Ballston Spa Central School District implements efficiency solutions with On-site Energy Management

Case Study

Organization Name:
Ballston Spa Central School District

Location:
Ballston Spa, New York

Business Type:
K-12 Public School District

Student Enrollment:
4,100

Annual Energy Savings:
11.2%

Overview

The Ballston Spa Central School District currently serves approximately 4,100 students from prekindergarten through grade 12. The 65-square mile school district, located in Saratoga County, encompasses portions of the towns of Milton, Malta, Ballston, and Charlton as well as the Village of Ballston Spa.

There are four elementary schools, one middle school, and one high school. The district also includes administrative offices, a bus garage, grounds shop, and maintenance facility.

Recognizing a Need

The district's facilities differ in age and construction with a variety of building control systems. This presents a challenge for the limited maintenance staff to effectively manage equipment repairs for maximum energy efficiency and conservation.

The administration recognized professional assistance was necessary to develop an effective energy efficiency strategy. Participating in NYSERDA's P-12 Schools Initiative gave the district access to tools, resources, and information to guide their implementation of clean energy projects. After evaluating available opportunities, it was determined NYSERDA's On-site Energy Manager (OsEM) Program, which provides cost sharing for hiring an on-site energy manager, was the best course of action.

Developing a Plan

An OsEM was brought in to identify energy-saving solutions that fit the district's objectives. The first step was to develop a baseline for each utility account. The baseline measured performance and verified energy use to develop semi-annual benchmarking reports and track progress.

At the end of the one-year OsEM engagement, electricity and natural gas use were reduced by 5% and 13%, respectively. In total, the implemented recommendations will cut the district's costs by 11% annually, with an additional estimated 8% savings resulting from upcoming projects.

In conjunction with the baseline measurements, the OsEM assembled a cross-functional team to quickly identify low-cost operational enhancements and maintenance project opportunities. Improvements, such as LED lighting upgrades and air sealing, were quantified to develop investment-grade data and assist with financial decision-making.

Identifying Opportunities

The baseline exercise established the starting point for performance measurement for implemented and planned projects. Opportunities primarily related to temperature control scheduling and set points were implemented, while other capital-intensive measures were identified and evaluated. At the end of the one-year OsEM engagement, a benchmarking report reflected project success and enabled the district to gauge the financial benefits of implementing additional upgrades.

Establishing Results

Projects identified by the OsEM included energy efficiency upgrades as well as operational, maintenance, and process improvements. At the end of the one-year OsEM engagement, electricity and natural gas use were reduced by 5% and 13%, respectively. In total, the implemented recommendations will cut the district's costs by 11% annually, with an additional estimated 8% savings resulting from upcoming projects.

Moving Forward

To further its commitment to sustainability efforts, the district is moving forward with additional efficiency projects. There is a constant effort to modernize building control systems for increased comfort and more precise scheduling. In addition, with heightened concerns regarding viruses, these upgrades will improve ventilation and safety.

The NYSERDA On-Site Energy Manager Program

Through the On-site Energy Manager (OsEM) Pilot Program, NYSERDA cost-shares up to 75% of the cost to hire an OsEM. OsEMs work with companies to develop and implement successful energy and productivity projects. Projects may include operation and maintenance improvements, behavioral changes, energy efficiency upgrades, process improvements, throughput and scrap reduction improvements, and cost management.

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