



**The Brooklyn Union Gas Company d/b/a National Grid
NY
System Energy Efficiency Plan (“SEEP”)**

Case 15-M-0252 - In the Matter of Utility Energy Efficiency Programs

Case 18-M-0084 - In the Matter of a Comprehensive Energy Efficiency Initiative

2019 – 2025 GAS SEEP

Revised October 1, 2021

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Acronyms	
3V0	Zero-Sequence Voltage
AMI	Advanced Metering Infrastructure
API	Advanced Program Interface
B2B	Business-to-Business
BCA	Benefit-Cost Analysis
BYOD	Bring Your Own Device
C&I	Commercial and Industrial
CCVT	Coupling Capacitor Voltage Transformer
CDG	Community Distributed Generation
CEAC	Clean Energy Advisory Council
CEF	Clean Energy Fund
CEMP	Customer Energy Management Online marketplace
CDO	Customer Directed Option
CLCPA	Climate Leadership and Community Protection Act
CMD	Connect My Data
CO2	Carbon dioxide
CSRP	Commercial System Relief Program
DER	Distributed Energy Resource
DERMS	Distributed Energy Resource Management System
DG	Distributed Generation
DI	Direct Install
DLC	Direct Load Control
DLM	Dynamic Load Management
DLRP	Distribution Load Relief Program
DMS	Distribution Management System
DOE	U.S. Department of Energy
DPS	Department of Public Service

DR	Demand Response
DRMS	Demand Response Management System
DSM	Demand Side Management
Dth	Dekatherms
EAM	Earnings Adjustment Mechanism
EE	Energy Efficiency
EES	Energy Efficiency Surcharge
EM&V	Evaluation, Measurement and Verification
EMS	Energy Management System
EPA	Environmental Protection Agency
ESCO	Energy Services Company
ETIP	Energy Efficiency Transition Implementation Plan
EV	Electric Vehicle
FlexTech	Flexible Technical Assistance Program
GBC	Green Button Connect
GBD	Green Button Download
GDR	Gas Demand Response
GHG	Greenhouse Gas
HAN	Home Area Network
HERs	Home Energy Reports
HID	High Intensity Discharge
HVAC	Heating, Ventilation and Air Conditioning
IPWG	Interconnection Policy Working Group
JU	Joint Utilities
KEDLI	KeySpan Gas East Corporation
KEDNY	Brooklyn Union Gas Company
kW	Kilowatt
kWh	Kilowatt hour
LED	Light-emitting diode

LMI	Low- to moderate-income
MF	Multifamily
mCHP	Micro-Combined Heat and Power
MMBTU	One Million British Thermal Unit
M&V	Measurement and Verification
MW	Megawatts
MWh	Megawatt hours
NE:NY	New Efficiency: New York
NG	National Grid
NIMO	Niagara Mohawk Power Corporation
NLC	Network Lighting Control
NPA	Non-Pipe Alternatives
NWA	Non-Wires Alternatives
NY	New York
NYC	New York City
NYS	New York State
NYSEIA	New York Solar Energy Industry Association
NYSERDA	New York State Energy Research and Development Authority
NYSIR	New York Standardized Interconnection Requirements
OnSEM	On-Site Energy Management Program
P4P	Pay-For-Performance
PA	Program Administrator
PM	Portfolio Manager
PSC	Public Service Commission
PSEG - LI	Public Service Electric & Gas – Long Island
PTR	Peak Time Rewards
QA/QC	Quality Assurance/Quality Control
REV	Reforming the Energy Vision
RFI	Request for Information

RFP	Request for Proposal
RPAs	Regional Program Administrators
RR	Realization Rates
RTEM	Real Time Energy Management Program
SBC¹	System Benefit Charge
SBS	Small Business Services
SCT	Societal Cost Test
SEEP	System Energy Efficiency Plan
SEM	Strategic Energy Management
TBtu	British Thermal Units
TCC	Transmission Control Center
TRM	Technical Resource Manual
TRM MC	Technical Resource Manual Management Committee
TVR	Time Varying Rate
UTC	Utility Cost Test
VGS	Verified Gross Savings
VT	Voltage Transformer

¹ The System Benefits Charge (SBC) recovers costs associated with clean energy activities conducted by the New York State Energy Research and Development Authority (NYSERDA). The Energy Efficiency Surcharge (EES) is a component of the base rates that customers pay for their specific service classification. Although these are two separate charges, both are required charges for most service classifications. However, there are service classifications of customers that are not required to pay the EES and the SBC charges. Those customers in turn are not eligible for our EE program offerings.

