

ERS and Central Maine Medical Center: The Benefits of Working with an Energy Consultant

Case Study

FlexTech Consultant:
Energy & Resource
Solutions (ERS)

Location:
Lewiston, Maine

Sector:
Healthcare

Building Square Footage:
500,000

Annual Cost Savings:
\$160,000

Annual Electricity Savings
2,136,000 kWh

The Project

ERS implements the Efficiency Maine Commercial and Industrial Custom Program on behalf of the Efficiency Maine Trust (EMT). The goal of the program is to assist participants with identifying and implementing cost-effective opportunities to reduce the consumption of grid-supplied electricity and/or pipeline-supplied natural gas.

In this role, ERS completed a detailed analysis of a proposed combined heat and power (CHP) project at Central Maine Medical Center in Lewiston, Maine. Through data collection and analysis, ERS guided them to a cost-effective solution that best aligned with the thermal and electric loads of the facility and that was eligible for implementation funding through the Efficiency Maine program.

Methodology and Analysis

ERS provides the following services through Efficiency Maine:

1. Outreach, including participant education and scoping audits intended to identify cost-effective opportunities worthy of development
2. Validation of projected energy impacts that are submitted by vendors and participants in support of incentive applications

A scoping audit conducted by ERS at the facility suggested there was a cost-effective opportunity for a small-scale CHP installation. Based on this finding, Efficiency Maine shared in the cost of an investment-grade assessment of the opportunity.

An independent engineering firm was retained to complete the analysis and proposed the installation of a 1,200-kW unit intended to provide 100% of the facility's thermal load. The ERS review of the proposed installation revealed several errors and unrealistic assumptions in the energy analysis that resulted in a grossly overstated prediction of the project benefit. All parties eventually agreed the independent firm's proposed installation would not be cost-effective for the applicant or eligible for funding from the Efficiency Maine program.





ERS maintained that an appropriately sized installation would be economical and obtained approval from EMT to work directly with the participant to document the level of thermal load that could be cost-effectively served by a CHP installation.

ERS installed flow and temperature data loggers and obtained trend data from the existing building automation system to verify hourly thermal loads. ERS also assisted the client in locating vendors who could provide turnkey installation proposals, validated the predicted energy impacts of a revised proposal reflecting a 250 kW CHP installation, and confirmed eligibility for an incentive.

Results

ERS was able to guide all stakeholders to arrive at a suitable solution and an application for incentive funding was submitted and approved. The installation of a 250 kW CHP system is now complete, and the system is on track to generate close to 2,000,000 kWh annually, with annual cost savings of approximately \$160,000.

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FlexTech Consultants are contracted by NYSERDA to provide expert, objective, and customized technical services to inform clean energy management and investment decisions. FlexTech Consultants can help customers set energy performance goals, identify savings opportunities, and prioritize those opportunities to achieve the greatest benefit. Because they provide customized technical assistance, they work with customers to help them achieve specific, individualized goals based on identified needs.



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