2022 Commercial and Industrial Energy Efficiency Solutions and Programs

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1. Overview

The Commercial and Industrial (C&I) programs consistently offer highly cost-efficient savings. The Company is continuously evaluating and responding to customer needs and market dynamics to develop enhancements that secure deeper, more comprehensive savings while strategically evolving program designs to drive market transformation across multiple end uses.

The C&I sector encompasses a diverse and complex set of customers. National Grid is focused on a Market Sector Approach for commercial and industrial programs. This approach allows the Company to address customer needs that are shaped directly by the industry and geographies in which the customers operate, and on strategic and commercial pressures specific to the industry or sector, resulting in customized solutions that fit customers' needs and increase participation in energy efficiency.

The detailed program descriptions provided in each Annual Plan provide snapshots and evidence of how programs are continuously evolving, building from one plan year to the next. They translate high level strategies into specific actions and activities that secure savings for customers; help to contextualize specific program innovations and enhancements described more briefly in the Annual Plan; and demonstrate how key strategies cross multiple program designs and end use targets.

The detail in this attachment is designed to allow stakeholders, the Public Utilities Commissioners and staff, and other interested parties to delve deeply into and fully explore the complex interplay between specific customer and building types, program implementation and delivery, incentive design, and high efficiency technologies.

What to look for in 2022

While the Company anticipates that lighting will continue to constitute the largest single source of savings in the C&I programs, its efforts are focused on driving non-lighting opportunities and program enhancements that encourage deeper, more comprehensive measure adoption in every customer class. The specific priority measures vary by customer but are reflective of opportunities highlighted in the Market Potential Study, particularly encouraging adoption and improved operation of heating, cooling, and ventilation (HVAC) technologies. The innovations and enhancements also reflect many ideas and insights that have evolved from the close collaboration with the EERMC and its consulting team, OER, the Division, and our vendors, as well as customer feedback.

The Company is expanding its focus on specific market segments to engage customers with tailored approaches to generate more comprehensive measure adoption (Telecommunications initiative launched in 2021), enhancements that make participation easier (such as the

Equipment and Systems Performance Optimization), provide attractive incentives for specific customer (especially Small Business), and enhancements that reduce barriers to comprehensive measure adoption (e.g. Whole Building Streamlined pathway in New Construction).

Equity objectives have been applied across the commercial portfolio, resulting in program design shifts and investment prioritization to ensure our small businesses customers are given access to program opportunities. Likewise, workforce development objectives have been set to help us succeed in solidifying the workforce infrastructure that can deliver on the vision of transitioning to efficient technologies while also building robust jobs and economic development opportunities for Rhode Islanders. The plan includes an effort to enhance the capabilities of the workforce. This includes ensuring vendors participating in the programs receive proper training from manufacturers or others in the technologies they are implementing, as well as advanced certifications where applicable. Furthermore, to complement this effort, the Company will sponsor targeted trainings to enhance the skills of the existing workforce in supporting high-performance buildings with advanced technologies, including trainings on advanced controls for HVAC and lighting.

Commercial & Industrial Programs

There are five C&I energy efficiency programs.

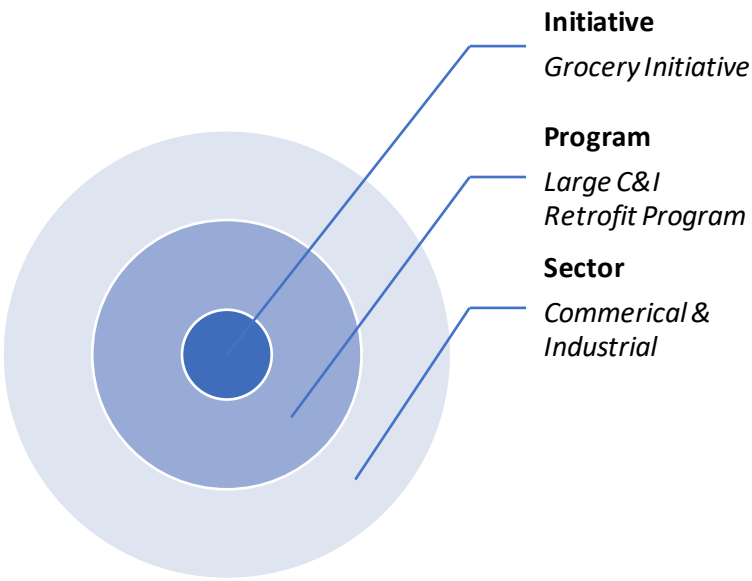
Table 1. Commercial and Industrial Programs

Large Commercial and Industrial New Construction
Large Commercial Retrofit
Small Business Direct Install
Connected Solutions (Active Demand Response)
C&I Multifamily Program

All C&I customers are eligible to participate in the Large Commercial and Industrial New Construction Program and the Large Commercial Retrofit Program. The Small Business Direct Install (SMB/DI) Program, however, is restricted to customers that consume less than 1,000,000 kWh per year. Larger and more complicated measures not offered by the SMB/DI vendor can be accessed by small business customers through the New Construction or Retrofit Programs.

Within a given program, there may be one or more initiatives that offer a targeted approach or tailored delivery design to more effectively and efficiently attract and secure savings from target customers. An initiative is defined as a go-to-market strategy within a Program that promotes a subset of measures or services within that program and/or targets a certain segment of customers. Examples include the Grocery Initiative and Industrial Initiatives within the Large Commercial and Industrial Retrofit Program. Anticipated savings, budgets, and participants for each initiative are included in the program-level totals.

Figure 1. Relationship between Programs and Initiatives



This attachment provides detailed descriptions of C&I energy efficiency and active demand response programs and initiatives, including detail on the target market (customer/building types), eligibility requirements, offers, implementation and delivery, and changes for 2022, along with the rationale for changes, in a standardized table format.

Enabling strategies for efficient delivery, better customer experience, and participation in energy efficiency programs are covered in the Finance and Marketing sections. Workforce development is addressed in the main text and covers initiatives for training, education, and awareness. A list of measures and incentives can be found in Section 0. The Company will continue to engage in pilots, demonstrations, and assessments; please refer to Attachment 8 for a detailed scope and list for each pilot, demonstration, and assessment proposed for the 2022 Energy Efficiency Plan.

Program Description Structure

In order to streamline PUC, stakeholder, and reader access to the most pertinent program information in the 2022 Annual Plan, the Company has adopted the following structure for each of the programs and program initiatives:

Eligibility Criteria	This section describes which customers and/or building types are eligible for participation in the program or initiatives.
Offerings	This section describes the offers available to customers under the program or initiative. It can include technical assistance, incentives,

	design support, verification services and financial offerings. This section also describes the various pathways by which a customer or building can participate in a program or initiative.
Implementation and Delivery	This section describes the process by which the Company engages the customer with energy efficiency programs and offerings.
Customer Feedback	Customer feedback can be received by the Company in various ways; via an implementation vendor, direct feedback from the customer, via surveys conducted by the Company.
Changes for 2022	The section captures the changes proposed in the year stated.
Rationale for Changes	Captures the rationale for the changes proposed in the planning year.
Proposed Upcoming Evaluations	Evaluation information can be found in this section at the program level. Initiatives like the Grocery Initiative or the Industrial Initiative are typically not evaluated. The measures included in these initiatives are evaluated as part of larger evaluations for the programs. Hence at the initiative-level tables you will not see this "Proposed Upcoming Evaluations" section.
Notes	Additional notes related to the program, customer, offerings etc.

Financial Mechanisms Structure

Customer type	This section highlights the customer consumption in kWh or customer type for which the mechanism is best suited
Loan size	Shows maximum loan size
Maximum Tenor	Shows the maximum length of time for which a customer can borrow funds
Loan Volume	Shows the dollar volume of loans outstanding or the range of funds borrowed in the past years or both
Benefits to customer	Describes the benefits of a mechanism to a customer
Limitations	Describes the limitations of a mechanism to a customer
2022 Actions	This area is included for EBF and C-PACE as the Company is working with RIIB and others on these mechanisms

More information	This area describes where more information can be found on the mechanism such as numeric tables. This area may also include additional information such as justifications for OBR fund injections (gas) or OBR rightsizing (electric)
Relevant notes	This area contains notes and will vary from mechanism

Electric Program Goals, Metrics, Budgets, Participation for 2022

Fuel	Lifetime MWh (Electric)	Annual MWh (Electric)	Annual Passive Demand Reduction kW (Electric)	Total Net Lifetime MMBtu (Electric Gas, Oil, Propane[1])	Budget ($000)	Participation[2]
Electric						

Gas Program Goals, Metrics, Budgets, Participation for 2022

	Lifetime MMBtu (Gas)	Annual MMBtu (Gas)	Budget ($000)	Participation
Gas				

The below figures compare the distribution of the C&I sector's energy savings goals when measured in annual savings compared to lifetime savings. The lifetime metric captures the long-term energy savings whereas the annual metric shows the first year savings only.

[1] For a breakdown of program level energy savings goals see Attachment 5, table E6-A and Attachment 6, table G6-A for more details.

[2] For information on the metric used to measure participation by program, please reference the main text, section 4.5

Figure 2. 2022 Planned Distribution of Lifetime MWh Goals for C&I Electric Sector

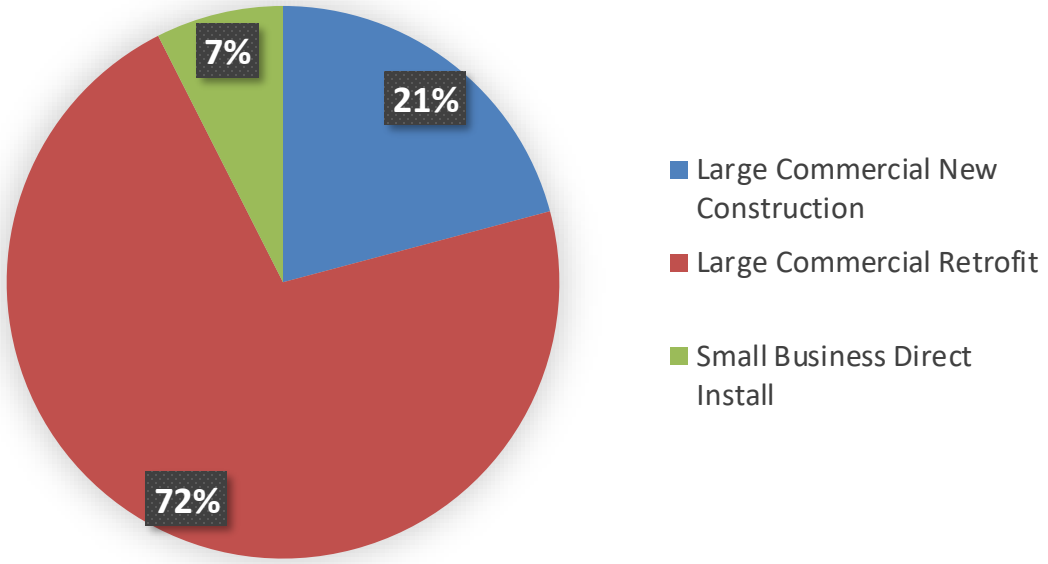


Figure 3. 2022 Planned Distribution of Annual MWh Goals for C&I Electric Sector

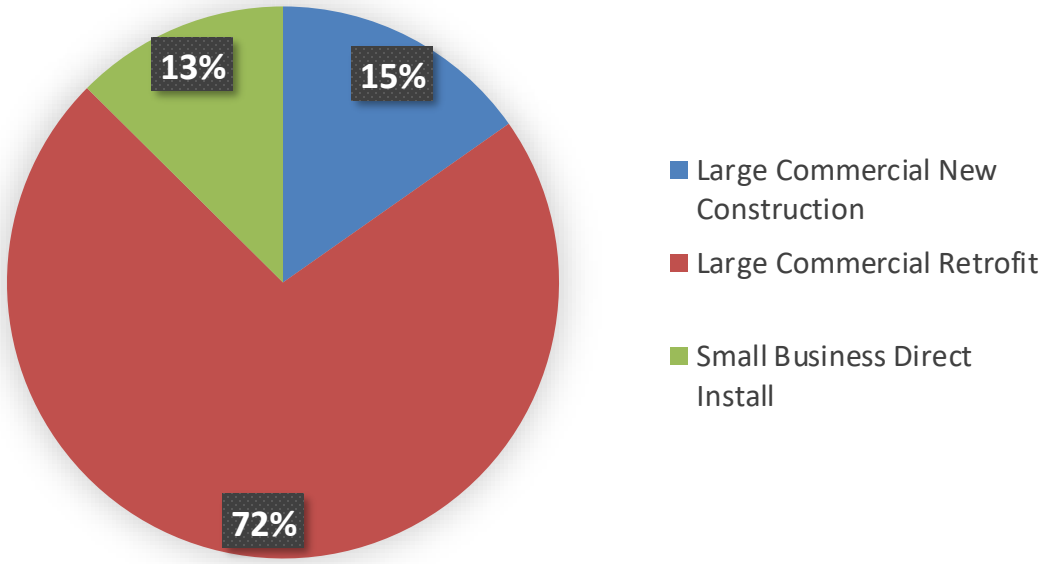


Figure 4. 2022 Planned Distribution of Lifetime MMBtu Goals for C&I Gas Sector

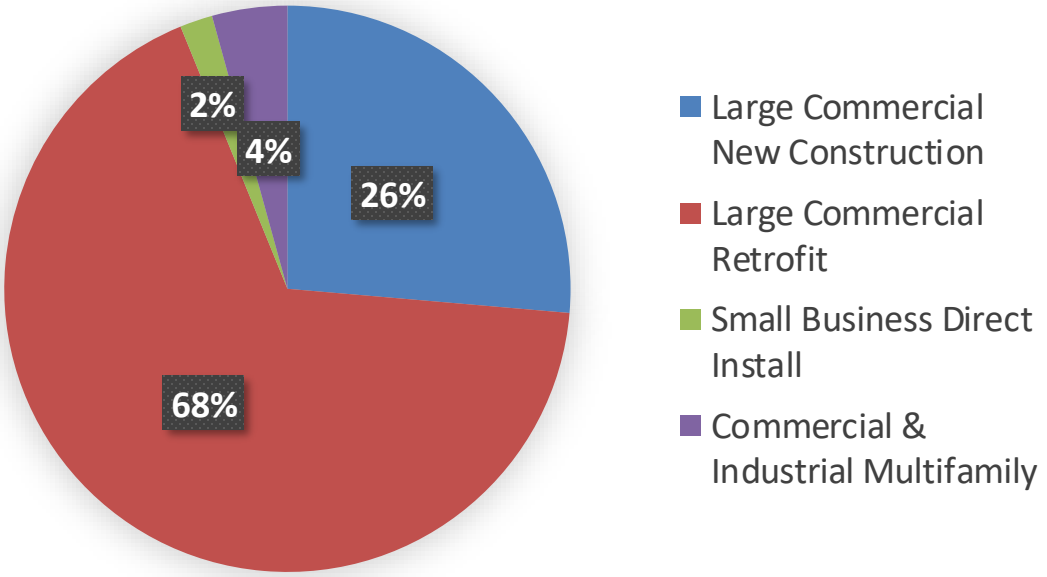
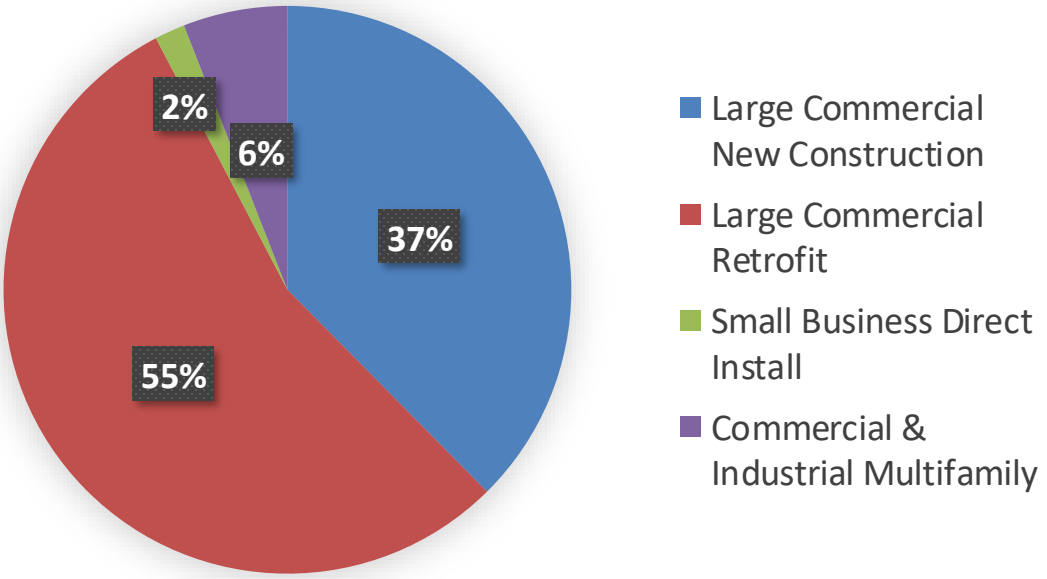


Figure 5. 2022 Planned Distribution of Annual MMBtu Goals for C&I Gas Sector



2. Large Commercial and Industrial New Construction Program

Eligibility Criteria	The New Construction Program is divided into two main categories to address the two primary new construction target markets: those

	pursuing ground-up new construction and major renovations, and those investing in new equipment and major systems upgrades. **New Buildings, Additions, Major Renovations and Tenant Fit-Ups** This is specifically for projects that are ground up new construction or major renovations, all of which traditionally involve some level of design and are governed by code. **End-of-Life Replacements** Typically, there is no design component to these projects. Customers purchasing new energy-consuming equipment or replacing equipment that has reached the end of its useful life are incentivized to purchase and install energy efficient equipment. Customers are encouraged to make efficient choices with every category of equipment purchase. Baseline energy use is considered to be the energy code. Savings are calculated using the baseline. Where equipment has reached the end of its life, savings from new measures are calculated not from the old equipment, but assuming all new equipment against the current codes and standards baselines. This works the same way as the "systems approach" described below, whether through prescriptive or custom pathways.
Offerings	**New Buildings, Additions, Major Renovations and Tenant Fit-Ups** The services and incentives offered are designed to promote and support high performance building design, equipment selection, and building operation. This program offers both technical assistance and financial incentives based on projected energy savings performance to incentivize building beyond the current RI program energy baseline. Technical assistance ranges from simple plan review and efficiency upgrade recommendations to complete technical reviews. Incentives are available for building owners, design teams, post occupancy verification, and Zero Net Energy certification and verification. The Large Commercial and Industrial New Construction Program offers four pathways for ground up new construction or major renovation projects which were introduced in 2021. • **Path 1: Zero Net Energy Ready** • **Path 2: Whole Building Energy Use Intensity Reduction** These two paths are based on achieving energy use intensity (EUI) project goals and are suitable for projects that engage early in the schematic design process.

