

Creating a High Performance Energy Management Strategy

Commit to an on-going, integrated, and systematic approach

Managing energy demand successfully means not only reaching your goal, but staying there over time.

Yet too often, organizations using traditional approaches slip into an ever-repeating cycle: high energy costs trigger an audit — implement the easy actions — net some savings — forget about energy until costs rise again. Sound familiar? Without an on-going, integrated, and systematic approach to energy management, energy expenses will rebound again and again.

Breaking the cycle can dramatically reduce your annual energy costs. Instead of periodic cost savings of 5%, organizations that adopt a systemic approach can achieve and maintain cost savings approaching 35%. While there are many different forms and examples of successful approaches to energy management, the U.S. EPA's ENERGY STAR® program has identified seven essential elements for a high-performance energy management strategy (See Diagram 1). The best performing organizations make these steps part of an on-going management process. How does your current strategy compare?

1. Commit to Continuous Improvement

Top-level commitment and leadership are critical to superior energy management; adopting an Energy Policy and appointing an Energy Director is the best way to show it. An Energy Policy sets the stage for a successful energy strategy by formalizing senior management's



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support. It also highlights your hospital's commitment to energy efficiency and pollution prevention to employees, patients, and the community. Some organizations use their partnership with ENERGY STAR as a basis for their energy policy.

Key Aspects of an Energy Policy

- *States Objective* — The policy should have a clear and easy-to-understand objective, and reflect the hospital's primary energy concerns.
- *Establishes Accountability* — The policy establishes a chain-of-command and define roles in the organization.
- *Measures Progress* — The policy specifies that progress will be measured and tracked annually.
- *Ensures Continuous Improvement* — As energy priorities change over time, the policy includes provisions for evaluating and updating as needed.

Establishing an Energy Director is also critical to elevating energy management. Whether independent or part of another position, Energy Directors must understand and communicate how energy management can help the organization achieve its goals. Their role is to define energy management as a core value throughout the organization.

Key Responsibilities of Energy Directors

- Leads a multi-disciplinary energy team of personnel

from all business units in the hospital

- Promotes energy projects and initiatives when competing for resources and attention
- Secures sufficient resources for energy projects
- Establishes methods of measuring and tracking results
- Develops energy performance standards for new construction, equipment, and facilities
- Communicates results to senior management and other key stakeholders

2. Assess Energy Performance

Would you plan a new hospital without knowing your current capacity and demand? It's no different than trying to find energy savings without knowing your energy use today. Establishing a baseline for energy performance enables you to create performance goals, calculate cost savings from efficiency efforts, and identify trends for future efforts.

Key Steps

- Benchmark energy performance (e.g. www.energystar.gov/benchmark)
- Account for all energy sources – electric, fossil fuels, renewable energy, and waste fuels
- Identify all major areas and activities of energy consumption
- Collect historical energy consumption and cost information

3. Set Performance Goals

Measurable energy performance goals are essential for tracking and determining success. Use them to create milestones and timeframes for achieving specific purposes and to objectively evaluate staff performance.

Key Steps

- Set energy performance goals based on total energy per square foot
- Set performance goals for preventative and predictive maintenance practices, failure evaluation, maintenance scheduling, and inventory control
- Establish accountability and develop timetables for meeting targets

4. Create and Implement Action Plan

The Action Plan is the document that establishes how the goals and objectives will be achieved. It specifies project milestones and completion dates as well as responsible parties, budget requirements, and a methodology for prioritizing energy performance opportunities. In short, the Action Plan ensures there is a systematic approach in place to implement continuous energy management activities.

Action plans focused on a whole-building approach can save twice as much as the typical technology-based

approach, prevent over-sizing, and minimize equipment costs. How? Building system interactions. Use your knowledge of how different systems influence energy demand (such as how inefficient, heat producing, lighting causes HVAC systems to work harder) to your advantage. The Energy Star staged approach synthesizes these interactions into a systematic method for planning upgrades that enables you to maximize energy savings. The stages are:

- **Recommissioning:** Periodically examine building equipment, systems, and maintenance procedures as compared to design intent and current operational needs.
- **Lighting:** Install energy-efficient lighting systems and controls that improve light quality and reduce heat gain.
- **Supplemental Load Reductions:** Purchase ENERGY STAR labeled office equipment, install window films and add insulation or reflective roof coating to reduce energy consumption of supplemental load sources.
- **Fan Systems Upgrades:** Properly size fan systems, add variable speed drives, and convert to a variable-air-volume system.
- **Heating And Cooling System Upgrades:** Replace chlorofluorocarbon chillers, retrofit or install energy-efficient models to meet the building's reduced cooling loads, upgrade boilers and other central plant systems to energy-efficient standards.

Key Steps

- Prioritize actions and investments from benchmarking and other assessments
- Determine budget for capital investments and operating costs
- Identify required personnel resources
- Create a metering, monitoring, and energy tracking strategy

5. Train and Motivate Staff

Reaching targets and goals ultimately depends on the motivation and capability of people who implement the Action Plan. Training helps staff understand the importance of energy performance, provides them with the knowledge and information necessary to make informed decisions, and demonstrates the commitment of senior management.

Key Steps

- Develop a Job Task analysis for each position that shows the minimum knowledge, skills, and training necessary for satisfactory performance
- Provide all employees basic training on energy conservation practices



- Develop targeted training for facility managers and the operations and maintenance staff
- Create employee incentives to drive energy performance
- Encourage feedback from employees

6. Evaluate Progress

Do the numbers. Did you achieve the desired results? The insight you get will tell you where your organization's strengths and weaknesses lie and suggest ways to improve performance.

Key Steps


- Compare energy performance against established targets
- Determine source of variation
- Take corrective action

7. Communicate Results

Work closely with your Public Relations department to publicize your results and distinguish your hospital as an environmental steward. For many organizations, ENERGY STAR provides a platform for communicating energy efficiency accomplishments. An effective communications effort will help you leverage the momentum of early successes, making it easier to implement future energy management activities.

Key Steps

- Identify key internal and external audiences
- Tailor messages based on action needed from each audience
- Determine the best way to reach each audience
- Set communications goals (e.g. newsletter articles, posters)

Sustained energy performance requires a commitment to an on-going, integrated, and systematic approach to energy management. Use the seven elements above to your competitive advantage. You will improve efficiency, enhance profits, and improve the quality of our air. And that looks good to people everywhere. 

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