



UMass Industrial Assessment Center Helps Cisco Brewery Find New Energy Savings Opportunities

In October 2017, the Industrial Assessment Center (IAC) at the University of Massachusetts Amherst conducted an assessment of the Cisco Brewery in Portsmouth, New Hampshire. This facility was built in 1996, and it employs more than 40 people.

IACs are located in 29 universities around the country and funded by the U.S. Department of Energy's Advanced Manufacturing Office. They provide assessments of energy and resource use at no cost for small to midsized manufacturing and water/wastewater treatment facilities. The New England region is served by the IAC at the University of Massachusetts Amherst, based in the Mechanical and Industrial Engineering Department's Center for Energy Efficiency and Renewable Energy.

Cisco's sustainability coordinator learned about the IAC at a workshop it cohosted about sustainability in food processing and beverage manufacturing. The company had already taken several actions to improve energy efficiency, including auditing and repairing leaks in the compressed air system, upgrading to LED lighting, and encouraging employees to find savings opportunities in a "utility treasure hunt." They had the IAC assessment to learn if there were additional measures they could take to reduce energy use and costs.

The assessment was conducted by a team including Professor Beka Kosanovic, Director of the UMass IAC, and two mechanical engineering graduate students. The team analyzed the facility's utility bills and then visited the site to meet with facility staff, learn about the manufacturing process and site operations, review all major energy consuming equipment in the facility, and measure performance of specific equipment using the IAC's tools and data loggers.

Two months after the site visit, the IAC provided a report with detailed analysis of six recommendations, including recovery and use of waste heat, improved insulation, installation of automated controls on selected equipment, and optimization of existing control systems. In total, the projected annual savings is \$59,500. Based on estimated implementation costs researched by the IAC, the energy savings would pay for the company's investment in only six months. In the year after the assessment, Cisco implemented two recommendations, and they are currently considering the others.



Projected benefits:

- Electricity savings: 609 MWh/year
- Natural gas savings: 1,100 MMBtu/year
- Emissions reductions: 260 tons CO₂, 310 pounds NO_x, 210 pounds SO₂/year

Annual cost savings: \$59,500

Simple payback period: 6 months

To learn more about the Industrial Assessment Center and find out if your facility is eligible for a free assessment, visit www.ceere.org/iac or contact IAC Director Beka Kosanovic at 413-545-0684 or kosanovic@umass.edu