I. BACKGROUND

On April 26, 2018, the Department of Public Services Staff (“DPS Staff”) and the New York State Energy Research and Development Authority (“NYSERDA”) issued a white paper introducing a comprehensive energy efficiency strategy called New Efficiency New York (“NE:NY”), which proposed a statewide energy efficiency target of reducing 185 trillion British Thermal units (“TBtu”) of energy usage across the state². This aggressive goal represents nearly one-third of the overall state goal of 40% reduction in greenhouse gas (“GHG”) emissions from 1990 levels by 2030. On December 13, 2018, the Commission issued the *Order Adopting Accelerated Energy Efficiency Targets* (“the December 2018 Order”) establishing incremental targets for 2019 - 2025³ to align with the state’s clean energy goals. The December 2018 Order directed the NY Utilities⁴ to work collaboratively with NYSERDA to file energy efficiency targets and budgets for 2019 - 2025 to support the state’s energy goals of reducing energy use by 185 TBtu. In response, the NY Utilities filed jointly the *NY Utilities Report Regarding Energy Efficiency Budgets and Targets, Collaboration, Heat Pump Technology and Low- and Moderate-Income Customers and Requests for Approval* on April 1, 2019⁵.

On January 16, 2020, the Commission issued the *Order Authorizing Utility Energy Efficiency and Building Electrification Portfolios through 2025* (“the January 2020 Order”) ⁶ approving statewide budgets and targets through 2025. The overall goals of the January 2020 Order are to decrease the state’s energy consumption and reduce costs for customers with a focus on environmental and utility infrastructure benefits through energy efficiency and building electrification.

² Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative*, New York Department of Public Service and NYSERDA, *New Energy: New York* (filed April 26, 2018) (“NE: NY White Paper”)

³ Case 18-M-0084 *In the Matter of a Comprehensive Energy Efficiency Initiative, Order Adopting Accelerated Energy Efficiency Targets* (issued December 13, 2018) (“December 2018 Order”).

⁴ Central Hudson Gas & Electric Corporation (“Central Hudson”), Consolidated Edison Company of New York, Inc. (“Con Edison”), KeySpan Gas East Corporation d/b/a National Grid (“KEDLI”), The Brooklyn Union Gas Company d/b/a National Grid NY (“KEDNY”), Niagara Mohawk Power Corporation d/b/a National Grid (“Niagara Mohawk”) (collectively “National Grid”), National Fuel Gas Distribution Corporation (“NFGDC” or “NFG”), New York State Electric & Gas Corporation (“NYSEG”), Orange and Rockland Utilities, Inc. (“Orange & Rockland”), and Rochester Gas and Electric Corporation (“RG&E”) (collectively, “NY Utilities” or “Utilities”).

⁵ Case 18-M-0084 *In the Matter of a Comprehensive Energy Efficiency Initiative, NY Utilities Report Regarding Energy Efficiency Budgets and Targets, Collaboration, Heat Pump Technology and Low- and Moderate-Income Customers and Requests for Approval* (filed April 1, 2019).

⁶ Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative, Order Authorizing Utility Energy Efficiency and Building Electrification Portfolio Through 2025* (issued January 16, 2020) (“January 2020 Order”)

The utilities report on their energy efficiency program plans to the New York State Department of Public Service Staff (“DPS Staff”) through the annual filing of a System Energy Efficiency Plan (“SEEP”) and provide quarterly updates with filing SEEP Record of Revisions. To support the development and framework of consistent and accessible utility SEEPs, on September 1, 2020, DPS Staff issued the Clean Energy Guidance document entitled *CE-02: SEEP Content Guidance, Version 5.0*⁷ providing updated SEEP guidance.

In accordance with the December 2018 Order, the January 2020 Order, and the *CE-02: SEEP Content Guidance, Version 5.0*, this document represents the Company’s gas SEEP for the years 2019 - 2025.

⁷ See *CE-02 SEEP Content Guidance, Version 5.0*, New York State Department of Public Service – Office of Markets and Innovation (dated September 1, 2020).

II. NE:NY EE PORTFOLIO & PROGRAM DESCRIPTIONS

EXECUTIVE SUMMARY

New York has one of the most ambitious climate laws in the United States, the Climate Leadership and Community Protection Act (“CLCPA”), that requires New York to reduce economy wide GHG emissions 40% from 1990 levels by 2030 and achieve net zero GHG emissions by 2050. This statutory requirement complements and accelerates the clean energy approaches of NY’s Reforming the Energy Vision (“REV”) policies for supporting utility and clean energy industry innovation. As part of its commitment to a clean energy future, National Grid announced in October of 2020 our “Net Zero by 2050” plan and updated Responsible Business Charter⁸. National Grid is fully committed to a clean energy future and helping New York achieve its energy and environmental goals under the CLCPA and has designed our energy efficiency programs under New Efficiency: New York (“NE:NY”) in a manner that is consistent with these net zero efforts.

