

5.1 Commercial and Industrial Custom Program

5.1.1 Overview

The Commercial and Industrial (C&I) Custom Program incentivizes tailored energy efficiency and distributed generation projects that require unique engineering analyses and projects entailing energy conservation measures that are not covered by prescriptive incentives.

Customer Segments

The C&I Custom Program is open to all C&I customers in Maine. This group consists of all non-residential customers, including businesses, institutions, and multifamily (or apartment) property owners. Despite its broad customer eligibility criteria, the program typically targets larger energy users with relatively complex facilities.

Channels

The C&I Custom Program targets eligible customers by making direct contact with facility managers and corporate officials, as well as with vendors and installers.

5.1.2 Objectives

- Help C&I customers overcome the barriers to implementing complex, custom energy efficiency and distributed generation projects
- Reduce energy costs at C&I customer facilities
- Reduce the price of electricity over time for all consumers by achieving reductions in demand for electricity during peak use periods
- Reduce total energy costs for electricity consumers in the state by increasing the efficiency with which electricity is consumed
- Create more favorable market conditions for the increased use of energy-efficient products and services

5.1.3 Market Barriers

- *Upfront cost and long payback periods:* Businesses commonly require that investments achieve no more than a 1.5- to 3-year payback; custom projects typically have a 4- to 7-year payback before accounting for incentives. Businesses and institutions have many competing demands for capital, and most conservation projects are weighed against other capital investments in internal decision-making processes.
- *Lack of in-house capacity/expertise:* Businesses and institutions often lack a full-time staff dedicated to energy or facility management. Without in-house expertise, they rely on outside contractors and vendors to identify conservation opportunities. Most custom projects require site-specific engineering; this can be capital-intensive and often extends beyond what most energy contractors or vendors are willing to explore on speculation. The Trust has found that relying on market-based contractors and vendors alone leaves the potential for many custom conservation projects untapped.

- *Unfamiliarity with new technology or processes:* In some cases, a custom conservation project involves technology or processes that are new to or uncommon in the marketplace. Such measures are not well-suited to promotion as part of a prescriptive list of highly standardized measures. The unfamiliarity of contractors and customers with uncommon measures represents a hurdle for custom projects.

5.1.4 Opportunity Analysis

Methodology

The Trust's opportunity analysis for the C&I Custom Program draws on the Applied Energy Group (AEG) Custom, Refrigeration and Compressed Air Potential Study (Appendix C). First, this study segmented utility data by location, business type, annual usage, and demand. This process helped to characterize the marketplace by facility type and business type and to determine the size of the efficiency opportunity in each eligible business segment. AEG then reviewed past program performance. It analyzed program tracking data to determine average project size by year, end-use, and customer, then linked the program database with the utility dataset using a combination of unique identifiers. This approach allowed AEG to compare the two datasets by segment, identifying participants and non-participants.

Based on the results of the market characterization and the evaluation of past program performance, AEG interviewed a group of contractors to shed some light on program and market gaps. These tasks provided the quantitative and qualitative data to shape AEG's projection of future program opportunity.

Findings

For the most part, the AEG study found that recent participation levels in the C&I Custom Program can be replicated in the Triennial Plan IV period. The majority of measures remain cost-effective, and there remains ample unrealized opportunity amongst medium and large customers.

The study acknowledged that activity in the C&I Custom Program has diminished when compared to three and four years ago. It attributes this change to several key drivers. First, the state's paper manufacturing sector is smaller than it once was, and the remaining paper mills have not participated in the program at the same rate as they did in the past. Second, large lighting retrofit projects that once represented a significant portion of the program have since transitioned to a prescriptive pathway through the C&I Prescriptive Program. Third, lower avoided costs in the Triennial Plan III period rendered certain large heating, ventilation, and air conditioning (HVAC) projects non-cost-effective. Finally, small combined heat and power (CHP) projects are no longer cost-effective in the Triennial Plan IV period when operations and maintenance costs are factored into the Total Resource Cost test.

5.1.5 Program Design

Addressing Market Barriers

The C&I Custom Program's incentive structure is designed to overcome barriers associated with large upfront costs and insufficiently attractive payback periods; at 50% of project cost for retrofits and 75% of incremental cost for lost-opportunity projects, the program's incentives are designed to have a meaningful impact on investment decisions. Additionally, program staff reviews project proposals on a rolling basis pursuant to a Program Opportunity Notice (PON). This approach helps to ensure that project investments can sync with customers' internal budgeting processes.

The program overcomes barriers associated with lack of in-house expertise by providing several levels of technical support. First, as appropriate, the program offers free scoping audits to customers where there is a reasonable likelihood of cost-effective energy efficiency and distributed generation project opportunity. The audits themselves are meant to be a starting point in the program, with a goal of identifying at least one project for which the customer could develop an application. In addition, many projects identified during scoping audits result in referrals to the C&I Prescriptive Program.

In cases where a specific project has been identified but requires more in-depth evaluation, the program cost-shares an investment-grade analysis, or "Technical Assistance Study." The Trust has found that these studies result in well-designed and successful efficiency and distributed generation projects, reducing the need for costly review or redesign at later stages in the installation process.