- **Path 3: The Whole Building Streamlined**
- **Path 4: Systems Approach**

These pathways support projects that are in the design development stage and incorporate energy efficient equipment and energy conservation measures (ECMs).

Table 2. Requirements and Eligibility for Large Commercial and Industrial New Construction Pathways

Zero Net Energy Ready	Achieve 25 EUI or lower	Over 20,000 Square Feet
Whole Building Energy Use Intensity	Achieve 10% better than RI Baseline EUI	Over 50,000 Square Feet
Whole Building Streamlined	Custom and Prescriptive ECM measures	20,000 to 100,000 Square Feet
Systems Approach	Prescriptive rebates for installing energy efficient equipment and measures	No Square Foot requirement

Zero Net Energy Ready: This path provides building owners and design teams with energy efficiency expertise and financial incentives to help achieve a very low EUI and Zero Net Energy Ready projects. This path focuses on EUI outcomes during design modeling and in post occupancy. To qualify, the planned building must include a minimum of 20,000 square feet of heated and cooled spaces, commit to achieving an EUI of 25 or less, engage National Grid before 50% Schematic Design, and commit to commission the completed building. An exception to the EUI of 25 or less requirement may be sought based on the type of building or hours of operation.

Whole Building Energy Use Intensity Reduction: This path is based on achieving EUI project goals and is suitable for projects that engage before the end of design development. Buildings over 50,000 square feet (mid- to large-size building) are eligible. This pathway provides energy efficiency expertise to building owners and design teams early in the design process. Technical assistance supports setting aggressive EUI targets and providing financial incentives to meet the EUI goals. To be eligible for incentives in this pathway, projects need to achieve a

	minimum 10% EUI reduction from the RI baseline. The RI baseline for 2022 will be based on the current RI building code. **Whole Building Streamlined**: This pathway provides design teams and owners energy efficient expertise in selecting the most cost-effective energy conservation measures for small- to mid-sized buildings that are early in project design. This pathway is applicable for projects 20,000 square feet to 100,000 square feet. Incentives are provided based on savings achieved by the energy saving measures implemented (Custom and Prescriptive measures). A whole building spreadsheet analysis tool is used to estimate energy savings and incentives early in the project. **Systems Approach**: This pathway provides incentives to building owners for incorporating energy efficient equipment into projects under 20,000 square feet and for major renovation projects that do not include the entire building (e.g. tenant fit outs).
Implementation and Delivery	**Zero Net Energy Ready:** The sales team reaches out to potential customers and design teams that may be interested in building to a Zero Net Energy (ZNE) Ready standard. After vetting a project to ensure that it meets the program requirements, a ZNE expert is brought in to assist the customer in assessing the project and identifying services that may be needed to achieve the ZNE goal. The ZNE consultant will be engaged by the customer, with the fee cost-shared between National Grid and the customer. The ZNE consultant is engaged from early in the project through the end of design development. They provide services such as EUI benchmarking to help set EUI targets, conduct an energy charrette, load reduction analysis, and HVAC selection analysis and model feedback. The customer signs the program memorandum of understanding (MOU). The project incentives are paid out to the customer in two payments: the construction incentive and the post occupancy incentive. The first customer incentive payment (as well as any design team incentive) is paid based on review of the design teams' model and verification that the design achieves an EUI of 25 or less (or the expected EUI target if there is a special exception). The second customer payment is available when one-year post-occupancy data demonstrates the building is achieving the target EUI, confirming that the building is performing as designed. Prior to the post

	occupancy payment, the customer must provide verification that the enhanced commissioning and envelope commission have taken place. The ZNE certification fees will be reimbursed when a project becomes ZNE certified. An optional verification incentive is offered to assist customers in identifying and correcting issues that may arise in post construction to help achieve the EUI during building occupancy. **Whole Building Energy Use Intensity Reduction:** The National Grid Energy Efficiency sales team reaches out to customers, owners, and developers regarding new construction project opportunities. If the customer decides to participate in energy efficiency programs, the National Grid team engages with the customer project design team and facilitates a design charette to establish customer project goals. Based on the project goals, an EUI target range is established, and a technical assistance (TA) vendor is engaged to model the baseline project and proposed design project. The customer then signs a MOU that outlines the EUI target that is included in the project documents and the post occupancy EUI verification plan and the other incentive details. An application including the energy conservation measures and systems agreed upon is signed by the owner. The owner commits to implement the efficiency recommendations and accepts the associated incentives. A Minimum Requirements Document (MRD) created by the National Grid Tech Rep is created as part of the application process. The National Grid sales team remains engaged during the design development and construction process to ensure energy efficiency measures and solutions are incorporated in the building projects to achieve the EUI targets. After completion, the project undergoes a post inspection that includes a visual inspection and review of construction design submittals. If there are any HVAC controls or variable load ECMs that have been incorporated in the project, field measurements are required to verify operation standards, as described in the Minimum Requirements Document. The EUI measurements are then monitored over a prescribed period, under the prescribed conditions, before final incentive payment is made based on the savings achieved. An optional verification incentive is offered to assist customers in identifying and correcting issues that may arise in post construction to help achieve the EUI during building occupancy. Verification documents must be submitted to obtain the optional verification incentive.

	Whole Building Streamlined: The National Grid sales team reaches out to the customers who are engaged in new construction. Occasionally, the sales team may be approached by the design team regarding a new building project. If the project meets the path requirements (small to mid-size buildings; from 20,000to 100,000 square feet), a technical vendor is brought in at no-cost to the customer to conduct an energy charrette and provide feedback on the building design to increase the project's energy efficiency. An MOU is signed. The technical vendor monitors the design progress and provides an estimate of energy savings and incentives at a mid-design review. A final technical report is provided at design completion that details the project savings and incentives to develop the incentive application and MRD. Once the building has been built, the customer and design team incentives are paid upon construction and MRD verification. **Systems Approach:** The National Grid sales team approaches customers, building owners, and owner representatives regarding new construction or major renovation projects. When a customer decides to move forward with a project, the customer has a choice to use their vendor of choice to install measures or to develop the project with technical assistance from the National Grid team. Once the project is installed, the project undergoes inspection of installed measures and review of design submittals. Incentives are paid out to the owner on documented savings from the project.
Customer Feedback	Customer feedback is gained through sales team interactions with customers and design teams, who regularly provide insights on what types of technical assistance and design support moves the builders and architects and end customers to adopt the high efficiency measures and design.
Changes for 2022	The Company will leverage municipal electronic permitting information (subject to this data being easily and broadly accessible) to identify trends and better characterize the State's C&I new construction market. In early 2022, RI is expected to update its energy code. RI program baselines, where applicable, will be updated to reflect this updated baseline.

Rationale for Changes	No significant program changes are proposed since the program's new four path structure was just introduced in 2021. More time is needed for projects to be completed within this new program structure before its effectiveness can be assessed.
Proposed Upcoming Evaluations	There are a number of ongoing and new evaluations planned for 2022. The following evaluations are relevant to the Large C&I New Construction Program, as well as the Large C&I Retrofit Program. • RI-21-CG-CustGasPY20 Impact Evaluation of PY2020 Custom Gas Installations • RI-22-CG-CustGasPY21 Impact Evaluation of PY2021 Custom Gas Installations • RI-21-CE-CustElecPY20Impact Evaluation of PY2020 Custom Electric Installations • RI-22-CE-CustElecPY20Impact Evaluation of PY2021 Custom Electric Installations The following evaluation is specific to the Large C&I New Construction Program. • RI-22-CX-Codes C&I New Construction and Code Compliance Study
Notes	

Large Commercial and Industrial New Construction – Electric Program Goals, Metrics, Budgets, Participation for 2022

Fuel	Lifetime MWh (Electric)	Annual MWh (Electric)	Annual Passive Demand Reduction kW (Electric)	Total Net Lifetime MMBtu (Electric Gas, Oil, Propane)	Budget ($000)	Participation
Electric	171,413	11,768	1,713	554,080	8,848	90

Large Commercial and Industrial New Construction – Gas Program Goals, Metrics, Budgets, Participation for 2022

	Lifetime MMBtu (Gas)	Annual MMBtu (Gas)	Budget ($000)	Participation
Gas	831,093	54,068	3,227	94

3. Initiatives Specific to Large Commercial and Industrial New Construction Program

3.1. Performance Lighting Plus

Eligibility Criteria	Any customer with a commercial meter is eligible to participate in this initiative. All projects that qualify under this incentive must: • Be a new construction or renovation project that includes the installation of new fixtures and qualifying lighting controls for commercial, industrial, educational, or municipal building(s). • Be a code-dependent project or extensive/substantial renovation. • Average a minimum of 2,000 hours per year. • Provide maintained light levels in accordance with the recommendations of the Illuminating Engineering Society of North America's 10th Edition Lighting Handbook or supporting Design Guides.
Offerings	**Incentives** Incentives may be offered for reducing the code mandated Lighting Power Density from the IECC baseline or a component-based approach that has been successful for other utilities/ program administrators. Additionally, design assistance will be made available to customers for the purpose of optimizing lighting design and lighting energy savings. The objective of the design assistance is to influence the lighting project at an early stage and to ensure that energy efficiency is considered and support throughout the implementation of the project. The precise incentive offerings and requirements for Performance Lighting Plus are still being revised for 2022 in concert with National Grid's Massachusetts colleagues. The Company will update this offering so that it is easier for customers to proceed along this path, remove inconsistencies, and make updates that reflect changes in the lighting market. The changes will be complete and published no later than Q1 2022. While details will be finalized with respect to the aforementioned considerations, the finished work product will be similar to the previous version of the Performance Lighting Plus initiative in that there will be multiple tiers where additional controls savings or fixture

	capabilities will lead to a larger incentive offering. New construction and retrofit projects will both be able to participate in this offering. The new offering is likely to differ from the previous offering in the following ways: 1. TLEDs without controls may be excluded from all tiers of the offering, including the base offering. Other utilities/ program administrators have already instituted this change in other states. 2. The Company will consider integrating the benefits of active demand response, a requirement of Tier 3 projects, into the sales presentation for this offering. 3. Incentives will most likely be stated to the customer in $/Square Foot (SF) or $/kWh saved as opposed to watts saved. The Company commits to working with the lighting sub-group of EERMC consultants to take into account other important factors before the offering is complete and published to customers.
Implementation and Delivery	**Application Forms** • Applications for Performance Lighting Plus incentives are made available through vendors, 3rd party implementers, and Customer Solution Sales Team. However, applications can also be created and submitted online using the Rhode Island Application Portal (RIAP). **Pre-Approval Requirements** • The Customer must submit a copy of the Manufacturer's technical specification sheets ("cut sheets") for each type of eligible equipment to be purchased. • Once pre-approved, a "pre-approved incentive letter" will be issued. **Installation and Incentive Requirements** • Once pre-approved, the customer must purchase and install the qualifying equipment within twelve (12) months of National Grid's pre-approval • Next, the Customer must return the following required information to National Grid within 30 days of the installation:

	○ A copy of the completed and signed pre-approval application ○ If there is a change in equipment, the customer must submit a new manufacturer's technical specification sheets ("cut sheets") for each type of eligible equipment purchased ○ A copy of the invoice indicating Proof of Purchase must indicate type, size, make, and model number of the equipment and date of purchase and installation ○ At the post-installation verification, the customer must sign the post-installation customer acknowledgement section of the original application **Application Process and Requirement for National Grid Approval** • The customer shall submit a completed application to National Grid. The customer may be required to provide National Grid with additional information upon request by the National Grid. The customer will, upon request by the National Grid, provide a copy of the as-built drawings and equipment submittals for the facility after energy efficiency measures are installed. To the extent required by the National Grid or by applicable law, regulation or code, this analysis shall be prepared by a Professional Engineer licensed in Rhode Island. • To be eligible for performance lighting plus incentives, a customer must have an active electric account. • The National Grid reserves the right to reject or modify the customer's application. National Grid may also require the customer to execute additional agreements, or provide other documentation prior to National Grid approval. If National Grid approves the customer's application, National Grid will provide the customer with the Approval Letter. • National Grid reserves the right to approve or disapprove of any application or proposed performance lighting plus incentive. • The criteria listed under Application Process and Requirement for National Grid Approval do not apply in the event that the Program Materials explicitly state that no Approval Letter is required for the Program. In such an event, the customer must submit to National Grid the following: ○ Completed and signed Program rebate form

	○ Original date receipts for purchase and installation of energy efficiency measures, and ○ Any other required information or documentation within such time as Program Materials indicate. **Pre- and Post-Installation Verification; Monitoring and Inspection** • The customer shall provide access to their facility and energy efficiency measures for National Grid's pre-installation and post-installation verifications. Such verifications must be completed to National Grid's satisfaction. • National Grid may perform monitoring and inspection of the energy efficiency measures for a three-year period following completion of the installation in order to determine the actual demand reduction and energy savings.
Customer Feedback	Customer feedback is gained through sales team interactions with customers and design teams, who regularly provide insights on what types of technical assistance and design support moves the builders and architects and end customers to adopt the high efficiency measures and design. The Company is also exploring the potential value of a lighting survey for designers, reps, and contractors involved in this program as the result of discussions with the EERMC Consultants.
Changes for 2022	The precise incentive offerings and requirements for 2022 are still being revised in concert with National Grid's Massachusetts colleagues. The Company will **update this offering so that it is easier for customers to proceed along this path, remove inconsistencies, and make updates that reflect changes in the lighting market** (see Offering section above for additional detail). The Company commits to working with the lighting sub-group of EERMC consultants to take into account other important factors before the offering is complete and published to customers.
Rationale for Changes	The goal of these changes is to increase savings through this pathway by: • Simplifying the application and processing; • Ensuring that that incentives are calibrated correctly in relationship to the lighting portfolio; and • Ensuring that vendors understand the benefits and proper installation of these systems.
Notes	Although this program is located in the New Construction section of this plan, it may also be utilized in Retrofit applications as well.

4. Large Commercial Retrofit Program

Eligibility Criteria	The Large Commercial Retrofit Program serves the needs of existing buildings in their pursuit to lower energy consumption. All commercial and industrial customers are eligible for the Large Commercial Retrofit Program.
Offerings	The Company has several pathways by which customers can participate in the Large Commercial Retrofit program for energy efficiency in existing buildings. Customers can participate via the: • **Prescriptive application** process; • By working with a National Grid Sales Representative or a Project Expeditor (PEX) to complete a **Custom application** for any energy improvement that is not covered by the Prescriptive pathway; or • Via an **Upstream program**. The retrofit program also has initiatives specific to Market sectors such as grocery and manufacturing/industrial initiatives that focus on specific needs of that customer type. The Company serves some of its largest customers through Strategic Energy Management Plans (SEMPs). The company has Memorandums of Understanding (MOUs) with these customers that specify savings targets and resources. These are described in more detail in section 5.5. The Company has found that although sector specific initiatives and SEMPs are helpful in gathering more savings and completing measures beyond lighting, they do not cover our entire customer base. The following areas that are specific to a technology or do not address a specific market sector are also included as part of the Large Commercial Retrofit program and are included in this section of the plan: • Customer Owned Streetlights • Company Owned Streetlights • Equipment & System Performance Optimization • Combined Heat and Power (CHP) • Fuel Cells
Implementation and Delivery	**Prescriptive Application**

	Customers complete a prescriptive application through the Rhode Island Digital Application Portal (RIDAP; https://www.ridap.nationalgridus.com) for a wide variety of energy efficient products such as lighting, air compressors, or variable speed drives (VSDs). **Upstream** Customers can purchase qualified products such as luminaires, kitchen equipment, water heating equipment, or more efficient heating and cooling technologies at participating distributors at a discount without needing to submit an application. These are collectively known as the Upstream Initiatives. These are described on more detail in section 5.15. **Custom Application** National Grid Sales Representatives or a Project Expeditor (PEX) assist customers to complete custom applications for any energy conservation measure that is not covered by Prescriptive or Upstream pathways.
Customer Feedback	Please see Initiatives sections for customer feedback.
Changes for 2022	5.16In 2021, the Company will **pursue a custom fuel cell project** that will enable the customer to generate on-site electricity and reclaim carbon dioxide for process related needs. The project is currently in the design phase but is expected to be installed by late 2021. Specific changes to initiatives in 2021 are described in section 5 below.
Rationales for Changes	Changes in the Large Commercial Retrofit programs will help generate savings, address customer and vendor feedback, and provide more customized solutions and options.
Proposed Upcoming Evaluations	There are a number of ongoing and new evaluations planned for 2022. The following evaluations are relevant to the Large C&I Retrofit Program, as well as the Large C&I New Construction Program. • PY2019 Impact Evaluation of Custom Gas Installations (continued from 2020) • PY2020 Impact Evaluation of Custom Gas Installations (to begin in 2022) • PY2018 Impact Evaluation of Custom Electric Installations (continued from 2020)

	• PY2019 Impact Evaluation of Custom Electric Installations (continued from 2020) • PY2020 Impact Evaluation of Custom Electric Installations (to begin in 2022) The following evaluations are specific to the Large C&I Retrofit Program. • Upstream Lighting Impact Analysis (continued from 2020; MA study with RI sites) • Strategic Energy Management Demonstration Evaluation (continued from 2020)
Notes	

