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C&I New Construction Program Process Evaluation (RI-24-CX-CINCProcess)

Rhode Island Energy

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RHODE ISLAND ENERGY COMMERCIAL & INDUSTRIAL NEW CONSTRUCTION **PROCESS EVALUATION**

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Abstract

This report details the findings of a process evaluation of Rhode Island Energy's Commercial and Industrial (C&I) New Construction Program. The Program provides incentives and technical assistance to Rhode Island C&I customers to improve the efficiency of their new or renovated buildings or new equipment. To learn about the Program's current design, operations, and incentive levels, as well as customers' experiences with the Program, the evaluation team talked with participating and non-participating customers and design teams that completed projects during 2022 or 2023. The team also completed a targeted literature review to compare the Program's incentives and structure to similar programs in other states.

Evaluation Objectives

1 | Investigate ways to engage early in the project development process, helping the Program drive deeper savings.
2 | Identify ways to better assist customers and design teams with decision-making related to energy efficiency.
3 | Understand why some design teams do not routinely work with the Program and explore ways to get them engaged.
4 | Benchmark the Program's incentives against peer programs to explore whether the incentive model should evolve.
5 | Examine ways to maximize the budget allocation to incentives by reducing other project costs.
6 | Identify additional opportunities to streamline the process and better align it with customer and developer needs.
7 | Explore how the Program has evolved since decoupling from the related program offered in Massachusetts.

Key Findings

- **Participating customers are generally satisfied with the Program.**
- **Early engagement with the Program drives deeper energy savings; gaps in program awareness limit early engagement.**
- **Continuing to simplify the Program's design and requirements will support future program participation and satisfaction.**
- **Customers would like the Program to simplify the detailed sequence of project steps and requirements.**
- **Project designers would benefit from more support and process streamlining.**
- **Documenting program processes and focusing on staff development would support future program success.**

Recommendations

- Promote program awareness and education to drive early project engagement and deeper savings.
- Use strategies to support customers and design teams with decision-making.
- Encourage design team engagement with the program through supportive program features, education, and incentives.
- Consider increasing incentive levels and/or revising incentive structures.
- Review, streamline, and document program processes and requirements.

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Executive Summary

This report details the findings of Cadeo and NMR Group's process evaluation of the Commercial and Industrial (C&I) New Construction Program (the Program) offered by Rhode Island Energy (RI Energy). The Program provides incentives and technical assistance to Rhode Island (RI) C&I customers interested in improving the efficiency of their new or renovated buildings or equipment. To learn about the current state of the Program's design, operations, and incentive levels, as well as customers' experiences participating in the Program, we talked with RI Energy staff, customers, and design teams that completed projects during 2022 or 2023. We also spoke with customers and designers that completed new construction projects in Rhode Island during the same time period but did not utilize the Program. Finally, we completed a targeted literature review to compare the Program's incentives and structure of offerings to similar programs in other states.

Key Findings

Participating customers are generally satisfied with the Program. All participants (five out of five) rated their final project savings outcomes highly, providing a score between eight and ten out of ten. Similarly, nine of ten participants provided high scores for the communication from Program staff. Satisfaction with the Program's technical assistance and incentive amounts was somewhat lower, though these program aspects still received high ratings from more than half of interviewed participants. All participating customers said they would consider participating in the Program again, and many of the interviewed individuals had subsequent projects that were currently in progress or in planning stages.

Early engagement with the Program drives deeper energy savings; gaps in program awareness limit early engagement. Participants, designers, and program staff agreed that working with the Program from the early design stages of a project makes it possible for the project to incorporate significant energy efficiency elements, thus driving deeper energy savings. When customers have a connection to the program, or at least an awareness of it, it is more feasible for them to engage with the Program early. However, we heard consistently that awareness is relatively low among many customers, designers, and other stakeholders, which may be limiting the Program's ability to engage more projects in the early stages. Customers that engaged with the Program in later project stages expressed regret that they could not benefit from more significant efficiency options. One of the best tools for delivering deep savings with early engagement and a positive customer experience is through hosting a design charrette. Interviewees told us that this formerly successful aspect of the Program has dropped off in recent years and they would like to see it revived.

Continuing to streamline the Program's design and requirements will support future program participation and satisfaction. RI Energy recently changed the Program's design from four to two pathway options to reduce confusion and simplify the overall program structure. The study team expects that this change will simplify the process of communicating

the program and getting projects enrolled going forward. However, it's important to note that because this change came into effect in 2024 and this evaluation studied the 2022 – 2023 program period, the customers and designers we spoke with had begun their projects under the program's prior four-pathway design, preventing us from determining the market's reaction to the change. Spreading the news about these types of program changes and simplification improvements to customers, designers, and staff will be important to encourage participation.

Customers would like the Program to simplify the detailed sequence of project steps and requirements. Many customers that have participated in the Program said that while they appreciate the Program's benefits and had a positive experience overall, they found some of the Program's processes and requirements, such as the energy modeling process and paperwork requirements, to be overly complex and more burdensome than expected. Some interviewees (both customers and design firms) cited administrative burdens and delays due to a lack of upfront communication about additional steps they would need to take, or the extensive paperwork required by the Program. Some participants and designers also stated that they were sometimes confused or frustrated by the differences in the processes between the C&I New Construction Program and other RI Energy C&I programs. Therefore, having clear requirements, checklists, and guidance can help reduce potential confusion for future participants.

Project designers would benefit from more support and process streamlining. Architects and engineers that we spoke with support the Program's goals and want to help their clients develop efficient projects that meet their needs and aspirations. However, two factors are limiting designer engagement with the program. First, most of the designers we interviewed showed limited understanding of the Program and indicated that their colleagues are not very familiar with it either. Second, prior experiences with program-participating projects have made some designers reluctant to take on the administrative burden that goes along with the program. Simplifying the project process from the designer's perspective and communicating those improvements to the design community are key to winning their active support. Financial compensation would also help motivate designers to engage with the program. For example, committing to cover the additional costs for designers' time spent coordinating and complying with program requirements would set customers' and designers' minds at ease that participating in the Program will not generate negative impacts on project budgets. In addition, the designers we spoke with weren't aware of the EUI design incentive that is available for EUI/ZNE Pathway projects; promoting this incentive may help to improve designers' sentiments toward the program and the extra effort it entails.

Documenting program processes and focusing on staff development would support future program success. The study team found indications that recent staffing changes within the overall Program team have reduced the institutional knowledge and informal communication and coordination processes that kept the Program moving efficiently in prior years. Documenting program processes, team roles and responsibilities, and ways of working would help the Program ensure a smooth transition in the event of future staffing changes. In addition, supporting staff development would help the Program solidify its foundation for ongoing performance.

The Program's incentive levels are approximately average on the whole, but certain aspects are lower than neighboring states. The Program's incentives, although appreciated by participating customers, are perceived by customers and designers who have property or experience in other states to be less motivating compared to neighboring states like Massachusetts and Connecticut. This incentive differential may reduce the Program's appeal for customers that might otherwise undertake an ambitious energy project through the program. Benchmarking RI Energy's program against peer states highlighted that its per-square foot incentive levels are lower relative to a very similar program in Connecticut, and the Program's limited ability to support electrification and the statewide prohibition on fuel switching reduces its ability to impact decarbonization and implement all-electric systems, in contrast to Massachusetts, Connecticut, and other states that offer large incentives for electrification (including fuel-switching) and all-electric new construction.

Figure 1 illustrates the most common factors that staff, customers, and design firms described as barriers to participation within the Program. Note that the figure is intended to represent the findings qualitatively, not quantitatively, and the barriers are not shown in a particular order.

Figure 1: Summary of Identified Barriers to Participation

The recommendations that follow are intended to drive future program success. Raising overall program awareness, supporting customer decision-making, building stronger relationships with the design community, and providing more resources for them, increasing incentives, and simplifying processes should result in broader adoption and higher energy savings across new construction projects. Strategies followed by an asterisk were suggested by one or more of the customers, designers, and/or program staff we interviewed, and strategies followed by a caret were suggested by the literature review. Other strategies are based on the evaluation team's analysis. It is important to note that some of these strategies are already employed by the Program to some extent (one notable example being the change from four to two pathways);

these strategies are included here to encourage greater use of them and to demonstrate what customers and project designers told us they want to see more of in the future.

Recommendations

Recommendation 1: Promote program awareness and education to drive early project engagement and deeper savings. Use a wide range of communication channels and take an educational approach to build program awareness and understanding among all stakeholders, including customers, architects, consultants engaged by project designers (LEED, mechanical, electrical), state agencies, and the trades. Suggested strategies include:

- Build relationships and increase visibility at in-person events. For example, present the Program at key stakeholder meetings such as the Rhode Island Association of School Maintenance Directors' monthly meeting.*
- Ensure the program website conveys key program details, such as succinct summaries of the pathways and options under the Program and a note about incentives for new equipment, and strongly encourages customers to contact RI Energy for solutions.[1]
- Demonstrate the Program's expertise and showcase solutions by increasing educational webinar and lunch-and-learn offerings. Offer a dedicated session for key design firms.*
- Share case studies and lessons learned from successful projects, particularly involving new technologies, to inform and inspire participants.*
- For email marketing, segment the audience by industry, project stage, or past engagement status, sending targeted and relevant information.*
- Connect regularly with key personnel in the state government or consider creating a dedicated portal or quarterly reports for state agencies.*
- Reach out to specific sectors by contacting organizations on industry-specific lists. For example, a list of cannabis organizations is available on the RI Office of Cannabis Regulation website.*
- Promote the Program through real estate trade publications to help a wide range of organizations become aware of the Program's offerings.*
- Include program information with the "will serve" letter when a customer is arranging utility services for a new building.*

Recommendation 2: Use strategies to support customers and design teams with decision-making. For example, interviewees recommended that the Program:

[1] https://www.rienergy.com/site/ways-to-save/save-money-with-rebates-and-incentives/savings-for-your-business/new-construction-and-major-renovations

- Educate customers and other stakeholders, especially architects and builders, about the performance of the latest technologies and share case study-style success stories and lessons learned from other projects through online content, live and recorded webinars, and/or in-person events.*
- Target educational content to the audience's interests and level of technical involvement. For example, consider creating sector-specific case studies (e.g., schools, healthcare) in various formats (e.g., videos, interactive tools, decision-support documents). Solicit feedback from attendees to improve future outreach.
- Use design charrettes to foster deep energy savings, collaboration, project buy-in, and exploration of innovative ideas.*
- Provide proactive information on cost estimates or general cost guidelines for different systems to streamline decision-making and discussions with the clients, providing them with the foundation for obtaining more tailored estimates. Demonstrate how more specific project cost guidance can be realized through tools such as cost calculators that account for building size, location, and energy needs. *

Recommendation 3: Encourage design team engagement with the Program through supportive program features, education, and incentives. The literature review and design team interviews suggested that the Program may re-engage designers in the following ways:

- Consider creating a dedicated "navigator" role or point of contact across the C&I programs to guide teams through the process and streamline communication and support.*[2] Alternatively or in addition, consider creating a digital resource to help customers and designers navigate program steps and requirements.
- Simplify program information and requirements to reduce the burden on design teams (see Recommendation 5).*
- Offer in-depth educational sessions on key topics of interest to customers and designers, such as the long-term costs and benefits of electric-based systems.*
- Compensate designers for time spent on administrative elements of the program.*
- Promote financial incentives to designers to encourage them to engage with the program.^
- Consider offering design incentives for Streamlined / Systems projects that require designer involvement.
- Sponsor a design competition or award to recognize excellence in project design and generate program publicity.^

Recommendation 4: Consider increasing incentive levels and/or revising incentive structures. The literature review suggested that RI Energy:

[2] RI Energy proposed in its 2025 Plan to create a Trade Ally Engagement Manager role whose responsibilities include outreach to architects and engineers, which would aid in the types of communication called for in these Recommendations.

Consider offering higher customer incentives to encourage participation. Incentive levels have not increased with inflation, and the literature review found that the incentives for EUI-based design are approximately 25% higher in neighboring Connecticut.^[3]

Recommendation 5: Review, streamline, and document program processes and requirements. While RI Energy took a major step toward streamlining the program design by consolidating its pathways in 2024, there are ways in which RI Energy can further simplify the process for customers, designers, and staff and reduce non-incentive costs:

Suggestions for internal program process improvements:

- Convene staff from all RI Energy and program vendor teams to document processes, identify opportunities for consolidating or removing steps, and clarify timeframe expectations. Prioritize the most impactful pain points for action and track implementation progress.*
- Support program staff development through training, a centralized resource detailing the latest processes and policies, and introductions to key customers and stakeholders in the state.*
- Develop streamlined processes for custom new building and new equipment projects with savings <25,000 kWh to free up resources to develop larger projects while improving the customer experience. These categories make up a major fraction of the custom applications processed by the program but deliver minimal overall savings. Direct small projects to the midstream offerings where possible and consider expanding the midstream offerings to include more equipment types.*
- Develop customizable Minimum Requirements Document (MRD) templates by end use or measure type to reduce confusion and streamline reviews.*

Suggestions for simplifying the customer and designer experience:

- Improve consistency among RI Energy's suite of C&I programs and provide clear, unified participation guidance to reduce confusion among customers and designers who might be working with multiple programs.*
- Provide clear upfront communication about documentation requirements, including checklists and executive-level summaries, to reduce delays due to back-and-forth communication.*
- Consider making energy modeling optional or scaling the complexity according to customer and design team needs, capacity, and timeline.*
- Provide a way to upload documentation for RI Energy to review in one location, such as an online portal, reducing administrative burden for participants.*
- Reduce the number of signatures required for custom projects to streamline the process and reduce timelines.*

[3] However, it should be noted that regulations prevent RI Energy from offering incentives to specifically promote heat pumps, prohibiting it from offering a "heat pump adder" like neighboring Massachusetts and Connecticut.

- Develop an updated Rhode Island-specific base case document that clarifies assumptions, including those regarding electrification projects.*
- Create a tool to standardize savings estimation for Streamlined/Systems pathway projects, or implement a rule of thumb (e.g., savings per square foot) for common measures, reserving detailed studies for novel measures and integrated projects.*
- Improve project tracking by categorizing projects by pathway in the database and tracking key metrics for better insights and efficiency.

* Strategy suggested by one or more customer, designer, and/or program staff interview
^ Strategy suggested by the literature review

Introduction

This report details the findings from Cadeo and NMR Group's process evaluation of RI Energy's C&I New Construction Program (the Program).

About the C&I New Construction Program

RI Energy's Program provides incentives and technical assistance to RI C&I customers interested in improving the efficiency of their new or renovated buildings or equipment. The Program promotes and supports the design of high-performance buildings, efficient building operation, and equipment selection. The incentives and technical services are designed to encourage building owners and developers and their design teams to build projects that perform better than the current baseline specifications. The Program also offers incentives for Zero Net Energy (ZNE) certification and post-occupancy verification of energy savings. Available technical assistance ranges from simple plan review and efficiency recommendations to complete technical blueprint reviews. The Program incentivizes new construction projects, major renovations, and new equipment for existing buildings. For more details about the C&I New Construction Program, please also refer to the PROGRAM DESIGN section below.

Program Pathways

For new construction and major renovation projects, the Program offers a choice of two pathways (see Figure 0-1):

Energy Use Intensity / Zero Net Energy (EUI/ZNE) Pathway. This pathway facilitates customers and design teams in defining an Energy Use Intensity (EUI) target range and

designing their project to meet that target. Projects engage with the Program at an early design stage. Eligible buildings are at least 20,000 square feet (SF) in size. Buildings may apply for an incentive for ZNE certification or may aim for ZNE Ready status, which is a design that could achieve ZNE status with the addition of a renewable energy system. Two tiers within the EUI/ZNE Pathway accommodate both the most ambitious projects that aim for ZNE/ZNE Ready status (Tier 1) and those that choose efficient equipment and design elements but are not intended to be ZNE Ready (Tier 2).

Streamlined / Systems Pathway. This pathway provides a simplified approach for customers who want to improve the efficiency of their building project through a less intensive process potentially focusing on selected building system(s). This pathway also accommodates projects that engage with the Program later in the design process. Buildings of all sizes may participate in this pathway; subsidized technical assistance is available for buildings of more than 20,000 SF.

Figure 0-1 RI Energy C&I New Construction Two-Pathway Design

Prior to 2024, the Program was organized into four pathways including separate ZNE- and EUI-based pathways and two pathways for less complex and measure-level projects. In 2024, RI Energy reduced the number of pathways from four to two by consolidating similar pathways in a bid to make the Program more user-friendly for both customers and staff. The change also keeps the RI Energy program in line with the similar program in Massachusetts, which is expected to reduce confusion for customers, designers, and contractors that work in both states.

In addition to the two design-based pathways, all commercial and industrial customers are eligible to participate in RI Energy's midstream offerings. Equipment purchased through the midstream initiatives (HVAC, domestic hot water, kitchen equipment, and lighting) can be installed in new construction and major renovation projects, as well as new equipment and end-of-life replacement scenarios

that are tracked through the Program. However, it is important to note that incentives obtained through the New Construction program and midstream offerings cannot be combined.

Program Management and Project Processes

The Program's management team comprises staff at three organizations: RI Energy, an implementation vendor, and an engineering vendor. RI Energy staff includes approximately eight employees (account managers, policy and strategy staff, program management staff, and application processing staff) who each split their time between the Program and other C&I programs. At the implementation vendor, there is a dedicated program manager and technical staff, and at the engineering vendor, a manager and staff engineers. Overall, the program management team assists customers throughout the process, from enrollment and technical assistance to application process and final inspection.

