



Best Management Practice Guide

Introduction

Even among the same sector, like Kentucky's adult beverage industry, organizations can differ dramatically in energy performance. The most efficient energy consumers have a structured approach to energy management with established policies and procedures to ensure long-term results by allocating staff/resources, setting fixed goals, and having a continuous improvement philosophy. Well-run energy programs may reduce energy costs by 3 to 10% annually and create a competitive edge by improving financial performance.



Well-run energy programs may reduce energy costs by 3 to 10%.

Team Approach

Forming an energy team is the first step to developing such a program. A team approach improves buy-in from all organizational levels, which helps to ensure greater energy savings. The energy team is responsible for planning, implementing, bench-marking, monitoring, and evaluating the energy management program. The team's duties also include delivering training, communicating results, and providing recognition. This effort requires internal resources and employees' time, however the cost to implement such an effort is small compared to the potential savings and payback is essentially immediate.



A team approach improves buy-in from all levels of an organization, thus helps to ensure success.

Need Help...

- *establishing an Energy Management Plan.*
- *training an energy team.*
- *or educating employees about energy efficiency?*

Contact the
**Kentucky Pollution
Prevention Center!**

Website: www.kppc.org

Email: info@kppc.org

Phone: 502-852-0965

Energy Management



Team Essentials

Funding is key, so seek funds early to ensure project funding before the annual budget is finalized. Note, some organizations set aside a percentage of their budgets for energy projects.

Successful teams avoid being isolated from the rest of the organization. Isolation can create the appearance that energy management is a marginal activity, at risk of elimination. Energy management should be integrated into the organization's structure as part of its core business, rather than being a stand-alone activity.

When energy management is fully integrated, each department has an energy management role. Therefore, ensure that the team is multidisciplinary with a representative from as many departments as feasible. Do not forget individuals from finance and utilities. Not only does this help to integrate the team into the organization; a diverse, cross-functional team can find more opportunities for reducing energy use than a team that is not cross functional.

Energy Champion

Most energy improvements are implemented at the facility level. The goals of such actions are to change inefficient operating practices, develop a culture of efficiency, and encourage facility specific buy-in to the principles of the energy management program. This can be achieved by working with facility managers/supervisors to identify a person who will serve as the site energy champion. Provide each site champion information on the benefits of energy efficiency to educate other employees, and encourage the champion to form a site energy team.

Led by an energy manager or energy champion, the energy team should be comprised of 10 or fewer representatives. Participating on an energy team is often voluntary. Therefore it is vital that the energy team is empowered by having the time and resources to accomplish their work along with the authority to make decisions.

Program Launch

Prior to program launch, prepare and deliver a briefing to senior management on the benefits of energy efficiency, the proposed approach, and a list of potential members of the energy team. After senior management has approved, a series of energy team meetings should be held. During these pre-launch meetings, the team should prepare for the official program launch by developing an energy policy, creating a program launch action plan and thinking of initiatives to highlight at the program's kickoff.

Develop a policy that upper management supports and stresses to all employees within the organization the benefits and goals of the program. The energy policy should state:

- energy and environmental commitment
- established goals and objectives,
- applicability to the company's energy policy,
- by whom it is approved

To help create credibility for the energy program, the kick off should be a formal event that involves senior management announcing the formation of the energy team, introducing the team(s) and presenting the energy policy.

Team Meetings

At the first post-launch gathering, the energy team should establish a meeting schedule. Monthly meetings are the norm. During meetings, the team members can report on their progress on assigned tasks and provide monthly reports on energy use. The meetings can also offer opportunities for presentations on best practices by in-house and outside technical and operational experts. In addition, members can network with each other, learn about key contacts, connect with different facilities and share problems for which the other attendees might be able to offer potential solutions. The meetings also provide time for the energy team to develop an action plan for the upcoming year, thus the team becomes proactive in planning its time and ensuring project funding.