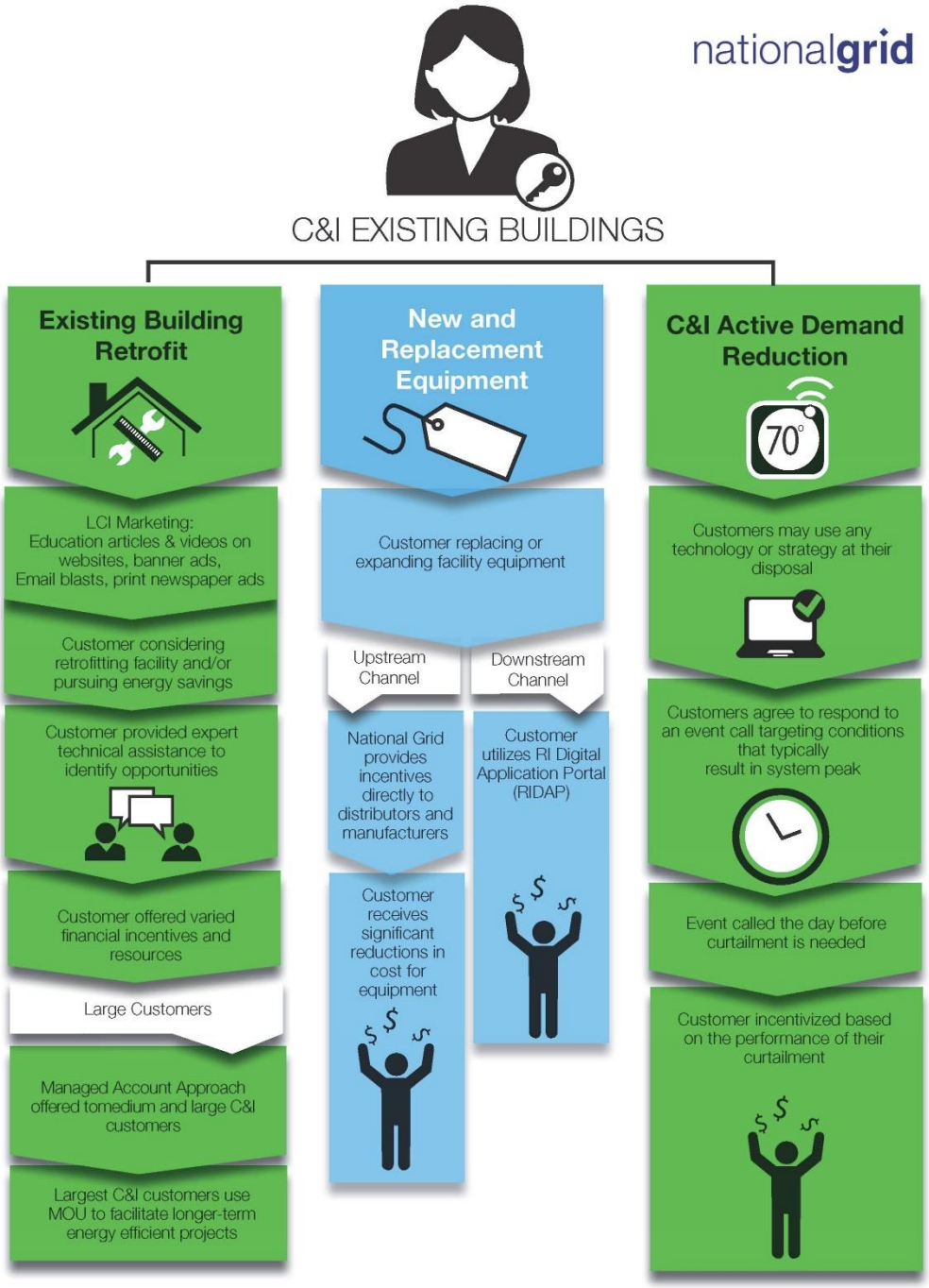
Large Commercial Retrofit – Electric Program Goals, Metrics, Budgets, Participation for 2022

Fuel	Lifetime MWh (Electric)	Annual MWh (Electric)	Annual Passive Demand Reduction kW (Electric)	Total Net Lifetime MMBtu (Electric Gas, Oil, Propane)	Budget ($000)	Participation
Electric	588,941	55,714	10,120	600,426	35,560	2,396

Large Commercial Retrofit – Gas Program Goals, Metrics, Budgets, Participation for 2022

	Lifetime MMBtu (Gas)	Annual MMBtu (Gas)	Budget ($000)	Participation
Gas	1,210,300	138,407	4,685	60

Figure 6. Large Commercial Retrofit Program (Existing Buildings)



Large Commercial Retrofit Program

5. Initiatives Specific to Large Commercial Retrofit Program

5.1. Grocery Initiative

Eligibility Criteria	EnergySmart Grocer (ESG) is an initiative that serves commercial customers who sell food at the retail or wholesale level.
Offerings	Technical assistance, project management, incentives, financing, installer and customer educations sessions.
Implementation and Delivery	This program is administered by the vendor. Company Account Managers associated with each vendor partner with the sales team to develop a relationship with the prospective customer. Once the relationship is established, EnergySmart Grocer (ESG) offers no-cost audits to the customer. This audit documents and identifies energy efficiency opportunities for the store's refrigeration, lighting, HVAC and kitchen equipment. Once the audit is complete, an Energy Savings Report is generated and presented to the customer. EnergySmart Grocer works with the customer's contractor to obtain a quote for the work. If the customer decides to move forward with the project, EnergySmart Grocer will generate an application, collect all necessary paperwork, and submit to National Grid for pre-approval. Once the project is complete, ESG will collect all invoices and final signatures, and complete a post-inspection verification to ensure the measures are installed as intended. ESG will submit all paperwork to National Grid and notify the customer when the incentive check is in the mail. ESG Account Managers maintain relationships with the customer. For smaller independent chains, the program uses an inform-to-invest strategy where the success of the first project is leveraged to pursue deeper and more expensive measures. For the regional and national chains, Account Managers schedule regular check-ins with the customer's Energy Manager to check-in on active projects and learn of future projects.
Customer/Vendor Feedback	Customer feedback flows through the ESG Initiative vendor to internal parties at National Grid. The Company's vendor has asked for financing support for small and mid-size independent grocers, as they believe this will allow such customers to commit to projects more quickly or increase the number of measures installed. The Company will provide this assistance through OBR or through an

	interest buy down mechanism in partnership with third party providers of debt capital.
Changes for 2022	This initiative will participate in a competitive bidding process in Q3 of 2020. The Company is looking to build on the success of this initiative while ensuring that new ideas for serving customers are considered, debated, and included the new contract if appropriate.
Rationale for Changes	
Notes	The Company is conducting an assessment investigating the energy and carbon reduction benefits of integrating leak detection and repair as a standard offering. Currently this work is done when leaking refrigerant is visible to the naked eye or identified as a problem by the customer.

5.2. Industrial Initiative

Eligibility Criteria	The Industrial Initiative offerings are available to all manufacturing and industrial customers.
Offerings	The following assistance and incentives are provided under the Industrial initiative: technical assistance; project management; measure incentives; installer and customer educations sessions; monitor-based commissioning; production systems and line efficiency coordination; and support in identifying and implementing process-related energy efficiency improvements that increase the efficiency of both energy use and business processes. The ability to participate in the Strategic Energy Management Demonstration, now called the Continuous Energy Improvement demonstration, has been offered to industrial and manufacturing customers since 2019. These customers will continue to be able to participate through 2022, the final year of the demonstration. Please refer to Attachment 8 for details on the demonstration, which is implemented by a separate vendor from the Industrial initiative.
Implementation and Delivery	The National Grid Sales Representative is responsible for identifying customers or "leads" for the Industrial Initiative Vendor to pursue for participation in the Industrial Initiative. The

	Company's trade allies also provide additional leads directly to the Industrial Initiative vendor. Prior to the initial site visit, National Grid provides the Industrial Initiative vendor with customer billing and interval data. This allows for the following analysis: interval data analysis; peak day loads; average weekday load shapes; average weekend consumption; base load energy usage; and a review of electric and gas usage and weather correlations (heating/cooling). In some cases, based on this analysis, the customer may be referred to the Company's demand response program. A kickoff meeting is scheduled with the National Grid Sales Representative and the Customer. The National Grid Technical Representative is also notified and welcome to participate. The kickoff meeting is typically followed by a site tour to identify potential energy efficiency measures. During the site tour, metering equipment may be deployed to assist with energy efficiency measure development. After the initial site visit, the Industrial Initiative vendor provides the customer and National Grid a follow up report on the opportunities identified and next steps. The report is typically reviewed with the customer and the Sales Representative. The measures identified are tracked in the Industrial Initiative vendor's Customer Relationship Management (CRM) system. The Industrial Initiative works closely with the customer's facility staff and contractors to develop workbooks to calculate potential savings and incentives. A "tech check" is submitted to National Grid to validate the proposed savings calculation methodology before the workbook is developed. Once the Company approves the custom workbook, the Sales Representative communicates the incentive to the customer. The Industrial Initiative Project Manager facilitates the application process from the earliest stage of measure through the completion of the project. The incentive application process may include formal status meetings between the Company's Sales Representative and the Industrial Initiative vendor. National Grid works with the Industrial Initiative vendor to continually engage customers, identify new opportunities, and realize more comprehensive energy savings.

Customer/Vendor Feedback	Customer feedback flows through the Industrial Initiative vendor and Sales Representative to internal parties at the Company. Feedback suggested using a service such as "DocuSign" to facilitate the application approval process, which the Company will implement in 2021. It was also recommended that the Company add business rules that account for savings accuracy when approving smaller "custom" projects so that the customer receives an approval quickly without excessive information requests, which is under consideration.
Changes for 2022	The initiative will continue outreach to customers in the 200-400 kW range to encourage greater participation by small- and medium-sized commercial customers.
Rationale for Changes	Small- and medium-sized commercial and industrial customers have not realized the same percent energy reduction via efficiency as their larger counterparts. The Company is working with the Industrial Initiative vendor to increase participation among this valuable customer segment.
Notes	The Industrial Initiative has installed and performed energy efficiency assessments on a number of the measures identified in the Market Potential Study including but not limited to: Boilers, Boiler Tune-Ups, Heat Recovery, HVAC Equipment and Systems, LED Lighting, Energy Management Systems, Demand Control Ventilation, System Controls, and Steam Traps.

5.3. National and Regional Restaurant Initiative

Eligibility Criteria	The Serve Up Savings (SUS) initiative will serve regional/multi-state and national restaurant chains not currently engaged with Strategic Energy Management Partnership Agreements (SEMPs). Restaurants with multiple locations within Rhode Island only will be served by the Small Business Program.
Offerings	Technical assistance, project management, incentives, work with franchisors to come up with a package of measures that will work for their franchisees.
Implementation and Delivery	Serve Up Savings works hard to minimize the effort needed for the customer to participate in the program. The first interaction is a Serve Up Savings Account Manager reaching out to the customer to introduce the program and schedule an audit of their stores. Once the audits are complete, the program puts together an Energy

	Savings Report which details the energy efficiency upgrade opportunities. The program works with the customer's preferred contractor or recommends three if they don't have one. The program obtains a bid for the work, so the customer can decide to move forward based on their financial metrics. The program will collect all required paperwork and submit to National Grid for pre-approval of incentives. Once pre-approved, the program will send the customer a commitment letter which details the financial incentives. The customer contracts directly with the contractor to complete the work. Once the work is finished, the program completes a post-inspection as well as collects all final paperwork. The program submits all paperwork to National Grid and a check is sent to the customer. The program leverages this check to push installation of the next set of measures to be installed at their stores.
Customer/Vendor Feedback	The Company's vendor regularly collects insights and feedback from customers. National Grid's sales team and program managers regularly check in with vendors to capture this feedback.
Changes for 2022	This initiative will participate in a competitive bidding process in Q3 of 2020. The Company is looking to build on the success of this initiative while ensuring that new ideas for serving customers are considered, debated, and included the new contract if appropriate.
Rationale for Changes	N/A
Notes	

5.4. Lodging Initiative (including On Premise Laundry) Research

Eligibility Criteria	In 2021, the Company explored the possibility of launching a future lodging initiative to serve hotels, motels, and resorts – as well as on-premise laundry at commercial laundry facilities, hospitals, colleges, and lodging facilities.
Offerings	In 2021, the Company employed an external vendor to **research important areas of focus such as the savings and best practices for deployment of guest room energy management systems (GREMS), kitchen hood controls, and ozone laundry**. The objective of this

	effort was to better understand and document the barriers facing this industry, and to specific EE technologies that may be deployed within it. Having concluded that research, the Company **does not** currently plan to launch a full-scale vendor-driven initiative that would offer technical assistance or project manager at this time, but through research process the Company uncovered two opportunities on which it intends to act: (1) creating an incentive to support the replacement of packaged terminal air conditioners with packaged terminal heat pump (PTHP) units; and (2) creating marketing materials targeted to lodging customers. These materials will provide information on efficiency upgrades commonly installed in hotels and motels, such as guest room energy management systems (GREMS), as well as lighting, kitchen, HVAC equipment, and demand response.
Implementation and Delivery	The Company continues to serve this market through existing sales channels. Large hotels and national chains are primarily targeted through the large C&I pathways, while small hotels may pursue the Small Business offering. Customers of all sizes may take advantage of the numerous offerings in our Upstream lighting, water heating, and HVAC initiatives.
Customer Feedback	This initiative is not currently active. Experts familiar with the sector have described the savings potential at lodging facilities, including significant opportunities to retrofit non-LED lighting, HVAC equipment, controls, and kitchen equipment. The sector was hit hard by COVID-19 and may experience continued headwinds if business travel declines permanently as remote conferencing has replaced in-person meetings.
Changes for 2022	In 2022, the Company will: (1) create an incentive to support PTHP units in 2022 along with research into customer barriers and (2) develop marketing collateral targeted to lodging customers.
Rationale for Changes	Although the concept of a vendor-driven lodging initiative has potential, and the Company has not ruled it out for future plans, its current focus is to expand efforts like ESPO with the potential to increase savings across all customer segments. GREMS appear to be an effective means of communicating the efficiency benefits of advanced controls to customers. The wide range of baseline conditions found among various lodging facilities, combined with the range of upgrades available, suggest that a

	single, bundled GREMS measure would make savings calculations extremely complex; therefore, these systems will still be incentivized through existing program pathways. On-premise laundry solutions may be considered in the future but do not currently appear to provide consistent savings in the Rhode Island market. These systems typically require a modest increase in electricity consumption to reduce gas and water consumption, which makes financial sense in some regions (especially the Southwest), but the high electricity prices, coupled with low gas and water pricing, makes this technology a poor fit for Rhode Island.
Notes	

5.5. Strategic Energy Management Planning (SEMP)

Eligibility Criteria	The Strategic Energy Management Plan (SEMP) Initiative is available to the Company's largest C&I customers, including chain restaurants. The SEMP initiative targets customers who have the potential to go deeper with energy efficiency, have a level of in-house sophistication to make organizational changes to incorporate multi-year energy planning, and are motivated by corporate and institutional sustainability goals.
Offerings	SEMP provides customers with customized support allowing flexibility to address the energy efficiency and sustainability opportunities of the organization and its facilities in the context of the Company's self-identified business needs. Working with a SEMP provides the customer the opportunity to think long-term about their energy needs and equipment, resulting in more comprehensive savings compared to the more traditional energy efficiency programs. Where appropriate and valued by the customer, automated benchmarking will be available to help demonstrate the impact energy efficiency measures can have on the energy usage of the facilities. **Colleges and Universities** These are currently served through either the Company's large commercial programs with a dedicated sales team or the Company's SEMP initiative. With a master-metered portfolio of buildings within the campus, most universities are tied to sustainability goals and climate action plans to reduce their greenhouse gas emissions. The

	Company's SEMP initiative allows enrolled university customers to engage in multi-year campus energy planning and assists them in identifying comprehensive and long-term energy efficiency opportunities. The Company has SEMP agreements in place with seven colleges and universities and is currently engaged in conversations with two other college campuses in Rhode Island for SEMP agreements.
Implementation and Delivery	A Memorandum of Understanding (MOU) offers a way to document a commitment between the customer and the Company to work together to achieve mutually stated goals through specific actions that are tailored to the customer's facilities over a multi-year planning horizon. As such, an MOU (though non-binding in this case) can set the stage for achieving deeper and more comprehensive energy efficiency savings and is more likely to succeed than a single measure or single year approach. Typically, the MOUs include a commitment by upper management, the establishment of specific and aggressive energy efficiency saving targets, measurement and verification strategies to document savings throughout the target facilities, and support by an incentive structure that meets the customer's financial criteria. To support customers setting aggressive kWh and therm savings goals under SEMP, there are several items that are reviewed: • Customer's total kwh and therm usage on all accounts • Customer's percentage of energy reduction over the last 5 years through EE measures • Customer's capital project plan • High level measure identification by the Company's TA vendor for potential savings over the 3-year SEMP The SEMP offering goes beyond energy efficiency into sustainability and branding support for the customer. The Company also engages SEMP customers with non-energy efficiency solutions, such as renewables, storage, electric vehicles, and distributed energy resources and technologies. The Company currently has seven SEMP MOUs. Four are large university campuses, one is with a large chain restaurant, and one with a large commercial customer. In addition, a State SEMP has

	been in place since 2016. The State SEMP focuses on State facilities, including office and administrative buildings, and public universities.
Customer Feedback	One customer commented that the MOU process is streamlined and easy to work with.
Changes for 2022	N/A
Rationale for Changes	N/A
Notes	In 2022, the Company will continue to market the SEMP initiative to colleges and universities in Rhode Island that have not yet participated in the offering. Likewise, the Company will continue to search for recruitment opportunities from highly motived industrial customers, chain restaurants, and cities.

5.6. Municipal and State Buildings SEMP

Eligibility Criteria	The Company currently has in place a three-year State SEMP. This SEMP includes municipalities, State buildings, Quasi State buildings, water and wastewater facilities, State Colleges, State Universities and public K-12 Schools.
Offerings	Following a successful joint MOU signed by the Company, OER, the Department of Administration (DOA) and the Department of Capital Asset Management and Maintenance (DCAMM) designed to integrate strategic energy planning across State and Quasi State facilities from 2016 to 2019, the State SEMP was renewed for another 4 years in 2020. The 2020-2023 MOU has a goal of achieving a 10% energy use reduction by end of 2023. The Company provides specific support to State and Municipal buildings through project management, implementation support, technical support and financial mechanisms to achieve energy efficiency in State, Quasi-State and municipal buildings. This is in addition to incentives available through Energy Efficiency programs. **Project/Energy Management Support:** The time and expertise required to identify, develop, and oversee these projects can be beyond the resource capacity of many towns and cities. The Company provides this support as part of the State and Municipal initiative and via a SEMP. **Implementation Support:** The Company provides support for energy efficiency project implementation via previously successful vendors.