Across every community that we serve, National Grid is deeply committed to the goal of net zero and has a long track record supporting the reduction of GHG emissions. We have helped New York to rank in the top five most energy efficient states in the nation through our existing Energy Efficiency (“EE”) and Demand Response (“DR”) programs several years in a row, and these programs continue to grow. Under the state’s NE:NY transformation of utility energy efficiency programs, National Grid is committed to achieving nation leading annual levels of gas efficiency savings by 2025 of 1.3%.

To help drive clean energy innovation, the Company has also partnered with the New York State Energy Research and Development Authority (“NYSERDA”) and the other New York Utilities to develop and implement statewide energy efficiency programs to support both the State’s and Company’s aggressive clean energy goals, with a focus on reducing energy consumption and lowering customer costs.

As part of these plans, we will spend 20% of incremental efficiency funding on income-eligible customers (such as no-cost home weatherization), with 40% of that program spending targeted to affordable multi-family buildings. In collaboration with the NY Utilities and NYSERDA, the Company launched the Statewide Low-To-Moderate Income

⁸ The Company’s “Net Zero by 2050” plan and updated Responsible Business Charter affirm our commitment to: (i) reduce GHG emissions from our direct operations by 80% by 2030, 90% by 2040, and to net zero by 2050; (ii) reduce GHG emissions from the gas we sell to customers by 20% by 2030, and further reduce these emissions beyond 2030 consistent with New York’s targets as laid out in the CLCPA; and (iii) prioritize ten major focus areas to achieve Net Zero for our US operations and the energy we deliver to customers.

(“LMI”) Program⁹. This statewide program is intended to create a more holistic and coordinated approach to deliver energy efficiency to LMI customers and communities across the entire state.

As a “gas-only” utility in the territory, the Company does not directly contribute to building electrification, however, the Company supports this effort by aligning its energy efficiency portfolio with its Long-Term Capacity Report¹⁰ to reduce peak gas system demand as a means to address gas system constraints. While currently not developing an incremental electrification program for the KEDNY territory, National Grid is supportive of the efforts of Consolidated Edison (“Con Edison”) and refers potential gas customers to Con Edison’s New York State Clean Heat Program focused on a variety of heat pump technologies as an alternative to new gas connections. The Company strives to reduce natural gas usage in the region by offering intensive weatherization measures, such as air-sealing and maximized insulation.

Additionally, National Grid is becoming more sophisticated in considering geo-targeted energy efficiency while supporting heat electrification (heat pump) programs as tools to manage electricity and gas demand in order to support electric and gas system needs. The Company has developed an accelerated energy efficiency program that will be part of the non-infrastructure solution to the downstate New York natural gas system constraint. The Company will continue to support the electrification efforts of Con Edison and work to reduce peak gas system demand through demand side management (“DSM”) tools and through Non-Pipe Alternatives (“NPAs”). The Company is also developing recommendations for addressing novel legal and regulatory questions, funding sources, benefit cost analysis, recovery models, reporting, measurement and verification, and incentives for these DSM programs.

⁹ Case 18-M-0084, In the Matter of a Comprehensive Energy Efficiency Initiative, Statewide Low and Moderate Income Portfolio Plan (“Statewide LMI Plan”)(filed July 24,2020)

¹⁰ <https://ngridlongtermsolutions.com/>

NE:NY PROGRAM DESCRIPTIONS

GAS COMMERCIAL & INDUSTRIAL PROGRAM

Program Design

The Gas Commercial and Industrial (“C&I”) Program offers customers a range of options to encourage the installation of energy conservation measures (“ECMs”) or “measures” with the potential to upgrade everything from building systems to manufacturing processes. Customers can choose from rebate programs, incentives on custom projects, or no-cost heating and water savings measures installed in their facilities. These offers apply to existing buildings and new construction. Program performance is continuously monitored; offerings and incentive levels are adjusted to reflect technological advancements and changes in the marketplace. The Gas C&I Program focuses on National Grid’s non-residential natural gas customers.