Establishing An Energy Management Program

Action Plans

Essential components of an energy management program's annual action plan are mechanisms for tracking progress, communicating results, and sharing knowledge. Such mechanisms can be informal or formal tools that include systems that track energy performance, implement best practices, and evaluate progress toward goals. A few best practices to consider when developing an action plan include:

- Tracking and monitoring energy use and costs
- Developing a baseline of energy use and costs
- Conducting facility energy assessments
- Communicate results
- Developing an energy reduction recognition program

Outsourcing

Outsourcing to external consultants to perform maintenance and metering to gather data can have certain advantages. For example, if your organization has insufficient in-house staff to perform regular maintenance of steam traps, it makes sense to hire a consultant. Outside eyes can also catch inefficient practices that are often overlooked by company employees or even by the energy team. Using third-party consultants and service providers can be especially effective when conducting assessments and technical audits. However, be careful of relying too much on outside sources and not developing expertise within your organization.

Training

Investing in training that promotes employee development helps ensure the success of the energy program by building overall organizational capacity. Informed employees are more likely to contribute ideas, operate equipment properly, and follow procedures. Formal training can be targeted to address specific energy management issues, transference of skills, and to gather feedback. Training can be conducted at a site, or it can be organization-wide.

Sharing Knowledge

A knowledge management system or best practices database can be used to share knowledge between facilities, managers and workers. Such tools can range from a database published internally on the organization's intranet, or spreadsheets and electronic charts provided to facility managers and engineers. Case studies on successful projects can be published on either tool. Also provide contact information of relevant persons for each case study.

Energy summits and energy fairs are also options. If possible, work with your organization's event planner to organize such events. Energy summits are usually annual gatherings to exchange information on the energy program accomplishments, best practices, and to discuss new project ideas. Energy fairs and exhibitions are one- to three-day events for all employees, their families, and even neighbors to educate them about basic energy strategies for the home. Normally, energy fairs are held at facilities and can include representatives from outside organizations, such as government or local utilities, to man the booths.

Posters, intranet sites, surveys, and competitions are additional tools for informally raising awareness of energy efficiency and transferring knowledge. Attractive and informative posters and intranet sites keep the energy program vividly in front of people's eyes and educate them at the same time.

Did You Know...

Every year, members of Kentucky's spirits industry gather to discuss and share experiences related to current environmental issues and aspire to shape future sector opportunities?

Contact us to learn more about the
Sustainable Spirits Summit!

Email: envhelp@ky.gov

Phone: 502-782-6189

Recognition

Recognizing the contributions of teams and individuals helps to reinforce the value of energy efficiency and encourage even greater improvements. Acknowledging successes will help sustain motivation. Forms of thanks ranging from simple verbal communications or coffee mugs to formal written commendations and certificates, plaques presented at award ceremonies, salary increases, and stock options can all act as motivators. Internally, consider recognition to individuals, departments, teams, and facilities. Look at incentives from the point of view of employees and ask: "What's in it for them?" Ensure that all recognition and rewards are equitable and based on published criteria. You may choose to recognize the best energy-saving ideas, the greatest reductions in energy use, and savings increased by "x" amount.

External recognition from a third party validates the importance of the energy program, provides satisfaction to those who earned the award, and enhances your organization's public image. A solid reputation contributes to your organization's competitive advantage by making it more attractive to customers, current and potential employees, lenders, and business partners. Awards from an outside organization are one of your most powerful tools for persuading senior management to support the energy program. Besides creating a sense of ownership by the corporate officer, the award attracts media attention and positive PR for the organization.

Recognition Opportunity...

Kentucky Excellence in Environmental Leadership (KY EXCEL) is a program that recognizes environmental achievements throughout Kentucky.

*For details, contact **KY EXCEL!***

Email: envhelp@ky.gov

Phone: 502-782-6189

Communicating Results

Sustaining the program requires ensuring managers and employees are aware of results. Publicizing the results of the energy management program helps to integrate it into the culture and foster organizational pride. If you have a good thing going, let others know. Explaining the benefits of saving energy and the results of your program takes effective communications skills. Possible newsletter subjects include facility achievements and brief summaries of assessment reports. You may be able to link your news to corporate or world events. Also consider asking your organization's public relations department for advice on your communications plan. Methods for communicating results include internal progress reports, reports on assessments, emails, pay statement mailers, and publications; such as newsletters, magazines, videos, the organization's intranet, posters, flyers, energy calendars posted on bulletin boards, and meetings and conferences.