	Municipalities recognize the value of this support, as it provides a trusted partner to bring the time and expertise they lack to identify, develop, and oversee complex projects. To continue to serve this sector, there are several support mechanisms in place: • URI Energy Fellows support municipalities as they learn to use Portfolio Manager as well as meet the Efficient Building Fund's energy reporting and energy management plan development requirements. National Grid also has an automated process by which customers can authorize upload of utility data onto Portfolio Manager. This system is used for benchmarking via Portfolio Manager. • The Company supports municipal engagement in OER and programs like vendor selection, engineering support, and implementation of upgrades through the energy efficiency programs. • The Company provides energy audits to select municipal/school/wastewater customers to support energy efficiency applications. In the past few years the Company has provided approximately 50 energy audits annually. For financing in this sector, the Company will continue to offer On-Bill Repayment for electric and gas measures. Schools and municipalities will have access to the same processes that were developed for the State, including consulting for procurement and product selection, retro commissioning, incentive calculations, new construction support and other services to ensure successful project installation.
Implementation and Delivery	The process of participating in the State SEMP is the same as described above for other SEMPs.
Customer Feedback	The initiative has received feedback regarding some challenges with the additional of schools to the SEMP including funding, timing, and collaboration among multiple stakeholders.
Changes for 2022	The SEMP will **target a 10% reduction in energy use by the above stated facilities by 2023.** The Company will **work with multiple State agencies on exterior lighting projects.**

Rationale for Changes	By targeting an additional 10% reduction in energy use by 2023, these facilities will save money that can be used for additional energy efficiency projects in the future. The addition of K-12 public schools to the State SEMP in 2020 is one of the most efficient ways to work with this sector.
Notes	Building Operator Certification classes sponsored by National Grid in the Rhode Island and Massachusetts service areas are available to schools and many school facility managers have taken advantage of this program and follow up by actively engaging in energy efficiency solutions at their facilities.

5.7. Equipment & System Performance Optimization

Eligibility Criteria	The Equipment & Systems Performance Optimization (ESPO) Initiative is available to all C&I customers averaging greater than 2,000 building operating hours a year. The ESPO initiative offers three pathways: to accommodate different customer segments and building needs. The ESPO initiative is designed to optimize equipment and systems and includes optimizing building energy controls and process system operations. The systems optimization may include retro-commissioning (RCx), operations & maintenance (O&M), and Monitoring-Based Commissioning (MBCx). This initiative falls within the Large Retrofit Program.
Offerings	ESPO provides three pathways for participation depending on the customer's energy efficiency opportunity, building type, and age and sophistication of existing control systems. The vendor and technical support team help the customer to select the best pathway . The three pathways are described below. **Low-Cost Tuning** offers prescriptive incentives to customers that have isolated items for systems in need of standard tuning. In addition to identifying standard tuning, the technical support will help to identify easy to install efficiency measures that can be implemented by the customer's facility staff, maintenance contactors, or retro-commissioning vendors. re-approval for implementation had been required before the customer or outside party can receive an incentive on the installation. The Company is developing guidelines for documenting baseline conditions to enable program participants to implement *some* Low-Cost Tune-Up measures without pre-approval. Incentives are provided to sites

	where the baseline condition and proposed upgrade are documented through a simple data input, which is used to determine savings at the measure level. Only selected HVAC, steam, refrigeration, and compressed air measures are eligible for prescriptive incentives. Customers participating in the two other ESPO pathways described below may opt to apply for Low-Cost Tuning incentives, eliminating the need to submit custom savings calculations. **Targeted Systems and Whole Building & Process Tuning** offers a custom RCx approach. Targeted Systems Tuning offers an in-depth investigation and tuning process for building systems and process lines. Rather than looking at the whole building, the Targeted Tuning looks for a specific process or end-use energy efficiency upgrades. The Whole Building and Process Tuning offers a comprehensive, full building or process approach to retro-commissioning for customers with a functional control system in place and electric usage greater than 5,000,000 kWh annually. Manufacturing or industrial customer can also use this pathway to apply a comprehensive tuning approach for their systems. Typically, the customers facility staff is involved in the Whole Building and Process Tuning given the broader scope and longer timeline associated with the installation and commissioning. Tuning investigation can be funded for pre-approved projects at the Company's discretion, with up to $12,000 available for System Tuning and $30,000 for Whole Building & Process Tuning. Incentives of $0.17 per kWh and $1.20 per therm of savings are offered for measures implemented through this pathway. An additional performance incentive of $0.03 per kWh and $0.20 per therm is available to customers that reduce at least 2.75% of the facility's annual electric consumption and 1.5% of the facility's annual gas consumption. **MBCx**, is a process that maintains and continuously improves building performance over time. MBCx is an ongoing commissioning process that focuses on monitoring and analyzing large amounts of data on a continuous basis. Also known as real-time energy management, this approach involves the installation of a software platform that captures and analyzes operational data from a facility's building automation system. MBCx systems can provide fault detection and diagnostics capabilities, meaning building

	operators can find equipment that is not operating as intended due faulty programming, current settings (e.g. scheduling or setpoints), damaged equipment, or simply systems in need of maintenance. The MBCx pathway is similar to the Whole Building and Process Tuning approach in that most savings calculations are custom; however, this pathway assumes that identified measures will be implemented and that customer will be committed to energy monitoring and on-going energy tracking for a minimum of three years. The current MBCx incentive is $0.17 per kWh and $1.20 per therm on a pay-for-performance basis. Beginning in 2022, the Company intends to begin funding MBCx set-up costs to mitigate risk to customers adopting these systems. For systems where the Company incentivizes set-up costs, there will be a reduced pay-for-performance rate. Furthermore, to ensure customers act on insights from the MBCx platform, customers and system implementers will be required to sign a participation agreement that obligates them to install and report savings from certain low-cost measures.
Implementation and Delivery	A customer begins the process for ESPO by contacting their National Grid Sales representative. In advance of undertaking an ESPO project, as with all custom projects, account and technical representatives will work closely with the customer and their implementers to identify the appropriate pathway. If needed, a retro-commissioning consultant will be brought in to provide an investigative report, the results of which are shared with the customer. The ESPO process may also identify additional capital projects that increase energy savings and can secure additional incentives. The Company may also facilitate the transfer of information from the controls vendor to third party retro-commissioning vendors or technical assistance vendors with expertise in building controls. The Rhode Island Products and Growth team continues to work with our Massachusetts counterparts to encourage development of workforce expertise in this area.
Customer/Vendor Feedback	The Company will work with ESPO customers and vendors to solicit feedback on participation barriers, program enhancements, and incremental modifications. The feedback will be reviewed by the

	Company and improvements based on customer input will be developed and implemented during the spring and summer of 2021.
Changes for 2022	The Company will allow some tuning measures to be implemented without pre-approval, provided baseline conditions are documented sufficiently to withstand M&V scrutiny. The Company will begin funding MBCx set-up costs to mitigate risk to customers adopting these systems. Customers that take advantage of set-up incentives will receive reduced pay-for-performance rates and must sign a participation agreement (along with their system implementers) to help ensure measures identified are installed and savings are reported. The Company will develop an ESPO guidebook to help standardize the process of completing and documenting RCx savings calculations and classifying different measure types. This should assist customers and trade allies participating in the MBCx and System and Whole Building pathways. The Company is investigating the possibility of adding Low-Cost Tuning measures, including a CHP system tune-up as well as gas measures such as unit ventilator adjustments. This effort can only proceed if sufficiently broad savings calculations can be developed. The Company is exploring opportunities to improve the persistence of RCx measures for customers, revisiting measure life assumptions, and seeking to better integrate ESPO with other controls offerings.
Rationale for Changes	Increasing participation in the ESPO program is a major focus in 2022. The option to waive pre-approval for tuning measures will enable building auditors/RCx agents to implement many measures in a single trip, eliminating the need for a return trip (and the associated cost and time lag). Set-up costs were identified as the primary barrier to broader MBCx adoption. The participation agreement will help ensure measures identified are installed and savings are reported, in part by clarifying roles and responsibilities and setting a high bar for system implementers.

	Calculating savings and classifying RCx and controls measures has posed a significant challenge for ESPO participants and created an administrative burden for program implementation staff. The guidebook will answer common questions and eliminate points of confusion. CHP tune-ups present a new savings opportunity. Likewise, program staff have suggested unit ventilators and other gas measures located in occupied building zones (as opposed to heating and cooling equipment located in mechanical rooms) frequently need significant tuning or repairs. This may be an excellent opportunity in schools. The Company currently claims short measure lifetimes from many ESPO measures, limiting the lifetime benefits. The Company has identified tactics to improve measure persistence in some cases (for example, HVAC system scheduling can be improved by ensuring building operators receive proper training and by programming certain resets.) Also, numerous M&V studies in other utility jurisdictions have suggested significantly longer measure lifetimes than National Grid currently claims for ESPO measures.
Notes	The ESPO initiative includes a number of technologies and end-uses identified in the Market Potential Study, including boilers (steam and hot water), waste energy recovery, refrigeration, scheduling and set point optimization, energy management systems, and rooftop units.

5.8. Lighting Designer Incentives (LDI)

Eligibility Criteria	LDI is offered to lighting design teams for qualifying New Construction/Major Renovations or Existing Buildings Performance Lighting projects. National Grid maintains a list of qualified Lighting Designers, as well as Engineers and Architects who have demonstrated at least 5 years of lighting design experience. National Grid markets the program to the construction and design community. Lighting designers cannot sell product for the project that they are receiving LDI. Lighting designer must have at least one of the following qualifications:

	• Lighting Certified (LC) – granted to those who successfully complete the NCQLP (National Council on Qualifications for the Lighting Professions) Lighting Certification Examination; • CLEP – certification from the Association of Energy Engineers (AEE); • IALD – International Association of Lighting Designers Professional Membership status; or • CLD – the IALD sponsored Certified Lighting Designer, certification.
Offerings	This incentive goes directly to the lighting design team to fund their efforts to achieve lighting energy savings while maintaining quality lighting design. LDI is a sum equal to 20% of the customer lighting incentive offered for a project, up to a maximum of $15,000 per project that goes directly to the lighting designer.
Implementation and Delivery	**Lighting designer submits LDI application for a project** LDI will be paid in two installments: National Grid will pay 50% upon pre-approval of the customer application, and 50% upon confirmation of installation, at the same time the National Grid makes the customer incentive payment. National Grid will make the payment to the lighting design team lead. The lighting design lead may choose to split the incentive with additional parties. For the first LDI installment, the lighting design team shall submit the Lighting Designer Incentive Worksheet and an invoice in the amount of 50% of the total anticipated LDI. The invoice should reference the project name. For the second LDI installment, the lighting design team shall submit a second invoice, again referencing project name.
Customer Feedback	LDI needs to inform customers about the benefits of hiring a lighting designer.
Changes for 2022	The Company will **create a one-page document that articulates the benefits of hiring a lighting designer** that can mailed or emailed to potential new construction or major retrofit customers.
Rationales for Changes	The Company believes that customers are more likely to participate when benefits are clearly articulated.
Notes	

5.9. Customer Owned Streetlight Equipment

Eligibility criteria	The customer owned LED streetlighting initiative is available to any city or town in Rhode Island serviced by National Grid for electric service on the Customer Owned Equipment S-05 tariff (Rate S-05), as well as fire districts, municipal water utility boards, Kent County Water Authority, Rhode Island Commerce Corporation, Narragansett Bay Commission and the State of Rhode Island.
Offerings	Incentives of $0.15 per kWh of first-year savings for qualifying LEDs and $0.25 per kWh of first-year savings for qualifying controls associated with either the dimming or part-night run hours as set forth in the streetlighting tariff.
Implementation and Delivery	A customer begins the process of purchasing their leased streetlights from National Grid by contacting their National Grid Community & Customer Manager. A suggested first step would be to indicate they are interested in getting an inventory of the streetlights and an estimated purchase price. This inventory is a non-binding opportunity for the customer to begin the decision-making process. If the customer opts to pursue the purchase of the streetlight assets, a notice to purchase is submitted to the Company and to the Public Utility Commission as required by the legislation. A final value of the assets is calculated, and sale agreements are executed. Once the closing process is complete, the ownership of the assets is transferred from National Grid to the customer. Once the customer owns the streetlights, they can replace the older technology with LED lighting and controls. The municipal energy efficiency sales representative from National Grid will assist the customer in determining the energy savings and amount of incentive they can expect once the process is completed. The customer fills out an application form and once the lights have been installed, the customer must contact National Grid for a post inspection. Once the post inspection is satisfactorily completed, the incentive can be mailed to the customer. Notification to the Community & Customer Manager with the completed location listing of the LED conversions is required for the billing system updates to realize any energy consumption savings.
Changes for 2022	No changes are anticipated for 2022.

Rationale for Changes	N/A
Notes	In addition to the incentives provided by the systems benefit charge mentioned above, OER provides grant funding to communities for LED street lighting. There is a $300,000 cap on the funding to individual cities and towns from OER.

5.10. Company Owned Streetlight Equipment

Eligibility Criteria	Eligibility for the incentive for company owned LED streetlighting is dependent on service on the 3 unmetered streetlight tariffs, S-06, S-10 and S-14 with exchange of an existing roadway or post-top style, Incandescent, Mercury Vapor or High Pressure Sodium Vapor sourced luminaire to one of the Company's LED offerings. The tariffs allow LED street or post-top fixtures to be available to all customer groups.
Offerings	Incentives of $0.15 per kWh of first-year savings for qualifying LEDs are available. All company owned street and area lights are operating at a dusk-to-dawn schedule.
Implementation and Delivery	The customer contacts their Community and Customer Manager with their interest. The Company returns a billing inventory and estimated cost savings analysis for the customer to review. If the customer opts to move ahead with the lighting exchanges, a letter of intent is sent to the Community and Customer Manager. Accompanying the letter should be the billing inventory with the customer's LED options by location indicated. The Company will issue the replacement orders and install the lights. The energy efficiency sales representative will contact the customer and assist in the incentive application and payment process. Over 100 LED streetlights projects have been installed to date. Of the 21 towns mentioned above under customer owned, 4 of them are also considering the Company Owned option.
Changes for 2022	No changes are anticipated for 2022.
Rationale for Changes	N/A
Notes	Currently, no energy efficiency incentive is available for the Company-owned controls option as the Company does not offer adjustable controls for billing other schedules such as part-night or dimming. A

	majority of street lighting customers in Rhode Island have either purchased their own streetlights or indicated a preference for purchasing their streetlights. Therefore, the volume of company-owned street lighting is on the decline. As a result, the number of company-owned streetlights that would be eligible for controls if controls were made available is a small number. Additionally, the controls associated with street lighting represents only a small piece of a Company-wide Advanced Metering Infrastructure (AMI) system which would be designed to handle the core business of electric and gas metering. Although the Company is keeping a watchful eye on advancing technologies, the capital investment on the system will be prompted by other customers. Like a multifamily building or leased commercial space where the tenant pays the electric bill, as long as the landlord (in this case, National Grid) approves the replacement, the customer leasing the streetlight will receive the energy efficiency incentive directly.

Table 3 below reflects some of the similarities and differences between the two ownership options available to customers for solid state street lighting.

Table 3. Customer- Versus Company-Owned Street Lighting

Distinction	Customer-Owned	Company-Owned
LED Fixture	Customer owns the equipment and is responsible for the purchase, financing, and maintenance	National Grid owns, installs, and maintains the equipment. The customer requests the exchange of existing or installation of new lighting
Energy Efficiency Incentive	Customer receives a one-time incentive payment for the installation of LED equipment (after satisfactory post-inspection by National Grid)	Customer receives a one-time incentive payment for the installation of LED equipment (after satisfactory post-inspection by National Grid)
Purchase/Lease	Customer purchases the equipment	National Grid leases the equipment to the customer
Outreach	League of Cities and Towns, Annual Department of Public Works (DPW) meeting with	League of Cities and Towns, Annual DPW meeting with Company, and various other meetings

Distinction	Customer-Owned	Company-Owned
	Company, and various other meetings	
Technical Support	Customer is responsible	Customer is responsible

5.11. Commercial Real Estate and Offices

Eligibility Criteria	Commercial Office Spaces
Offerings	It is unknown how COVID-19 will change this market. Due to this uncertainty, the Company has paused the development of a commercial real estate (CRE) initiative. However, National Grid sales staff will continue to support and monitor conditions within this segment.
Implementation and Delivery	The CRE sector has specific challenges and barriers linked to the split incentive between building owners and tenants, as well as difficulty accessing decision makers. The Company serves this customer segment with specific services to engage customers, like benchmarking and finance tools, as well as specific incentives tied to office performance-based design approach that benefits both building owners and tenants. **Benchmarking** The Company provides automated benchmarking services for commercial office spaces that allows building owners to be aware of their buildings energy use and compare it with that of its peers. After a facility has been benchmarked, National Grid has various resources to help its owners achieve lower energy consumption per square foot. **Commercial Property Assessed Clean Energy (C-PACE)** C-PACE is an ideal tool for some commercial real estate owners and developers. It allows them to finance energy and related improvements in a way that is widely considered "off book" and can be passed through to renters in many types of leases. To advance the use of this unique mechanism National Grid works with the Rhode Island Infrastructure Bank (RIIB) and Sustainable Real Estate Solutions (SRS) to bring awareness to commercial building owners. The Company will continue to refine its automated benchmarking capabilities in 2022. National Grid will work with partners such as the

	City of Providence, Chambers of Commerce, and other entities to ensure that customers are aware of this tool as well as its benefits.
Customer Feedback	The Company has heard from long-term tenants that would like to make EE improvements but cannot do so in a way that is favorable to them due to lease terms.
Changes for 2022	The Company will not develop a full-scale CRE initiative. However, a National Grid salesperson will continue to cover this market and monitor conditions in this segment. The Company is exploring the possibility of developing a peer group strategy whereby local CRE owners and property managers share best practices. The Company is also investigating new opportunities, including identifying the most common office space energy efficiency opportunities.
Rationale for Changes	Office space is experiencing a period of contraction as many employers offer permanent work-from-home options. This will likely lead to a consolidation of office spaces, making CRE owners reluctant to invest in their properties. This uncertainty makes 2022 an inopportune time to pursue a full-scale CRE sector initiative.
Notes	

5.12. Extended Care Facilities (Nursing Homes/Assisted Living)

Eligibility Criteria	The extended care market sector includes nursing homes, assisted living facilities, and rehabilitation facilities.
Offerings	Offerings for this market segment may include lighting improvements, HVAC improvements (including heat pumps) and controls, envelope improvements, energy management systems, energy efficient laundry systems, and Combined Heat and Power (CHP). 9.6
Implementation and Delivery	In 2021, the Company has more clearly defined who will serve different parts of this market. Nursing homes under 1,000,000 kWh consumed annually will be served by the Small Business Program. Facilities that consume more will be served by a large business sales representative. Assisted living facilities whose units contain kitchens will be served by the Multi Family program.