The Gas C&I Program consists of the following sub-initiatives that support large commercial and industrial customers:

- *Utility Energy Service Contract Program (“UESC Program”)* – The Utility Energy Service Contract (“UESC”) program is an energy services contracting program, where the Company and customers, typically government agencies, enter limited-source contracts for energy management services, such as energy, water efficiency improvements, and demand reduction. UESCs allow government agency customers to benefit from the Company’s energy expertise, creating a streamlined approach to contracting using a limited-source contract vehicle that meets public procurement process requirements.
- *Statewide Benchmarking Program* – On December 13, 2018, the Commission, in its Order Adopting Accelerated Energy Efficiency Targets (the “December Order”), directed New York Utilities to prepare for statewide benchmarking of building energy performance. National Grid has implemented an automated and enterprise-wide process, as of January 1, 2019, that uploads customer aggregated usage data, upon request, to the Energy Star Energy Star EPA Portfolio Manager site. The December 2018 Order also directed utilities to create an energy efficiency offering to accompany building benchmarking. The Company has developed a benchmarking offering for its customers that provides building audits and technical assistance, thus promoting action by building owners or decision-makers to make upgrades that reduce overall building usage as part of this potential statewide benchmarking mandate.

- *Prescriptive* – For customers who are looking to replace existing equipment with more energy efficient models, the prescriptive program provides assistance in the form of rebates to customers or their installation contractor allowing them to install equipment needed to reduce energy consumption and save money in the long term. The prescriptive program offers a set menu of energy efficiency measures with corresponding set incentives.
- *Midstream* – Midstream refers to the way incentives travel to the customer. For example, customers see a direct incentive from a downstream program. With National Grid’s Midstream program, National Grid provides rebates to distributors for sales of high efficiency equipment rather than traditional programs that provide rebates to end-use customers. After signing a Distributor Participation Agreement, distributors can submit rebate applications for qualifying equipment. Rebates are then processed and typically paid out within two weeks of application approval. Midstream programs can leverage existing distributor-to-contractor networks by providing distributors rebates to stock and upsell more efficient equipment. Distributors influence 90% of all equipment sales, resulting in ease of participation for all customers as well as an increased awareness throughout the supply chain.
- *Custom* – The custom program offers incentives to help customers target unique energy efficiency opportunities not covered by our prescriptive offerings. Customers will be able to work with our sales professionals & our energy engineers to identify needs and put together a Minimum Requirements Document (“MRD”) which describes the minimum equipment specifications and operational requirements of the proposed system. Incentives are given to customers if there is a clear projection of savings; these incentives are offered to help cover the total cost of these projects. National Grid is currently offering weatherization measures that improve the building envelope at a higher incentive level through the custom program. These measures are targeted toward achieving further gas savings to assist in addressing the Downstate New York gas capacity constraint.
- *Direct Install* – National Grid’s Direct Install Program offers C&I customers no-cost installation of high-efficiency water and energy saving measures. These upgrades use 30% less water than standard fixtures. Upgrades include aerators, showerheads, pre-rinse spray valves and salon valves.

- *Kitchen Point of Sale (“POS”)* – Through the Kitchen Point of Sale Program National Grid customers receive a rebate directly on their invoice when they purchase qualified natural gas foodservice equipment from participating vendors. Eligible equipment must be installed at an active, valid, non-residential National Grid natural gas service location.
- *Financing* – National Grid has financing available to customers who need some extra help to complete a project. This financing program offers a 0% interest rate buy-down financing for twenty-four (24) or thirty-six (36) months with \$0 down and pre-funding available if immediate cash flow is confirmed by the contractor.

2019-2021

In 2019, the Company tested a midstream heating and water heating pilot to assess different delivery methods which resulted in the launch of a full-scale heating and water heating midstream delivery method in 2020. In support of mitigating gas constraint issues and support demand reduction efforts, the program offered enhanced incentives for custom projects. The program continues to offer support to customers in response to COVID-19 hardships with enhanced incentives and safety measure kits. The Company also began to expand on collaboration with NYSERDA and their technical assistance programs and will continue to do so, focusing on new offerings designed to avoid overlap of services, while continuing to meet the needs of customers as they retire various programs. The program continues to collaborate with Con Ed in the Kitchen Point-Of-Sale Program to reduce market confusion and increase participation in the program. In 2021, new measures were also added to the Direct Install program in an effort to combat market saturation. The benchmarking program was added to National Grid’s portfolio of offerings as well and will be looking to evaluate its performance over time.

To provide deep technical support, National Grid’s program implementation team offers Onsite Energy Engineering Expert (“OSEEE”) capability, which leverages the expertise of the Company’s in-house engineers. This in-depth, consultative technical support helps customers analyze energy efficiency and system improvement opportunities, connect them to financial incentives, and establish plans for future energy savings.