Additional Resources

Energy Star

Teaming Up to Save Energy Guide

- <https://www.energystar.gov/buildings/facility-owners-and-managers/industrial-plants/build-energy-management-program>

Southern Rural Development Center

Working with Virtual Teams

- <http://srdc.msstate.edu/virtualteams/index.html>

Kentucky Pollution Prevention Center

Sustainable Spirits and Brewing Initiative

- <http://kppc.org/ksmi/ssb/>
- info@kppc.org
- 502-852-0965

Kentucky Division of Compliance Assistance

Kentucky's Sustainable Spirits Initiative

- <https://eec.ky.gov/Environmental-Protection/Compliance-Assistance/Pages/sustainable-spirits.aspx>
- envhelp@ky.gov
- 502-782-6189



Kentucky Division of Compliance Assistance



Produced by the Kentucky Pollution Prevention Partnership (KP3) thanks to US EPA Pollution Prevention Grant Funding





Keys to Team Success

A team approach improves buy-in from all levels of the organization, which in turn helps to ensure greater energy savings. Below are seven keys to ensuring team success.

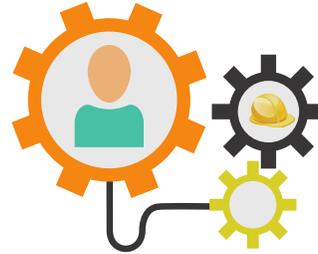
Support



Support from the top senior management is key for funding and empowerment of a energy team or a network of energy teams.



1

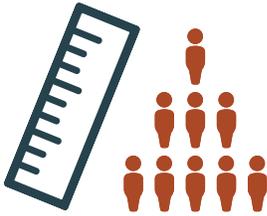


Members

The team should have a diversity of cross-functional members that have good communication skills, are able to work independently, and have the ability to adapt.

2

Size



The most effective teams have fewer than 10 members. Larger teams allow for members to reduce effort because they feel less responsible for output.



3



Trust

Trust is key for a team to effectively work together and with others. Three ways of building trust include uniting around a common cause, developing interpersonal relationships and face-to-face touchpoints at key points in their work.

4

Communication



For good communication, make sure the team is using the right tool, developed a communication plan, and established a communication schedule.



5



Leadership

Team leaders should serve as coordinators that lean on specific team member expertise (as needed), foster a sense of balanced power and provide/request regular status updates.

6

Shared Vision



Establish a common purpose or vision with clear and detailed deliverables. Give the team freedom and set up a reward system to keep the team motivated.



7





Energy Management Ideas

Strong energy management is a strategic asset that creates a competitive edge by reducing energy costs. Below are a few ideas to get you started.



Facility Energy Assessments

Organize facility walk-throughs to assess energy use and find energy saving opportunities. Assessments are powerful tools for involving facilities and encouraging buy-in. These events are also hands-on learning opportunities because energy team members may see best practices in action. However, the energy team will need to remember that annual energy assessments compete for time and attention against the business of the facility. After an assessment, an in-depth report should be written and a summary circulated internally.



Sub-Metering Devices

In order to reduce energy, one must know how much energy is being used. Sub-metering can be an expensive investment, but there are simple, in-line, manual sub-meters available that are relatively inexpensive when compared to the digital, PLC based models. Sub-metering helps energy teams develop a more accurate understanding of energy use within the facility and develop clearer, more concise and attainable goals.



Plug Load Management

Conduct an assessment of non-essential items being left on or plugged in during times of non-use or during times of temporary shutdowns (i.e. nights and weekends). Electrical power consumed by electronic appliances while switched off or in standby mode is called phantom load. Approximately 1-3% of the company's annual plug load usage is due to phantom load. Take inventory of non-essential equipment left on and address these items with the appropriate department teams.



Equipment Shutdown/Load Strategy

Investigate equipment being left on during temporary shutdowns, longer shutdowns, and times of non-use. Take inventory of non-essential equipment left on and address these items with the appropriate department teams, which would cover the entire facility. Once equipment is identified, develop a policy to turn off or reduce the load on select equipment. By turning off process equipment when not in use, the company can reduce their energy usage and demand load. Identify the equipment that is critical to the production process first, and then consider ways to reduce the load from other equipment.



Demand Reduction Strategies

High demand charges can result from a high rate of energy usage for even short periods. Plant production schedules and the economics of each situation should be considered. One possible solution may be to distribute the facility's electrical demand over alternate shifts. Another possibility is to schedule the operation of high demand electrical equipment to when overall facility demand is lower. Coordinating these times could reduce the amount of equipment operating at one time, thus decreasing the maximum demand for the billing period.