Customer Feedback	Customers in this market segment, especially nursing homes, asked for clearer definitions of who would serve them as well as more turnkey support
Changes for 2022	See Changes in Implementation and Delivery
Rationale for Changes	See customer feedback above.
Notes	Small business customers are able to take advantage of incentives for measures that are not included in the Small Business or Multi-Family programs.

5.13. Farm/Agriculture

Eligibility Criteria	The Farm and Agricultural Initiative is available to any farm or agricultural National Grid customers within the state of Rhode Island regardless of energy source including delivered fuels. National Grid will cover electric and natural gas energy efficiency incentives in accordance with the customer's eligibility and the program criteria. These energy conservation measures will be installed with prior approval of landlord, where appropriate.
Offerings	Lighting, HVAC improvements (including heat pumps), envelope improvements (weatherization, air sealing, insulation), equipment upgrades including refrigeration, pumps and motors, and ventilation. Now Commercial Property Assessed Clean Energy (C-PACE) can be used as a financing tool. C –PACE, further defined in the "Affordability and Financing" section below, allows customers in participating communities to access low-cost private capital for terms that greatly exceed most conventional business loans. It also allows the customer to capitalize all costs related to the project. The Company recognizes that financial assistance can help small businesses, including agricultural ones, to move forward with energy efficiency projects and is committed to helping them access affordable options. In addition,

	farmers may be eligible to participate in the Rhode Island Agricultural Energy Program grant.[3]
Implementation and Delivery	National Grid engages with customers through targeted outreach, while also providing additional information via the Office of Energy Resources website.[4] By way of this initiative, participating customers will receive a no-cost, no-obligation energy audit in which a qualified vendor will visit the farm, perform an energy audit and provide the customer with a written list of recommended measures tailored to the customer's situation, including equipment focused on agriculture.
Customer Feedback	Incentives have been critical to get customers to move forward with energy efficiency measures. The process took a long time from audit to installation. Customer awareness could be improved. Feedback indicates customers lack awareness as to what qualifies for energy conservation measure incentives. However, those who have utilized incentives have seen significant savings and benefits to their operations.
Changes for 2022	No changes are anticipated for 2022.
Rationale for Changes	N/A
Notes	

5.14. Combined Heat and Power Initiative

Eligibility Criteria	To qualify for a Combined Heat and Power (CHP) energy efficiency incentive, a proposed project, no matter the size, must meet the following conditions: • Host customers must be in the franchise service area of the Company. • Proposed systems must either be (i) thermal leading and sized so the recoverable heat can be used to offset other facility thermal loads and generate electricity as a by-product, (ii) using waste

[3] http://www.rifarmenergy.org/ri-ag-ep.htm
[4] http://www.energy.ri.gov/policies-programs/programs-incentives/feep.php

	energy or waste heat to generate electricity, or (iii) electric load following and meeting a total system efficiency greater than 55%. • Both new construction and retrofit installations are eligible; in either case, the baseline system must be documented. • The overall minimum total system efficiency of the proposed CHP units must be 55% or greater.[5] System efficiency is calculated as Annual Useful Energy/Annual Natural Gas Input where *Annual useful energy = Net Annual kWh*3,413/100,000 + utilized thermal output (therms)* *Annual natural gas input = CHP gas input in therms (HHV)* • The equipment to generate electricity may be an internal combustion engine, gas turbine engine, steam turbine, or back pressure turbine and the facility will capture waste heat for use in the facility. • Any size wasted energy systems and back pressure or extraction turbines can qualify. While it is expected that most of these applications will be retrofit, both new construction and retrofit installations are eligible; in either case, the baseline system must be carefully documented. • The project must pass cost effectiveness screening. These systems are designed to take advantage of existing on-site wasted energy, rejected heat, opportunity fuels, renewable natural gas or inefficient processes. Therefore, there is no minimum total system efficiency requirement.
Offerings	If a project has been shown to be cost effective, presents no capacity or reliability concerns, and has met the required eligibility criteria, it will be eligible for a non-variable incentive. An additional incentive tier will be available to CHP projects where the host customer also commits to implementing energy efficiency measures representing at

[5] The RI DEM's Air Quality Regulations (http://www.dem.ri.gov/pubs/regs/regs/air/air43_12.pdf; Page 11) set a minimum system design efficiency of 55% for CHP to be eligible to apply for Emission Credits. As noted in the incentive levels section below, a higher energy efficiency incentive is available for systems with efficiencies of 60% or greater.

	least five percent of the site energy use or the maximum load reduction identified in the Technical Assistance Study, whichever is less.[6] A customer may be treated as having made this commitment to energy efficiency if they have made investments to achieve similar load reductions through energy efficiency within the previous five years. Please use the table below to determine the non-variable incentive levels available for CHP project.

[6] If CHP facility sizing is determined by electric load (or not constrained by either electric or thermal load), the requirement will be 5% of electric usage; if the facility sizing is determined by thermal load, the requirement will be 5% of thermal energy usage. The energy efficiency measures will themselves be eligible for incentives, and are not part of the CHP incentive package cap described.

Table 4. Determination of Non-Variable Incentive Level for CHP Projects

Wasted energy, back pressure turbines, and extraction turbines	$900 per net kW
CHP with total system efficiency ≥55% - <60%	$900 per net kW
CHP with total system efficiency ≥55% - <60% with customer implementing energy efficiency measure equal to 5% of site energy or maximum load reduction	$1,125 per net kW
CHP that utilized between 25% -49% opportunity fuels, renewable natural gas, or biogas as a fuel source	$1,225 per net kW
CHP with total system efficiency ≥60%	$1000 per net kW
CHP that utilizes opportunity fuels, renewable natural gas, or biogas as the primary fuel source	$1,250 per net kW
CHP with total system efficiency ≥60% with customer implementing energy efficiency measure equal to 5% of site energy or maximum load reduction	$1,250 per net kW

The CHP system costs must include: all system, auxiliary, and interconnection costs, and CHP maintenance. If the CHP system is receiving a tax credit or other financial arrangement that reduces the cost of the CHP project to the customer without distributing that cost reduction as an additional cost to other electric or gas ratepayers, it may be treated as a credit against the cost of the CHP project.

The CHP incentive package cap from the Company will be 70% of the total project cost inclusive of the installation incentive, incentives related to gas service, present value of any performance incentive, system reliability procurement incentive, and any other incentives related to the transaction. For new construction installations, the incentive cap will be 70% of the incremental cost difference between the cost of what would have been done absent the CHP project and the cost of the CHP project. In the event the incentive is greater than

	70% of the total project cost, the incentive amount will be reduced to an amount equal to or less than 70%. A minimum of 20% of the energy efficiency incentive payment will be held until commissioning is completed. An additional optimal operations and maintenance energy efficiency incentive capped at $20/kW-year ($1.66/kW-month) and $50/kW-year ($4.16/kW-month) for systems utilizing biogas will be offered as part of the incentive package for any project with a net output greater than one MW for a period of up to 10 years. No payments will be made until the unit is in operation and provides demonstrated load reduction. The optimal operations and maintenance energy efficiency incentive will be made semiannually based on actual metered load reduction. Load reduction performance will be based on the net daily metered kW output of the system during ISO-New England's on-peak periods averaged over each six-month period. The optimal operations and maintenance energy efficiency incentive provides the customer with a post-commissioning incentive for maintaining or increasing the total system efficiency of the CHP system. This helps ensure the system is operating efficiently and that the system capacity savings are in-line with those bid into the ISO-NE Forward Capacity Market. The customer will repay a portion of the incentive to the Company if the project is abandoned, removed from the premises, sold, or otherwise no longer utilized as the primary source of heat and electricity by the customer, within 10 years from the date of final incentive payment authorization. The repayment will be the energy efficiency installation incentive times the number of years remaining until the required ten years of service divided by ten.
Implementation and Delivery	**Identification and Recruitment of Qualified CHP Projects** The Company currently works with vendors and customers to identify CHP opportunities at customer locations. The Company promotes CHP systems and outlines the process for qualification and implementation of CHP facilities through the Company's energy efficiency programs. The Company has sales and technical staff that are the primary points of contact for customers and vendors with potential CHP projects. The Company will continue to communicate criteria for CHP assessment and will communicate to vendors so that their presentations to

	customers will be more consistent with Company technical assistance requirements. **Targeted Outreach and Support for Potential CHP Customers** The Company believes that significant savings can be generated with this technology in the coming years. The Company is focused on developing a pipeline of projects for small, medium and large customers. The Company has a CHP program manager who helps customers navigate the technical and procedural aspects of bringing a CHP unit online. The Company also works with TA vendors that provides assistance in identifying and executing CHP projects. In addition, the Company works with CHP vendors to offer RI customers smaller CHP units where installation and operations are turn-key. Other strategies that will enhance CHP acceptance will also be considered, such as: preparing and distributing case studies, providing customer plant operator training depending on the size and complexity of the system and whether or not the management of the system will be outsourced, and providing easier customer access to CHP unit performance data. **Installation of Incremental or Additional Energy Efficiency Measures for Customers who have Previously Installed CHP** The Company will individually review the installation of proposed incremental energy efficiency measures for customers who have previously installed CHP on site or who are adding additional energy efficiency equipment that might affect the performance of an existing CHP unit. The Company will carefully categorize and protect the benefits attributed to previously installed CHP projects, while at the same time foster any additional cost-effective energy efficiency measures that further reduce total energy use. There are two types of project categories. The first category is "CHP Optimization" and involves measures which are installed with the purpose of increasing the output or operating efficiency of the existing CHP or other distributed generation (DG) unit; for example, the addition of combustion air precooling on a gas turbine CHP unit. In order to maintain compliance with ISO-NE's FCM rules, such projects will be tracked in the FCM, if applicable, as incremental output of the associated DG facilities. The second category is "Incremental EE", which includes "traditional" energy efficiency measures installed with

	the intent of reducing energy consumption in sites that have previously installed CHP. These measures may or may not affect CHP performance and output. For locations where an existing CHP unit covers a large percentage of the total load at the facility, additional energy efficiency savings measures installed may result in lowering the output of the CHP system instead of a load reduction on the Company's electric grid. Therefore, to assess savings that can be claimed by the energy efficiency programs, hourly load mapping may be required to accurately assess the net savings on the Company's electric and gas distribution systems, which will be assessed at the Company's electric and/or gas revenue meters at the customer's site. In cases where a typically electric measure (like lighting) reduces the electric load enough to require reducing the CHP output, gas savings may result from a normally electrical energy efficiency measure and could be claimed in the Gas utility DSM programs. **Scoping Study/Qualification** The Company will offer technical assistance on CHP projects beginning with a preliminary scoping of a potential site. This scoping will be based on an evaluation of: • Monthly (or hourly, where available) electric, gas, and other fuel usage • All site-specific forms of thermal energy end uses • Coincidence of electric and thermal loads • Proposed project cost • A high-level analysis of the fuel resources needed for the project and any actual or anticipated fuel capacity constraints and/or actual or anticipated fuel reliability issues This scoping will determine if further study of the site appears favorable, i.e., provides CHP operating hours and load factors that would be an appropriate application of CHP. **Technical Assistance Study** Assuming a favorable screening during preliminary scoping, National Grid will offer to co-fund a TA study of CHP with the customer. The TA study will be performed by an independent, qualified engineering firm. This study will assess thermal and electric loads, propose an

	appropriate CHP size and technology, compile a budget cost estimate, and identify potential barriers to the technology, etc. National Grid typically funds 50% of the cost of any TA study conducted by a preferred vendor selected by the Company, and up to 50% of the TA for other qualifying independent engineering firms. Any TA study by a CHP vendor or its representative which fulfills the CHP TA requirements may be accepted, though no co-funding will be provided. The TA study must be completed, submitted, and approved by the Company prior to implementation. The TA study must include an assessment of the likely on-peak kW reduction from the CHP given the proposed nameplate rating, the net CHP output after subtracting parasitic loads associated with the CHP, projected availability based on anticipated site-specific operating characteristics, performance data on other similar units, and a greenhouse gas analysis that estimates the change in greenhouse gas emissions expected from the project and a statement that informs the customer of the state goal to reduce greenhouse gas emissions by 80% below the 1990 levels, by 2050. (On-peak kW reduction = Net Output x Availability x % Loaded.) This kW load reduction should be used in the benefit-cost screening. As indicated in the offering section, a larger incentive is available for CHP projects that include the implementation of energy efficiency measures at the host facility. If the customer wants to meet a higher tiered incentive and did not previously qualify for that higher tier, the company could include another review. This review would propose measures to fulfill that requirement with new energy efficiency opportunities. These opportunities themselves will be eligible for energy efficiency incentives and will help make sure that the CHP facility is correctly sized for the facility's needs and will avoid creating a disincentive for future load reduction at the site. **Cost Effectiveness** The screening for cost effectiveness specific to CHP is included in the Rhode Island Test included as Attachment 4. However, given the Division's concerns over the applicability in all circumstances of what the Division characterizes as generic economic benefit assumptions identified in the CHP economic development benefit study underpinning theses adders, the Company will provide two scenarios of the benefit cost screening for CHP systems with a net output of one

	MW or greater: one test that includes the economic benefits adder within the Rhode Island Test, and one test that excludes the economic benefits adder. If the scenario of the screening test for the project would not pass without the economic benefits included, the Company will provide a written and well-supported justification explaining why the economic benefits are reasonably likely to be obtained. During the project notification process described elsewhere in this section for projects of one MW or greater, if any party who has intervened in the notification dockets disagrees with the Company's justification, the matter will be set for hearing at the Commission for resolution. **Other Contract Terms and Guidelines** In order to ensure proper operation of the CHP facility and persistence of energy savings, the following terms and guidelines will be required: • As part of the TA study, a minimum requirements document (MRD) will be developed. This MRD will contain engineering hardware and operational specifications that directly affect the savings estimates developed in the TA study. Compliance with the MRD will be necessary to receive rebate payments. • All systems greater than one MW will require electric, thermal and gas metering for commissioning and monitoring of system efficiencies. • The project must be commissioned. Commissioning is a process following installation whereby a third party verifies that the project is installed and operating as detailed in the TA study and MRD. • The customer must sign and produce a contract for O&M services through the first planned major overhaul of the CHP unit after post installation commissioning. On-going O&M contracts for a minimum of 10 years from project commissioning are recommended. • Customers applying for interconnection of a CHP systems must not operate the unit until they receive the authorization to interconnect from the Company. • kW-demand savings achieved via the electric energy efficiency programs, including CHP, will continue to be reported by the Company to ISO-NE as Other Demand Resources (ODR) and the

	revenue generated will be used to fund future energy efficiency projects through the Company's programs. **Qualification** The cost of the project will be provided by a design/build or general contractor experienced with CHP projects and revised as necessary. **Options for a CHP proposal that fails cost effectiveness testing** If a CHP project does not pass the benefit-cost test, the Company will work with the customer to develop other solutions that may still support the CHP facility. Such other solutions may include one or all of the following: • Re-analyzing the optimal size of the CHP unit, or the number of generators. A different sized CHP unit might provide better efficiencies and pass the benefit cost test. • Identifying other load reduction opportunities at the facility. Benefits can be garnered from load reduction in lieu of achieving that load reduction through CHP. **Attribution of CHP Energy Savings to the Company** For CHP projects one MW or greater in size that meet the eligibility criteria, 100% of the project savings shall be attributed to the energy efficiency programs. For CHP projects smaller than 35 kW, the Company shall use the latest net to gross adjustments determined by impact evaluations conducted on the RI CHP programs. These evaluations shall be conducted at least once every five years. **Notification Process** The Company shall inform the DPUC, OER, and EERMC of any CHP project with a net output of one MW or greater (where net is the nameplate MW output minus CHP auxiliary kW). The notification shall occur after the cost benefit screening and before the offer letter is presented to the customer. For CHP projects with a net output of one MW or greater, the Company shall submit the following documents for review by the Division: • Documentation demonstrating that the project would not move forward without energy efficiency technical assistance and/or incentives. The documentation shall justify its finding with the following evidence:

	• A letter signed by a senior executive or site operations manager stating that the project would not move forward without the energy efficiency technical assistance and incentive; • Documentation from the customer on all relevant leases, agreements or commitments related to the CHP system or incentive offer; • Estimated project budget. • A complete benefit cost analysis for the CHP project using the Rhode Island Test, as well as application of this test applying sensitivities related to the removal of economic benefits • A report including a natural gas capacity analysis that addresses the impact of the proposed project on gas reliability; the potential cost of any necessary incremental gas capacity and distribution system reinforcements; and the possible acceleration of the date by which new pipeline capacity would be needed for the relevant area. For any proposed CHP project greater than one MW: • The Company will submit a project description to the Division, providing all the pertinent details relating to the project. • The Division may submit information requests to the Company at any time after receipt of the project description. The Division may also submit follow up data requests, as needed. • The Company shall respond to all information requests as soon as reasonably possible, but no later than fourteen days from receipt of information requests, unless the Division grants an extension. • The Division will make all reasonable efforts to communicate decisions around the provision of a notification of support within thirty days of the receipt of the last set of information request responses received from the Company. • To the extent that additional review time is required, the Division will provide notification to the Company. • If at the end of fifty days from the date the Company provided the project description to the Division, the Division has not provided to the Company its opinion of support or opposition to the project, the Company retains the right to make a filing with

	the Commission seeking approval of the CHP incentive. The Division retains its right to take any position on the project it deems appropriate and shall not be prejudiced by the fact that it did not provide an opinion to the Company within the fifty day period. Even if the Division provides its opinion to the Commission that the Division supports the CHP project, the Company must file a notification with the Commission, setting forth the pertinent facts relating to the project. If (i) the Commission takes no action within thirty days and (ii) the Division or any other party has not objected to the proposed project, the project will be deemed approved. If the Division or any other party objects, the Commission will set the matter for hearing.
Customer/ Vendor Feedback	Vendors and customers provided feedback in advance of the 2020 Rhode Island Annual CHP Public Meeting. The vendors and customer noted that the incentive levels and interconnection remain the most significant barriers to CHP adoption. Customers and vendors also remarked on the financial and interconnection challenges associated with smaller CHP systems. The Company is currently exploring options for a prescriptive pathway for micro-CHP systems. This process would simplify the interconnection process and expedite the installation time for smaller CHP systems.
Participation and Savings	Due to the high capital cost and technical requirements of installing CHP, there is a very long lead time for a successful installation. With small numbers of projects and wide ranges of possible project sizes, the Company anticipates substantial variability in MW realized in any given year. For 2020, the Company achieved 630kW of installed capacity, corresponding to approximately 4,089 MWh of savings. As of August 2020, the Company has knowledge of the following, estimated pipeline of CHP projects in Rhode Island (see Table 5) that have initiated a Technical Assistance Study and are expected to leverage energy efficiency incentives. The Company commits to updating this pipeline table in each annual Energy Efficiency Plan and reconciliation filing to the PUC going forward. Direct notification shall be sent to the Division of Public Utilities & Carries, the Office of Energy Resources, and the Energy Efficiency and Resource Management Council via email whenever a CHP project with a net output of one MW or greater is

<table>
<tr><td></td><td>added, removed, or updated after the Technical Assistance Study and before the offer letter to the customer.