Projects typically enter the Program either when the customer (or their agent) reaches out to the Program, or when a RI Energy account manager becomes aware that a customer is planning a project that is a good fit for the Program based on whether the project involves new construction, a major renovation or has potential to incorporate new energy-efficient systems that exceed baseline energy codes.

The Program implementation vendor typically steps in at this stage. The program manager contacts the customer to learn about the project and determine eligibility and the best fit in terms of the Program pathway.

From this point, the process diverges based on the selected program pathway. EUI/ZNE Pathway projects begin working with a ZNE expert consultant, benchmark EUI targets, go through an energy modeling process, and might engage in a design charrette. The customer signs two documents: (1) a Memorandum of Understanding (MOU) that specifies the project's performance targets, verification plan, and the accompanying incentive(s), and (2) an application that specifies the efficiency measures and design elements. A program engineer also creates a Minimum Requirements Document (MRD), which specifies the technical performance aspects of the project that will be verified at its conclusion. Program vendor and/or internal staff stay engaged with the project through all phases, and the project concludes with an inspection and possibly post-metering and verification.

For Streamlined / Systems Pathway projects, the customer may select a vendor of their choice to install the measures or choose to use technical assistance from RI Energy. After installation, the Program inspects the project and reviews design submittals. The incentive is paid upon project completion.

Program Challenges

A significant challenge facing the Program is related to electrification. Regulatory decisions that prevent the Program from offering incentives for projects involving fuel-switching also limit the Program's ability to be responsive to customers that want to decarbonize their facilities or build all-electric.

Additionally, program staff expect building energy code changes to make it more difficult to incentivize certain new construction projects or measures, such as food service and HVAC measures. With Rhode Island leading the way among states adopting the IECC 2024 code update, code changes will be implemented in the Program in 2025. These changes are expected to raise the baselines for certain measures, reducing energy savings potential and the Program's ability to offer incentives for those equipment types.

Study Objectives

The Cadeo-NMR team used the following objectives to guide this research.

1 | Investigate ways to engage customers and design teams early in the project development process, helping the Program to drive deeper savings.
2 | Identify ways to better assist customers and design teams with decision-making related to energy efficiency.
3 | Understand why some design teams do not routinely work with the Program and explore ways to get them engaged.
4 | Benchmark the Program's incentives against peer programs to explore whether the incentive model should evolve.
5 | Examine ways to maximize the budget allocation to incentives by reducing other project costs.
6 | Identify additional opportunities to streamline the process and better align it with customer and developer needs and timelines, particularly for customers that are not interested in substantial design changes.
7 | Explore how the Program has evolved since decoupling from the related program offered in Massachusetts, and how it is expected to continue to evolve in the near term.

Participation Summary

The study team analyzed participation data from the 2022 and 2023 program years to characterize recent project trends.

We began by developing a simple breakout of 2022 – 2023 electric projects by savings magnitude ("project size") and pathway. We focused on the pathways because they're central to the Program design and their structure was recently updated.[4] Because of some uncertainty in assigning previously completed projects to the current program pathways, the numbers in TABLE

[4] Because the pathway designations changed during the analysis period, we used project characteristics including subprogram, project type, and number of installed measures to estimate which completed projects would fall into the two pathways in the new program design. Due to missing data, not all completed projects are represented.

0-1 are approximate. Bold font and color are used to highlight the most common application type and largest source of savings.

Looking at the percentages of applications, overall savings, and square footage[5] falling into each quadrant, we found that Streamlined / Systems pathway projects accounted for most of the savings (85%) and square footage treated (82.4%). In contrast, EUI/ZNE-based projects account for a disproportionately high percentage of savings (15%) relative to the percentage of applications (8%) falling into this category, reflecting the greater depth of savings achieved by EUI/ZNE projects on average. Categories that stand out with high percentages of applications and savings are highlighted in orange and blue, respectively.

Table 0-1 Characterizing the Program Pathways

Percent of completed projects 2022 – 2023 / Percent of gross annual kWh savings / Percent of total square footage served / Typical customer types.

Pathway	L – XL projects >100,000 gross annual kWh	S – M projects <100,000 gross annual kWh	Total
EUI/ZNE-Based Projects	4% of applications 13% of total savings 17.2% of total SF Schools, medical	4% of applications 2% of total savings 0.4% of total SF Schools, medical	8% of apps 15% of savings 17.6% of total SF
Streamlined / Systems Pathway (Non-EUI-Based)	23% of applications **61% of total savings** **45.6% of total SF** All customer types	**69% of applications** 24% of total savings 36.8% of total SF All customer types	92% of apps 85% of savings 82.4% of total SF
Total	27% of applications 74% of savings 62.8% of total SF	73% of applications 26% of savings 37.2% of total SF	165 projects 100% of savings

As shown in TABLE 0-2 below, when we analyzed individual measures that were part of custom electric applications in 2022 and 2023, we found that more than a quarter of the net energy savings came from six new building measures. Similar to Table 0-1, the category with the largest number of measures in each row is highlighted orange, while the categories with the largest savings are highlighted blue.

[5] Note that not all projects had square footage data, so the square footage information is presented as ratios of the total available square footage data for program pathways.

On the other hand, a quarter of all custom applications were for new equipment delivering less than 25,000 kWh each and totaling just 3.5% of overall savings. A further 12% of overall measures that were for the smallest new building projects delivered 1% of total savings.

Table 0-2 New Construction Custom Electric Measure Characteristics

Number of completed measures 2022 – 2023 / Total gross annual MWh savings / Typical customer types.

Project Type	XL >250,000 kWh	L 100-250,000 kWh	M 25-100,000 kWh	S <25,000 kWh	Total
New Construction	6 measures **3,295 MWh**	2 measures 205 MWh	11 measures 728 MWh	**21 measures** 160 MWh	**40 measures 4,388 MWh**
New Equipment	4 measures **1,152 MWh**	5 measures 773 MWh	11 measures 572 MWh	**45 measures** 404 MWh	**65 measures 2,901 MWh**
New Controls	2 measures **775 MWh**	2 measures 299 MWh	**6 measures** 247 MWh	2 measures 2 MWh	**12 measures 1,323 MWh**
Major Renovation	0 measures	3 measures 392 MWh	7 measures **394 MWh**	**12 measures** 56 MWh	**22 measures 842 MWh**
Other*	1 measure 281 MWh	9 measures **1,273 MWh**	8 measures 509 MWh	**22 measures** 85 MWh	**40 measures 2,148 MWh**
Total	13 measures **5,502 MWh**	21 measures 2,941 MWh	42 measures 2,451 MWh	**102 measures** 707 MWh	**179 measures 11,602 MWh**

* The "other" category includes expansion of an existing building, replacement of failed equipment, change in the use or function of a building, and planned replacement of equipment.

For natural gas projects, the team found that most customers that completed projects in 2022 were from the industrial sector, as shown in TABLE 0-3.[6] Additionally, most of these projects fell within the largest category of therm savings (>1,500 therms). The second-largest fraction of projects were quite small, reporting less than 500 therms per project.

[6] Due to differences in the configuration of the electric and gas datasets, the electric data is presented on a measure basis and gas on a project basis.

Table 0-3 Gas Application Characteristics

Number of completed projects 2022 / Total gross annual Therms savings / Typical customer types.

Project Type	XL >1,500 Therms	L 1,000-1,500 Therms	M 500-1,000 Therms	S <500 Therms	Total
Large Commercial New Construction	**21 Projects** **90,000 Therms** *Industrial, schools*	3 Projects 3,000 Therms *Industrial*	12 Projects 7,000 Therms *Schools, Industrial*	18 Projects 3,000 Therms *Industrial*	**54 Projects** **103,000 Therms**

Methodology

This section describes the activities the team used to investigate the research objectives and the data sources that we referenced.

Research Activities

The evaluation team completed six research activities to evaluate the Program, as shown below.

	Evaluation Tasks
Literature Review	• Conducted a literature review to help RI Energy benchmark its incentive structures against similar programs in other jurisdictions. These data can help program staff consider ways in which the incentive structure can evolve and help them benchmark RI Energy's incentive levels and structure against industry peers.
Program Data Analysis	• Reviewed 2022-2023 program participation data to analyze trends and assist the team in developing an approach to stratify and categorize customer projects. These trends included typical building usage and square footage by program pathway, as well as average kWh and therms usage by the type of project work completed. The team utilized program data of custom electric projects, as well as gas application data and categorized them based on project type.
Top 25 Analysis	• Identified the 25 largest building projects (based on budget and square footage) initiated during 2019 – 2022 in Rhode Island, using a list sourced

	from another study that is in-progress as of the preparation of this report.[7] The team analyzed these projects to uncover insights about the impact the program is having on the largest new building projects in the state. • Determined whether projects had participated in the Program and explored observable differences between participating and non-participating projects. • Estimated the energy savings that would have resulted had the non-participating projects participated in the Program. • Used interviews to assess the perspectives of participants representing projects in the "Top 25" (four of the twelve participant interviews and two non-participant interviews).[8] The interview guide in APPENDIX C. Participating and Nonparticipating Customer Interview Guide was used for this task.
Program Staff and Vendor Interviews	• Conducted five interviews with RI Energy staff and program vendors to gather insights into the evolution of the Program's pathways, customer engagement strategies, coordination among stakeholders, and vendor support processes. The interview guide appears in APPENDIX B. Program Staff and Vendor Interview Guide.
Participating and Non-Participating Customer Interviews	• Conducted 12 interviews with program participants to learn about customer decision-making processes, experiences with the Program, barriers to participation, and ideas for enhancing program engagement and simplifying processes. The study team aimed to recruit a wide range of customer types and building sizes, with a focus on oversampling for some of the largest ("Top 25") projects to deliver insights on how the Program influences top-tier new building projects in the states. We also interviewed representatives of two non-participating large projects to learn what deterred them from utilizing the Program. The interview guide can be found in APPENDIX C. Participating and Nonparticipating Customer Interview Guide.
Design Team Interviews	• Conducted six interviews with architecture and/or engineering firms involved in new construction projects to explore their decision-making processes, challenges encountered, reasons for program participation or non-participation, and suggestions for increasing engagement and better supporting design teams.

[7] DNV. 2024. "Rhode Island Non-Residential New Construction Industry Standard Practice Study." Prepared for Rhode Island Energy.
[8] Despite outreach efforts including at least five contacts per individual via email and/or phone and outreach assistance from account managers, only two non-participants were interviewed against a target of five interviews.

- We targeted firms with multiple projects and/or an office located in Rhode Island. Each firm in the sample was contacted at least five times via email and/or phone to recruit the target of six firms. The design team interview guide is included in APPENDIX D. Design Team Interview Guide

Data Sources

RI Energy and its vendors provided the following datasets, which our team combined and cross-referenced to inform the evaluation activities:

- 2022 – 2023 electric application data, including seven sheets of data (customer information, customer contact information, installation contractor, equipment vendor, project expeditor, billing information, LCI-Electric database extract)
- 2022 – 2023 electric measure savings data
- 2022 – 2023 natural gas application data, including six sheets of data (customer information, installation contractor, equipment vendor, project expeditor, billing information, LCI-Gas database extract
- 2022 – 2023 gas measure savings data
- Building type and application type lookup tables
- Electric Custom Detail Report for 2022 – 2023 projects
- 2022 gas application data (Gas Template Report)
- C&I reported savings summary 2022 – 2023.
- RI Energy New Construction Projects Pipeline: Contacts and Application Numbers (from implementation vendor)
- RI Energy NC Project Report 2024 – 2nd quarter (from implementation vendor)
- Dodge database export (from evaluation vendor)
- New Construction project square footage and participation data (from evaluation vendor)
- Recruitment Disposition (from evaluation vendor)

The team primarily used application IDs to link the data between spreadsheets and files.

RI Energy and/or the program's implementation vendor also provided contact information for each group of interview subjects, including program staff, non-participating project customers, and design firms. The team utilized these sources to contact and schedule interviews with these groups. The customers and designers we spoke with represented or worked with a variety of customer types, including schools and universities, medical facilities, transportation and logistics, and grocery stores. The design professionals included engineers and architects providing services including design, administration, engineering consulting, and project management.

Evaluation Findings

Our findings draw upon all evaluation activities and cover the following key areas:

- Program Satisfaction
- Program Design
- Customer Awareness, Engagement, and Decision-Making
- Incentives and Budget Optimization
- Program Delivery
- Insights from the Largest Projects

Our program improvement recommendations can be found in the RECOMMENDATIONS section of the EXECUTIVE SUMMARY above.

Program Satisfaction

Program staff believe the Program is seen as beneficial by customers. They recognize that customer satisfaction with the program may be tempered by the complexity of the process and the limited incentives they can offer in many cases. Staff are interested in simplifying processes and better aligning incentives with customer needs to improve program outcomes and satisfaction.

Feedback from participants was consistent with the staff's perspectives: Participants are positive about the Program overall and most rated their project's final outcomes highly (between eight and ten out of ten). They highlighted the communication and support from program and vendor staff as extremely helpful and most rated their satisfaction with the incentives highly. Feedback on technical assistance was more mixed. Interviewees cited the application process and project documentation paperwork as areas for improvement.

TABLE 0-1 below summarizes the Program aspects that participants highlighted as most satisfactory and other aspects where feedback was mixed (or no feedback was provided).

Table 0-1 Participant Satisfaction with Program Aspects

Program Aspects	
Positive Feedback	**Other Feedback**
Project Outcomes	
• Participants (5 out of 5) rated their final project outcomes highly (8 – 10 out of 10). • All participants said they would be interested in participating again.	• Some participants (7) were unable to give feedback due to the ongoing process or were not knowledgeable of the savings outcomes.
Communication	

• Nine of ten participants rated their communication with staff highly (8 – 10 out of 10). • Participants highly valued direct, one-on-one communication with a single program representative, stating that having this access made the process smoother. • Effective communication and project support were consistently appreciated by participants.	• One individual mentioned they were moderately satisfied at first, but that a key employee moved on before the process was complete. • Project check-ins seem to be inconsistent: One participant said they appreciated having monthly status meetings, while others expressed a desire to have such meetings. • One participant highlighted that they were not aware of the need for certain documentation, such as model numbers, serial numbers, and installation details until late in the process, and this led to delays and complications.
Technical Assistance	
• Four of six participants rated the technical support they received highly (8 – 10 out of 10). • One participant offered the observation that assistance with vetting vendors saved participants time and gave them confidence in their choice, making the process more efficient. • One interviewee highlighted how RI Energy staff and vendors provided the necessary information for a presentation to the committee approving the project, and thus made decision-making easier. • Participants noted that having external consultants or partners assisting the Program makes the process both more manageable and more valuable because of the expertise they bring.	• One individual rated their technical assistance experience as one out of ten, citing a need for additional support and resources from staff, as well as greater accountability when problems arise. • One participant that rated technical support as a 6 stated that it could be improved if RI Energy consolidated best practices and cases. • Participants noted that previous experience with the Program made the process easier, but one participant acknowledged it might be challenging for someone unfamiliar with the offerings.
Incentive	
• Six of ten participants were highly satisfied (8 – 10 out of 10) with their incentive amount. • One participant was originally dissatisfied with their incentive, but RI Energy increased the incentive later in the project.	• Three participants stated they were dissatisfied with the incentive, though one of these participants acknowledged the incentive was low because they had entered the program in a later stage of the project. Of these other two, one was generally dissatisfied with the amount, while another was dissatisfied by comparison to what they had received from Massachusetts on a different project.

Project Timeline

- Five participants and the two non-participants stated that the timeline for their projects was typical. One participant stated that their project had a faster than usual turnaround. Of those who cited some delays, external factors to the program were the main cause, such as market conditions or bureaucracy.
- Three participants expressed a desire for simpler project documentation processes, such as providing clear documentation requirements upfront and allowing digital information submission to save time and see the progress of their projects.
- One interviewee had been waiting several months for a response from the Program. This delay led to concerns about whether any resources would be available to help with energy efficiency costs for the project.

The designers we spoke with had positive feedback on certain program elements, such as finding the net zero consultant's services very helpful and appreciating project financing options. On most facets of the Program, we heard mixed feedback, with some individuals very positive about their experiences and others citing a negative experience in the same area. Program aspects that got mixed feedback included:

- **Thoroughness (or complexity):** Depending on their perspective, designers either praised the thoroughness of the process or criticized its complexity.

> "They were eager to talk with us, eager to set up calls and go over the process, and work with the owner and engineers to make sure we understood the process." –Participating Architect

> "Having a navigator at RI Energy would be so helpful [instead of] spending months trying to figure out who to talk to." – Participating Architect

- **Communication and responsiveness:** Some designers praised the Program staff for their clear communication and responsiveness. Interviewees appreciated the Program's regular communication, including meetings and emails. However, one designer wished the Program would employ a single, clear point of contact or "navigator" to simplify communication and improve coordination, and another said that having staff communicate more clearly up-front about incentives and processes would increase program satisfaction and encourage energy-efficient decisions.
- **Energy modeling:** One designer described how they found the detailed energy modeling and reporting provided by the Program to be valuable for identifying specific energy savings opportunities, such as reducing corridor lighting power density. On the

other hand, another designer shared that they and their client had not planned to use energy modeling in their project and found the modeling process difficult and unhelpful, primarily due to the additional effort and paperwork required. Another was frustrated that the energy monitoring component included highly detailed specifications that were not communicated upfront. Lastly, another designer stated that their client was simply unaware that energy modeling was a part of the process. One designer suggested that energy modeling could be made optional.