2022-2025

The Company intends to explore peak demand-reducing measures to support system constraints while considering opportunities to merge NYSERDA’s Real Time Energy Management (“RTEM”) program into the existing portfolio. The Company will also be focused on expanding the financing partnership program opportunities to C&I gas customers. Additionally, there will be continued focus on market gaps, such as determining market viability for a Retro-Commissioning initiative to help customers

improve operations and maintenance procedures to enhance overall building performance. The Company will support measure enhancements to the Gas Demand Response (“GDR”) program and promoting gas EE. A key focus on obtaining knowledge from the Company’s partnerships and collaboration with NYSERDA, along with market research is to ensure that the program is evolving to meet customer demands and achieving a more productive mix of utility and third-party investment. The overall goal is to improve the efficiency of the gas system and increase consumer value and choice.

In addition to these efforts, the Company will be commissioning an analysis effort to conduct propensity modeling to optimize savings in the Commercial & Industrial sector. The vendor will create a Portfolio Optimization Analysis Tool that National Grid’s existing program implementation team will use to increase savings achieved from targeted energy efficiency offerings. Through this analysis and tool, the Company will support measure enhancements to the gas Demand Response program and promoting gas EE. The Company will continue research and implementation of peak demand measures to the portfolio.

Program Incentives & Delivery

The Gas C&I Program promotes prescriptive, custom, point-of-sale, midstream and direct install energy savings opportunities. Prescriptive incentives are available for measures that provide predictable energy savings in virtually all applications where they replace a similar technology of lesser efficiency. National Grid offers such incentives for a variety of natural gas technologies including, but not limited to, space and water heating systems (along with associated controls), steam traps and pipe insulation. The prescriptive path often serves as the customer’s initial exposure to energy efficiency and may lead to more complex custom projects.

Additionally, the Company offers custom incentives. To identify and quantify custom opportunities related to a specific process or unique building operations, National Grid provides customers with expert technical assistance, using both in-house technical staff and subject matter experts drawn from a pool of prequalified expert private sector engineering consultants, as well as collaboration with NYSERDA’s technical services and complementary programs.

To move customers to action once opportunities have been identified, the Company also offers incentives designed to offset the cost of implementing the energy efficiency project. The overarching goal is to instill customer confidence in the projected energy savings and the reliability of equipment performance, in order to make the financial investment attractive, and to provide a delivery process that makes the upgrade process as simple and seamless as possible.

Program Collaborations

Partnerships include working with NYSERDA, new market players, and peer New York utilities in areas where electric and natural gas service territories overlap to identify the best market segments and offerings for these joint initiatives. The Company also works to provide financing from partners for small, medium, and large-scale projects. Furthermore, the Company is exploring potential partnership programs with water utilities to enable both therm and water savings.

Our internal collaborations include working with the Program Managers who facilitate the commercial initiative "Project Expediter" which utilizes market trade partners to assist with bringing large project leads and market-specific segment leads together. Since its inception, this network has grown over 30% in upstate and more than doubled territory wide with the introduction of this network downstate.

Lastly, as market needs evolve the C&I program may collaborate with other internal programs including but not limited to the C&I Multifamily program and the Small Business program.

Target Market

The target market for the C&I Program are all non-residential gas customers within the Company's service territory. The company has received approval to expand our target market to include non-firm gas customers.

Quality Assurance/Quality Control Procedures

Quality assurance measures include pre and/or post inspections to verify equipment is installed and operating as designed. Quality assurance/quality control procedures and business practices are constantly reviewed. The specific C&I inspection procedures vary based on the type of measure installed and the size of the project, including 100% inspections on third party payments. The Company randomly selects up to ten percent (10%) of the completed prescriptive incentive applications and custom projects where the incentive is less than \$10,000. All third-party payments, and custom projects where the incentive is greater than \$10,000 require a post-inspection. As a result of the COVID-19 pandemic the Company has implemented a virtual pre-inspection and post-inspection process to meet the NYS safety guidelines. The information required is the same whether the inspection is completed in person or virtually.

Anticipated Project Timeframe

Small to average size projects can take an estimated six (6) to twelve (12) months to complete while larger projects can take an estimated one (1) to four (4) years to complete, depending on size and complexity.

GAS MULTIFAMILY PROGRAM

Program Design

The Gas Multifamily Program is designed to increase the installation of energy efficiency measures in existing multifamily buildings (buildings with five (5) or more dwelling units) within the Company's service territory by working with property owners, managers, trade allies, and tenants to encourage installation of gas energy saving measures offered within the program. Offerings include prescriptive, custom, and direct install measures. Multifamily buildings present opportunities for upgrades in common areas, building envelopes, and within living units. The Company will evaluate, refine, enhance, and explore new ways to animate this highly segmented and complex market by delivering comprehensive energy efficiency measures and solutions.

