

Jefferson Community College implements campus-wide solutions with On-site Energy Manager

Case Study

Institution Name:
**SUNY Jefferson
Community College**

Location:
Watertown, New York

Student Enrollment:
2,200 FTE

Number of Buildings:
9

Institution Type:
Community College

Institution Size:
285,297 Square Feet

Annual Energy Savings:
14.8%

Overview

Jefferson Community College, located in Watertown, New York, has long been recognized among its peers for committing to environmental excellence. In 2012, the college became a signatory of the American College and University Presidents' Climate Commitment and developed a climate neutrality plan.

In addition, the college maintains an active membership in the SUNY Sustainability Coalition (NYCSHE), NYS Association for Reduction, Reuse and Recycling, NNY Chapter of U.S. Green Building Council, and is recognized as a "Tree Campus USA member" listed with Arborday.org.

Over the past decade, several clean energy solutions were implemented on campus, further proving that sustainability is a core value. To continue demonstrating its commitment to clean energy, the college joined the New York State Energy Research and Development Authority's (NYSERDA) REV Campus Challenge in 2015. The challenge presented a perfect opportunity for the school to meet its financial, environmental, academic, and community goals through clean energy solutions. To achieve these goals, the college applied for the On-site Energy Manager Program at the beginning of 2019.

Making Progress

The college has made excellent progress in reducing energy use over the past 10 years—most notably, the reduction of electrical demand. Overall, the campus has gone from high peaks of more than 700 KW to a current average level of a little more than 450 KW, despite adding 30,000 square feet of new buildings. This success is due to the use of off-peak chiller plants with ice storage, LED lighting, improved HVAC systems, and upgrades to the computerized energy management system.



“Without the funding for the OsEM grant this project would not have been possible, and the team from NYSERDA was great to work with and were always available throughout the various project phases. I would recommend the OsEM program to any institution that wants to improve their energy efficiency and reduce operating costs.”

— Bruce Alexander, LEED AP,
Director of Administrative
Services, SUNY Jefferson
Community College

NYSERDA’s On-site Energy Manager (OsEM) Program represented a once-in-a-lifetime opportunity for the college. The college was able to hire a part-time On-site Energy Manager who utilized the information gathered in the REV energy study and created a campus energy management plan. The OsEM assembled an energy management team consisting of JCC Staff and principals from the college’s architecture and engineering firm. The OsEM facilitated various improvements to operations on campus including updates to the preventative maintenance plans, staff BAS training, the implementation of an energy awareness campaign, and the development of OsEM operating procedures to guide ongoing energy management efforts. Walkthrough audits were performed on all campus facilities and retro-commissioning was completed on both major building automation systems. Various low cost/no cost energy conservation measures were implemented along with capital improvement measures.

An analysis of the one-year project results was conducted at the conclusion of the engagement in April 2020. Fiscal years 2018-2019 were compared with 2019-2020 using utility regression analysis. This showed an overall (electric and natural gas) improvement of 14.8%, twice the original project goal of a 7% reduction. Overall energy costs were reduced by \$68,800 annually.

Additional future benefits will include gathering information to update the campus-wide energy procedures and improve energy awareness for students, faculty, staff, visitors, and the local community to help the campus meet sustainability goals going forward.

Because of its participation in the OsEM program, and its commitment to reducing energy use and making operational improvements, the college was selected as a finalist for the 2020 Association for the Advancement of Sustainability in Higher Education’s (AASHE) Sustainability Awards.

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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