- **Support:** Interviewees had varied experiences with support from the Program. For example, one interviewee praised RI Energy's approach to managing all aspects of the Program and helping customers navigate its complex requirements, especially on large-scale projects. Another praised that program staff were proactive, such as in setting up meetings to ensure the entire team understood the benefits. However, a third interviewee said they wanted to see more involvement and commitment from program staff, and another noted there was a difficult transition when a staff member left the Program. The variation in reported experiences seems to have multiple factors, including differences in expectations, prior experiences with the Program or other programs in Rhode Island or other states, the timing of project engagement with the Program, and each project's unique needs.
- **Flexibility:** Interviewees had differing perspectives on the Program's flexibility. For example, one designer said that RI Energy representatives were extremely helpful in customizing the energy models and set helping them set an appropriate EUI target for a project that did not fit the typical guidelines. In contrast, another interviewee said that the Program's rigid adherence to rules sometimes overlooked the client's needs and project schedules.

Finally, there were a few program aspects that received only critical feedback from designers:

- **Administrative burden:** Several designers lamented the administrative demands of program participation, citing factors such as the time and effort needed to track down the right contacts, correspond about technical and administrative requirements, and complete multiple steps and forms as a deterrent to them recommending the Program to clients. One designer said that chasing down the right contact and information can be a significant obstacle, as it takes a lot of time and effort that could be better spent on the actual design and construction work.
- **Differences across C&I programs:** Designers may help their clients with various energy efficiency measures, some of which go through the Program while others go through one of the prescriptive or midstream offerings. One designer perceived the differences in processes and requirements across programs as a significant obstacle, citing confusion and complexity arising from fragmentation and siloing of the various programs.

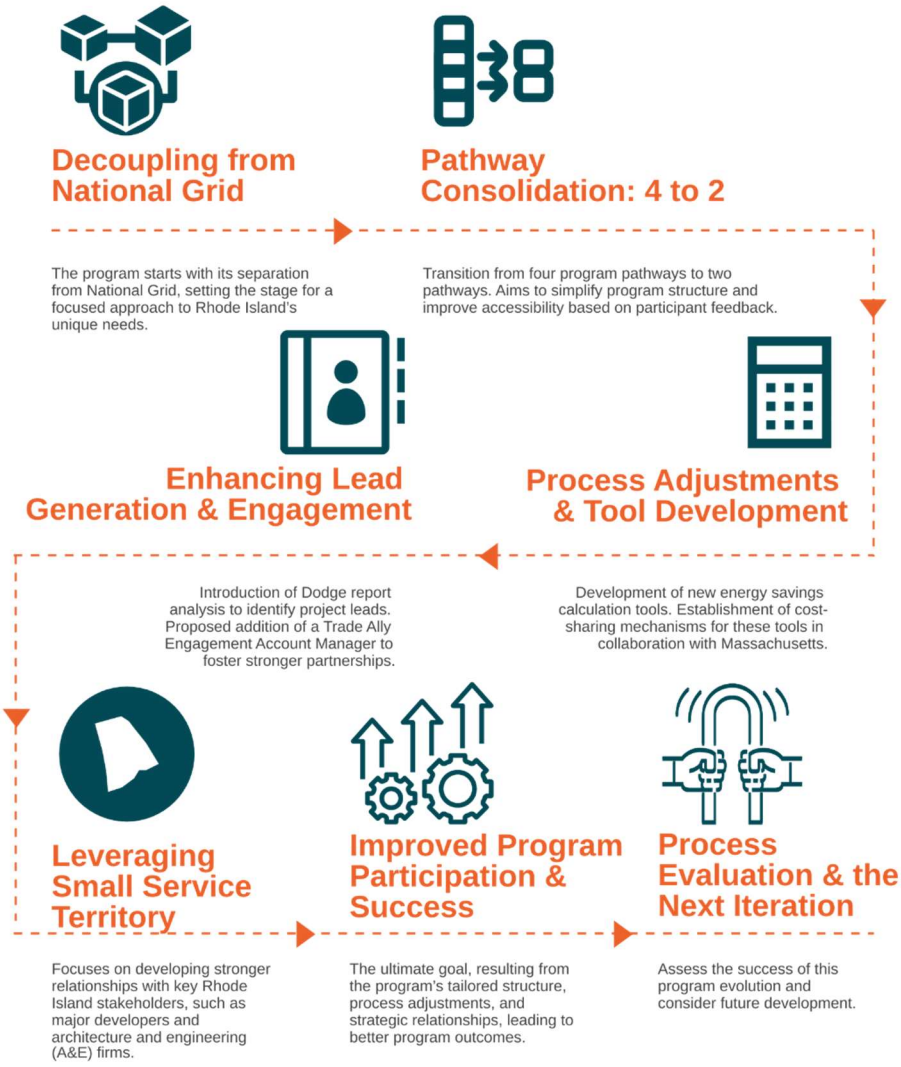
Program Design

In this section, we detail the information and feedback we received from participating customers, non-participating customers, designers (architects and one engineer), and program staff from both RI Energy and vendor organizations.

Recent Program Evolution

Since the Program was decoupled from National Grid's program in Massachusetts, RI Energy has been working to tailor the Program more closely to the state's specific needs. One major step was to simplify the Program pathways from four to two options beginning in 2024, reflecting the team's responsiveness to customer feedback asking for a less complex, more accessible program. Program staff perceived that the four-pathway design was workable for the minority of customers with a sophisticated understanding of efficient design and decarbonization, but for the majority, it was too complex. Staff also noted that some of their colleagues were confused about the Program, which made it difficult for them to advise customers effectively.

Figure 0-1 Recent Evolution of the C&I New Construction Program (2022 - 2024)



In this study, we spoke with 2022 and 2023 participants who entered the Program when it still had the four-pathway structure, and therefore we could not determine whether the streamlined structure has been an improvement for customers. However, the participants we spoke with did ask for less complexity, and therefore the recent pathway change seems to be a step in the right direction.

The six designer professionals we interviewed stated that their firm's participation with the Program tends to be on the low side, with many staff being unaware or only somewhat aware of the program. For example, one interviewee completed six or seven projects within this time frame, but only took part in the Program once. The primary factor that the designers reported as deterring participation was the additional costs and burden of coordination they had encountered when participating in a previous project. One interviewee mentioned their firm relies heavily on consultants to identify available incentives, limiting direct engagement of the

designer with the program and making them somewhat dependent on third parties to drive decision-making.

With the division of resources that occurred in 2022 between RI Energy and National Grid, the team has needed to adjust processes and find new ways to achieve some of its needs. For example, the development of energy savings calculation tools was previously done jointly with Massachusetts. Now, as RI Energy, the team has worked out a new system of cost-sharing so it can continue to have access to the latest information and leverage tool enhancements as they are developed for the Massachusetts program.

Another recent change enacted by the Program team is the addition of Dodge report analysis to improve lead generation. Program staff have also proposed adding a Trade Ally Engagement Account Manager to the Program team to help raise program awareness, bring in projects, and improve the customer experience.

RI Energy's relatively small, compact service territory offers some advantages for the Program. Program and vendor staff have a small group of key players, including major developers and architecture and engineering (A&E) firms, to manage and engage. With sufficient resources, the Program should be able to develop strong, focused relationships with the big players in the state, leading to improved program participation and success.

Role of the Program Pathways

The Program pathways are the central feature of the Program. Program staff have a realistic picture of the tradeoffs between the EUI/ZNE Pathway and Streamlined / Systems Pathway options.

Regarding the EUI/ZNE Pathway, which requires early engagement of the project with the Program and targets Zero Net Energy or low-EUI projects, program staff recognize that the offering is complex but offers significant support for customers looking to take on an ambitious project. This pathway generates customer interest but is time-consuming and sometimes overwhelming for customers, requiring many steps and considerable time from the design team (and therefore added costs). Staff acknowledges that the EUI/ZNE Pathway is too intensive for most projects.

On the other hand, the Streamlined / Systems Pathway is seen as simpler and more manageable for both customers and staff, but less influential on customer decisions because of its later engagement model and less ambitious project goal-setting requirements. The Streamlined / Systems Pathway serves multiple project types, ranging from less ambitious comprehensive design and renovation projects to new equipment installations to replacement of individual failed or end-of-life measures, and therefore is a crucial element in meeting customers' needs.

Staff are looking for ways to streamline both pathways and have already implemented or planned steps in this direction. For example, the program team plans to implement electronic signature capabilities after RI Energy transitions to a new program tracking system. Additionally,

though it is simple in comparison to the EUI/ZNE Pathway, the Program's staff perceives that further simplifying the Streamlined / Systems Pathway would help attract more projects. This report explores options for further streamlining in the OPPORTUNITIES FOR STREAMLINING

Role of Midstream Offerings

Midstream measure offerings play a valuable role in RI Energy's C&I portfolio, using point-of-sale mechanisms to ensure high-efficiency products are available and incentivized during the purchasing phase of a project. Technologies available through the midstream initiatives include HVAC, food service, lighting, and gas water heating equipment. For Streamlined / Systems pathway projects, midstream measures may be combined with other, non-midstream measures to meet the customer's project needs.[9] For small C&I New Construction projects that the program staff typically might run through the small business energy savings tool, steering such projects instead to the midstream offerings may help to simplify the process for the customer and conserve staff time for tackling more complex projects.

Engaging and managing distributors and dealers in the state is relatively manageable because RI Energy occupies a small, compact service territory. Vendors work closely with manufacturers, manufacturer reps, and dealers to ensure high-efficiency products are specified and incentivized. Engagement with A&E firms help get efficient products specified in new projects.

Other Program Features

Participants and designers acknowledged that financial incentives are the most impactful program feature, but they pointed out that other program aspects have been impactful for them as well. For example, participants talked about elements such as working with a net zero consultant, schematic reviews, project financing, and the general support and guidance offered by the Program staff as key parts of the Program experience.

For ZNE/EUI Pathway projects, holding a design charrette with multiple stakeholders early in the project can help set clear project goals, facilitate better collaboration, and increase understanding of incentives. In the past, design charrettes were held fairly regularly, but the focus on holding charrettes seems to have dropped off in the past few years. One staff member shared that a former account manager who is no longer with RI Energy tended to take the lead in organizing charrettes, and described how the charrettes were effective in providing early engagement and input on project design. One participating customer we spoke with described how a design charrette had brought together a wide range of stakeholders to envision the new building for a previous school project, but the district's latest project did not include a charrette.

[9] A measure purchased through the midstream offering cannot also receive an incentive from the C&I New Construction program.

Electrification

Staff recognize that the Program needs to clarify its approach to heat pumps and other electrification measures. Program staff are increasingly fielding inquiries from customers that are interested in electrification incentives, and our research confirmed that many customers are interested in electrifying their properties, but the Program is unable to offer incentives for heat pumps in most cases due to a regulatory ruling disallowing fuel switching rebates for replacement of oil or propane heat with electric heat provided by heat pumps.[10]

The ruling was based on a decision that "the proposed fuel switching rebates were inconsistent with the LCP [least cost procurement] statute (R.I. Gen. Laws § 39-1-27.7)," the purpose of which "is to meet Rhode Island's electrical and natural gas energy needs, in a manner that is optimally cost-effective, reliable, prudent, and environmentally responsible. These electrical and natural gas needs are met through cost effective energy efficiency instead of the acquisition of additional supply." The Commission found that switching from another fuel to electric heat pumps would increase the need for electric supply, thus violating the LCP statute.[11,12] Due to this ruling, proposed heat pump projects must be evaluated against a standard-efficiency heat pump baseline, and any projects in existing buildings, including renovations, cannot receive incentives for equipment involving switching from a delivered fuel to electricity or natural gas that would result in higher electricity or natural gas usage.

In contrast to existing buildings, new buildings with no pre-existing fuel supply are able to install heat pumps and receive the standard C&I New Construction incentive of $0.35/SF for the energy savings, but the Program is not able to offer an "adder" incentive for heat pumps like those offered in several other states, including neighboring Massachusetts and Connecticut.[13] This discrepancy is seen by some, especially customers and designers with a presence in neighboring states that offer heat pump adders, as a major gap in the Program.

Determining the most appropriate baseline for calculating energy savings can be difficult on a case-by-case basis, and program staff expressed a desire for developing and documenting an agreement among the program staff and EM&V regarding the base case for electrification measures such as variable refrigerant flow or heat pump systems.

The interview results suggested that customers fall into two camps on electrification: One camp is dedicated to pursuing it because of public commitments, organizational values, or legislative requirements. The other camp is driven by cost considerations and would pursue electrification only where it was financially advantageous or legally required. We were able to ask two

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[10] STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION. DOCKET NO. 4979, Order 23937. October 28, 2020. https://ripuc.ri.gov/sites/g/files/xkgbur841/files/eventsactions/docket/4979-NGrid-Ord23937-%2810-29-20%29.pdf.

[11] Ibid., 13-14.

[12] In addition, the Commission "found that there had not been a sufficient showing that electric ratepayers, the people paying for the energy efficiency program, would receive any benefit from subsidizing the switch by oil or propane customers to electric heat pumps."

[13] Previously the Program offered a heat pump adder incentive of $1,000 per ton.

designers about their clients' interest in electrification. One architect estimated that if RI Energy were able to provide incentives related to fuel switching, around 80% of their clients would be interested. On the other hand, an engineer we spoke with estimated that around 20% or less of their clients might consider electrifying their heating load, arguing that based on an evaluation of the cost, most clients will be unlikely to pursue electrification proactively unless they were experiencing high bills or the owner had other reasons to pursue it. The engineer argued that most owners are primarily concerned with budget and hesitant to make expensive updates before it is necessary.[14] Similarly, some of the participants we interviewed said they would "absolutely" pursue electrification incentives, while a few were skeptical based on cost or technical considerations.

Benchmarking the Program Design

This section describes comparable incentive programs in other jurisdictions. The literature review looked at 20 comparable programs in nine states: Connecticut, New Jersey, New Hampshire, New York, Vermont, California, Wisconsin, Oregon, and Washington.[15] Incentives and program features and requirements were found through publicly available resources.

Although there was considerable variation across programs, in general RI Energy offers comprehensive program options for new construction and renovation projects similar to, or greater than, other states. However, most other programs encourage electrification and allow fuel-switching. Another difference is that other states tend to break out technical assistance into a variety of categories, whereas RI Energy groups it together under a single cap. Exploring options for breaking out technical assistance funding into multiple categories, each with its own cap, could allow RI Energy to better meet the needs of individual projects while controlling overall spending. For example, simpler projects that only need one or two types of assistance could be limited from overspending, while complex projects potentially could access a higher total amount of technical assistance funding across several categories.

Incentives tend to be broadly comparable across programs, with RI Energy falling somewhere in the middle. Neighboring Connecticut offers a similar program design; Connecticut's incentives for EUI-based design are approximately 25% higher with Tier 1 incentives at $2.50/SF and Tier 2 at $2.00/SF, in comparison with Rhode Island's Tier 1 at $2.00/SF and $1.50/SF for Tier 2. Connecticut also offers an incentive adder for cold-climate heat pump installation, ground source heat pumps, and grid-interactive efficient buildings.

Many states have incorporated renewable energy and battery storage into their new construction offerings. If Rhode Island shifts to a greater focus on electrification, integrating

[14] In their answer, the engineer was referring mostly to customers in existing buildings, and therefore their perspective may be less relevant for true new construction projects.

[15] We did not include Massachusetts because the program staff are already well-versed in that state's programs.

renewable energy offerings would help customers make a coordinated transition by integrating the systems into the new building or renovation design.

APPENDIX E. Literature Review Matrix contains a matrix showing the full results of the literature review and links to the sources.

Table 0-2 Literature Review Summary

Program Aspect	Comparison Summary
Project Types	Similar to RI Energy, many programs support EUI target-based and/or ZNE building design, as well as options for less intensive comprehensive and single-measure energy efficiency projects. RI Energy offers more flexibility than some other programs in addressing partial and non-EUI buildings as well as equipment, while others may emphasize only whole-building performance and high-efficiency systems. RI Energy is one of a few programs that specifically notes the availability of incentives for partial or renovation buildings.
Fuels and End Uses	Like RI Energy's program, others provide incentives primarily for electricity and natural gas end uses with a focus on HVAC systems, building envelopes, water heating, lighting, ventilation, refrigeration, energy recovery, custom solutions for industrial processes, and energy management systems. Some programs also offer renewable energy installations like solar and battery storage, and many highlight heating electrification. Grid-interactive buildings and waste heat recovery are less common.
Heat Pumps / Electrification	Unlike RI Energy's program, many other states actively encourage fuel-switching with an emphasis on electrification. These programs encourage the transition from fossil fuels to electricity, renewable energy and energy storage, particularly solar and battery storage. Some states offer an incentive adder to encourage the installation of high-efficiency heat pumps.
Technical Assistance	Although many programs do not specify a cap on technical assistance, RI Energy has a higher technical assistance cap ($25,000) compared to those states that do specify a cap. Other states offer technical assistance with varying levels of cost-sharing and support. The three programs with assistance caps limit assistance to $10,000, $20,000, and $85,000 (including metering and verification), respectively. Some states specify that they offer discrete types of assistance, such as early design support, energy modeling, commissioning, and installation. The two RI Energy programs do not specify discrete types of assistance beyond required energy modeling, a net zero/EUI expert, design development, assistance during construction as well as energy conservation and carbon reduction conversations.
Incentive Levels	Incentives tend to be broadly comparable across programs, with RI Energy falling somewhere in the middle. Neighboring Connecticut offers a very similar program design, with incentives for EUI-based design approximately 25% higher than RI Energy's (Tier 1 incentives at $2.50/SF and Tier 2 at $2.00/SF, in comparison with RI Energy at $2.00/SF and $1.50/SF for Tiers 1 and 2). Connecticut also offers an incentive adder for cold-climate heat pump installation, and ground source. Some states offer additional incentives for energy design assistance, solar-ready design, heat pumps (e.g., up to $4,000/ton for ground source systems), grid-interactive buildings ($3,000 for demand response or battery storage enrollment), and

	verification. Finally, some other states provide performance-based incentives at $0.40/kwh for building envelopes, lighting, and energy recovery measures, compared to $0.35/kWh for RI Energy's Streamlined / Systems Pathway. Additional incentives focus on demand savings, solar PV, and batteries.
Other Program Elements	Some unique elements include NYSERDA's Early Design Support Partners and Multifamily Buildings of Excellence Programs, Con Edison's Neighborhood Bonus offering, Pacific Power's Clean Buildings Accelerator program and Connecticut's design team incentives. Many programs support Net Zero design and whole-building approaches in a push for clean energy integration. Financing options are common.