Table 5. Pipeline of RI CHP Projects with TA Study Initiated
<table>
<tr><td colspan="2">Customer Name or Company Name*</td><td>Schartner Farms</td></tr>
<tr><td colspan="2">Approximate Size of CHP (kW and Annual MWh)</td><td>13.3 MW
26,465 Annual MWh</td></tr>
<tr><td rowspan="3">Location Information</td><td>Feeder</td><td>49-56-88F1</td></tr>
<tr><td>Substation</td><td>Tower Hill Substation</td></tr>
<tr><td>Gas Line ID</td><td>416612250</td></tr>
<tr><td colspan="2">Current Status (Scoping, Study, Under Construction, Post-Inspection or Commissioning)</td><td>Scoping Study</td></tr>
<tr><td colspan="2">Estimated Year(s) in which the Company will claim energy savings</td><td>2022 and 2023</td></tr>
</table>
*Customers and/or Companies may opt-out of disclosing their names in this table. If a customer or company has opted-out their names have been redacted in the table above. The Company will provide a confidential pipeline table without redacted names to the PUC, DPUC, and/or OER, if requested.</td></tr>
<tr><td>Changes for 2022</td><td>N/A</td></tr>
<tr><td>Rationale for Changes</td><td>N/A</td></tr>
<tr><td>Notes</td><td>The Company continues to explore alternative fuel options for CHP systems, such as renewable natural gas, hydrogen, biogas, and other opportunities fuels.</td></tr>
</table>

5.15. Products Offered Through "Upstream"

When the Company refers to an "Upstream" initiative it is referring to the practice of offering an incentive directly to a manufacturer or distributor (mainly distributors in Company initiatives) of efficient equipment instead of offering an incentive to the customer through an application

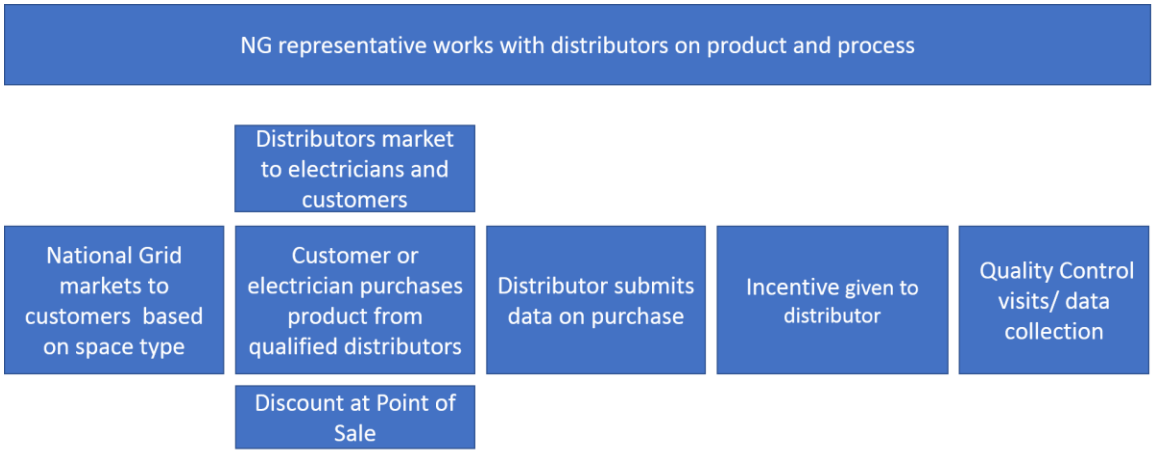
form after the sales transaction has been made. This allows them to sell the product for less and make it more appealing to a potential customer. It also allows the customer to acquire this more efficient equipment without the burden of paperwork and waiting for reimbursement.

5.15.1. Upstream Lighting

Eligibility Criteria	The Upstream Lighting initiative is available to all commercial customers.
Offerings	Discounted luminaires, luminaires with controls, lamps, and controls at the point of sale at qualified distributors.
Implementation and Delivery	National Grid targets marketing to relevant customers and works in collaboration with qualified distributors, who also conduct marketing. Distributors sell products directly to consumers or relevant intermediaries (e.g. electricians) and provide discounts at the point of sale. The distributor then submits data on the purchase and the Company pays the incentive to the distributor and conducts quality control visits. See Figure 7 for more detail.
Customer Feedback	The Company's implementation team regularly talks with lighting wholesalers who have direct contact with the customers who purchase equipment and are best positioned to relay customer expectations and feedback. Feedback from these wholesalers is often as important to program success and design as direct end-customer feedback because they strongly influence customer lighting choices.
Changes for 2022	The 2022 plan will maintain **increased incentive support and special promotions for Luminaire Level Lighting Controls (LLLCs).** **The Company also continue to cross market between the different Upstream Initiatives.** The Company will continue **to market of all lighting products to small businesses** who consume less than 6,000 kWh per year.
Rationale for Changes	Market transformation, increased savings, and driving more participation across the entire spectrum of customer sizes, including ultra-small business.
Notes	The Company will continue to investigate ways to increase stocking of luminaires with controls. Information will be collected through the Upstream vendor as well as anonymous surveys developed by

	National Grid staff in collaboration with the appropriate members of the EERMC Consultant team.

Figure 7. Implementation and Delivery Process for Upstream Lighting



5.15.2. Upstream HVAC

Eligibility Criteria	The Upstream HVAC initiative is available to all commercial customers.
Offerings	Discounted premium efficiency HVAC equipment and controls at the point of sale at qualified distributors including air-cooled air conditioning and heat pumps systems, water-cooled air conditioning and heat pump systems, variable refrigerant flow systems, as well as dual enthalpy economizer controls and electronically commutated motor (ECM) circulator pumps for hydronic heating or service hot water applications.
Implementation and Delivery	All upstream products follow a similar implementation and delivery process shown in Figure 7. National Grid targets marketing to relevant customers and works in collaboration with qualified distributors, who also conduct marketing. Distributors sell products directly to consumers or relevant intermediaries (e.g. electricians) and provide discounts at the point of sale. The distributor then submits data on the purchase and the Company pays the incentive to the distributor and conducts quality control visits.

Customer Feedback	The Company's sales team and program managers regularly talk with partnering distributors who have direct contact with the plumbing, HVAC and heating contractors, and occasionally end customers who purchase equipment. Distributors provide feedback from these key distribution chain players. Plumbing, HVAC and heating contractors have direct contact with customers and are best positioned to relay customer expectations and feedback. Feedback from these contractors is often as important to program success and design as direct end-customer feedback because contractors strongly influence customer equipment choices.
Changes for 2022	The Company is working with the initiative vendor and M&V staff to understand the feasibility of offering an accelerated retirement program for HVAC measures. If this is possible, it may yield additional savings as the baseline would no longer be strictly confined to New Construction, but be a mix of Retrofit and New Construction. The Company's investigation will be complete prior to the final draft of the 2022 EE Plan.
Rationale for Changes	
Notes	The savings of the upstream HVAC products will be calculated from new construction baselines, not retrofit.

5.15.3. Upstream Gas

Eligibility Criteria	The Upstream HVAC initiative is available to all commercial customers.
Offerings	Discounted premium efficiency water heating equipment at the point of sale at qualified distributors. The 2022 offering will include water heaters (indirect and on-demand), water heating boilers, and condominium water heaters.
Implementation and Delivery	All Upstream products follow a similar implementation and delivery process shown in Figure 7. National Grid targets marketing to relevant customers and works in collaboration with qualified distributors, who also conduct marketing. Distributors sell products directly to consumers or relevant intermediaries (e.g. electricians) and provide discounts at the point of sale. The distributor then submits data on

	the purchase and the Company pays the incentive to the distributor and conducts quality control visits.
Customer Feedback	The Company's sales team and program managers regularly talk with partnering distributors who have direct contact with the plumbing, HVAC and heating contractors, and occasionally end customers who purchase equipment. Distributors provide feedback from these key distribution chain players. Plumbing, HVAC and heating contractors have direct contact with customers and are best positioned to relay customer expectations and feedback. Feedback from these contractors is often as important to program success and design as direct end-customer feedback because contractors strongly influence customer equipment choices.
Changes for 2022	No changes are anticipated for 2022.
Rationale for Changes	N/A
Notes	

5.15.4. Upstream Kitchen Equipment (Electric and Gas)

Eligibility Criteria	The Upstream Kitchen Equipment initiative is available to all commercial customers.
Offerings	Discounted premium efficiency electric and gas kitchen equipment at the point of sale at qualified distributors. National Grid currently offers more than 9 different types of energy efficient cooking equipment across both fuels.
Implementation and Delivery	All upstream products follow a similar implementation and delivery process shown in Figure 7. National Grid targets marketing to relevant customers and works in collaboration with qualified distributors, who also conduct marketing. Distributors sell products directly to consumers or relevant intermediaries (e.g. electricians) and provide discounts at the point of sale. The distributor then submits data on the purchase and the Company pays the incentive to the distributor and conducts quality control visits.
Customer Feedback	The Company's sales team and program managers regularly talk with kitchen equipment wholesalers who have direct contact with the customers who purchase equipment and are best positioned to relay

	customer expectations and feedback. Feedback from these wholesalers is often as important to program success and design as direct end-customer feedback because they strongly influence customer equipment choices.
Changes for 2022	No changes are anticipated in 2022.
Rationale for Changes	
Notes	

5.16. Telecommunications Initiative

Eligibility Criteria	This is initiative is designed to serve mobile, fiber optic, and cable data companies and their associated infrastructure.
Offerings	Technical assistance, project management, and incentives
Implementation and Delivery	This program is administered by the vendor. The Company's sales representatives work with in concert with vendor staff members to develop a relationship with the prospective customer. Once the relationship is established, the Telecommunications Initiative offers no-cost audits to the customer. This audit documents and identifies energy efficiency opportunities for the location's HVAC, HVAC controls, airflow management, VFS and fan optimization. Once the audit is complete, a report is generated and presented to the customer. The Telecommunications Initiative works with the customer's contractor to obtain a quote for the work. If the customer decides to move forward with the project, the Telecommunications Initiative vendor will generate an application, collect all necessary paperwork, and submit to National Grid for pre-approval. Once the project is complete, the Telecommunications Initiative vendor will collect all invoices and final signatures and complete a post-inspection verification to ensure the measures are installed as intended. The Telecommunications Initiative vendor will submit all paperwork to National Grid and notify the customer when the incentive check is in the mail.

Customer Feedback	Initial feedback indicates that customers are appreciative of an offering customized to their needs from a vendor who has executed on this concept in other areas of the country.
Changes for 2022	The Company does not anticipate any changes in 2022.
Rationale for Changes	
Notes	

6. Small Business Direct Install Program

Eligibility Criteria	Commercial customers who have less than 1,000,000 kWh in annual usage may participate in the Small Business Direct Install Program. K-12 schools, national and regional chain restaurants, and small grocery stores who consume less than 1,000,000 kWh per year are excluded from this program as they are served through other pathways or initiatives.
Offerings	The Small Business Program begins with a no-cost site assessment conducted by a Small Business Energy Specialist to understand the customer's energy-related needs and goals. The assessment keys in on energy efficiency measures such as lighting systems and controls, cooler/refrigeration control, water saving measures, HVAC controls, motor controls, weatherization/insulation, and custom measures. Turn-key install and OBR is offered to support the adoption of the recommended measures to the customer. A Customer Directed Option (CDO) is also available. In this pathway, customers may use their own electrician to install measures while the Small Business program vendor processes and submits all necessary paperwork to National Grid.
Implementation and Delivery	A customer begins the process for a Small Business energy assessment by either calling, emailing, or using an online form to express interest in the program. The customer is connected to a dedicated, internal Small Business program staff to learn more details about the process and the next steps. The assessment is scheduled with the customer, and the Energy Specialist meets the customer at the scheduled time. The Energy Specialist performs the assessment, identifies strategies to pursue opportunities, reviews design considerations with the customer, and incorporates this detail into a proposal describing appropriate energy efficiency measures. The proposal reflects the installed costs, the expected energy savings, and the applicable program incentives. Once the customer decides to proceed, the Energy Specialist hands off the project to a Project Coordinator who works with the customer to set a convenient installation schedule that will not interrupt their business. After installation, a certificate of install is signed off on by the customer indicating their satisfaction with the work provided. There is dedicated support staff to address any post-install issues that

	may arise. This support structure is designed to smoothly execute projects and allow the customers to remain focused on their daily tasks.
Customer/Vendor Feedback	The Company's vendor regularly collects insights and feedback from customers. National Grid's sales team and program managers regularly check in with vendors to capture this feedback. In 2022, the Company will introduce a customer a short, formal customer satisfaction survey in 2022. In addition to questions typical of a customer satisfaction survey, the Company will ask an optional question about whether the Company identifies as a woman, minority, or LGBT owned. This will allow the Company to have some understanding of the type of customers it serves. Outgoing direct mail and phone outreach have increased in volume and the program vendor is employing more direct canvassing from its field staff to meet its yearly goals. Consequently, the cost of acquiring a customer is increasing.
Changes for 2022	The Company will dramatically increase the volume of weatherization installations for customers customer using all types of fuel. This is possible due to a $1,100,000 RGGI allocation to the Company from OER for this purpose. The Company has committed to, at the request of OER, to spend 50% of these funds in areas hit hardest by the COVID pandemic. The Company and its vendor will deploy auditors that are bilingual. In addition to English the auditor will speak either Spanish or Portuguese. These are the two languages that are most widely spoken outside of English in Rhode Island. The Company also commits to raising its goal of luminaires or retrofits kits with integrated controls to 40% in 2022. This goal was 30% in the 2021 plan. In addition to collecting information about who is served by this program, the Company will continue to market services to Woman and Minority Owned Enterprises (WME). This effort will extend beyond the WME registered with the state and will seek to develop relationships with groups such as the RI Black Business Association and the RI Hispanic Chamber of Commerce to understand how we can better understand and serve these businesses.

Rationale for Changes	Capture more non-lighting savings per the Market Potential Study, provide more savings and benefits to SMB customers during a financial downturn, and prepare for the future of heating.
Proposed Upcoming Evaluations	There are no scheduled evaluations, as recently completed evaluations continue to inform the program. A 2017 Impact Evaluation of Small Business Electric Installations was completed in March 2020. The study updated electric non-lighting impact factors for the Small Business initiative. A 2016 study of small business lighting (Rhode Island Commercial and Industrial Small Business Initiative Impact Evaluation) was completed in 2019. At the time of filing, the Company had just completed a 2019 Rhode Island Free-ridership and Spillover (FRSO) Study. FRSO is updated for the whole small business program, both electric and gas, as part of this study.

Small Business Direct Install – Electric Program Goals, Metrics, Budgets, Participation for 2022

Fuel	Lifetime MWh (Electric)	Annual MWh (Electric)	Annual Passive Demand Reduction kW (Electric)	Total Net Lifetime MMBtu (Electric Gas, Oil, Propane)	Budget ($000)	Participation
Electric	61,319	9,696	881	161,038	8,862	474

Small Business Direct Install – Gas Program Goals, Metrics, Budgets, Participation for 2022

	Lifetime MMBtu (Gas)	Annual MMBtu (Gas)	Budget ($000)	Participation
Gas	38,296	3,830	359	107

7. Connected Solutions (Active Demand Response)

Eligibility Criteria	Commercial and Industrial customers
Offerings	The Company implemented an active demand reduction program in 2019 based on demonstrations done in 2017 and 2018. Under this program, customers agree to reduce their electric use during the system peak. Customers participating in the demand response (DR) program are free to curtail their energy use by any means possible, as this program is technology neutral. **Targeted Dispatch** *(One to eight DR events per summer)* This option calls on customers to curtail their electricity use or discharge energy from generators only a few times per summer. Typical technologies or strategies used to curtail load include building management systems to control HVAC systems, lighting control systems, and manual or automated changes to manufacturing processes. The customer's performance is calculated using either the Company's electric meter where available (typically G-32 customers) or third-party metering (typically G-02 customers). Please refer to the program materials available on the Targeted Dispatch page of the Company website for a detailed explanation of the baseline method used and examples. This initiative uses Curtailment Service Providers (CSPs) to assess curtailment opportunities at a facility and deliver curtailment services to enrolled customers. CSPs identify curtailment opportunities for deployment under the Company's initiative, as well as demand charge and Installed Capacity (ICAP) tag[7] management opportunities and present a complete curtailment proposal to the customer. The demand charge and ICAP tag management provide opportunities for direct bill savings to customers. Customers and CSPs respond to dispatch signals sent by the Company. Customers and CSPs are notified of events a day before the event. The core model remains focused on reducing demand during summer peak

[7] Installed Capacity Tag is a capacity payment that is set for a customer by using their peak demand during the peak day/hour on the NEPOOL grid

<table>
<tr><td></td><td>events, typically targeting fewer than twenty hours per summer. The program is structured to avoid interfering with the ISO-NE programs or penalizing customers for participating in both programs.

