COLORADO INDUSTRIAL ENERGY CHALLENGE

Improving Efficiency, Reducing Costs and Emissions

PROFILES IN INDUSTRIAL ENERGY EFFICIENCY

MillerCoors Energy Team and Guidebook Help Employees Find New Savings

ENERGY TEAM BUILDS ON A LONG HISTORY

"The Coors brewery in Golden has a long history of energy conservation, energy independence, and self-sufficiency from its earliest days," says MillerCoors' Energy Manager Matt Cook. Opened in 1873, the MillerCoors brewery in Golden can brew up to 22 million barrels and package up to 16 million barrels annually, with brands including Coors Banquet, Coors Light, Miller Lite, Keystone, Blue Moon, and George Killian's Irish Red Lager. MillerCoors is the second largest beer company in America, capturing nearly 30% of U.S. beer sales.

"To continue our efforts to reduce energy costs and become more sustainable, we formed an Energy Team in 2005 and enlisted employees from all business areas and plant support functions to be a part of it—including financing, engineering, packaging, and facilities," explained Cook. This group is tasked with five key functions, all based on MillerCoors' principles of World Class Manufacturing and Focused Improvement to find and eliminate waste:

1. Establish plant specific energy policies and practices
2. Engage plant personnel in energy conservation
3. Develop energy education programs
4. Conduct energy assessments within plant business areas
5. Identify and implement energy conservation capital projects

Quick Facts

LOCATION: Golden, Colorado

MARKET SECTOR: Breweries

BREWERY SIZE: 1,600 acres

BREWERY PRODUCTION: Up to 16 million bbls annually

PROJECT: Step-by-step guidebook for employees to find energy savings and earn an incentive

PROJECT LED BY: Cross-departmental energy team

CIEC GOAL: 12% reduction per barrel of beer from 2010-2015

INCENTIVES ENCOURAGE EMPLOYEE ENGAGEMENT

Even though the Energy Team provides energy assessments to all departments, often times additional savings ideas are uncovered by those employees working in that area every day. To engage employees in spotting these opportunities, the Energy Team challenges each brewery employee to find any waste amounting $500 in a quarter—and if the group meets this goal, each member of the group gets a financial payout. "The savings can be from any kind of loss or waste – energy, water, materials, labor and so on—but much of the focus has been energy," explained Cook.

MillerCoors reports getting a steady stream of good ideas through this process. Sometimes it's simply a repair need—fixing a steam leak or water leak, for example. Other times it involves an equipment upgrade, or even a more complex process change.

A BREWERY GUIDEBOOK HELPS IDENTIFY SAVINGS

"We also recognized that employees could bring forward more potential energy-saving measures if they had more awareness on what to look for and more support in evaluating anything they find," said Cook.

So, to address this, the Energy Team put together an "Energy-Focused Improvement Guidebook," based on a publication by Bonneville Power Authority but customized for a brewery environment. The guidebook is user-friendly, easy enough for non-energy-experts to understand, and thorough in uncovering opportunities. For instance, simple yes/no questions on each utility system (lighting, steam, refrigeration, etc) help to flag items for further investigation, and then a walk-through assessment helps collect the necessary data to quantify the savings and develop a plan of action. The guidebook is accompanied by a spreadsheet with tools to help estimate or quantify savings in many categories, e.g., compressed air leaks or steam leaks.

A question in the lighting section, for instance, asks "Are lights left on in unoccupied areas?" This question led employees to notice that team rooms, office spaces, and warehouses could all benefit from adjusting either the timing or level of lighting—saving both energy and money.

"The guidebook has high-level info as well as specific yes/no questions," says Cook.

In The Guidebook

MillerCoors' developed an easy-to-understand "Energy-Focused Improvement Guidebook" that walks through the steps to identify and evaluate energy-savings opportunities:

STEP 1: IDENTIFY RELEVANT UTILITY SYSTEMS FOR A SPECIFIC AREA

For example, lighting, motors, belts, drives, fans, pumps, compressed air, steam and condensate, refrigeration,CO2 systems, and water/wastewater

STEP 2: REVIEW GUIDEBOOK UTILITY CHECKLISTS

Simple yes/no questions about each utility system tells you if opportunities may exist, and flags them for further investigation

STEP 3: WALK-THROUGH ASSESSMENT

A focused investigation of any ideas identified in Step 2, carried out with subject matter experts

STEP 4: POST WALK-THROUGH ASSESSMENT MEETING

A brief meeting to review the findings and develop a list of potential projects

STEP 5: ESTIMATE POTENTIAL SAVINGS

Data gathered during walk-through and Energy Focused Improvement Cost Tool is used to estimate potential annual energy and cost savings

More Info

We encourage all industrial companies to form an energy team, to engage employees in finding energy-savings, and to offer a structure for pursuing those opportunities.

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