Customer Awareness, Engagement, and Decision-Making

Customer decision-making drives the project processes and outcomes. Depending on the decisions customers make, and when they make them, a project may engage with the Program early, late, or not at all.

In this section we look at:

- The typical course of a new construction or renovation project, including key milestones.
- Why it is important for customers to engage with the Program early in the project.
- How customers make decisions.
- How design teams influence customer decisions.
- How the Program can engage with customers and design teams early in the Program.
- How the Program can influence decision-making.

Key Project Milestones

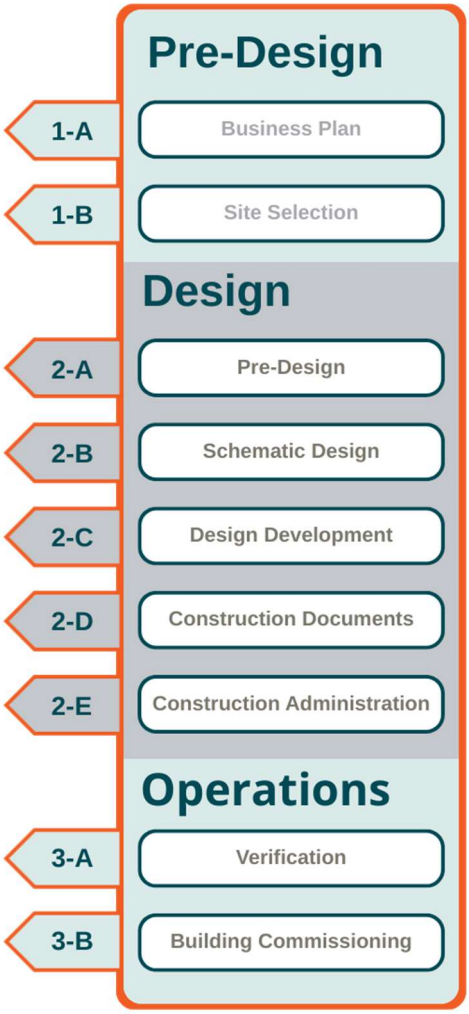
A typical new construction or renovation project follows the sequence of stages shown in FIGURE 0-1.[16] The key stages from an energy perspective include:

- Pre-Design (Stage 2-A): High-level decisions such as the overall approach to the building envelope, glazing coverage, and building orientation take shape at this stage.
- Schematic Design (2-B): This is when the major energy performance decisions are made, such as the heating system, building envelope, and other systems.
- Design Development (2-C): This is where the details of the schematic design decisions are figured out, with systems and materials being selected.
- Construction document phase (2-D): While this phase centers on documentation, it is where the earlier energy-related decisions are detailed and deployed throughout the building design.

[16] Adapted from NMR Group, Inc. and EMI Consulting, 2020. C&I New Construction Program Planning & Market Effects/Spillover Study (MA19CX01-B-NCPLANME), C&I New Construction Program Planning & Market Effects/Spillover Study (MA19CX01-B-NCPLANME) Final Report. Submitted to Massachusetts Program Administrators. April 15. https://ma-eeac.org/wp-content/uploads/MA19CX01-B-PLANME-Report-FINAL-2020-04-15.pdf.

We will refer to these milestones in later sections.

Figure 1: New Construction Project Stages



Important high-level decisions that affect energy usage, such as building placement, orientation, building envelope, glazing levels, and use of renewable energy systems, are made even before the schematic design stage. The caveat that designers shared about getting the Program involved at the very earliest stages is that the highest-level decisions about a project can be in a state of flux for quite some time, and therefore it could be inefficient for the Program to invest significant resources in engaging at this stage. However, the Program could make contact during pre-design or even earlier and then check in periodically until the design process truly gets started.

Detailed system decisions are made during design development (2-C); therefore, the Program can have some impact if brought into the project at that stage, but the window of opportunity to drive deep savings has generally closed by this point. Participants and staff told us that RI Energy currently tends to get involved with projects around this stage.

One final consideration shared by designers is that for public projects, once requests for proposals (RFPs) or project awards are announced, it is important to reach out to design teams early to make them aware of the Program and available incentives.

Designers told us that it is best for the Program to get involved in a project "the sooner the better." There was a consensus that engaging before or during the schematic design phase (2-B) is ideal because key decisions that affect energy performance, such as mechanical system costs, equipment placement, and whether to replace the heating system, are made during schematic design. We found significant variation in the timing of engagement for the participants we interviewed, ranging from very early in the design phase to midway through or even near the end of the project. These decisions set the project on a certain path. To be able to choose the most efficient path, it is necessary for clients and designers to understand the budget early and address as many factors as possible during the schematic design process, and then continue to refine the budget and system design as the project continues. One designer shared that they usually do a detailed cost estimate near the middle of the schematic design phase. Once that

estimate is in place, the team is able to make many of the decisions related to energy use. They then do another iteration of a cost estimate in the early design development phase. Therefore, engaging with the project before the mid-schematic cost estimate is ideal for the Program to influence decision-making.

Importance of Early Engagement

Early engagement with the Program provides better results. Participants that started working with RI Energy early in their project reported seeing benefits from having energy efficiency measures incorporated early in their projects. Taking a proactive approach allowed them to better integrate RI Energy's recommendations into the design. Conversely, participants who started working with the Program late in the process expressed regret that they missed opportunities to maximize energy savings and streamline decision-making. One participant explained that once the project was well into design and decision-making, it became too costly to change direction. These participants shared that if they had known about the Program earlier, they would have started the process sooner, pointing to the importance of building program awareness among customers through more organized and proactive outreach.

In addition to increasing awareness and engaging early with customers, participants and designers emphasized that it is important to promote the Program and engage with architects, engineers, and consultants. Efforts from the Program to build awareness and interest with these professionals could increase the probability that energy-efficient measures are considered earlier in the process, rather than being tacked on later in the project.

Characterizing the Customer Decision-Making Process

All the groups we spoke with agreed that the decision to pursue an efficient design is generally driven by the customer.

The primary drivers for participants' decision-making were varied. For some participants, it was largely driven by financial factors like return on investment. One participant said they were trying to decrease operating costs for tenants. For other participants, long-term sustainability goals were the primary motivation. Regardless of the motivation, interviewees said they relied on incentives from RI Energy to make the upgrades more financially viable.

> "The goal is typically to maximize the efficiency, within cost constraints."
> – Participating Architect

Public and private organizations take varying approaches to decision-making, and using knowledge of these differences can help the Program try to engage at the "right" time. For example, one participant shared that their parent organization has a closed-door approach to decision-making, with key departments like energy management, real estate, and merchandising taking charge. External parties such as contractors or program staff may face difficulties directly influencing this type of organization, but putting out accessible information such as educational webinars may help the information filter to less open organizations indirectly.

Some organizations have specific processes and approvals that must be completed, and these processes can extend project timelines and bring politics into the decision-making. For example, for school projects someone (typically the facilities and/or finance director) must present the project to the school board, justify the project's savings potential (i.e., balance savings and cost), and secure the board's votes to proceed. Other participants shared that within their organization, there is a clear hierarchy of decision-makers that review and approve energy-related decisions. The dollar amount of a project typically determines which level or levels of approval is required. Securing approval from upper management or executives can be challenging. Such formal decision-making processes ensure oversight but may slow down the decision-making process for energy efficiency investments and decisions around program participation.

In contrast, we heard from one participant representing a family-run business that decision-making processes in their organization are "quick and fast," without the bureaucracy seen in larger organizations, and were made without external input from third parties. The challenge for the Program in working with this type of process is in inserting itself at the right time, before too many decisions have been made, and providing quick, agile assistance so as not to be seen as a hindrance to the project. This type of customer may lack the broader checks and balances that could help optimize energy efficiency decisions, so the Program can play an important role in bringing experience and objective judgment to the decision-making process.

The customer's decision-making mindset is another key piece to consider. Some participants emphasized that their organization takes a long-term ownership mindset, which encourages them to prioritize durability, lower ongoing utility costs, and sustainability. However, three interviewees stated that the ownership status of the property did not have a significant impact on their decision-making regarding energy efficiency improvements. RI Energy can further support the long-term mindset by providing energy savings projections and planning tools to help owners make more informed decisions.

Designers also weighed in on their perceptions of their clients' decision-making processes. They shared that:

- Customers are generally enthusiastic about the prospect of receiving incentives, sometimes referring to it as "free money" because it allows them to get a more efficient end product without significantly increasing the project budget.
- However, sometimes the incentive amounts are not substantial enough to significantly influence certain aspects of the project.
- Public sector clients are much more likely to pursue higher efficiency and program participation.
- On the other hand, most private sector clients tend to be more to choose higher efficiency and participate in the Program unless they are convinced that it is financially advantageous. Because decision-making is driven by the customer, these customers are unlikely to participate unless the Program reaches out at the right time and convinces them that it is a financially sound investment.

- Providing reliable cost estimates or general cost guidelines for different systems could streamline decision-making and discussions with the clients. This is something the Program can help provide.

Role of Design Teams in Customer Decision-Making

Several participants told us that they depended on their architects and engineers to provide expertise on which energy efficiency features to include, with one interviewee saying they put "complete trust" in the design team's recommendations on energy-efficient equipment. Another participant strongly affirmed that the design team had a direct influence in their decision to participate in the program. However, other participants reported that their design team did not influence their decision to pursue energy efficiency measures, and instead their decisions were driven by internal teams or company policies. Other participants were already repeat customers of RI Energy's programs, so the design team did not need to influence their participation.

Complex program requirements that fall on the shoulders of project designers can be an indirect deterrent to participation. Design teams told us that they typically comply with customer decisions, including decisions about pursuing energy efficiency and participating in RI Energy's programs. They make efforts to address their clients' questions and help them explore rebate options. However, we heard from some designers that the Program does impose burdens on them, and so it is possible that they may try to subtly steer their clients away from participating in the Program.

Building Customer and Design Team Awareness, Understanding, and Interest: Keys to Early Engagement

For a customer or designer to engage with the Program in pre-design or early design stages, they first must be aware and have some understanding of the Program, and then choose to engage with the Program.

Building Customer Awareness, Understanding, and Motivation

> "Targeting the design community is key, reaching out to developers and stakeholders, public awareness is important. Target large stakeholders and give it a public presence." – Participating Architect

Awareness of the Program is high among sectors and organizations such as universities and schools that undertake frequent building projects and/or have organizational sustainability goals, as well as organizations that have a RI Energy account manager. When we spoke with participants from these organizations, they stated that they would reach out to the Program when beginning a new project. They showed familiarity with the Program features, requirements, and even changes in the Program and staffing over time. Even in these organizations, however, staff turnover can lead to loss of that awareness and familiarity, and so it is important to continue outreach and awareness-building activities. For example, one interviewee encouraged the Program to send a representative to the monthly dinner meeting organized by the Rhode Island

Association of School Maintenance Directors, where they could make a presentation periodically to keep awareness high in this community.

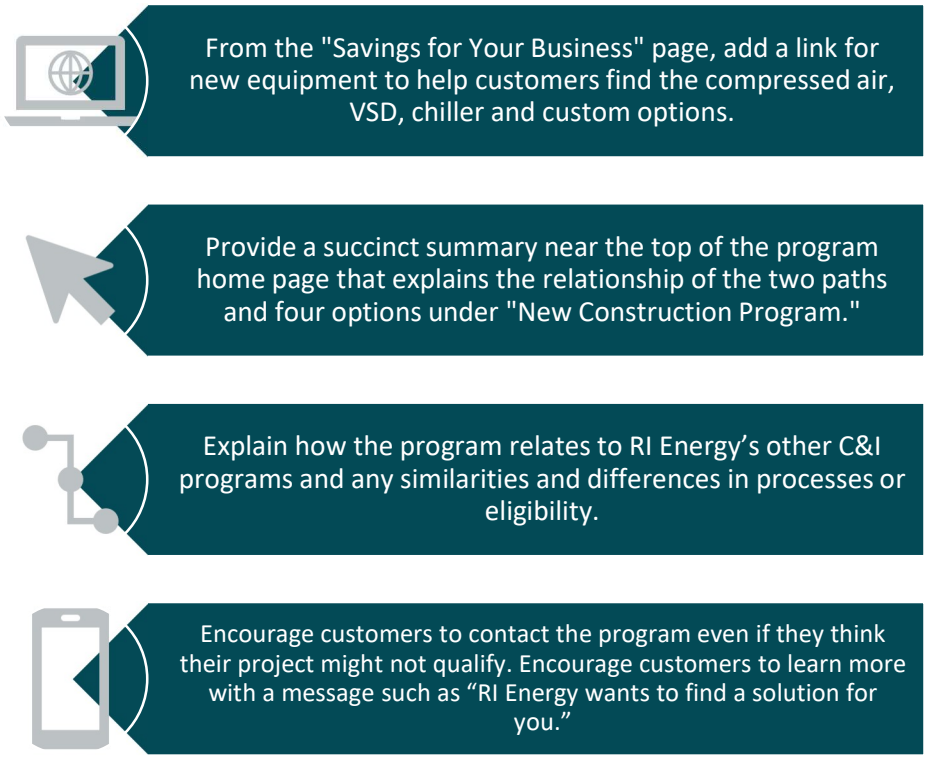
Other sectors that either take on building projects infrequently, do not have organizational sustainability targets or staff knowledgeable about efficiency, and/or do not have an account manager are likely to have lower awareness levels. In the interviews, we found that participants in this category were less familiar with the Program, despite having completed at least one project through it. For example, one interviewee was unclear whether the Program offered technical assistance.

Participants had several suggestions to increase awareness of the Program among customers:

- Educate customers about the performance of the latest technologies and share case study-style success stories and lessons learned from other projects.
- Reach out to the trades to let them know about program offerings and plans that would help them inform their clients.
- Include program information with "will serve" letters, which commit the utility to providing utility hook-up to new properties. Will serve letters are sent early in the project process and are therefore an opportune time for the Program to provide information about available incentives.
- Use periodic outreach in the form of concise email bulletins communicating the availability of rebates for energy-saving equipment to reach a wide array of C&I customers. These emails can also be used to communicate program changes.
- Promote the Program through real estate trade publications to help a wide range of organizations become aware of the Program's offerings.
- Consider providing a mailing or dashboard similar to residential home energy reports that communicates and benchmarks energy usage and gives updates about available rebates and services.
- Reach out to specific sectors by taking an educational approach that shows an understanding of the industry's unique energy needs and challenges. For example, cannabis organizations can be identified by accessing the list of licensed cultivators and processors on the RI Office of Cannabis Regulation website, and helpful messaging would focus on growers' key challenges.

- Connect regularly with key personnel in the state government or host periodic webinars for state agencies to help promote awareness and generate word-of-mouth marketing. One interviewee connected with the Program during the design development phase thanks to a suggestion from an individual at the RI Department of Administration. A designer also suggested that the Rhode Island Department of Education (RIDE) is a key contact for schools; providing RIDE with resources to share about the Program would help them steer projects to it.

The Program website is an important avenue for customers to learn about the Program, find answers to their questions, and locate contact information or an application. One design team member stressed that having a program website that lays out the process is important for customers who haven't gone through the process yet. Having reviewed the Program site, the study team recommends a few changes to help customers understand and connect with the Program:[17]



[17] These recommendations relate to the new website design released in September 2024.

Once a customer is aware of the Program, they may still need to be persuaded to participate. Designers recommended that providing clear information about available incentives, along with comparisons of the cost of implementing energy efficiency measures against the incentives, are key when engaging with clients and guiding them to a decision to participate. Addressing common questions and concerns up-front is also important.

Building Design Team Awareness, Understanding, and Acceptance

Although each of the project designers we interviewed – four architects, one owner's project manager (OPM), and one engineer – had been involved with at least one program project, most of them showed limited understanding of the Program. They expressed confusion about the requirements and differences between the Program and other RI Energy C&I programs, and some shared that they thought their colleagues were not very familiar with the Program as well. The architects shared that they often engage mechanical, electrical, and/or LEED consultants to handle energy and sustainability aspects of projects and tend to rely on those consultants to identify incentive opportunities and guide decision-making. Therefore, program staff should work to build awareness and understanding of the Program among not only design firms, but also the consultants they engage for energy assistance.

Overcoming Design Team Reluctance

Designers who were relatively experienced with the Program told us that when their client brings them a project that is a good fit for the Program, they recommend the Program to the client due to the availability of extra funding and resources. However, some designers did express reluctance to engage with the Program based on prior experiences in which they found the amount of paperwork, coordination, time commitment, and additional tasks overwhelming and had difficulty navigating the Program.

> "If they had been involved earlier, things may have been different, but at that point, it wasn't feasible to go backwards."
> – Participating Architect

Designers had several ideas for addressing the factors that make them and their colleagues reluctant to recommend the Program:

- Creating a dedicated "navigator" role or point of contact that can guide architects and clients through the Program requirements, connecting them with the right resources. A consistent point of contact, even if that person changes over the course of the project, would be very helpful.