The Gas Multifamily Program consists of the following sub-initiatives that will further support these customers. Below are brief details about each initiative:

- *Prescriptive* – The Prescriptive program provides rebates to eligible customers for specific energy efficiency measures following installation. Eligible measures include energy efficient boilers, water heaters, and furnaces, steam traps for radiators, heating control equipment such as Wi-Fi thermostats, and pipe insulation. Customers may apply for rebates online or by mail.
- *Midstream* – The midstream program started in 2020 as a pilot program and in 2021, became a full program within the Multifamily portfolio. This program provides another delivery mechanism for energy efficiency savings with water heating equipment, by providing rebates to distributors for selling high-efficiency equipment. This allows distributors to sell this equipment to National Grid's customers at a lower cost, saving money for the customer, and energy efficiency savings for National Grid.
- *Custom* – The custom program allows customers to apply for incentives for products that are not covered by the Prescriptive program. This allows customers doing large or custom projects to apply to National Grid to receive incentives, and National Grid provides technical analysis and other support, with incentives up to fifty percent (50%) of project costs. Types of custom projects include heating equipment larger than that covered in the Prescriptive program, energy monitoring systems, and other customized projects.
- *Direct Install* – In the Direct Install program, the Company provides installation of high-efficiency water and energy saving measures at no cost to the customer. These measures include energy efficient shower heads and faucet aerators.

- *Statewide Benchmarking Program* – On December 13, 2018, the Commission, in its Order Adopting Accelerated Energy Efficiency Targets (the “December Order”), directed New York Utilities to prepare for statewide benchmarking of building energy performance. National Grid has implemented an automated and enterprise-wide process, as of January 1, 2019, that uploads customer aggregated usage data, upon request, to the Energy Star EPA Portfolio Manager site. The Company has developed a benchmarking offering for its customers that promotes action by building owners or decision makers to make upgrades that reduce overall building usage as part of this potential statewide benchmarking mandate.

2019-2021

In 2019, to support gas constraint issues and demand reduction efforts, the Company offered enhanced incentives for custom projects. A midstream water heating pilot was launched in 2020, which was transitioned to a full program in 2021. The Benchmarking Program was launched in 2021 to enable customers the opportunity to compare their energy usage to a benchmark and learn about the other programmatic offerings to improve their efficiency. The Multifamily program continued to offer support to customers in response to COVID-19 hardships with enhanced incentives and safety tools for tenants. The Company launched a one-pipe steam pilot to explore steam opportunities in multifamily units and initiated an Energy Management System (“EMS”) direct install pilot to evaluate how to make an EMS more cost effective. Additionally, the Company’s key focus is to continue developing the LMI Multifamily Program as part of the Statewide LMI implementation plan. The LMI Multifamily Program launched in fall of 2021. The Company continues to explore partnerships with Con Ed for multifamily dwellings to maximize vendor participation and provide customers with a single point of contact for both utilities.

2022-2025

The Company will continue to define the LMI Multifamily Program to look for better ways to serve both the LMI and Market Rate customer segments. A key focus is on obtaining knowledge from the Company’s partnerships and collaboration with NYSERDA, along with market research to ensure that the Company is evolving to meet customer demands and achieving a more productive mix of utility and third-party investment. The overall goal is to improve the efficiency of the gas system while increasing consumer value and choice. The Company will also explore ways to streamline the customer’s journey through the various programmatic offerings, including weatherization as well as the other Multifamily specific programs.

Assessments will also be conducted on the potential coordination of program offerings with time-of-use rates, as well as adding a retro-commissioning option (in conjunction with third

parties). The Company will continue to grow LMI customer participation in the program and explore future collaboration with NYSERDA's multifamily offerings.

Program Incentives & Delivery

The Gas Multifamily Program provides for the installation of energy efficiency measures. These measures vary depending on building characteristics (e.g., age, construction, and locational constraints) and may include in-unit direct savings measures, common area direct savings measures, and contractor installed capital intensive measures. For the Custom Program, Property owners and managers are provided a customized list of recommended energy efficiency measures, which are then discussed with the owner/manager. For the Custom and Prescriptive programs, incentives are provided after the measures are installed, to the customer. For the Direct Install Program, the measures are installed at no cost to the customer, and the Midstream Program provides an incentive to distributors, who pass the savings on to the customer.

