferences, and interactions with business executives, academics and government personnel. The cumulative findings were published in July 2005, A Roadmap for Strategic Energy Planning and Management (The Conference Board Research Report R 1365-05-RR).

Step 1: Initial Assessment

This first step involves a thorough, organization-wide assessment of the importance of energy to the company in relation to its overall needs, risks, goals, image and reputation, and of potential business opportunities through energy-related products or services. Properly implemented, the assessment can provide clear direction as to the potential inherent in a strategic approach to energy planning and management.

The key question posed by the assessment process is “what are the business opportunities related to energy?” This framework provides the context for evaluating energy as more than simply a cost of operation. Companies that have embarked on such an evaluation have asked themselves very fundamental questions about how energy relates to:

- Potential business opportunities;
- Potential business risks; and
- The overall “positioning” of the company

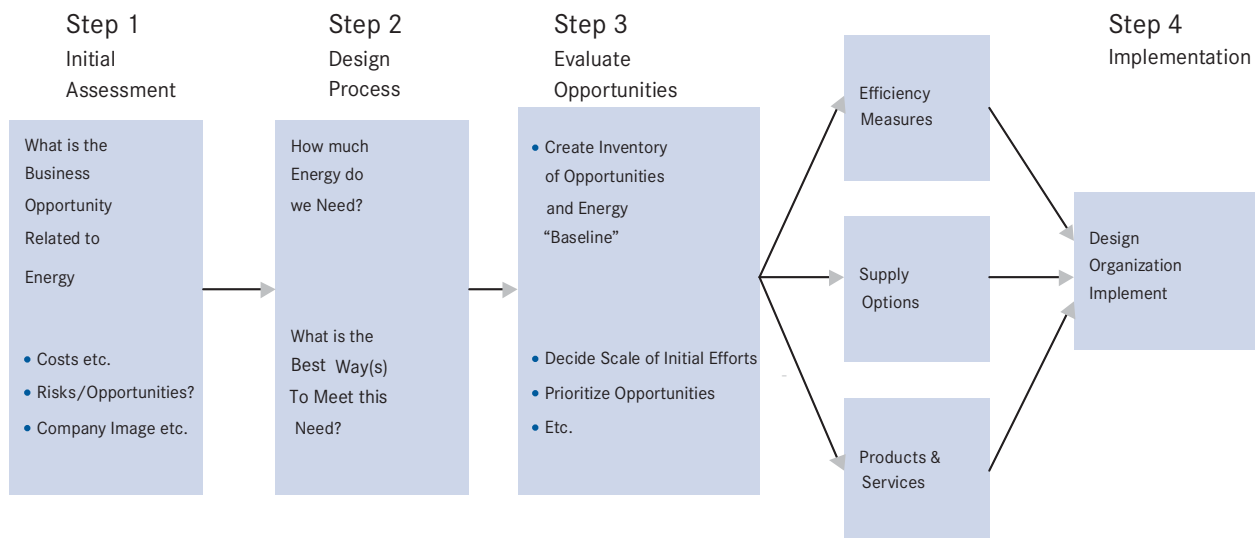
Drivers for Company Energy Management

How Energy Management Can Impact Corporate Planning



Chart 1:

Energy Planning & Management "Roadmap"



The bottom line is that while cost is an increasingly important factor, companies evaluate the importance of energy from multiple perspectives. Other factors such as risk management, reputation, and even product-line issues may carry weight as well. As one advisory committee member Howard Stanley of Corning, Inc. observes:

“Cost and consumption are key elements of managing energy. You have to gather your data and implement strategies to affect the factors you can control. Even if your energy dependence is low, if energy is important to your company, then a review is justified.”

The outcome of this step is a decision: to go forward with a more strategic approach to energy management, or not.

Step 2: Design the Process

The design and planning process begins with an assessment of a company’s actual energy needs versus “business as usual” practices and an investigation into the most promising solutions for meeting those needs. Taking this approach—asking the fundamental question of “how much energy do we need?”—encourages thinking beyond the familiar and the comfortable and exploring possibilities for innovation. It is important that process design and planning consider all factors that could inhibit success, from corporate culture to appropriate scale to resources, funding and organization.

Key questions to consider:

- At what scale should we initially approach energy management: a single facility or division, or enterprise wide? This decision is driven by the potential for success in the early stages and consequent sustainability of the overall management process.

- What technical and financial resources are available (this is closely related to the scale question): are they internal, external, or both? What are the competing priorities for these resources?
- Are there programs or processes already in place (e.g. Six Sigma) with which energy management could be integrated?

These and other questions frame the overall approach that a company will choose and can greatly influence the chances for early success, which is critical to establishing a sustainable management process that will maximize potential benefits.

Step 3: Evaluate Opportunities

This step is the “nuts and bolts” of the energy strategy and management planning process because it is where real opportunities can be realized. It is where the “real work gets done,” but because of its potential size and complexity, especially in larger, diversified and energy intensive businesses, if not well mapped out and systematically approached, significant opportunities may be missed, or momentum may be lost that will be difficult to regain.