This Energy Efficiency Plan is being coordinated with the SRP Plan to ensure that the customer offerings are cohesive, not duplicative, and a comprehensive marketing plan is being implemented. This coordination between SRP, NWAs, and DR is detailed in the 2021-2023 SRP Plan sections on NWAs in System Planning and on Coordination with Energy Efficiency.

Daily Dispatch (40 to 60 DR events per summer)

This option calls on customers to curtail their energy use or discharge energy many more times per summer than the Targeted Dispatch. Because of the number of dispatches, customers typically look for an automated participation path with a technology that does not disrupt their comfort or business, such as battery storage or thermal storage.</td></tr>
<tr><td>Implementation and Delivery</td><td>Targeted Dispatch (One to eight DR events per summer)
The estimated performance for Targeted Dispatch is lower than expected given the number of enrollments. Consequently, the Company proposed increasing the goal to 28MW-performed for 2022.

The number of enrolled MW in Targeted Dispatch has decreased since 2019. This is in large part due to customers choosing to move their enrollment from Targeted Dispatch to Daily Dispatch. This is a good trend, because Daily Dispatch generated more system benefits per MW than Targeted Dispatch offering.

Table 6. Targeted Dispatch Participation
<table>
<tr><th></th><th colspan="4">Historic Numbers</th><th>Estimated Number</th><th>Proposed Number</th></tr>
<tr><th></th><th>2017</th><th>2018</th><th>2019</th><th>2020</th><th>2021</th><th>2022</th></tr>
<tr><td>Average MW of Curtailment over all events</td><td>11</td><td>27</td><td>32</td><td>21</td><td>23
(vs. 37 planned)</td><td>28
(20% increase)</td></tr>
</table>
Please refer to the program materials available on the Targeted Dispatch page of the Company website for a detailed explanation of the baseline method used and examples.</td></tr>
</table>

<table>
<tr>
<td></td>
<td>Customers have the option to receive their incentives directly from the Company, or have the Company send the incentive to the customer's curtailment service provider. Please see the program materials and the customer application available on the Targeted Dispatch page of the Company website for more details.

Daily Dispatch (40 to 60 DR events per summer)
The estimated performance for Daily Dispatch is lower than expected given the number of enrollments. Consequently, the Company proposed increasing the goal to 10 MW-performed for 2022.

Table 7. Daily Dispatch Participation
<table>
<tr><th></th><th colspan="2">Historic Numbers</th><th>Estimated Number</th><th>Proposed Number</th></tr>
<tr><th></th><th>2019</th><th>2020</th><th>2021</th><th>2022</th></tr>
<tr><td>Average MW of Curtailment over all events</td><td>0</td><td>4</td><td>8
(vs. 4 planned)</td><td>10
(25% increase)</td></tr>
</table>
Please refer to the program materials available on the Daily Dispatch page of the Company website for a detailed explanation of the baseline method used and examples.

Customers have the option to receive their incentives directly from the Company, or have the Company send the incentive to the customer's curtailment service provider. Please see the program materials and the customer application available on the Daily Dispatch page of the Company website for more details.</td>
</tr>
<tr>
<td>Customer Feedback</td>
<td>Although COVID-19 will have lasting impacts on how customers do business, most customers are expecting relatively normal operations for the summer of 2021.</td>
</tr>
<tr>
<td>Changes for 2022</td>
<td>At this time, there are no anticipated program changes related to Targeted or Daily Dispatch for 2022 based on performance projections from currently available data. The results from the summer 2021 performance may highlight opportunities to improve the program in 2022, however results are not expected until shortly after the filing of this Plan. The Company will share any proposed program changes resulting from the evaluation with stakeholders prior to implementing changes.</td>
</tr>
</table>

	Coordination with other Company Energy Storage programs The Company is developing two Energy Storage Initiatives in 2021, as detailed in Docket Nos. 4770/4780 Amended Settlement Agreement: • One behind-the-meter (BTM) system co-located with a DCFC site, which will consist of an approximate 250 kW two-hour energy storage system, supporting approximately two to six DCFC ports. • One front-of-the-meter (FTM) storage system, which will consist of an approximate 500 kW three-hour energy storage system for the primary purpose of realizing distribution system value, with the exact storage size and capacity to be determined by system need and location. The Docket Nos. 4770/4780 demonstrations primarily focused on testing grid-connected systems to mitigate the load impact associated with EV charging, whereas the Energy Storage Initiative in the 2019 Plan was a storage-enabled DR program focused on incentivizing the use of customer-owned behind-the-meter (BTM) storage to shift peak load at traditional end-use customer facilities. These efforts are separate from the Energy Storage Demand Response Initiatives specifically targeted to facilitating BTM storage to be used for DR. The Company's intent is to test storage use cases in both FTM and BTM in order to identify all applications that are beneficial to customers and to the grid as a whole. A secondary benefit of testing both categories of storage applications is that it will help spur the development of a robust storage market in Rhode Island, where the contributing parties may differ between large grid connected applications and smaller BTM applications.
Rationale for Changes	The Company's other efforts related to storage are complementary to the ConnectedSolutions program's goal of reducing electric use during system peaks. Routine coordination with other Company programs helps leverage opportunities for further savings while minimizing duplication of efforts that could otherwise confuse customers.

ConnectedSolutions – Electric Program Goals, Metrics, Budgets, Participation for 2022

Fuel	Lifetime MWh (Electric)	Annual MWh (Electric)	Annual Active Demand Reduction kW (Electric)	Budget ($000)	Participation

Connected Solutions (Active Demand Response)

Electric	0	0	32,400	4,438.3	180

8. C&I Multifamily Program

Eligibility Criteria	See Attachment 1, Section 3, for eligibility information. In addition to criteria listed in Attachment 1, Section 3, the multifamily program provides joint residential and commercial energy services to condominiums and apartment complexes for energy efficiency upgrades with no cost audits. The multifamily C&I program also serves customers like non-profits, group homes, and houses of worship that traditionally do not fit within the predefined program structure.
Offerings	See Attachment 1, Section 3, for offerings. In addition to what is listed in Attachment 1, Section 3, the C&I multifamily program specifically offers incentives for master metered gas measures that typically include boiler upgrades, reset controls, and insulation and air sealing. The remaining areas are addressed through residential incentives via a common point of contact such as a property manager or building owner to comprehensively service the facility.
Implementation and Delivery	See Attachment 1, Section 3, for implementation and delivery. In addition to what is listed in Attachment 1, Section 3, note that the program coordinates with the Residential New Construction Program, Multifamily Programs, and the Small Business Program.
Customer Feedback	See Attachment 1, Section 3, for customer feedback.
Changes for 2022	See Attachment 1, Section 3, for program changes.
Rationale for Changes	See Attachment 1, Section 3, for rationale.
Proposed Upcoming Evaluations	See Attachment 1, Section 3, for upcoming evaluations.
Notes	

C&I Multifamily Program – Gas Program Goals, Metrics, Budgets, Participation for 2022

	Lifetime MMBtu (Gas)	Annual MMBtu (Gas)	Budget ($000)	Participation

Gas	131,220	8,803	964	729

9. Finance as an Enabling Strategy

t Many customers face challenges in bringing energy efficiency projects to fruition. These may include structural limitations within a business, information overload, cultural resistance within companies, and access to capital. The Company's plan deals with the first three barriers in various ways, but this section of the plan focuses on mechanisms that can help customers afford to carry out energy efficiency upgrades and/or perceive costs differently.

Mechanisms Offered

National Grid and its partners have developed four primary finance mechanisms to help customers afford energy efficiency upgrades, each with unique attributes. Some may only be available or apply to certain customers, building, or ownership types.

9.1. On Bill Repayment (OBR) - Electric

Customer type	Commercial customers who consume more than 1,000 MWh per year
Loan size	$1,000 to ~$100,000 (may be larger for SEMPs)
Maximum Tenor	5 years for commercial accounts, 7-10 years for State facilities
Loan Volume	Variable, between $5MM to $10MM per year
Benefits to customer	No formal credit check/ rapid approval, on bill repayment, zero interest
Limitations	Maximum tenor too short for many comprehensive upgrades, cannot be used to support upgrades customers may desire such as windows and roofs as they have a B/C ratio less than 1.0.
More information	National Grid's revolving loan fund projections for 2022 are illustrated in Attachment 5, Table E-10.
Relevant notes	The Company is requesting a $2,000,000 infusion into this revolving loan fund as the Company is projecting a negative balance in this fund by the end of 2022. This includes estimated repayments made by customers in 2022.

9.2. On Bill Repayment (OBR) - Electric Small Business

Customer type	Commercial customers who consume less than 1,000 MWh per year
Loan size	$500 to $50,000
Maximum Tenor	5 years
Loan Volume	Variable, between $1.8MM and $3.0MM per year
Benefits to customer	No formal credit check/ rapid approval, on bill repayment, zero interest
Limitations	Maximum tenor too short for many comprehensive upgrades, cannot be used to support upgrades customers may desire such as windows and roofs as they have a B/C ratio less than 1.0
More information	National Grid's Small Business revolving loan fund projections for 2020 are illustrated in Attachment 5, Table E-10

9.3. On Bill Repayment (OBR) – Gas

Customer type	All commercial gas customers
Max loan size	$1,000 to ~$100,000 (may be larger for SEMPs or special projects)
Maximum Tenor	3 years for commercial accounts, 5 years for State facilities
Loan Volume	Variable, between $1MM and 1.5MM per year
Benefits to customer	No formal credit check/ rapid approval, on bill repayment, zero interest
Limitations	Maximum tenor too short for many comprehensive upgrades, cannot be used to support upgrades customers may desire such as windows and roofs as they have a B/C ratio less than 1.0
More information	National Grid's Gas revolving loan fund projections for 2021 are illustrated in Attachment 6, Table E-10
Notes	

9.4. Efficient Buildings Fund (EBF)

Customer type	State agencies, quasi-state agencies, and municipalities
Max loan size	More than $5MM

Maximum Tenor	Up to 20 years
Loan Volume	Variable, ~$20.5MM loans outstanding to date
Benefits to customer	Below market rate interest, long tenor, loan amounts can be large enough to make comprehensive building wide improvements
Limitations	Appropriate customers must file applications and be ranked against other potential loan applicants
More information	More detail on this mechanism can be found in Attachment 5, Table E-10 and at the end of this attachment in Section 13.
Description	In 2022, the Company has budgeted for a $5,000,000 transfer to the Rhode Island Infrastructure Bank (RIIB) in support of the Efficient Buildings Fund (EBF). The Efficient Buildings Fund (EBF) is a long-term, low-cost financing option for municipalities and quasi-public agencies to complete energy efficiency and renewable energy projects. Specifically, EBF offers loans no less than 20% below the borrower's market rate of financing. EBF is administered in partnership with RI OER and the Rhode Island Infrastructure Bank (The Bank, Infrastructure Bank, or RIIB). OER is responsible for determining project eligibility, reviewing project applications and producing a Project Priority List (PPL). The Infrastructure Bank only finances projects that are listed on the PPL. National Grid provides technical and logistical support to customers, principally municipalities, in the following areas: 1. National Grid arranges and incentivizes scoping studies at 100% of cost. The Company also assists customers with paying for more advanced engineering reports that provide more precise savings and cost information necessary to execute an upgrade with confidence. National Grid typically covers 50% of the cost of this report. The Company refers to these reports as Technical Assistance (TA) studies. 2. National Grid also assists municipalities by helping them issue and evaluate Requests for Proposals (RFPs). This includes, but is not limited to, developing an appropriate scope of work, developing technical requirements, supporting coordination between vendors and the municipality, and helping to review submitted bids. This is a vital service as municipalities do not have the resources to do this on their own.

3. National Grid funds and manages a University of Rhode Island (URI) fellow who has been a critical element in getting Rhode Island schools benchmarked on the Environmental Protection Agency's (EPA) Portfolio Manager platform. This benchmarking gives schools and municipalities insight into where they might want to prioritize energy efficiency upgrades.
4. National Grid's municipal sales representative works closely with OER and RIIB though virtually every step of the process from the promotion of EBF to post inspection of installed measures. Leads on potential projects may start with National Grid or OER or RIIB.

8 Contributed Capital	$ 21,870,447
System Benefit Charge	$ 16,870,447
SBC Transfer 9/29	$ 5,126,000
Total Loans Issued	$ 20,577,618
Anticipated '20 Loans	$ 27,200,000
	$47,777,618
Program Leverage Ratio	2.18x

Pipeline Forecasting and 2022 Transfer Request

9 Loan Number	**EE Eligible Financing Estimate**	**Probability**	**Weighted Financing Estimate**	**Construction Completion Estimates**
1	$ 4,000,000	75%	$ 3,000,000	2022/2022
2	$ 2,500,000	75%	$ 1,875,000	2022/2022
3	$ 5,000,000	75%	$ 3,750,000	2022
4	$ 4,000,000	75%	$ 3,000,000	2022/2022
5	$ 15,000,000	75%	$ 11,250,000	2022/2022
6	$ 2,000,000	50%	$ 1,000,000	2022/2022
Total*	**$ 32,500,000**		**$ 23,875,000**	

All numbers are EE only

Table 10. Forecasted 2022 Pipeline Loan Descriptions Savings

Loan Number	Project and Measure Description	Annual Savings Estimate - MWh	Annual Savings Estimate - Therms	Lifetime Savings Estimate - MWh	Lifetime Savings Estimate - Therms
1	Lighting upgrades, will move forward once MOU completed between National Grid and RIDOT	1,600	-	24,000	-
2	Comprehensive efficiency, already listed on PPL	867	16,667	13,000	250,000
3	Comprehensive Energy Efficiency, financing in May 2022	1,733	33,333	26,000	500,000
4	Seeking borrowing authority for energy efficiency projects in November	1,400	26,667	21,000	400,000
5	Building Energy Efficiency, has borrowing authority	5,267	100,000	79,000	1,500,000
6	Building Energy Efficiency, on PPL, seeking borrowing authority in November	733	13,333	11,000	200,000

9 and Table 10 above show the expected 2022 pipeline including financing costs, probability of closing the loan and expected annual

	(over several years) and lifetime savings. The forecasted 2022 pipeline consists entirely of energy efficiency projects. The EBF program pipeline includes projects from borrowers that have already received authority to borrow or are seeking borrowing authority in November 2020. The Bank's conversations with municipal clients have provided indications that those clients with existing debt capacity will borrow in the near term to take advantage of the historically low interest rates to invest in critical energy efficiency infrastructure projects while not drawing on any rainy day reserve funds. As indicated in the pipeline, the loan numbers 1 – 6 will begin construction in 2022 and will need funds to start construction. Some of these improvements will be completed in 2022 and others will be completed in the following years. The EBF has a weighted average pipeline of $23.875 MM in projects. To meet this demand, the Bank is requesting a $5 MM infusion of capital from the energy efficiency plan in 2022 for EBF. As the program matures over time, the leverage will be achieved with an increasing proportion of recycled dollars and a decreasing proportion of transfer funds. For 2022, the sixth year of the program, a high proportion of transfer funds are needed to support new loans. RIIB will request funds transferred on an as-needed basis with no more than three funding transfers. A funding request from RIIB will consist of an email to the Company with the following, supporting documentation: 1. The relevant, final Project Priority List(s) (PPLs) indicating which projects have been approved for EBF funds and have met the EBF rules and regulations including requirements for cost-effectiveness, 2. Notification from an EBF applicant that they intend to close a loan in calendar year 2022, and; 3. Documentation that RIIB doesn't have sufficient SBC and/or SBC repayment funds to commit to the municipalities in Point 2. The Company will transfer funds to RIIB within sixty (60) days of receiving a confirming funding request from RIIB.
2022 Actions	
Notes	

9.5. Public Sector Revolving Loan Fund

The Public Sector Revolving Loan fund was a predecessor of the Efficient Buildings Fund. It was funded by Regional Greenhouse Gas Initiative (RGGI) funds controlled by the RI OER. This fund no longer makes loans. As funds are repaid from previous disbursements they are periodically transferred back to RI OER to be used at their discretion. More detail on this fund can be found in Attachment 5, Table E-10.

9.6. Commercial Property Assessed Energy (C-PACE)

Customer type	Owners of non-residential property
Max loan size	Limited only by the financial health of the building
Maximum Tenor	Average measure life of all upgrades, can exceed 15 years
Loan Volume	Variable
Benefits to customer	Can be structured to be cash flow positive, no personal guarantees, financing can be used to finance a wide variety of improvements related to energy, may be considered an operating expense.
Limitations	Minimum transaction value of ~$50,000, preferred $100,000+
Changes for 2022	Specific deliverables will be discussed in the final draft after the Company discusses this topic with the Rhode Island Infrastructure Bank (RIIB) in more detail.

9.7. Ascentium Rental Agreement

Customer type	Owners of non-residential property
Max loan size	No stated limit
Maximum Tenor	Variable
Loan Volume	Variable
Benefits to customer	Rapid preliminary approval, rental product is considered an operating cost
Limitations	Specific terms of the agreement may not work for all customer types

10. Other Enabling Strategies for Customer Engagement

10.1. Improving Quality and Efficiency in Project Cycle Times

The Company is committed to providing customers with a more expedited project initiation and incentive application (transactional) experience. The Company continues to look for process improvement relative to processing applications, and the building Technical Assistance (TA) review process.

