

BRIGGS & STATTON INSTILLS ENERGY EFFICIENCY WITHIN ITS CORPORATE CULTURE

SOLUTION OVERVIEW

Briggs & Stratton, the world's largest producer of gasoline engines for outdoor power equipment, joined the Better Buildings, Better Plants Challenge with the goal of reducing energy intensity by 25% in 10 years. The company was progressing towards that goal when its Energy Manager left in 2013. A subsequent gap in the hiring process left a 6 month void and energy efficiency efforts suffered a loss of focus.

Without corporate level direction, staff on plant energy teams prioritized other responsibilities and stopped proposing and implementing energy projects. Even though the energy manager position was only vacant six months, it had an outsized impact as it effectively prevented any funding for new energy projects for a whole fiscal year.

Additionally, many capital intensive improvements and lower-cost energy conservation measures had already been implemented under the previous energy manager. Without a dedicated corporate energy manager, the company found it difficult to reach beyond the low-hanging fruit, contributing to the loss of momentum behind the energy program. Consequently, Briggs & Stratton hired a new energy manager who set about rebuilding support for energy efficiency across all Briggs & Stratton sites. A key tactic that allowed the energy manager to succeed was to work with others within Briggs & Stratton to institutionalize and better integrate energy management as a key element within Briggs & Stratton's Corporate Continuous Improvement Program. This revitalized energy efficiency efforts and spurred a renewed company-wide commitment to energy efficiency.

ORGANIZATION TYPE

Manufacturer of gasoline engines for outdoor power equipment

BARRIER

Maintaining a commitment to continuing energy efficiency improvement even with turnover in the energy manager position

SOLUTION

Including Energy Management as a key element in the company's Corporate Continuous Improvement Program

OUTCOME

Continuous energy efficiency improvement despite energy manager turnover

POLICIES

Briggs & Stratton's Continuous Improvement Program, similar to many manufacturing companies, focuses on analyzing elements that map value streams throughout the company. The new Energy Manager persuaded the head of the Continuous Improvement Program to formally integrate energy efficiency into the program, giving the company's energy management effort greater structure, accountability, and credibility. For example, the program involves examining and scoring the energy consumed per engine produced at each plant on a monthly basis. This helps each plant's energy team get back on track.

The company's goal was to increase energy awareness, education, and accountability organization-wide, with an eye on the Better Plants Challenge goal of reducing energy intensity at each plant location by an average of 2.5% per year.

PROCESS

Adding Energy Management as one of the elements of the Continuous Improvement (CI) Program led to:

1. Re-establishing energy teams at each plant location
2. Assigning an Energy Champion for each team
3. Scheduling meetings to review the status of ongoing energy projects and energy-team activities
4. Engaging a key member of the Corporate CI team to help set goals and benchmarks for the plants

Energy teams at each plant typically consist of 6-8 plant employees that are led by the location's designated Champion, the facility manager or energy coordinator. The Champion interacts with operations managers and oversees systems like chilled water, boiler systems, vacuum systems, and substations. Additional team members can include staff from accounting, procurement, distribution, and production control.

With energy management integrated into the Briggs & Stratton corporate CI program, energy champions at each plant are better able to engage with the Energy Manager to identify, fund, and drive more energy projects. For example, Briggs & Stratton is using a phased approach to implementing a ventilation project at its Burleigh facility in Wauwatosa, Wisconsin. The project improves thermal efficiency by installing new direct fired makeup air units, improving unit controls and upgrading the existing building automation system (BAS) with new controls that allow staff to schedule equipment operation over Wi-Fi and achieve energy savings by reducing the runtime of equipment.

Phase 1 Verify Wi-Fi strength throughout the plant and install new transmitters where they were needed to ensure signal strength.

Phase 2 Install controllers on existing equipment and near the locations of new equipment.

Phase 3 Install new MAU's

Phase 4 Tie in all controls to existing BAS.

Briggs & Stratton is also implementing variable-frequency drive (VFD) projects in several plants to reduce the electrical pumping costs for both hot and chilled water systems, budgeting several upgrades each fiscal year.

The company relied on U.S. Department of Energy (DOE) and ENERGY STAR® materials, including ENERGY STAR's "Facility Guidelines for Energy Management," for guidance. The Briggs & Stratton energy team also engaged with DOE and ENERGY STAR organizations to leverage their extensive knowledge base and share best practices. The company's staff found new avenues of technical expertise and assistance through Better Plants In-Plant Trainings. ENERGY STAR provided value through energy treasure hunts and helping with identifying root causes of energy waste. Rockwell Automation software and hardware were also used to measure key energy sources in the plants.

OUTREACH

Briggs & Stratton worked hard to win employee buy-in at the plant level. The corporate energy leadership regularly engaged employees and facility energy team leaders through group conference calls and personal visits to the plant locations. The plant energy teams also began holding monthly meetings to discuss new energy initiatives, progress on existing energy projects, and education and awareness efforts.

OUTCOMES

As of fiscal year 2014, Briggs & Stratton has reduced corporate energy intensity by 16.8%, or \$70 million in energy cost savings since 2009. This progress has spurred interest in further energy reduction efforts company-wide, with greater support for energy management from company leadership.

MEASURING SUCCESS

As Briggs & Stratton has solidified its energy management program, next steps for the company include developing a more rigorous approach to tracking the energy efficiency improvements it is making. Measuring energy intensity in BTU per engine produced at a corporate level can be difficult due to the diversity of the products. The company is exploring measuring the same metric (BTU/engine) at each individual plant through the CI teams. As part of the Continuous Improvement Program, the company plans to conduct detailed assessments and reporting at the plant level going forward.