In addition, the program has found that the Trust's impartial expertise in providing technical assistance and reviewing project applications helps improve the accuracy of projections of the amount of energy savings that can reasonably be expected from the energy upgrade. The Trust thus plays an important role in ensuring that program participants feel confident in moving forward with significant investments and helps secure necessary approval from corporate decision makers.

Measures Promoted

The C&I Custom Program is designed to be flexible enough to invite a broad array of potential projects and participation from customers of varying sizes. During the Triennial Plan IV period, the Trust anticipates following the same practice of offering competitive incentives for relatively large, custom electric and thermal energy efficiency projects.

The C&I Custom Program will also continue to offer incentives for cost-effective distributed generation projects, as it has since 2009 when the program was initiated. In addition to the standard criteria, the program will also apply the following extra criteria to distributed generation projects:

- The program will only consider the avoided electricity (including capacity) from the output of a generation unit that coincidentally offsets grid-supplied electricity. The program will examine hourly data to ensure that proposed project's output will be used on site, behind the customer's meter.
- Projects that involve the combustion of fossil fuels will need to meet an overall annual threshold for operational efficiency.

Incentives and Financial Considerations

The C&I Custom Program will invest in custom efficiency and distributed generation projects consistent with the following program design elements:

- *Minimum project size:* The program will set a minimum project threshold in order to improve the likelihood that the project savings will exceed investment costs in custom engineering. In FY2019, the minimum electric project size was 36,000 kWh annual savings, and the minimum thermal project size was 4,000 MMBtu annual savings.
- *Simple payback:* The program will set a minimum simple payback threshold that will apply to all applicants. This floor helps ensure that the program incentive is instrumental in moving a project forward, helping avoid free-ridership. Because most customers in the program have unique usage and costs of energy, program staff will perform an individualized simple payback assessment for each project. This involves estimating the financial value of site-specific energy savings through a billing analysis and comparing these savings to the total cost of the project as supported by specific bids from contractors and vendors.
- *A ceiling on the cost of first-year energy savings:* The program will apply a cost ceiling, expressed as dollars per unit of savings, to ensure that it does not overpay for savings.
- *Customer cost-sharing:* The program will continue to require that customers pay a percentage of the project's cost. This requirement may differ between retrofit and lost opportunity projects.
- *Maximum incentive size:* The program will apply annual incentive caps in order to avoid overspending the budget, causing program interruptions or suspensions. The balances within the relevant funding sources will dictate the appropriate threshold levels for different project types (i.e., electric, natural gas, all-fuels). If an electric or natural gas project shows potential for significant, cost-effective electricity savings but exceeds the program's incentive limit, the Trust may work with customers to bring a specific funding request to the Public Utilities Commission (PUC) to be considered for funding through a budget adjustment.¹

The program will also continue to provide incentives for Technical Assistance Studies. The cost share will be set at a meaningful percentage of the overall study cost, and capped at a reasonable threshold. For example, the current program offers 50% up to \$20,000.

Marketing and Outreach

The unique, site-specific nature of custom projects and the barriers they face means the C&I Custom Program uses an individualized, customer-focused outreach strategy. Program outreach starts with raising awareness of the program among the leadership of targeted businesses and institutions and reaching out directly to facility or energy managers. After making contact, the program staff offers free scoping audits and encourages customers with promising projects to pursue Technical Assistance Studies.

¹ This option does not extend to all-fuels projects, which are funded using RGGI funds.

In addition to targeting potential customers, the program markets custom energy efficiency opportunities to the major vendors and contractors, as well as architectural and engineering firms working in Maine. These energy professionals are able to “pitch” program participation to potential clients. Similarly, partnerships with trade associations or industry groups help spread the word about program offerings.

Quality Assurance/Quality Control

Because each custom project is unique, each requires site-specific oversight by program staff. The Trust independently verifies energy-saving calculations in project proposals and equipment specifications. By evaluating proposals in collaboration with the customer, the Trust provides added security to customers installing projects that may have been proposed by outside contractors or employ new technologies. The Trust also analyzes how the paybacks of the proposed projects relate to the customers’ internal investment hurdles.

The C&I Custom Program staff reviews projects from their earliest stages through to their completion. This includes conducting site visits, reviewing design plans, and reviewing invoices to ensure that each project is completed according to initial design specifications. If projects run over budget, the customer is responsible for the overrun, placing the onus on private sector project managers to exert budget oversight. Upon project completion, the program staff conducts a site visit to verify project installation details. All projects are inspected. Savings estimates (and incentives) are adjusted for “as-built” conditions. The Trust meters all distributed generation projects and logs their ongoing performance in the Trust’s customer tracking database.

The Trust employs several strategies to prevent stranded investments. These strategies include: requiring program participants to fund at least 50% of project costs; requiring projects to achieve minimum thresholds of cost-effectiveness; setting minimum and maximum simple payback parameters; reviewing the financial and technical capacity of the proponents to execute and maintain the project; and setting a cap on the maximum incentive from the Trust.