Program Collaborations

National Grid will continue to collaborate with NYSERDA and other third parties to target deeper energy savings in the multifamily sector. Additional opportunities to collaborate with other utilities to coordinate leads, audits, and savings between the gas and electric utilities will also be evaluated. The Company collaborates with Consolidated Edison by using the same vendor for their respective Direct Install Programs, so the vendor may install efficient electric measures at the same time as gas-efficient measures.

The Company collaborates with 'NYC Retrofit Accelerator' which is managed by a 3rd party vendor and paid for by the New York City ("NYC") Mayor's Office of Sustainability to promote multifamily programs and assist customers to utilize available incentives. Information about these offerings is available online and includes information about incentives available from National Grid and others.

Target Market

Landlords or owners of buildings with five (5) or more units receiving gas service from National Grid on multifamily gas heating rates are eligible to participate in the Multifamily Program if they contribute to the Energy Efficiency Surcharge ("EES") component of the SBC. Customers with at least one (1) centralized heating system at a gas heating rate are eligible to participate in this program if they contribute to the EES component of the SBC. The company has received approval to expand our target market to include non-firm customers.

Quality Assurance/Quality Control Procedures

Quality assurance measures include pre-inspections and/or post-inspections to verify equipment is installed and operating as designed. Random post-inspections are performed on up to ten percent (10%) of installed projects including 100% of projects with incentive payments made to third parties (contractors). All custom measure incentives require pre-installation and post-installation inspections. As a result of the COVID-19 pandemic, the Company has implemented a virtual pre-installation and post-installation inspection process to meet the NYS safety guidelines. The information required is the same for an inspection conducted in person or virtually.

Anticipated Project Timeframe

Small to average size projects can take approximately six (6) months to complete while larger projects can take an estimated one (1) to four (4) years to complete, depending on size and complexity.

GAS RESIDENTIAL ENGAGEMENT PROGRAM

Program Design

The Residential Engagement Program is a behavioral initiative to encourage residential customers to change their energy use behavior to conserve energy. Behavioral initiatives seek to identify the motivational factors which cause residential customers to actively employ personal energy saving actions and/or participate in energy efficiency programs.

The Engagement Program consists of the following sub-initiative that will further support gas customers. Below are brief details about each sub-initiative:

- *Home Energy Reports* – Home Energy Reports are monthly and bimonthly reports used as an informational and educational tool sent to customers. These reports are sent to gas customers via print (mail) or email. All Home Energy Reports include personalized energy usage information, data insights, tip modules and references to other programs offered through the Company. Although made up of the same information, emailed reports have the benefit of directly linking customers to learn more about content in the report. Typically, printed reports are sent bimonthly, while emailed reports are sent on a monthly basis.

2019-2021

The Company will implement a new version of the Home Energy Reports (“HER”), referred to as HER 3.0. This version includes new energy insights, behavioral techniques and QR codes to engage the customer further. After a HER 3.0 pilot in the Niagara Mohawk service territory, evaluations determine customers found this version more useful than previous version, with an increase in click rate and web logins. A full release of the HER 3.0 version is being released to all customers in fall 2021.

The Company continued to explore methods of personalization for energy saving modules on reports, such as segmented marketing based on customer persona or bill support for potential low-income customers. This program will continue to cross-promote other energy efficiency programs, such as the Gas Residential Program and the Online Marketplace Program.

2022-2025

A key focus in 2022 will be to enhance personalization through customer personas and customer insights. The program will explore additional ways to personalize energy savings tips within the HERs for customers. The Residential Engagement Program will continue to cross-promote other energy efficiency programs and will explore the promotion of other demand side management programs such as gas demand response.

The Residential Engagement Program will consider the implementation of a video Home Energy Report (“vHERs”) pilot. Video Home Energy Reports are video based reports used as an information and educational tool which are sent to customers. These reports include personalized videos including information on energy usage, tips to reduce usage and the option to learn more about energy efficiency in the home. The program will also explore the potential for high usage alerts. This would help the program target and alert customers who are forecasted to use more energy than expected, allowing customers to manage their usage in a more effective way.

As in previous years, the program will continue to investigate ways to enhance customer personalization, other program areas to promote, and innovative energy savings tips to share. The program will also seek to be an educational tool for new and innovative energy efficiency technology. The Company will continue to explore methods of personalization for energy saving modules on reports, such as segmented marketing based on customer persona or bill support for potential LMI customers.

Program Incentives & Delivery Overview

The purpose of this behavioral mechanism is to provide customers with personalized energy information via an energy information marketplace. The energy information marketplace uses multiple channels (e.g., web, mail, email) to deliver personalized energy information to residential customers. The information motivates customers to take action to conserve energy use and reduce expenses.