- Simplifying the information and requirements, providing more executive-level summaries and checklists rather than extensive technical details. Making the process easier to understand and navigate would encourage more participation.
- Improving coordination and reducing the fragmentation between the various RI Energy incentive programs. Aligning the criteria and processes across programs, and/or creating more clarity and simplicity within the Program, would make it much easier for clients and architects to take advantage of the available incentives.
- Conducting educational webinars, lunch-and-learns, or information sessions for designers. These sessions can build program awareness and educate stakeholders about key topics such as the true costs of installing and operating an electric-based system. For example, designers may be afraid to guide clients to choose electric if they do not have a solid understanding of the long-term cost implications, as well as the benefits and design considerations. Providing such education would be highly valuable for the design community and help to build relationships.
- Additionally, based on the literature review, the Program should consider options for incentives to designers, beginning with offsetting the costs and administrative burden entailed in participation and potentially offering design competitions or awards for excellence in design. Offering design or engineering incentives can motivate design teams to participate.

Program Recruitment of Projects

Program staff cited several ways in which they actively bring specific projects into the Program, including communications between account managers and the customers they support, identifying upcoming building projects through Dodge reports, and even using local news reports to learn about new building projects or major renovations.

Program staff face practical challenges in recruiting projects. For example, to compensate for outdated RI Energy account contact information, staff tend to rely on internet searches, ZoomInfo, and Dodge data to find contact information for potential projects.

The implementation vendor and other program staff are working on several ideas for improvements to project recruitment and management, including:

- Develop additional branded program materials to support program promotion and awareness.
- Market the Program via email, meetings, seminars, webinars, and lunch-and-learns.
- Perform outreach activities such as in-person visits, webinars, and periodic emails.
- Methodically identify project leads via the Dodge database and industry reports.

- Provide financial incentives to design teams to help overcome any reluctance due to inconvenience or the time commitment required.

The Program vendor recently developed a proposal for enhanced outreach that features many of the improvements suggested by this research. Implementing this outreach plan, along with additional methods as recommended in this report, should significantly improve the Program's ability to bring in projects.

RI Energy staff are particularly eager for the Program vendor to work on developing relationships with architecture and engineering firms in order to build program awareness, understanding and acceptance. This emphasis is supported by the design team interviews we completed.

How the Program Can Influence Decision-Making

Program staff told us that once a project has engaged with the Program, the Program staff attempt to steer the customer to the lowest possible EUI if the project is in a sufficiently early stage. For later-stage projects, which tend to be a small majority of projects, the Program can exert a more limited influence. The Program vendor will convene meetings to present the pathways and gather project details, and then work with the customer to choose the best course of action.

We heard from participants and designers about a number of ways the Program has influenced decision-making during their project, as well as ideas for additional ways the Program can provide guidance.

- Participants told us that they appreciated the knowledgeable personnel from RI Energy, emphasizing that the support and guidance from these representatives were instrumental in navigating the Program and making decisions. One participant asked the program to provide even more technical assistance.
- One participant shared that their project benefited from having the Program vendor review the project; the staff person identified additional energy efficiency measures that could be added during construction. The participant felt that this external perspective provided a fresh look and led to enhanced savings.
- Some participants talked about how the Program helped them factor the incentive into the project's financial analysis, while others asked for additional support in this area. One person specified that they would like to get assistance with analyzing cost-benefit comparisons and aligning green building strategies with resources and incentives.

- One participant asked the Program to share detailed success stories and lessons learned to help customers and designers learn from others' experiences, advancing the state of practice in Rhode Island. This could be held as a roundtable or lunch and learn with a case study format.

> I think projects that are well built should be highlighted or publicized more. We need to see what other people are doing and things that they are doing wrong. We can then learn from it. - Participant

Incentives and Budget Optimization

Incentives play a critical role in driving program participation and satisfaction. The participants we spoke with appreciated the incentive that their projects received, and a majority were highly satisfied with the incentive amount. However, there is a general perception among program staff and some customers and designers that the current incentives for new construction projects are sometimes insufficient given the complexity and time commitment required.

In this section, we bring together analysis of program tracking data, participant and design team interview findings, and learnings from the literature review to paint a picture of recent incentive allocation trends, participant perceptions of their project incentives, and incentive practices in other states.

National Incentive Trends

Through the literature review, the study team found that RI Energy's incentives are roughly on par with comparison states, though its EUI-pathway rates are lower than neighboring Connecticut, which has a similar program design. It is difficult to make a straight comparison across programs because most vary significantly in their goals, pathways and technologies offered, and approach to electrification. The section titled BENCHMARKING THE PROGRAM DESIGN and APPENDIX E. Literature Review Matrix contain more data and analysis of the literature review findings. On the whole, RI Energy should consider increasing its incentive rates to keep up with trends and the effects of inflation, particularly if enhanced outreach does not drive a significant uptick in enrollment. RI Energy's EUI/ZNE Pathway offers an EUI design incentive payable to the project designer ($0.20/SF capped at $15,000), though it seems this incentive is not frequently implemented. The RI Energy program does not offer an incentive for designers for Streamlined / Systems Pathway projects.

Rhode Island Incentive Trends

Table 0-3 presents the allocation of incentives by project type for custom electric projects completed from 2022-2023. The table shows the number of installed measures for each project type, as well as the total incentives paid. We found that the largest incentives, i.e., those over $75,000, were mostly new construction projects. Incentives in this category made up the

majority of the total incentive dollars spent. In contrast, new equipment accounted for the majority of the measures installed, but only 6.6% of the overall incentive spend.

Table 0-3 Incentive Allocation by Project Type, Custom Electric, 2022-2023

Project Type	>$75,000	$50,000-$75,000	$25,000-$50,000	$0-$25,000	Total
New Construction	15 measures **$3,222k**	0 measures	5 measures $157k	**20 measures** $270k	40 measures $3,650k
New Equipment	3 measures $429k	3 measures $168k	12 measures $353k	**47 measures** **$459k**	65 measures $1,410k
Controls	2 measures **$255k**	1 measure $70k	0 measures	**9 measures** $86k	12 measures $410k
Major Renovation	4 measures **$313k**	0 measures	8 measures $225k	**10 measures** $77k	22 measures $615k
Other	2 measures $249k	3 measures $157k	4 measures $167k	**31 measures** **$286k**	40 measures $859k
Total	26 measures **$4,468k**	7 measures $395k	29 measures $902k	**117 measures** $1,177k	179 measures $6,943k

Staff Perceptions of Program Incentives

The Program staff we spoke with tended to hold the opinion that the current incentives are too modest (or that customers think they are too modest), and that this leads to customer frustration and lower participation. Staff cited the constraint of incentivizing only for efficiency above and beyond code or industry standard practice as a source of friction in the Program. Though it is standard for new construction programs to calculate incentives on this basis, it can be confusing and disappointing for customers to learn that a measure with a high first cost is eligible for an incentive that covers only a small fraction of the cost. This may be an issue particularly for customers who have participated in a retrofit project in the past. The lack of incentives for electrification is also a keenly recognized gap in the Program's offerings.

Staff had some ideas for improving incentive amounts:

- Standardizing savings calculations to reduce the need for comprehensive building modeling, increasing throughput for TA vendors and decreasing study costs (potentially leading the Program to accept lower realization rates in exchange for more projects and a better customer experience)
- Simplifying the application and approval process to reduce the burdens of participation on the customer, e.g., delays and costs.

Design Team Perceptions

Project designers observe that incentives play a crucial role in motivating clients to pursue energy-efficient projects, and they believe that increasing the size of the incentive can drive greater participation. As one designer noted, incentives are important to bridge the gap between budget limitations and energy goals for customers that want to aim for performance beyond code. Budget constraints are a major factor, and early involvement helps to align energy goals with cost, especially in projects aiming for carbon neutrality.

One designer noted that the incentive amount is not always enough to move the customer to choose higher efficiency, especially if the Program process steps and requirements are onerous. A designer suggested that increasing the Program's efforts to educate customers about the value and structure of new construction incentives can mitigate some of the dissatisfaction with the dollar amounts.

In addition to the extra effort put into the design process itself, some designers expressed consternation about the time and effort they have to invest in project applications and coordination on behalf of their clients; recognizing and compensating them for this would help win their engagement. A key issue that came up in several design team interviews was administrative burden and the resulting additional project costs or "back charges." Back charges can arise when the design team must put in additional hours to comply with program requirements, communicate with the Program, etc. These additional costs can put a strain on the designer's relationship with their client. For example, if the customer is billed for the additional hours, this can reduce the customer's satisfaction with the designer, the Program, or both. Conversely, if the designer feels uncomfortable charging that time to their client, they may come to resent the Program and discourage future projects from using it.

To overcome this challenge, RI Energy should consider doing more to promote the EUI design incentive among designers and customers, and extending a similar honorarium or compensatory incentive to Streamlined/ Systems pathway projects with a significant design component, to help cover the cost of the hours spent by the design team on program requirements. None of the designers we spoke with seemed to be aware of the EUI design incentive payable to designers of projects that go through the EUI/ZNE Pathway ($0.20/SF up to $15,000). Given the sense of burden and frustration expressed by some designers, promoting this incentive more widely may help to improve their sentiment toward the program and the extra effort it entails.

Customer Perceptions

When we asked participants to rate their satisfaction with aspects of the Program on a scale from zero to ten, where ten is extremely satisfied, a majority rated their satisfaction with the project incentive at least an eight out of ten (see TABLE 0-1 for a summary of customer satisfaction feedback). One participant was highly dissatisfied, and two more were moderately satisfied, in part due to comparison with higher incentives (especially incentives for heat pumps) in neighboring Massachusetts, where they had professional experience and/or contacts in the

industry. Despite this mixed feedback, it is important to note that RI Energy's incentives are roughly average when compared to similar programs in states around the country.

Several participants we interviewed said that the incentives from RI Energy played a critical role in driving their organization's energy-efficient decisions, and several indicated that incentives were the most significant driver for pursuing energy efficiency measures. At the same time, they said that higher incentives would help make deeper energy efficiency investments more attractive for their organization and asked for a centralized way to view available incentives before planning projects, which could optimize budgeting and ensure that customers can take full advantage of the available financial support. Two participants also encouraged RI Energy to offer more financing options to support larger projects. We did not receive any feedback specifically about the incentives for Zero Net Energy (ZNE) certification or post-occupancy verification of energy savings.

Another experience one interviewee shared was that their sustainability initiative and capital expense requests were approved based on the estimated savings and incentives offered by RI Energy. A different participant also shared that the rebates from RI Energy were combined with long-term pricing agreements with vendors to enable the project to meet their organization's required return on investment (ROI).

Program Delivery

In this section we summarize information and feedback from interviewees about their experiences with projects in the Program. We focus on opportunities for the Program to streamline and simplify the process.

Project Application, Design, and Technical Assistance Processes

Participants responded with mixed feedback regarding the design and technical assistance they received from the Program, with satisfaction scores ranging from one to nine out of ten. One participant that rated the assistance as a six said they felt there was room for improvement in consolidating best practices. Two participants reported that while the financial incentives were helpful, technical assistance or engagement with staff was either insufficient or absent. The participant who rated their satisfaction with RI Energy's technical assistance as one out of ten said they did so because the assistance was mostly vendor-driven (and therefore not perceived as coming from the utility).

Participants highlighted the support from account managers and vendors during the process, describing overall positive experiences. Two participants praised the personal attention they received from their account representatives, noting that in-person visits were particularly effective in maintaining communication

"I think the more assistance you can provide us, the better, when it comes to getting through the process." – Participating Architect

about ongoing projects. Similarly, one participant indicated that using vendors familiar with the Program significantly reduced their workload, making the process smoother.

In the past, design charrettes were a key feature of the New Construction Program. Charrettes bring together a wide range of project stakeholders to generate and evaluate ideas and goals for the project. One participant talked about attending a design charrette for a previous large new construction project and how they appreciated the positive effect it had on the project design and community engagement.

Technical Assistance and Review Processes

The technical review process, managed by the Program implementation and engineering vendors, is pivotal in ensuring project designs are effective and accurate. While the transition to a more streamlined set of program pathways is likely to be beneficial to new projects coming into the Program, we heard from Program staff that further refinement and standardization are needed. They noted challenges such as maintaining consistency between custom models, changes in energy savings calculation tools with insufficient documentation, lack of clarity about handoffs, and delays of up to a few weeks in technical reviews. Program staff had several ideas for improvements in technical assistance and project review processes:

- Developing a Rhode Island-specific base case document and consolidating customer forms could reduce confusion and delays.
- Simplifying energy savings estimation for Streamlined / Systems Pathway projects, accepting higher evaluation risk in exchange for more efficient projects. This could involve creating a tool to standardize savings estimates or applying an average savings per square foot for common measure incentives instead of using the full custom project review process.
- Improving consistency of energy savings calculation tools and documenting methodologies.
- Consider developing templates for MRDs by end use or measure type to streamline technical reviews and reduce staff and customer confusion.
- Convening staff from all three organizations to document processes and procedures and communicate timeframe expectations

Some participants described difficulties in securing approval from the Program for their project. For example, one participant faced significant challenges with securing approval due to disagreements with engineers about the feasibility of their proposed lighting setup. The participant stated that they eventually received the rebate through persistence but described the process as frustrating.

Project Timelines

Program Staff Perspectives

Program staff believe that project delays can occur at various stages, with most of these being outside of the program's control. They suggested ways of reducing the potential for the

Program to impact project timeline, including engaging early with customers, streamlining the technical assistance and review process, strengthening communication practices, and simplifying processes.

Two staff members argued that customer signature collection should be streamlined. One specific recommendation is for signatures to be required only after RI Energy has made an incentive offer. The current process requires acknowledgment signatures before this stage and some staff believe this step is not necessary.

Staff also agreed that project documentation should be clear and concise. For example, they recognize that customers should be made aware and able to understand which changes to the project could be problematic in terms of jeopardizing the incentive.

Participant Perspectives

Most participants reported experiencing no delays specifically related to program processes during their projects, with some attributing this to a smooth process and efficient project planning. Only one participant cited a program-related delay, which involved an extended wait for a response from the Program.

Of the delays that participants did experience, they tended to fall into the following categories:

- Logistical delays: A few participants pointed to delays related to getting specific equipment on-site or waiting for parts and equipment from other countries, which sometimes extended the project timeline significantly.
- Approval-related delays: At least one participant experienced a delay related to securing capital approval for certain measures.
- Coordination delays: One participant noted that needing to coordinate with multiple people involved in the project caused delays, although these were not directly tied to energy efficiency measures.
- Pandemic-related delays: Several participants experienced significant project delays related to supply chain disruptions. This issue was common across multiple industries.
- Leasing-related delays: One participant described delays related to a need to obtain legal permissions before making changes to a leased property.
- Bureaucratic process delays: One participant described delays arising from needing to navigate the approval processes of a large organization.

Many of these delays occur in construction projects even in the absence of program engagement. While there are many sources of delay outside of the Program's control, RI Energy could help participants minimize these hurdles by providing advice and assistance based on its experiences with prior projects.

Program Staff Coordination

Several staff members we interviewed at both RI Energy and vendor organizations cited a need for better coordination, communication, and definitions of roles and processes.

Under the current processes, some of the key points of coordination include:

- Account managers pass off any project leads they encounter to the implementation vendor.
- The implementation vendor holds monthly check-in meetings with the RI Energy program manager, the Energy Efficiency Advisors, and the engineering vendor. One of the vendors noted that there tends to be a lot of back-and-forth communication about projects that could be reduced with tighter processes.
- Projects are tracked in an offline spreadsheet by the implementation vendor. Having a cloud-based file that would be accessible to all program staff would allow for faster updates and turnaround times by communicating updates sooner than a monthly meeting.

There are several pain points associated with the status quo. The primary challenge is that changes in staffing on the Program team have reduced the collective institutional knowledge and interrupted the informal communication and coordination processes that seem to have kept the Program moving efficiently in the past. We found that some staff members are confused by the offerings and/or unaware of recent changes. Account managers said they did not receive regular project status reports and would like to do so, as well as being included in periodic pipeline review meetings in order to become better integrated into the Program.

To compensate for the loss of institutional knowledge and experienced staff, RI Energy should invest in process documentation and team building. Documenting processes and creating a centralized resource detailing the latest processes and policies will help to safeguard against disruptions in the event of future staffing changes. Creating clarity regarding communication and handoff processes will help to ensure smooth transitions and comprehensive customer engagement.

Opportunities for Streamlining

While the timing of this study did not allow the study team to determine how customers and designers are reacting to the consolidation of the Program pathways, customers and design interviewees had several other suggestions for ways in which the Program can simplify and streamline its processes.

- Some participants asked for clearer communication upfront about documentation requirements, including checklists and executive-level summaries, to reduce delays due to back-and-forth communication.
- Participants asked the Program to simplify the project approval process.
- Another participant raised the idea of creating an online portal for project tracking and entering documentation for RI Energy's review.
- Designers asked RI Energy to improve coordination and consistency among the programs making up the C&I portfolio to provide clear, unified guidance and straightforward processes to customers and designers. Customers and designers can

become confused and frustrated by differences in required paperwork and documentation, process steps, and contacts between programs.

- Internally, some staff told us they see a need to convene representatives from all RI Energy and vendor teams that partner on the Program to document processes, identify opportunities for consolidating or removing steps, and communicate timeframe expectations. Possible points of simplification include developing MRD templates for specific end uses or measure types to streamline reviews and creating a tool or high-level approach to standardize savings estimation for Streamlined / Systems pathway projects. The Program might also decide to redirect some projects that currently utilize the small business tool to the midstream offering instead, possibly including expansion of the midstream offerings.
- Customers and staff recommended that the Program reduce the number of signatures required for custom projects to simplify the process and reduce timelines.

