PROGRAM PROFILE

Efficiency Maine Distributed Generation Program

NEW ENGLAND CHP TECHNICAL ASSISTANCE PARTNERSHIPS

Program Description

Efficiency Maine Trust offers an incentive for combined heat and power (CHP) systems through its Commercial & Industrial (C&I) Custom Program. The Efficiency Maine Trust is the independent, third-party administrator for programs to improve the efficiency of energy use and reduce greenhouse gases in Maine. The Trust does this primarily by delivering financial incentives on the purchase of high-efficiency equipment or changes to operations that help customers save electricity, natural gas, and other fuels throughout the Maine economy. Efficiency Maine's programs are funded largely by a combination of electric and natural gas system benefit charges, ISO New England's Forward Capacity Market proceeds, and Regional Greenhouse Gas Initiative (RGGI) revenues.

Quick Facts

LOCATION: Maine
MARKET SECTOR: Hospitals, assisted living facilities, hotels, lumber industry, wastewater treatment plants, anaerobic digesters
Program Type: Incentive program
Geography: Statewide
Program Start: 2010

Efficiency Maine's C&I Custom Program incentivizes tailored energy efficiency projects that require site-specific engineering analyses and/or projects with energy conservation measures that are not otherwise covered by prescriptive incentives. The C&I Custom Program is designed to overcome the barriers confronting Maine's larger businesses and institutions when making investments in complex energy efficiency and distributed generation projects. Interested parties must submit an application in response to the Distributed Generation Program Opportunity Notice, a competitive solicitation document that describes the program requirements and application guidelines.

To qualify for funding, the project system must meet the following criteria:

- An annual operating efficiency of 60% or greater
- Annual energy savings of at least 36,000 kWh
- A simple payback greater than one year
- A benefit–cost ratio greater than 1.0 (based on Efficiency Maine's Total Resource Cost test)
- Ability to reduce grid-supplied electricity consumption behind the meter (no net metering or export to other entities)
- A meter that links to the Efficiency Maine tracking database (for the purpose of reporting to, and receiving credit from, ISO-New England's Forward Capacity Market)

When evaluating an incentive application, Efficiency Maine's cost-effectiveness test compares a potential CHP system's benefits to its costs. Benefits include the net present value of the project's net energy impact; costs include equipment, labor, installation, engineering, interconnection, permitting, and operations and maintenance before any tax incentives or third-party grants.

St. Mary's in Lewison, Maine, received an incentive from Efficiency Maine for a CHP system installed in 2016. For more information, see Efficiency Maine's video case study: https://www.youtube.com/embed/BKGWzvW2H6I?rel=0.

PHOTO COURTESY OF NEW ENGLAND CHP TAP TEAM

Program Development

The C&I Custom Program has been incentivizing distributed generation (primarily CHP) projects since its inception in 2010. Efficiency Maine's Third Triennial Plan (for fiscal years [FY] 2017–2019) identified CHP as the most significant source of efficiency opportunity for the program. The Maine Public Utilities Commission (MPUC) approved the plan and the corresponding budget required to capture that opportunity. With the Fourth Triennial Plan (for FY 2020–FY 2022), however, the MPUC ordered Efficiency Maine to factor operations and maintenance costs into its Total Resource Cost test for cost-effectiveness screening. Though CHP projects are still eligible for funding in principle, this new requirement renders many small projects non-cost-effective.

Summary of Policy Results and Outcomes

A 150 kW CHP system prior to installation at St. Mary's d'Youville Pavilion, a non-profit nursing home

PHOTO COURTESY OF CO-ENERGY AMERICA

The Efficiency Maine C&I Custom Program has incentivized 20 CHP projects, including natural gas reciprocating engines, biomass-based steam turbine generators, and anaerobic digesters. Participants have included hospitals, assisted living facilities, hotels, sawmills, and wastewater treatment plants. St. Mary's Hospital in Lewison, Maine, received an incentive for half of the total cost of the project, and the estimated savings to the facility are $80,000 per year. During a tour of the St. Mary's system, Scott Young, St. Mary's Director of Facilities, said, "Efficiency Maine's incentive was key in making the whole project happen." The policy allowed for the facility to produce 150 kW while covering the heat load of 128 independent apartments, along with a 233-bed nursing home.

Lessons to Share

- High asset utilization rates (80% or greater) are usually necessary to meet the benefit–cost test requirements and qualify for funding.
- Customer stakeholder opposition, such as noise complaints or space requirements, can present significant barriers to CHP adoption.
- An internal advocate (building manager, operator, etc.) for CHP can bolster the success and completion of CHP projects, but turnover can also present a major barrier when advocates leave an organization.
- Requirements for interconnection agreements can be costly and can critically reduce project financial performance (especially with smaller projects).

Resource

To learn more about the Efficiency Maine Distributed Generation Program, visit ***https://www.efficiencymaine.com/custom-distributed-generation-projects/***

For More Information

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