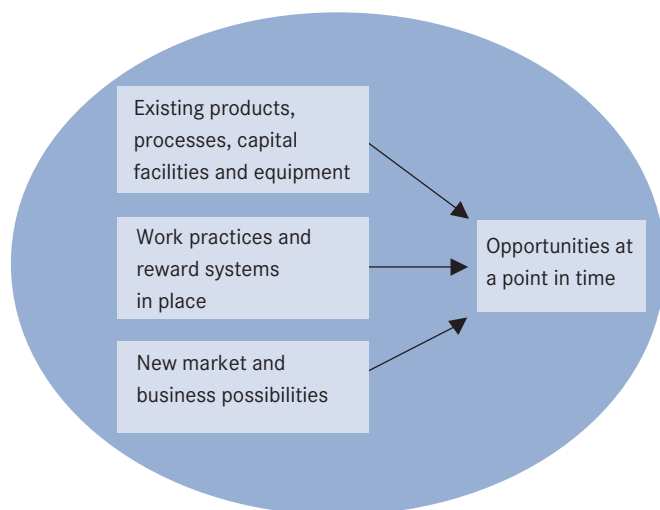
Essential to this third and crucial step in the process is a baseline that reflects the types, quantities, and costs of energy used in each significant component of the business. Ideally this will include facilities, operations, and transportation and distribution, and in some cases even the energy consumed by the product itself, especially if that issue is increasing in importance in a business sector. Also, for certain companies, this will include an assessment of new or expanded energy-related products and services that may benefit the company.

Opportunities fall into three categories, although not all will be relevant for all companies:

- Energy efficiency reduces the amount of energy used, reducing both cost and environmental impact.
- Energy supply management can help to control costs and assure reliability.
- Energy related products and services can help existing products to be more competitive in the marketplace or create new markets.

At any point in time, in addition to the cost of energy, a range of factors influence the opportunities that are available.

Factors Influencing Energy Opportunities at a Given Point in Time



Because these influencing factors, including energy cost, are dynamic, a strategic approach to energy planning and management must be dynamic and iterative rather than static. Only in this way will opportunities be continuously identified and realized.

Step 4: Implementation

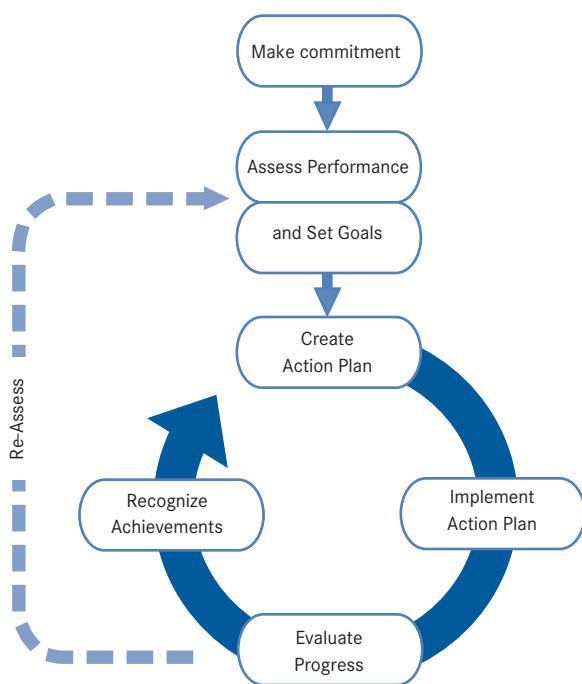
This fourth and final process step follows a classic management system model and involves determining and setting in place an organizational structure that will ensure that the program is integrated into the overall company management culture and that the new energy management goals are achieved. Regardless of the framework decided upon, certain management principles and tools must be in place to achieve significant results. These include:

- Leadership at the very top of the company with a clear commitment to results;
- Clearly stated goals and measurable objectives at appropriate levels;
- Clear accountability for results, whether in a single or multiple executives;
- Sufficient resources to enable achievement of the objectives and goals;
- Periodic review and updating of goals, objectives and resource commitments; and
- Recognition of progress and reward for achievements.

One simple and widely adopted management system model and guidelines has been developed by ENERGY STAR in consultation with many of its partner companies:

The specific system adopted is not as important as whether it meets the fundamental principles for success and fits a specific company's operating culture.

ENERGY STAR Guidelines for Energy Management



About the authors

Charles J. Bennett, a Senior Research Associate at The Conference Board, is associated with the Global Corporate Citizenship Research Group and coordinates The Conference Board's environment, health, and safety council and research programs. His published research focuses on a wide range of topics, including sustainability, corporate citizenship, environment, health and safety, and energy.

Meredith Armstrong Whiting has served as a Senior Research Fellow of The Conference Board since 1987. She authors research on topics relating to public policy, environmental issues, safety and health, corporate citizenship, sustainability and energy, and organized The Conference Board's first council for chief environmental, health, and safety executives.

The Conference Board's Strategic Energy Management Advisory Group

At the invitation of The Conference Board, eight member companies from a variety of industries, all with extensive experience in strategic planning for energy management, formed an advisory group to assist in the creation of the Roadmap for Corporate Energy Strategy. Members included executives from Abbott, Cargill, Corning, DuPont, Duke Energy, Florida Power & Light, IBM, and ICF Consulting.

Over a period of six months, in a series of meetings and conference calls, the ten executives involved provided guidance and raised issues that needed to be considered by companies attempting to implement or refine an energy strategy. Reflecting the combined decades of experience that they represent, many of their comments, organized by category throughout this report, paint a vivid picture of the challenges and successes that have honed their own and their companies' insights into energy management.

Acknowledgements

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