Insights from the Largest Projects

To learn about the influence the Program is having on the largest building projects in Rhode Island, we identified a list of approximately 25 of these projects (described in the study workplan as the "Top 25") from the Dodge construction database.[18] We identified which projects had or had not participated in the Program by comparing participant data to the list extracted from the Dodge database. We analyzed the available data about these participants and non-participants to characterize the two groups, and interviewed representatives of four participating and two non-participating projects.

How the Largest Projects Compare to Participants Overall

Approximately half of the largest projects we identified had participated in the Program. Similar to the Program as a whole, the predominant participating sectors included universities and schools, as well as other municipal and state buildings. Commercial properties such as office buildings, a hotel, and medical properties were also represented. Nonparticipating projects included a wide-ranging mixture of properties, from mixed-use developments and hotels to schools and medical facilities.

The largest participating projects that we completed interviews with included two schools and two office spaces. Most of this group indicated they had engaged with RI Energy early in the design and decision-making process, suggesting they were able to take a comprehensive approach to the project. In contrast, some of the interviewees representing smaller projects indicated they did not engage with RI Energy until much later in the project. Of the four

[18] https://www.construction.com/

interviewees representing the largest projects, all were in professional roles similar to those of other participants, such as directors and facility managers.

Estimate of Missed Savings Opportunities

To help RI Energy get a sense of the extent to which the Program is capturing the potential savings from large new construction projects occurring in Rhode Island, we used analysis of secondary data to look at the "Top 25" (i.e., the 25 largest by budget and/or square footage) new construction and major renovation building projects that took place during the 2022 through 2023 timeframe. We used this analysis to develop a rough estimate of the "missed opportunities" for the approximately 13 of the Top 25 projects that did not participate in the Program. To develop the "missed opportunities" estimate, we started by calculating the average savings per square foot for similar participating projects completed during 2022 – 2023.[19] We found that similar participating projects saved between 0.1 kWh and 4 kWh per square foot, with a mean of 1.1 kWh/SF. We then multiplied these savings-per-square-foot values by an estimated square footage value of 100,000 SF to estimate the "missed opportunity" savings.[20]

Using this approach, we estimate that the 13 nonparticipating projects would have achieved total savings between 130 MWh and 5,200 MWh, with a mean of 1,400 MWh. Had these 13 properties undertaken comprehensive custom projects delivering per-kWh savings on the high end of the range (i.e., 4 kWh/SF), they would have boosted the total 2022 – 2023 program savings by roughly 25%. Keeping in mind that new building and major renovation projects comprise only roughly half of the Program's savings, with the other half coming from new equipment, controls, and replacement of failed equipment, it is helpful to consult the "XL" New Construction project category as a point of comparison (see TABLE 0-2). In 2022 – 2023, the largest electric measures delivered 3,295 MWh of savings. Had the 13 non-participating projects pursued comprehensive efficiency efforts amounting to 5,200 MWh, they would have more than doubled the savings from that category.

It is important to note that the estimate of additional potential is highly sensitive to the assumed per-square-foot savings and square footage values. In the absence of square footage data for non-participating projects, we assumed a conservative value of 100,000 SF per project. With one or two very large projects (e.g., a new building greater than 500,000 SF), the impact on program savings would be proportionally higher (see TABLE 0-4 below). Similarly, projects that drive significant efficiency improvements delivering higher per-square-foot savings values have a greater impact. TABLE 0-4 shows the range of possible savings under illustrative scenarios of savings values and square footage amounts.

[19] "Similar participating projects" included new building and renovation projects with more than 25,000 SF.

[20] Because square footage information was not available for the large majority of non-participating projects, we assumed the buildings to average 100,000 square feet each.

Overall, this analysis reinforces that driving even a small number of ambitious projects can create very large savings for RI Energy's customers and, in turn, for the Program.

Table 0-4 Illustrative Estimates of Potential Savings from Incremental "Top 25" Projects

SQUARE FOOTAGE SCENARIOS	PROJECT IMPACT SCENARIOS		
Additional Projects (13)	**Low Savings** (0.1 kWh/SF)	**Mid Savings** (1.1 kWh/SF)	**High Savings** (4 kWh/SF)
13 properties at 100,000 SF each	130 MWh	1,430 MWh	5,200 MWh
11 properties at 100,000 SF + 2 properties at 500,000 SF	210 MWh	2,310 MWh	8,400 MWh

Participant Experiences

Overall, interviewees representing the largest projects completed during 2022 – 2023 reported experiences and suggestions for improvement similar to those representing smaller projects.

Many participants, including those with larger projects, expressed overall satisfaction with the process, though they had suggestions for improvement and experienced some challenges during the process. For example, an interviewee with a large project expressed some frustration with the initial incentive offer but was later provided with an option to apply a larger credit. This credit could only be applied if the project were completed before the end of the year, causing some pressure to complete the project earlier. On the other hand, they praised their RI Energy-vetted vendor for completing the work within the new timeframe. This interviewee, like others, highlighted the importance of communication and early engagement.

Three of the four largest projects indicated that some efficiency measures were dropped from the initial project design. While only one indicated that efficiency measures were dropped or added following a review of the process, two other participants within this group specifically noted that EV chargers were dropped or scaled back during the process.

Program Influence

To explore how the Program influenced participating Top 25 projects, we succeeded in interviewing representatives of four participating projects. These individuals cited a variety of ways in which the Program influenced their decision-making process. For example, one interviewee stated that the program vendors that RI Energy vetted were extremely helpful throughout the process. Others cited specific program staff, as well the program's assistance in providing the necessary materials and savings information, as being particularly helpful. Though most of these interviewees did not cite the incentive as being particularly influential, one interviewee indicated that they believed the incentive was sufficient for their energy efficiency measures.

Nonparticipant Program Awareness, Reasons for Non-Participation, and Desired Program Features

We interviewed representatives of two of the largest non-participating building projects to learn about their awareness of the Program and reasons for not participating. We also used the interview to explore the program features that would motivate the interviewee to participate in the future. We found that these non-participants were simply not aware of the Program or their design team and consultants did not suggest it. These individuals emphasized the necessity for RI Energy to engage with customers as early as possible, as well as improve the advertisement of their services for potential customers that are less familiar with the Program.

Appendix A. Evaluation Scope of Work

To: Rhode Island Energy

From: Beth Delahaij, NMR Group, and Doug Bruchs, Cadeo Group

Date: May 24, 2024

Re: Process Evaluation of C&I New Construction Program

Context

Rhode Island Energy's New Construction Program provides incentives and technical assistance to Rhode Island (RI) commercial and industrial (C&I) customers interested in improving the efficiency of their new or renovated buildings or equipment. The Program promotes and supports the design of high-performance buildings, efficient building operation, and equipment selection. The incentives and technical services are designed to encourage building owners and developers and their design teams to build projects that perform better than the current baseline specifications. The program also offers incentives for Zero Net Energy certification and post-occupancy verification of energy savings. Available technical assistance ranges from simple plan review and efficiency recommendations to complete technical blueprint reviews. The program incentivizes both new construction and major renovation projects and new equipment at existing sites.

For new construction and major renovation projects, the program offers a choice of two pathways:

> Pathway 1: The Energy Use Intensity / Zero Net Energy Ready pathway facilitates customers and design teams in defining an Energy Use Intensity (EUI) target range and designing their project to meet that target.
>
> Pathway 2: The Streamlined / Systems pathway provides a simplified approach for customers who want to improve the efficiency of their building project through a less intensive process potentially focusing on selected building system(s).

RI Energy is interested in investigating certain aspects of the program's design and operations, such as strategies for engaging early with customers and design teams to drive deeper savings, right-sizing incentives, further reducing non-incentive costs, and finding additional ways to streamline the participation process from both the customer perspective and the program perspective. The Cadeo-NMR team presents this work plan to describe the evaluation study that will aid in achieving these objectives.

Study Goals

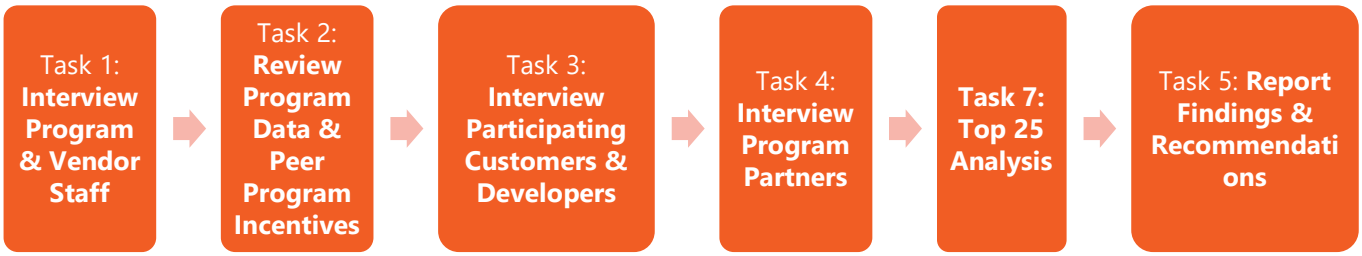
The primary goals of this study are to:

1 | Investigate ways to engage customers and design teams early in the project development process, helping the program to drive deeper savings.
2 | Identify ways to better assist customers and design teams with decision-making related to energy efficiency.
3 | Understand why some design teams do not routinely work with the program and explore ways to get them engaged.
4 | Benchmark the program's incentives against peer programs to explore whether the incentive model should evolve.
5 | Examine ways to maximize the budget allocation to incentives by reducing other project costs.
6 | Identify additional opportunities to streamline the process and better align it with customer and developer needs and timelines, particularly for customers that are not interested in substantial design changes.
7 | Explore how the program has evolved since decoupling from the related program offered in Massachusetts, and how it is expected to continue to evolve in the near term.

Study Tasks

The evaluation team completed a total of six complementary impact and process tasks to evaluate the C&I NC program. Figure 1 illustrates a roadmap of the tasks we will complete for this study.

Figure 0-1: Roadmap of Tasks



Below we describe our approach for this project:

Task 0: Finalize Work Plan

Our team will finalize this plan, which includes the individual tasks/milestones, deliverables, timelines, and budget for this evaluation. We will refine any tasks and timelines based on feedback from RI Energy.

Deliverables: Draft and final work plan

Timeline: March – May 2024

Task 1: Interview Program Staff and Vendors

The Cadeo team will conduct four in-depth interviews of program staff members and vendor staff that support the program. These interviews may be conducted as group interviews as appropriate to enable the team to gather multiple perspectives in a cost- and time-efficient manner. Interviews will include program management, strategy, technical, and sales staff with experience with new construction projects.

Interview topics will include:

- Evolution of the program pathways and how well the current design fits customer needs.
- Typical pathways for outreach, engagement, project identification, and project development, including any different practices by market segment (including key segments such as schools, universities, and municipalities)
- Outreach and engagement practices for and experiences with program partners such as architecture and engineering firms
- The degree to which RI Energy's implementation vendor is embedded within the developer and other key market actor communities.
- Communication and coordination among project developers, technical reviewers, and other staff and stakeholders
- Sources of delay over the lifetime of projects
- Ideas for maximizing the budget allocation to incentives by reducing other project costs.
- Vendor support processes, including any perceived opportunities for improvement and greater efficiency.
- Clarity of roles and management of handoffs between vendor and PA staff
- Tracking and handling of customer concerns, requests, and issues
- The technical review process for projects
- Trends and any perceived gaps in the types of equipment installed through the program.
- Ideas for streamlining the process for customers that are not interested in substantial design changes.
- Required project documentation and opportunities for simplification.
- Staffing, training, and other resources
- The role of evaluation in projects and program design
- How the program has evolved since decoupling from National Grid's program in Massachusetts.
- Any anticipated impacts of state building code updates
- How the program is working to align with climate mandates and how it may be affected by the Future of Gas docket

Deliverables: Report out during biweekly status call; findings summarized in slides

Timeline: April – June 2024

Task 2: Review Program Data and Literature

The study team will request program data from RI Energy in order to (1) analyze program data for participant trends and (2) sample participants for Task 3 and program partners for Task 4.

Analyzing participation trends will help the program team optimize services and processes to suit segments of the commercial and industrial customer base in Rhode Island by indicating which customer types are participating frequently (and therefore likely well-served by the program), and which customer types are less well represented in the data. This information will help the program team adapt its outreach and offerings to increase program engagement.

The study team will carry out an exploratory analysis of the program tracking data with the goal of developing an approach to stratifying or categorizing customer projects. Depending on the data available, the team will, at minimum, analyze and segment projects by program pathway, type (new build / controls / equipment / etc.), savings, end use(s)/equipment types, and incentive amounts.

If any firmographic or facility data are readily available (e.g., market segment/industry, square footage, number of employees, revenue, NAICS or SIC code), the team will incorporate these metrics into the analysis.

To help program staff consider whether and how the New Construction Program's incentive structure should evolve, the Cadeo team also will conduct a targeted review of information about the incentive structures of peer programs offered by program administrators in other states. We will use this information to benchmark RI Energy's incentive levels and incentive structure against industry peers.

Deliverables: Report out during biweekly status call; findings summarized in slides

Timeline: April – June 2024

Task 3: Interview Participating Customers and Developers

Next, our team will conduct ten interviews of customers and/or developers that participated in the program during 2021, 2022 and/or 2023. These interviews will target a mixture of the following project types[21]:

- Energy Use Intensity / Zero Net Energy Pathway participants (new construction/major renovation projects greater than 20,000 square feet pursuing an EUI target)
- Streamlined / Systems Pathway participants (new construction/major renovation projects pursuing simplified efficiency goals)
- New construction/major renovation projects for buildings of less than 20,000 square feet
- Customers installing new equipment in an existing facility.

[21] For projects that went through a program pathway that has since been consolidated or heavily revised, we will consult with the program team as needed and attempt to translate the findings into the currently applicable pathway structure.

In addition, we will aim for a diversity of participant types: We will attempt to sample repeat customers to learn what keeps them coming back to the program, and customers who participated only once or possibly cancelled a project to learn about any barriers they encountered that could be overcome with process changes. We will offer an incentive of $200 to thank interviewees for their time.

The interviews will focus on (1) understanding customer decision-making processes with the goal of helping the program engage with projects at the ideal time to drive deep energy savings, and (2) customer experiences with the program, particularly any barriers or requirements that stand in the way of participation or limit the extent of customer engagement.

The interviews will address the following topics:

- Understanding the decision-making and project development process from the customer perspective with a focus on unique aspects depending on market segment/industry (e.g., schools, higher education, offices, industrial, etc.), and delving into aspects such as timing, project milestones, and key decision-makers
- The influence of RI Energy's program on decision-making and how the program can better assist customers and design teams with decision-making related to energy efficiency.
- The role of design teams in customer decision-making, including the decision of whether to participate in the program.
- Differences in decision-making between facility types and situations, such as owner-occupied properties, new leased buildings, tenant fit-out renovations, etc.
- Successes and barriers encountered in projects completed through the program, such as experiences with communication with program staff and vendors, satisfaction with the incentives and technical assistance, any delays that occurred during the project, and satisfaction with final project outcomes in terms of energy savings and value.
- Additional ways the process can be streamlined for projects in which the customer is not interested in substantial design changes.

Deliverables: Report out during biweekly status call; findings summarized in slides

Timeline: May – July 2024

Task 4: Interview New Construction Design Teams

The Cadeo team will interview six architecture and engineering firms that have served as design teams for new construction and major renovation projects in Rhode Island. The team will aim to include a range of firms in these interviews:

- Firms that have participated in multiple projects through the program
- Firms that have had one or a small number of experiences with the program and have not pursued more regular participation.
- Firms that carry out eligible projects in Rhode Island but have not participated in the program in the past three years.

We will offer an incentive of $200 to thank interviewees for their time.

The interviews will address the following topics:

- Understanding the decision-making and project development process from the program partner perspective with a focus on unique aspects depending on market segment/industry (e.g., schools, higher education, offices, industrial, etc.), and delving into aspects such as timing, project milestones, and key decision-makers
- How the program can better assist design teams and customers with decision-making related to energy efficiency.
- Aspects of the program participation process that firms found to work well and challenges they have encountered in completed projects.
- Aspects of the program that participating design teams find most and least valuable.
- For firms that have participated in the past but do not regularly engage with the program, explore the factors that discourage participation and how the program could get them engaged.
- For non-participating firms (i.e., firms that have not participated in at least three years), the level of awareness and familiarity with the program and its offerings.[22]
- How the program can make contact with non-participating firms and demonstrate value.
- Ideas for engaging different market segments and project types in a timely and effective manner.

Deliverable: Report out during biweekly status call; findings summarized in slides

Timeline: May – July 2024

Task 5: Report Findings & Recommendations

At the conclusion of the research tasks, our team will document our findings and recommendations in a concise and reader-friendly memo.

Deliverable: Memo

Timeline: July – early August 2024

Task 6: Project Management

The key staff and roles for this project are described below:

Beth Delahaij, Project Manager (NMR Group)

Doug Bruchs, Principal Investigator (Cadeo)

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[22] The team will explore several potential methods of identifying non-participating firms, such as (1) asking program staff for known non-participating firms, (2) requesting project contact data from 2020 and prior and comparing listed design firms to the 2021-2023 population; (3) online searches, and/or (4) reviewing the websites of local city planning committees to identify firms working on recent new construction projects.

Michelle Zelenka, Analyst (NMR Group)

Calissa Jones, Analyst (NMR Group)

The team will utilize the bi-weekly meetings to discuss findings, barriers, and any next steps during each task phase of the project.