10.2. Tools for Customers' Management of Energy Usage

The Company intends to help customers access their energy data to allow for greater awareness of energy consumption. The Company will seek to achieve this through the various methods described below:

10.2.1. Automated Benchmarking Systems

National Grid has developed a path towards automating data uploads into Energy Star's Portfolio Manager. Automated transfer of usage data to customers helps customers better understand and manage their energy use, supports prior OER commitments to state and municipal facilities improvements, and is an important tool in the future for building labeling. Customers can automatically upload aggregate, whole building energy usage data, both electric and gas, onto Portfolio Manager, allowing building owners and stakeholders to benchmark energy usage and performance and compare usage to similar buildings nationally. In Rhode Island, properties that have three active accounts or less per fuel (electric and/or gas) are required to submit consent forms for each tenant.

The Company will support benchmarking efforts with customer support on automating data uploads as well as provide access to EPA training on Portfolio Manager. Additionally, the Company will send marketing and informational emails to customers to inform them of the automated benchmarking process. Company support is now available to National Grid customers in RI, MA and NY.

Additionally, the Company will continue to support the White House and DOE Green Button initiative. The Green Button initiative allows customers to securely download their own digital energy usage with a simple click of a literal "Green Button" on electric utilities' websites. This initiative is available to both electric and gas customers.

10.2.2. Building Labeling

The Company will continue to work with OER and other stakeholders to identify strategies for building labeling in the commercial and multifamily real estate sectors in Rhode Island. The

Company will continue to work closely with OER to support property owner and tenant access to usage data.

10.3. Enabling Technologies

10.3.1. Removable Insulated Jackets for Big Steam Plants

For some of National Grid's largest customers, steam turbine insulation jackets improve both efficiency as well as safety in the plant. They are easily removed and replaced by any staff member. Both standard and custom sized jackets are available. A heat loss reduction of 135 BTUs per square foot per hour can result from using the jackets and one single turbine can save $9,500 in energy in a year. Touch temperature of the turbine can be reduced from 750^0 F to 145^0 F, improving safety. This product also has a five-year guarantee. This is a custom express gas measure that can save customers tens of thousands of therms annually. The measure will be aggressively implemented by the Company's energy efficiency sales teams in RI to all medium to large C&I customers who use steam and high temperature hot water for processes and space heating. It can also be used on all valves, fittings, steam traps, condensate tanks and uninsulated hot water tanks. The jacket has excellent synergies with general mechanical insulation on piping systems, steam system assessments, and steam trap surveys. National Grid is providing training for these measures with targeted webinars on gas measures and Steam System Assessments. This has been successful at universities, colleges, and hospitals and other large steam users in both Rhode Island and Massachusetts.

10.3.2. Heat Watch

The Company is also facilitating "Heat Watch" for Multifamily, small business, and C&I programs. This service includes running boilers in conjunction with controlling and managing the whole boiler and heating systems for a facility. This service will save 10-15% of energy on steam systems by preventing overheating and improving temperature control of spaces, especially during spring and fall.

10.3.3. CozyTM Radiator Covers

The Cozy ™ Radiator covers are insulated enclosures with a room temperature sensor controlling a fan that introduces heat to the space when needed. It virtually makes each steam radiator its own controllable HVAC zone. One NY University was able to reduce boiler run times by 41%.[8] Non-energy benefits include increased asset value, improved tenant/occupant

[8] https://www.radiatorlabs.com/wp-content/uploads/2016/08/CaseStudy-ColumbiaUniversity.pdf

comfort, reduced emissions, and improved safety. One college in Rhode Island has had good results. This measure is available as a custom project.

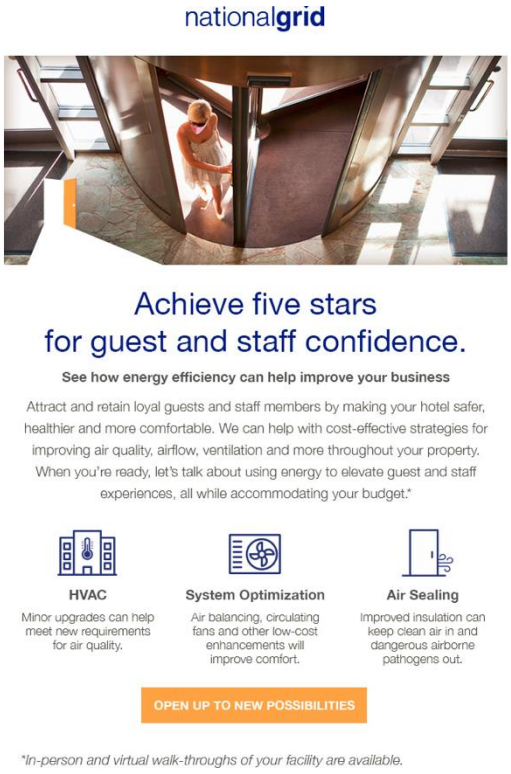
10.3.4. Aeroseal

Aeroseal is for both heating and cooling. It provides duct sealing to seal up old leaks by blowing in atomized polymers. This measure has been successful at a Rhode Island college.

11. Marketing to Commercial and Industrial Customers

In the first half of 2021 the company continued the "Open Up to New Possibilities" campaign which launched in July of 2020 after a brief Marketing pause and as a response to the current situation for many businesses because of the Covid-19 pandemic. As businesses were still feeling the impacts of COVID, the strategy was to continue to relate to and understand what business customers are going through as they are navigating their new normal and plans for re-opening. The messaging does not sell or push any specific product, but instead offers help when customers are ready to discuss how energy efficiency can save them money. The messages also bear in mind the various stages of economic reopening and use language that can be applied to any stage. Visually, the campaign relies on large impactful imagery that adheres to proper social distancing and mask guidelines (see Figure 8).

Figure 8. Open Up to New Possibilities Campaign Images



In the second half of 2021 when businesses are more focused on re-opening as a natural evolution to our "Open up to new possibilities" campaign we launched "More Opportunities in More Places". The campaign theme is focused on the idea that after nearly a full year of just trying to stay in business, we want to help you get back to business with the resources, financing and expertise you need.

For customer targeting and media planning, the Company continues to utilize its previously attained customer survey research insights data and customer personas (see Figure 9) for the business customer. The Company aims to represent the voice of the customer in all campaign planning. Prior to launching any campaign, National Grid surveys our Business Customer Council and utilizes the insights from to determine appropriate messaging and imagery.

The Company will continue to utilize commercial customer persona research to inform our key messages and marketing channel selection. National Grid will pay close attention to how the pandemic continues to impact customers and remain nimble with our approach.

Figure 9. Commercial Customer Persona Research

Lean & Green	Small & Seamless	Seeking Solutions
• Smallest customers based on usage • Most environmentally conscious, interested in green-related products • Among the most open to purchasing from NG	• Small customers • Interested in tools to manage accounts • Skew to Real Estate • The least open to purchasing from NG	• Medium customers • Interested in bill and usage information, financing options • Skews to Retail/Food • The most open to purchasing from NG

No Frills	Big Business
• Medium customers • Most interested in the basics of customer service and emergency response • Among least open to purchasing from NG	• Largest customers • More interested in advice, tools to track usage and savings • Lowest level of barriers to energy improvements • Skews to Industrial, Public Sector

As National Grid develops 2022 campaign plans, paying close attention to the appropriate messaging and tone as business customers recover from the pandemic, the Company will dive into the characteristics of each segment and adjust messaging and targeting where appropriate. The goal is to enhance targeting and messaging, not to eliminate any commercial customer targets. The "More Opportunities in More Places" campaign will serve as an overarching campaign that provides a unified message for large commercial customers, small business customers and multifamily customers. In 2021, the Company will continue to utilize a fully integrated strategy that leverages digital marketing, paid search and social media marketing, print advertising, email campaigns as well as public relations.

In 2021 the Company will continue to leverage earned media/PR as a truly integrated part of our marketing campaign, an initiative that kicked off in 2019 (see Figure 10). This includes media relations and influencer engagement and National Grid will continue this strategy moving forward.

Figure 10. Earned Media/PR Strategy

Earned Media/PR Strategy

NEW FOR ALL: Implement a News Bureau Program which allows us to proactively build awareness of National Grid's incentives to all the key stakeholders in each market and across al business segments & verticals through:

- Media Relations - ongoing, proactive pitching of trade and business media
- Influencer Engagement
- Event Management
  - Speaking opportunities for National Grid SMEs (subject matter experts) at strategic events
  - Focus on trade events for outreach to plumbers, electrician associations, etc.
  - Press kit generation to development background information, fact sheets, press releases, images, etc.
  - Considering over 14 events for NYS 2019
- Partnerships with Trade Associations
- Content development and editorial calendar for social media, case studies and more
  - Tie into seasonal and relevant engagements (i.e. small business week social blitz)
  - Promote key topics like new construction, manufacturing, green building in NYS, etc.
    - Allows us to really dig deeper and provide more relevant content to key focal areas
      - Ex: Specifically for UNY property managers, developing content that drives home ways National Grid can help mitigating risk and tenant complaints, provide financial solutions, and improve tenant retention.
  - Business segment specific research studies (i.e. multi-family landlord/tenant research) to build out additional case studies and renter email campaign

While National Grid's paid media primarily targets people directly involved in the decision-making process for capital budgets and facility improvements/projects, C-Suite & Facility Managers, and Small Business owners, the Company does have some advertising and communications dedicated to its secondary audience of key influencers. These are the people/firms that influence energy project go-forward decisions, for example, Distributors, Project Expeditors, Engineers, Architects, etc. who may have an existing relationship with the customer.

In planning for 2022, the Company will continue to focus on the key strategies that have proven successful in the past. It will continue to evolve and adjust tone and messaging as appropriate to remain sensitive to our customers' needs. National Grid has continued to work to update our website and campaign landing pages to reflect key messages, strategies, and general core values and has also increased focus on providing industry specific messaging and information wherever possible.

Finally, the Company will tie its marketing activities to the energy efficiency program priorities described elsewhere in this plan. This includes:

- Promoting planned Workforce Development activities, potentially via social media.
- Developing fact sheets to explain program focus areas such as ESPO.
- Developing case studies demonstrating successful efficiency projects highlighting specific sectors, namely for lodging and commercial real estate customers. This builds on a 2021 effort to produce a series of case studies on projects completed at the Quonset business park.

12. Commercial and Industrial Measures and Incentives

Table 11. Electric Programs

Electric Programs					
Program	**Subprogram**	**Net Annual kWh Tracker by Subprogram**	**Incentive / Net Annual kwh**	**Total Incentives**	**Shared Costs**
Large Commercia and Industrial New Construction	D2 CAIR	605,600	$0.66	$400,000	
	C&I Codes	596,266	$0.28	$167,900	
	D2 Upstream Food Service	64,136	$1.30	$83,189	
	D2 HVAC Prescriptive	100,450	$1.80	$180,502	
	Upstream Heat Pump - Ductless	794,030	$0.40	$319,585	
	Upstream Heat Pump - Packaged	40,992	$0.16	$6,413	
	Upstream HVAC Air Conditioners	40,992	$0.45	$18,374	
	Upstream HVAC Controls	492,203	$0.49	$241,937	
	Upstream HVAC ECM Pump	2,439,962	$0.27	$663,000	
	Upstream HVAC VRF	124,527	$0.31	$38,500	
	D2 Lights	8,935	$1.17	$10,450	
	Motors and VFD	527,245	$1.06	$559,550	
	Upstream HVAC Refrigeration	1,179,061	$0.58	$678,930	
	Comprehensive Design - Custom	2,163,708	$0.90	$1,942,156	
	Compressed Air - Custom	297,350	$0.31	$92,000	
	HVAC - Custom	238,398	$0.32	$76,713	
	Lighting - Custom	1,084,581	$0.47	$514,315	
	Motors & VFD - Custom	310,705	$0.64	$199,959	
	Process - Custom	111,833	$0.58	$64,396	
	Refrigeration - Custom	605,600	$0.66	$400,000	
	Other - Custom	596,266	$0.28	$167,900	
	Program Planning & Administration				$189,209
	Marketing				$381,202
	Sales, Technical Assistance & Training				$1,513,411
	Evaluation & Market Research				$465,940

Electric Programs					
Program	**Subprogram**	**Net Annual kWh Tracker by Subprogram**	**Incentive / Net Annual kwh**	**Total Incentives**	**Shared Costs**
Large Commercial and Industrial Retrofit	CHP	459,260	$0.03	$13,778	
	Custom: SEM	967,430	$0.37	$360,419	
	EI HVAC	738,562	$0.33	$241,500	
	Custom: Street Lighting	17,181,203	$0.43	$7,354,458	
	EI Light: Prescriptive	266,585	$0.19	$49,500	
	EI Light: Upstream A-lines and Decoratives	1,316,355	$0.22	$287,500	
	EI Light: Upstream Exterior	159,951	$0.56	$90,000	
	EI Light: Upstream G24 G23, MR Lamps, PAR	3,689,480	$0.22	$805,000	
	EI Light: Upstream High/Low Bay	817,456	$1.25	$1,020,000	
	EI Light: Upstream Linear Fixture w/Controls	1,198,936	$0.41	$488,400	
	EI Light: Upstream Linear Luminaires	1,054,137	$0.17	$178,000	
	EI Light: Upstream Retrofit Kits	10,562	$1.16	$12,200	
	EI Light: Upstream Stairwell	533,535	$0.12	$63,000	
	EI Light: Upstream TLEDs	2,089,620	$0.37	$780,000	
	Motors and VFD	417,146	$0.25	$106,306	
	Compressed Air - Custom	1,887,943	$0.90	$1,702,450	
	HVAC - Custom	8,096,568	$0.48	$3,908,170	
	Lighting - Custom	146,986	$0.27	$40,340	
	Motors & VFD - Custom	332,341	$0.41	$136,814	
	Process - Custom	405,715	$0.86	$349,946	
	Refrigeration - Custom	97,638	$0.59	$57,420	
	Other - Custom	459,260	$0.03	$13,778	
	Program Planning & Administration				$825,013
	Marketing				$294,759
	Sales, Technical Assistance & Training				$4,713,847
	Evaluation & Market Research				$929,094
Small Business Direct Install	Lighting	8,305,575	$0.76	$6,343,353	
	Lighting controls	762,234	$1.28	$974,586	
	Non-Lighting	628,384	$0.98	$617,117	
	Program Planning & Administration				$223,867
	Marketing				$301,270
	Sales, Technical Assistance & Training				$302,954
	Evaluation & Market Research				$98,669

Program	Subprogram	Demand Response kW Goal	Incentive / Net Annual kW	Total Incentives	Shared Costs
Commercial Connected Solutions	Daily DR Resources	10,000	$300.00	3,000,000	
	Peak Shaving DR (MW)	22,400	$40.00	1,120,000	
	Program Planning & Administration				$95,039
	Marketing				$7,212
	Sales, Technical Assistance & Training				$233,415
	Evaluation & Market Research				$0

Table 12. Natural Gas Programs

Gas Programs					
Program	Measure Groups	Net Annual MMBtu Tracker by Subprogram	Incentive / Net Annual MMBtu	Total Incentives	Shared Costs
Large Commercial and Industrial New Construction	Boilers	2,859	$71	$203,406	
	CODES AND STANDARDS	358	$0	$0	
	Combo Boiler/DHW	864	$135	$116,670	
	Non Boiler Heating	529	$72	$38,270	
	COND WATER HEATER 94%MIN 75-300 and above	575	$76	$43,607	
	COOKING-COMBO OVEN 1				
	COOKING-CONVECTION OVEN 1				
	COOKING-CONVEYOR OVEN 1				
	COOKING-FRYER-1000				
	COOKING-COMBO OVEN 1 - Upstream	610	$17	$10,589	
	COOKING-CONVECTION OVEN 1- Upstream	1,658	$42	$69,092	
	COOKING-CONVEYOR OVEN 1- Upstream	244	$17	$4,243	
	COOKING-FRYER-1000- Upstream	13,676	$24	$332,412	
	COOKING-GRIDDLE 1- Upstream	105	$17	$1,819	
	COOKING-RACK OVEN 1- Upstream	1,753	$17	$30,427	
	COOKING-STEAMER-1000- Upstream	387	$17	$6,726	
	WATER HEATER - Indirect Upstream	66	$55	$3,648	
	Water Heaters 94 and above	583	$42	$24,724	
	Custom	25,498	$25	$638,232	
	Water Heating Boiler - 94% TE	4,301	Up to 75% of Total Resource Cost	$59,330	
	Program Planning & Administration				$115,030
	Marketing				$196,125
	Sales, Technical Assistance & Training				$1,061,941
	Evaluation & Market Research				$230,713
Large Commercial and Industrial Retrofit	Controls	18,868	$20	$381,524	
	Custom: RCx	3,962	$16	$63,000	
	Behavior / Training	2,778	$0	$0	
	DHW	667	$15	$9,706	
	HVAC	17,224	$17	$296,193	
	Prescriptive Steam Traps	9,652	$10	$93,149	
	Custom: General	81,123	$17	$1,385,555	

	Custom: SEM	4,133	$30	$124,051	
	Program Planning & Administration				$199,241
	Marketing				$334,243
	Sales, Technical Assistance & Training				$1,590,552
	Evaluation & Market Research				$165,605

Gas Programs					
Program	**Measure**	**Net Annual MMBtu Tracker by Subprogram**	**Incentive / Net Annual MMBtu**	**Total Incentives**	**Shared Costs**
Small Business Direct Install	Small Business Gas	4,886	$49	$239,274	
	Program Planning & Administration				$6,873
	Marketing				$40,360
	Sales, Technical Assistance & Training				$32,885
	Evaluation & Market Research				$758
C&I Multifamily	Air Sealing_MF	1,020	Average Incentive based on measure mix		
	CUST NON-LGT_MF	7,669			
	Faucet Aerator_MF	56			
	Insulation_MF	10			
	Pipe Wrap (Water Heating)_MF	42			
	Programmable Thermostat_MF	437			
	TSV Showerhead_MF	149			
	WiFi thermostat gas_MF	61			
	Participant_C&I	729	$1,037	$756,000	
	Program Planning & Administration				$28,085
	Marketing				$22,416
	Sales, Technical Assistance & Training				$144,241
	Evaluation & Market Research				$2,476