Task 7: Top 25 Analysis

In this optional task the Cadeo team proposes to analyze the "Top 25," i.e., the 25 largest known new construction or major renovation projects by square footage that were permitted in Rhode Island between August 1, 2019 and February 1, 2022.[23] These projects will be identified by leveraging a list developed for a different study currently being conducted for RI Energy by DNV.

The team will begin by obtaining and reviewing the list from DNV and verifying that the Top 25 projects were completed and have characteristics that make them suitable for inclusion in this study of new construction projects. We also will verify the participation status (participant or non-participant) of the 25 projects and if possible, determine which program pathway each project utilized and any other notable characteristics of the group, including any observable differences between participating and non-participating projects (e.g., size, location, industry).

The team then will estimate the "missed opportunities," i.e., estimate the energy savings that could have been delivered by the projects that did not participate. One method for estimating this impact is by calculating the average savings per square foot for projects completed during that time period and applying that average to the square footages of the non-participating projects.

To explore the program's influence on participating Top 25 projects, we will attempt to sample from the Top 25 list for the participant interviews in Task 3 and will include questions about program influence in the interview guide.

Finally, we will interview five non-participating Top 25 projects (customers and/or design teams) to learn about their awareness of the program and reasons for not participating. We will also use the interview to explore the program features that would motivate the interviewee to participate in the future.

Budget

The team developed the budget outlined in Table 0-1, including project milestones. We leveraged our previous experience reviewing and working on a similar study in Massachusetts to inform these assumptions and the resulting budget estimates.

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[23] The actual number of projects analyzed may be somewhat larger or smaller than 25 due to some ambiguity in the data related to project size.

Table 0-1: Project Budget and Associated Milestones

Task & Milestones	Expected Completion	Total
Task 0: Finalize Workplan		**$6,020.00**
0a. Final Workplan	May 2024	
Task 1: Interview Program Staff and Vendors		**$14,293.20**
1a. Report out during biweekly status call	June 2024	
Task 2: Review Program Data and Literature		**$8,925.00**
2a. Report out during biweekly status call	June 2024	
Task 3: Interview Participating Customers & Developers		**$24,157.60**
3a. Report out during biweekly status call	July 2024	
Task 4: Interview New Construction Design Teams		**$19,040.80**
4a. Report out during biweekly status call	July 2024	
Task 5: Report Findings & Recommendations		**$19,846.00**
5a. Develop and Deliver Memo	Late July – Early August 2024	
Task 6: Project Management		**$6,884.00**
6a. Project Management	August 2024	
Task 7: Top 25 Analysis		**$14,449.00**
7a. Report out during biweekly status call	July 2024	
Total		**$113,615.60**

Project Timeline

The chart below details the schedule for this evaluation.

Task	2024					
	March	April	May	June	July	August
Task 0: Finalize Workplan						
0a. Draft and Finalize Workplan						
Task 1: Interview Program Staff and Vendors						
1a. Report out during biweekly status call						
Task 2: Review Program Data and Literature						
2a. Report out during biweekly status call						
Task 3: Interview Participating Customers & Developers						
3a. Report out during biweekly status call						
Task 4: Interview New Construction Design Teams						
4a. Report out during biweekly status call						
Task 5: Report Findings & Recommendations						
5a. Develop and Deliver Memo						
Task 6: Project Management						
6a. Project Management						
Task 7: Top 25 Analysis						
7a. Report out during biweekly status call						

Appendix B. Program Staff and Vendor Interview Guide

To: Rhode Island Energy

From: Beth Delahaij, NMR Group

Date: May 16, 2024

Re: Process Evaluation of C&I New Construction Program – Staff and Vendor Interview Guide

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Thank you for taking the time to speak with us about the Rhode Island C&I New Construction program. The things you share will not be attributed to you directly in any way.

Program Design

1. Can you please describe how the program has evolved over the past few years, including changes to the program pathways?
2. How has the program evolved since it was decoupled from National Grid's program in Massachusetts?
3. What are the unique opportunities and challenges associated with each pathway?
4. How well do you think the current program design fits customer needs?

Project Stages

5. How do you conduct outreach and get customers and design teams engaged with the program? How do you identify projects?
6. How do outreach, engagement, and project identification differ by market segment, such as schools, universities, industrial, offices?
7. Once a project opportunity has been identified, how do you work with the customer, design team, and other parties to develop the project?
8. What are some challenges you encounter with outreach, engagement, and project development?
9. Can you share any ideas you have for best practices and/or improvements in outreach, engagement, and project development?
10. Where do program-related delays tend to occur over the lifetime of projects? Do you have suggestions for overcoming the causes of these delays?

Vendor Support and Efficiency

11. [For internal program staff] What are the keyways in which vendors support the program? To what degree is the implementation vendor connected with developers and

design teams in the Rhode Island market? Are there any opportunities for improvement and/or greater efficiency?

12. [For vendor staff] Are there other ways in which you and your team support the program? What are the opportunities to drive more projects and/or improve efficiency?
13. Are the division of roles and responsibilities and management of handoffs between vendor and program staff clearly defined?

Measures and Technical Review Process

14. What are the most common measure types installed through the program? Do you see any gaps in the offerings or uptake through the program?
15. Can you describe the technical review process for projects and how it varies across the different pathways?
16. Do you have suggestions to help improve savings estimation methods or realization rates?

Role of Evaluation

17. What role does evaluation play in projects and program design?

Process Streamlining

18. What are the project documentation requirements and how do they differ by pathway? Are there opportunities for simplification?
19. Do you have ideas for streamlining the process for customers who are not interested in substantial design changes?
20. Do you have ideas for maximizing the budget allocation to incentives by reducing other project costs?

Communication and Coordination

21. How do you track and handle customer concerns, requests, and issues throughout the project lifecycle?
22. Can you describe how project developers, technical reviewers, and other staff and stakeholders communicate and coordinate to keep projects on track? Is there any need for improvement?
23. How do you coordinate other program processes (e.g., tracking and reporting, pipeline management)? Is there anything you would change about these processes?

Staffing, Training, and Resources

24. What changes, if any, do you think are needed with respect to staffing, training, budget, and other resources for the program?

Policy and Regulatory Shifts

25. How do you see policy and regulatory shifts driving the current program design and implementation? What changes do you foresee? [Probe on how the program is working to align with climate mandates and how it may be affected by the Future of Gas docket.]
26. Do you foresee any impacts on the program due to state building code updates? If yes, what impacts do you expect?

Appendix C. Participating and Nonparticipating Customer Interview Guide

To: Rhode Island Energy

From: Beth Delahaij, NMR Group

Date: May 23, 2024

Re: Process Evaluation of C&I New Construction Program – Task 3 Participant IDI Guide

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Background and Purpose

This guide is for interviews of customers and/or developers that participated in the program during 2021, 2022 and/or 2023, and is intended to gather perspectives from a range of participant and project types.

The interviews will focus on understanding (1) customer decision-making processes with the goal of helping the program engage with projects at the ideal time to drive deep energy savings, and (2) customer experiences with the program, particularly any barriers or requirements that stand in the way of participation or limit the extent of customer engagement.

Introduction

- Thanks for taking the time to meet today to talk about your organization's experiences with the Rhode Island Energy New Construction Program.
- [FOR PARTICIPANTS] This interview will help Rhode Island Energy understand the experiences of customers using their program and improve the program for future customers.
- [FOR NONPARTICIPANTS] As you might know, the Rhode Island Energy New Construction Program provides financial incentives and technical assistance to Rhode Island commercial and industrial customers to help them improve the efficiency of their new or renovated buildings or equipment. Available technical assistance ranges from simple plan review and efficiency recommendations to complete technical blueprint reviews. The program incentivizes both new construction and major renovation projects as well as new equipment at existing sites.
- Let's do some quick introductions before we get started: [Name, organization, role in the study or organization]
- As a reminder, you will receive an incentive ($200) to thank you for your time. You can expect to receive the incentive via email in the next two weeks.
- Everything you share with us will be treated as confidential; the information will be summarized and anonymized across the various interviews we conduct. Nothing you share will be attributed to you or your organization.

Project-Specific Information

1. Can you please confirm whether you were involved in the [sampled project] and describe your role in this building project and in your organization?
2. Can you describe the building project in question for us, including the energy efficiency features included?
3. What was the overall timeline for this [new construction or renovation] project? Is this typical for this type of project in your experience?
4. Can you please walk us through your organization's decision-making process for incorporating energy efficiency equipment or feature(s) into this building project? At what stage of the project were these decisions made?
5. **[SKIP FOR NONPARTICIPANTS]** At what point in your project did you engage with the Rhode Island Energy New Construction program?
6. Can you please talk about any energy efficiency measures that were dropped from or added to the project scope as it progressed?
7. Who were the key decision-makers involved in this project, particularly around decisions related to energy? Is this typical for new construction projects at your organization?
8. Would you say your organization's decision-making processes are typical for your industry? Why or why not?
9. Is this property owned or leased? How, if at all, did that affect your organization's decisions about energy efficiency improvements?

Decision-Making Influences

10. **[SKIP FOR NONPARTICIPANTS]** How did Rhode Island Energy's program influence your organization's decision to pursue energy efficiency measures? [Probe on the following factors:]
    a. Financial incentive (Was the incentive sufficient to cover the higher cost of the efficient equipment or design element?)
    b. Account manager or sales staff.
    c. Staff from the program implementer
    d. Technical assistance
    e. Prior experience with the programs (either own experience or by reputation)
    f. Website or printed program materials
    g. Other factors?
11. How did the project's design team influence your organization's decision whether to pursue energy efficiency measures?
12. **[SKIP FOR NONPARTICIPANTS]** How, if at all, did the design team influence your organization's decision to participate in the Rhode Island Energy program?
13. What challenges did you encounter [**FOR NONPARTICIPANTS:** do you think you would encounter] in securing approval to participate in the Rhode Island Energy program?
14. How could the Rhode Island Energy program better assist you in making decisions related to energy efficiency? [Probe on the following factors:]

a. Additional education or promotion of the program
b. Additional analysis of the financial value of the energy efficiency measures.
c. Additional technical assistance
d. Higher incentives (If not asked in Q10, ask here: Was the incentive sufficient to cover the higher cost of the efficient equipment or design element?)
e. Other factors?

15. How could the Rhode Island Energy program best engage with your organization early in the project process? [**FOR NONPARTICIPANTS, SKIP TO Q26]**
16. **[SKIP FOR NONPARTICIPANTS]** Were there specific aspects of the program that were particularly helpful in your decision-making process?

Project Successes and Challenges [PARTICIPANTS ONLY]

17. What aspects of the program worked well for your project? [If necessary, probe on staff support, plan review, technical assistance, incentives, other.]
18. Can you share any specific successes or positive experiences you had during the project?
19. Can you describe any barriers or challenges you experienced while participating in the program?
20. Were there any delays during your project related to the energy efficiency measures? If so, what were the causes? How did the delay impact your project's timeline, budget, workflow, etc.?
21. What additional support or resources would have made your experience better?
22. On a scale of 1 – 10, where 10 is extremely satisfied, how satisfied were you with: [probe on ratings less than 7]
    a. The financial incentive from the Rhode Island Energy program?
    b. Any technical assistance you received from the program?
    c. The communication and support you received from program staff and vendors?
    d. The final outcomes in terms of energy savings and value?
23. Regarding the process of participating in the Rhode Island Energy program, are there steps that you would like to see simplified or streamlined?

Closing Questions [PARTICIPANTS ONLY]

24. At this time, Rhode Island Energy is unable to provide incentives for heat pumps or other efficiency measures that result in fuel switching. If they were to begin offering such electrification measures, would your organization be interested?
25. Would you consider participating in the program again? Why or why not?
26. What improvements would you suggest for the program to better meet your needs?

Additional Questions for Nonparticipants

27. At the time of this building project, was your organization aware of the Rhode Island Energy New Construction program?

28. **[If yes to Q26]** Did your organization consider participating in the program? [If yes] Why did the project ultimately not go through the program? [If no] What prevented your organization from considering the program?
29. **[If no to Q26]** In light of the description of the program that I shared earlier in the interview, do you think your organization would be interested in participating in the program for a future project? Why or why not?
30. At what stage of a future project would your organization need to become aware of the program to make use of it?
31. What kind of assistance would interest your organization?
32. At this time, Rhode Island Energy is unable to provide incentives for heat pumps or other efficiency measures that result in fuel switching. If they were to begin offering such electrification measures, would your organization be interested?
33. How could the program best reach out to decision makers at your organization about future building projects?

Conclusion

- Thank you again for your time and insights.
- As a reminder, you can expect your incentive to arrive via email in the next two weeks. Can you please confirm which email address we should send this to?

Appendix D. Design Team Interview Guide

To: Rhode Island Energy

From: Beth Delahaij, NMR Group

Date: June 13, 2024

Re: Process Evaluation of C&I New Construction Program – Task 4 Design Team IDI Guide

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Background and Purpose

The purpose of these interviews is to learn from six architecture and/or engineering firms that have served as design teams for new construction and major renovation projects in Rhode Island. The interviews will contribute to the following research objectives:

1 | Investigate ways to engage customers and design teams early in the project development process, helping the program to drive deeper savings.
2 | Identify ways to better assist customers and design teams with decision-making related to energy efficiency.
3 | Understand why some design teams do not routinely work with the program and explore ways to get them engaged.
6 | Identify additional opportunities to streamline the process and better align it with customer and developer needs and timelines, particularly for customers that are not interested in substantial design changes.

Introduction

- Thanks for taking the time to meet today to talk about your organization's perspectives on the Rhode Island Energy New Construction Program.
- This interview will help Rhode Island Energy understand the perspectives of design teams and improve the program for future customers.
- Let's do some quick introductions before we get started: [Name, organization, role in the study or organization]
- As a reminder, you will receive an incentive ($200) to thank you for your time. You can expect to receive the incentive via email in the next two weeks.
- Everything you share with us will be treated as confidential; the information will be summarized and anonymized across the various interviews we conduct. Nothing you share will be attributed to you or your organization.

Introductory Questions

1. Can you describe your role and your firm's role in new construction and major renovation projects?
2. Can you describe your firm's typical role in decisions related to energy efficiency for client projects?

3. How familiar are you with Rhode Island Energy's New Construction Program and its offerings?
4. How many new construction and major renovation projects have you and/or others from your firm worked on in Rhode Island in the past three years?
    a. Of those, how many participated in the Rhode Island Energy New Construction Program?
5. How frequently do you recommend that your clients participate in the New Construction Program? Why is that?

Decision-Making

We're interested in understanding how decisions related to energy performance are made during the development of a new construction or renovation project.

6. During a project, what kinds of decisions tend to get made early on that affect the ultimate energy performance of the project? At what stage(s) are these decisions made?
7. At what stage of a project would your organization need to become aware of the program to make use of it? When is the best time for the program to engage?
8. Over the course of a project, what are the key project milestones in terms of decision-making related to energy?
9. Typically, who are the key decision-makers in the client organization and on the design team?
10. In your experience, how does decision-making differ across market segments or industries (e.g., schools, higher education, offices, industrial)?
11. What ideas do you have for engaging different market segments and project types in a timely and effective manner?
12. How can the Rhode Island Energy New Construction Program most effectively influence decision-making in favor of energy efficiency?
13. At this time, Rhode Island Energy is unable to provide incentives for heat pumps or other efficiency measures that result in fuel switching. If they were to start offering such electrification measures, what percentage of your clients do you think would be interested?

[IF Q4a = zero and/or Q5 = "NEVER," SKIP TO NONPARTICIPATING FIRMS SECTION (Q24).]

Program Assistance

14. At what project stage do you typically recommend your clients engage with the program?
15. Which aspects of the program do you find most valuable?
16. Can you share any specific successes or positive experiences you had during the program participation?
17. Are there specific aspects of the program that are particularly helpful in the decision-making process?

18. How often are the provided incentives sufficient to cover the difference in the cost of the efficient equipment or design elements relative to standard practice? Are there other additional costs that aren't covered by the incentives?
19. How satisfied are you with the communication and support from program staff?
20. How often do your clients express a reluctance to participate in the program? How do you respond if they express reluctance?
21. If you have clients that participate in similar programs in other states, are there notable differences between those programs and Rhode Island Energy's programs?

Challenges and Barriers

22. Which aspects of the program do you find least valuable or problematic?
23. Can you share any specific challenges you have encountered during program participation?
24. How do these challenging aspects of the program influence your inclination to recommend that your clients participate in the program?
25. How could the program address these discouraging factors to get you more engaged?

[IF Q4a > 0 and/or Q5 ≠ "NEVER," SKIP TO CLOSING QUESTIONS SECTION (Q29).]

Nonparticipating Firms

26. What factors have led your firm to not participate in the program? Can you describe any negative experiences you have had with the program (or with similar programs in other states) in the past?
27. Do you discourage your clients from participating in the program if they express interest? [If yes] Why is that?
28. How can the program make contact with firms such as yours (that is, firms that are skeptical or have had negative experiences in the past) and demonstrate its value?
29. What would encourage your firm to consider participating in the program (again [if prior participant])?
30. If the program made the changes you suggest, would you begin recommending that your clients participate? If not, why is that?

Closing Questions

31. Finally, are there any additional program features, resources, or support that would encourage your firm to participate in the program (more regularly)?

Conclusion

- Thank you again for your time and insights.
- As a reminder, you can expect your incentive to arrive via email in the next two weeks. Can you please confirm which email address we should send this to?

Appendix E. Literature Review Matrix

This appendix details the literature review findings.

Program	Project Types	Fuel and End Uses	Electrification Component	Technical Assistance	Incentive Levels	Other Program Elements	Links
Bonneville Power Administration (BPA)	Commercial sector new buildings.	End uses include building envelope, HVAC, lighting, appliances, and water heating.	Fuel switching permitted and the program has an electrification focus.	Not specified; focus is on equipment rebates and direct incentives.	The BPA offers commercial HVAC advanced rooftop unit control at $120/ton retrofit lite and $250/ton retrofit full. Also, connected thermostat at $150/initial install, and $50/verification, ductless heat pump retrofit and upgrade at $1000/ton retrofit and $300/ton upgrade, air source heat pump retrofit and upgrade at $700/ton retrofit and $150/ton upgrade, midstream lighting at $1-$150/lamp, commercial insulation at $0.80-$2.80/sqrt ft, and windows at $9-$18/sqrt ft.		Energy Efficiency Implementation Manual 2024-2025 UES Measures | Regional Technical Forum
CA CEMS - Custom Incentives	Custom incentives for larger, complex energy efficiency projects in commercial and industrial buildings.	Electricity and natural gas fuel. End uses include non-standard equipment installations, larger HVAC systems, and custom energy management solutions.	Supports electrification through customized energy efficiency projects. No explicit fuel switching incentives mentioned.	Yes, the program offers technical assistance. Engineering review required and optional assistance in project planning and implementation.	Incentive amounts are variable based on project size and energy savings with larger projects and energy-efficient installations. Custom incentives typically at 70% of project costs.	Tailored solutions for complex energy efficiency projects, subject to engineering review.	Commercial Business Incentives - CEMS Program CEMS Rebate Catalog

CA CEMS - Fast-Track Incentives	Fast-track incentives for quick energy efficiency upgrades in commercial and industrial buildings.	Electricity and natural gas fuel. End uses include lighting, HVAC, refrigeration, vending machine controllers and other equipment.	Emphasizes electrification through specific measures such as VFD retrofits and efficient motors. No explicit fuel switching incentives mentioned.	Limited technical assistance is implied; the focus is on quick approval and implementation of specific measures.	CA CEMS offers incentives for ozone laundry system at $90.00 per pound of laundry capacity, vending and beverage merchandise controlled (double-door) at $38.00 per unit, VFD retrofit for air compressor at $10.00-$20.00 per rated-HP and bare suction line insulation (walk-in cooler) at $1.29 per linear ft.	Quick approval process, focused on specific energy efficiency upgrades.	Commercial Business Incentives - CEMS Program CEMS Rebate Catalog
Consolidated Edison (Con ED)	High performance buildings.	End uses of heating electrification, building envelope, and waste heat recovery.	Fuel switching permitted and the program has an electrification focus.	Yes, this program offers technical assistance.	Con ED offers incentives for lighting fixture replacement at $14-$125, lighting retrofit replacement at $14-$105, refrigerated display case lighting 4ft at $20, and 5ft at $25. Incentives include lighting bi-level fixtures at $35-$195, unitary HVAC at $75/ton, packaged terminal AC at $150/ton, single-package vertical air conditioner at $0.30/kWh saved, high efficiency natural gas furnace with thermal efficiency greater than 80% at $1,500-$5,000, natural gas hot water boiler at $0-15,000, high efficiency natural gas hot stream boiler at $0-$10,000. Also, incentives for chillers at $0.30/kWh, chiller tune-up at $8/Therm, boiler tune-up at $2/Therm, EC motors-HVAC at $0.35/kWh, air compressor at $250/HP and waste heat recovery electric at $0.45/kWh.	Benefits to eligible neighborhoods like Brooklyn and Queens. Various other custom incentives for projects.	The Consolidated Edison Commercial and Industrial (C&I) Energy Efficiency Program Manual 2024
Energize CT - Pathway 1: Zero Net Energy (ZNE)/Deep Energy Savings	High-performance buildings and net zero.	End uses include construction, heat pump, and grid-interactive efficient building incentives.	Fuel switching not permitted.	Yes, this program offers technical assistance up to $10,000.	Construction incentives for Tier 1 at $2.50/SF and Tier 2 at $2.00/SF. Post Occupancy at $1.50/SF, design team at $0.20/SF, energy modeling services up to $12,000, verification incentive at 50% of fee up to $10,000. Additional incentives for heat pump adder for air source at $640/ton, variable refrigerant flow at $1,000/ton, and ground source at $4,000/ton. Grid-interactive efficient building	Additional incentives if one-year post-occupancy aligns with target EUI, also optional Net Zero and Passive House	New Construction and Major Renovation Energy Efficiency Programs PATH 1: NET ZERO/DEEP ENERGY SAVINGS

					incentives also up to $3,000 per program for successful enrollment in demand response or battery storage programs.	certification incentives.	
Energize CT - Pathway 2: Whole Buildings Energy Use Intensity (EUI) Reduction	EUI target based.	End uses include construction, heat pump, and grid-interactive efficient building incentives.	Fuel switching permitted and the program has an electrification focus.	Yes, this program offers technical assistance up to $20,000.	Incentives include 25% and greater site EUI reduction at $2.25/SF and 10-24.9% site EUI reduction at $0.75-$1.75/SF. A verification incentive at 50% of fee up to $10,000 and additional incentives for heat pump adder for air source at $640/ton, variable refrigerant flow at $1,000/ton, and ground source at $4,000/ton. Grid-interactive efficient building incentives also up to $3,000 per program for successful enrollment in demand response or battery storage programs.	Design team incentives up to $15,000 for integrated, creative design to reach very low EUIs.	New Construction and Major Renovation Energy Efficiency Programs PATH 2: WHOLE BUILDING EUI REDUCTION
Energize CT - Pathway 3: High Performance Buildings	High-performance buildings and energy conservation measures (ECMs).	Electric and natural gas and end uses include building envelope, lighting, HVAC, energy recovery, and ventilation.	Fuel switching permitted and the program has an electrification focus.	Yes, this program offers technical assistance.	Incentives for building envelope at $0.40/kWh or $1,000/summer peak kW, lighting & networked lighting controls at $0.40/kWh or $1,000/summer peak kW, energy recovery at $0.40/kWh or $1,000/summer peak kW and demand control ventilation at $0.40/kWh or $1,000/summer peak kW. Also, incentives for non-ground source water source heat pumps at $0.40/kWh or $1,000/summer peak kW.	Offers incentives based on demand savings as well as energy.	New Construction and Major Renovation Energy Efficiency Programs PATH 3: HIGH PERFORMANCE BUILDINGS Path 3 & 4 Incentive Rates
Energize CT - Pathway 4: Systems	Custom energy-efficient equipment and systems late in design process.	Electric and natural gas and end uses building envelope including lighting, HVAC, energy recovery, and ventilation.	Fuel switching permitted and the program has an electrification focus.	Yes, this program offers technical assistance.	Support provided for prescriptive and custom-efficient equipment applications. Incentives for building envelope at $0.40/kWh or $1,000/summer peak kW, lighting & networked lighting controls at $0.40/kWh or $1,000/summer peak kW, energy recovery at $0.40/kWh or $1,000/summer peak kW and demand control ventilation at $0.40/kWh or $1,000/summer peak kW. Also, incentives for	100% construction document completion eligible for heat pump incentives at 50% stated rates.	New Construction and Major Renovation Energy Efficiency Programs PATH 4: SYSTEMS Path 3 & 4 Incentive Rates

					non-ground source water source heat pumps at $0.40/kWh or $1,000/summer peak kW.		
Energy Trust of Oregon - Custom Incentives	Custom energy efficiency projects, high-performance buildings, solar installation, battery storage, and tenant improvements.	Electric, solar PV, battery storage and end uses including HVAC, lighting, building envelope, renewable energy, solar-ready design, and battery storage installation.	Fuel switching permitted and the program has a strong electrification focus of solar and battery storage measures.	Yes, technical assistance is provided.	Assistance includes early design up to $2,500, energy modeling at 60% of approved costs and up to $40,000, design review at 50% cost share, and up to $15,000, metering and certification at 50% of approved cost, and up to $20,000, battery storage development up to $5,000, and solar development up to $2,500. Modeling savings for above-code EUI at $0.25/kWh and $0.80/Therm and modeling savings for Path to Net Zero EUI at $0.40/kWh and $1.20/therm. Incentives for solar ready design, solar installation, and battery storage installation up to $15,000 each.	Path to Net Zero support, whole building comprehensive solar readiness and integration.	New Buildings: Individual Incentives Path to Net Zero Program Application
Focus on Energy (WI)	High performance buildings.	End uses including heating, cooling, ventilation, plumbing, building envelope, lighting, commercial refrigeration, compressed air and vacuum and steam systems.	Fuel switching permitted and the program has an electrification focus.	Yes, technical assistance is provided.	Energy design assistance at $0.075/kWh and $0.87/Therm, express EDA at $0.075/kWh and $0.87/Therm, energy design review at $0.075/kWh and $0.87/Therm, energy efficiency custom incentive at $0.05/kWh, $100/peak kW reduced, and $0.95/Therm. Also, incentives for low payback custom incentive at $0.02/kWh, $0.20/Therm and renewable energy custom incentives at $0.10/kWh, $100/peak kW reduced or generated, $1.25/Therm saved or generated. Incentives for hot water boilers at $5.00/input MBh, high turndown burners at $12.00/boiler HP, furnace at $100-$200/furnace, infrared heater at a$3.00/MBh, unit heater at $1.25/MBh, AC split and packaged systems at $30.00-$85.00/A/C unit and energy recovery ventilator at $0.50-$0.70/CFM.	Renewable energy savings from technologies (solar thermal, biogas, biomass, wind) are higher than energy efficiency upgrades.	2024 SUMMARY OF SERVICES AND INCENTIVES FOR BUSINESSES Custom Application Prescriptive Rebates

NH SAVES - Performance Buildings Pathway	Energy efficiency upgrades for commercial and industrial buildings with a focus on performance.	Electricity and natural gas fuels. End uses include building envelope, HVAC, lighting, water heating, and process equipment.	Supports electrification through energy-efficient equipment installations. No explicit fuel switching incentives mentioned.	Yes, the program offers technical assistance, covering up to a certain percentage of technical assistance fees.	Incentive levels are provided based on energy savings with lighting at $0.40/kWh, unitary HVAC (RTU, AC, HP, VRF) at $0.40/kWh, high efficiency chillers at $0.40/kWh and custom-building envelope incentives.	No-cost technical assistance, with project financing options available.	New Construction High Performance Buildings INCENTIVES AND SERVICES NATURAL GAS Commercial New Construction or Major Renovation
NJ New Construction Energy Efficiency - Single Measure: SmartStart Buildings Program	Single-measure, prescriptive energy efficiency projects.	Electricity and natural gas and end use including prescriptive and custom incentives for individual building systems such as HVAC, lighting, and refrigeration.	Supports electrification through energy-efficient equipment installations. No explicit fuel switching incentives mentioned.	Yes, the program offers technical assistance during the design and installation phases. Customers may need to cover some of the costs; specific details are not provided.	Fixed dollar amounts for popular technologies with established savings. Prescriptive and custom measures include incentive rates based on equipment and energy savings.	Focus on individual systems, with options for both prescriptive and custom incentives.	SMARTSTART BUILDINGS PROGRAM New Construction Energy Efficiency | NJ OCE Web Site
NJ Pay for Performance (P4P) Program	Existing and new construction high-performance buildings.	End uses include heating, cooling, ventilation, domestic hot water, and building envelopes.	Fuel switching permitted and the program has an electrification focus. Project must have 50% of source energy savings from investor-owned electricity and/or natural gas.	Partners provide technical services as an "energy expert".	Incentives include an energy reduction plan at $0.15/sf, instillation of recommended measures for electric at $0.09 based on 15% savings, and $0.005 for each % over 15% with $0.11 maximum and gas at $0.90 based on 15% savings, and $0.05 for each % over 15% with a $1.25 maximum. Enhanced incentives in installation of recommended measures and post-construction benchmarking report for electric savings additional at $0.09-$0.11/projected kWh saved, and gas savings additional at $0.90-$1.25/projected kWh saved.	Comprehensive, long-term approach to incorporating energy efficiency. Various incentives offered for different project types.	P4P Program Guide

NYSERDA: Early Design Support Partners and New Construction	Carbon natural net or zero performance at facility level new and old construction buildings.	End uses include all-electric heating and cooling, renewable energy, storage, and electric vehicle charging infrastructure.	Fuel switching not permitted.	Yes, technical assistance team provided	NYSERDA offers incentives at $1.50/sqrt ft.	Variety of program options and competition for carbon neutral net or zero energy performance.	New Construction Early Design Support Partners Building Cleaner Communities Competition Regional Economic Development Councils
Pacific Power - Waste Heat to Power	Waste heat recovery, and custom energy efficiency projects.	Electricity fuel only. End uses include non-lighting efficiency upgrades, and waste heat to power projects.	Supports electrification through waste heat to power projects. No explicit fuel switching incentives mentioned.	Yes, the program offers technical assistance for energy analysis and savings verification. No specific cost-sharing details available.	Incentives for non-lighting measures at $0.18/kWh for energy savings. Waste heat to power projects offer custom incentives based on savings up to 70% of project cost.	Waste heat to power incentives, and Clean Buildings Accelerator program support.	Washington Non-Residential Energy Efficiency Custom Analysis
Program: Efficiency Vermont - Equipment Approach	Equipment-focused energy efficiency upgrades in commercial and industrial projects.	Electricity and natural gas fuel. End uses include energy-efficient HVAC systems, lighting, and building envelope upgrades.	Supports electrification through energy-efficient equipment upgrades. No explicit fuel switching incentives mentioned.	Yes, the program offers technical assistance. No specific cost-sharing details available.	Incentives are typically aligned with Vermont's energy code, supporting 5%-10% energy savings.	Neutral, third-party advice on Vermont's energy code compliance.	Commercial New Construction Project Support
Program: Efficiency Vermont - High Performance	Comprehensive building design and system optimization for high-performance	Electricity and natural gas fuel. End uses include building envelope, HVAC systems, lighting, and energy management systems.	Supports electrification through high-performance systems. No explicit fuel switching	Yes, the program offers technical assistance. Provides incentives for design charrettes and energy	Supports 10-20% energy savings with financial incentives provided for meeting high-performance standards.	Efficiency Vermont certification for high-performance buildings.	Commercial New Construction Project Support

	energy savings.		incentives mentioned.	modeling.			
Program: Efficiency Vermont - Net Zero	Net-zero energy buildings that produce as much energy as they consume through on-site renewable energy.	Fuel types include electricity, solar energy, and other renewable energy sources. End uses include building envelope, renewable energy systems, energy storage, and HVAC systems.	Strong emphasis on electrification and renewable energy integration. No explicit fuel switching incentives mentioned.	Yes, the program offers technical assistance. Incentives provided for energy charrettes, energy simulation, and commissioning.	Supports 30-45% energy savings with additional incentives for net-zero certification.	Efficiency Vermont certification for net-zero energy buildings, higher resale values, and zero electricity bills.	Commercial New Construction Project Support
Program: NJ New Construction Energy Efficiency - Whole Building/Comprehensive	Whole building design for commercial, industrial, and multifamily buildings.	Electricity and natural gas fuel. End uses include energy savings beyond code compliance for lighting, HVAC, and building envelope.	Emphasizes electrification through high-performance design. No explicit fuel switching incentives mentioned.	Yes, the program offers technical assistance for design support, energy modeling, and installation assistance. Customers may be responsible for a portion of the costs; specific details are not provided.	Incentives are based on energy savings, with variable rates depending on the extent of energy reduction.	Offers up to $50,000 in incentives for solar PV, operations, and maintenance tune-ups.	New Construction Energy Efficiency | NJ OCE Web Site NEW CONSTRUCTION
Rhode Island Energy EUI/ZNE Pathway	EUI-based custom comprehensive.	Electric and gas, and all end uses	Fuel switching not permitted.	Energy modeling required and customer cost-share services of a net zero/low EUI expert (75% of fee up to $25,000 cost share).	Tier 1 for Net Zero Level at $2.00/sf, paid at end of construction and Tier 2 at $1.50/sf, paid at end of construction. Also, incentives for 1 year post occupancy at $1.50/sf and EUI design incentives calculated at $0.20/sf and capped at $15,000, but not less than $8,000.	Net Zero consultant; Additional incentives if one-year post-occupancy aligns with target EUI. Also, optional Net Zero certification incentives	New Construction & Major Renovations - Path 1 Application

Rhode Island Energy Streamlined / Systems Pathway	Non-EUI whole-building projects, partial buildings, heavy process loads and discrete measures.	End uses include building envelope, lighting controls, unitary HVAC (RTU, AC), high efficiency chillers, energy recovery DCV, VF kitchen hood, DHW heaters, low flow DHW fixtures, air source heat pumps, VRF, and GSHP.	Fuel switching not permitted.	Optional assistance in which customer pays 50% of the cost of technical assistance fees that exceed a certain dollar amount (depending on project phase).	Incentive levels at $0.35/kWh and $2.00/therm.		New Construction & Major Renovations - Path 2 Application
SoCalGas - Business Equipment Rebates	Equipment rebates for commercial and industrial customers.	Natural gas fuel. End uses include boilers, water heaters, steam traps, and other gas-fired equipment.	Focus on natural gas efficiency; no fuel switching, or electrification incentives mentioned.	Not specified; focus is on equipment rebates and direct incentives.	Incentives for commercial boiler at $5-$9/MBtuh, gas modulating controller up to $750/kit unit, steam trap for commercial customers at $100/unit.	Instant rebates at the register for qualifying equipment, with financing options available.	Business Equipment Rebates | SoCalGas