This program helps to promote other programs in the Company’s residential portfolio such as the Residential Gas Program and the Residential Online Marketplace through information on the Home Energy Reports as well as tips to take advantage of these programs.

Program Collaborations

National Grid contracts with a vendor to deliver the energy information marketplace, define the participant group, the treatment period, engagement mechanisms, content of messaging, and strategy for how these messages tie in with other Company offerings. In addition, a third-party vendor is used for customer contact services and is trained to answer questions about the Engagement Program. Internally, there is collaboration with the marketing team to coordinate modules in the HER to support other programs and potentially align marketing campaigns.

Target Market

Residential gas customers and some individually metered multifamily customers are eligible to participate in the Residential Engagement Program if they contribute to the EES component of the SBC.

The Residential Engagement Programs are utilizing multiple report types to educate customers about developments in the programs from the NE: NY order. The programs are exploring the ability to use different delivery methods to educate customers about proper use of heat pumps and what LMI program offerings may be available to them.

Quality Assurance/Quality Control Procedures

The behavioral initiative assigns customers to treatment and control groups. The treatment groups receive mailer-based reports on an ongoing basis and have access to the same information on the National Grid website. Control groups are retained for the purposes of evaluation.

Periodic evaluations are conducted on different aspects of the program, including program administration, operations and reporting by third-party vendors to verify the effectiveness of the current program processes and validity of savings.

Anticipated Project Pipeline

Not Applicable

GAS RESIDENTIAL AND NON-RESIDENTIAL ONLINE MARKETPLACE PROGRAMS¹¹

Program Design

The Residential Online Marketplace Program¹² includes individualized customer education on specific energy efficiency opportunities for customers' homes or businesses. The Online Marketplace provides an intuitive, visual and interactive tool to engage the customer, and allow customers to take immediate action with instant financial incentives and rebates. The Online Marketplace will drive action, educate, and utilize customer insights for a more targeted customized online experience.

The Gas Residential Online Marketplace Programs include the following sub-initiative that will support gas customers:

- *Gas Residential Efficiency Platform Online Assessment* – guides customers through a series of questions to collect information about their homes and their usage habits. The online assessment then generates a report that provides customers a disaggregation of their energy usage and details for a variety of recommendations on how they can save energy.

2019-2021

The program has been substantially expanding marketing efforts throughout the territory. Referrals to the marketplace are driven by the online assessment, and there is increased traffic to the National Grid website due to this offering and additional marketing. Engagement for the program is continuously being developed and includes video marketing, sponsor content, monthly blog posts, and media ads. The updated Online Marketplace 2.0 was launched in 2020 and will be improved and assessed continuously. In 2021, some additional functionality was added to the Marketplace platform including coupon codes. The Marketplace has seen an increase in the number of users and products sold in 2021. The Online Assessment program saw increased engagement in early 2021 driven by an email campaign encouraging customers to take the assessment. In 2021, the Online Assessment program plans to incorporate some offline marketing materials accompanied by QR codes in addition to normal marketing efforts.

2022-2025

The Company will continue to explore incorporating additional energy efficiency measures into the online marketplace. In addition, the Company will continue to monitor and expand Demand Response enrollment in 2021 and will continuously assess and

¹¹ <https://ny.home.marketplace.nationalgridus.com/>

¹² Previously named the Residential and Non-Residential Efficiency Platforms

improve Rebate-as-a-Service into the marketplace as well. The Company will investigate further leveraging the online assessment to engage customers remotely and partner with large manufacturers and engage additional marketing tactics, such as dynamic content advertising and personalized communications to customers. The Company issued a Request for Proposal (“RFP”) for the Marketplace program to incorporate additional features to serve customers. This will include an Electric Vehicle selector Tool with information about the cost of ownership of an EV. The new Marketplace also aims to educate and advise customers on larger measures such as appliances. Through the RFP, the Marketplace program is seeking new and innovative ways to engage and educate our customers. The company is investigating ways to incorporate virtual energy assessment solutions in addition to our existing online assessment offerings to provide a more robust energy assessment. The non-residential online marketplace will be expanded to include the DNY service territories.

Program Incentives & Delivery

Customers complete an online energy assessment that collects information about their homes or businesses and their usage habits. The online assessment then generates a report that provides customers a disaggregation of their energy usage and details for a variety of recommendations on how they can save energy. These tips direct the customer to the marketplace website where they will have the opportunity to purchase smaller, self-install energy efficiency measures. National Grid provides an instant rebate for these measures.

The Company continues exploring and evaluating the opportunity to provide increased incentives for circumstances in which the product being purchased provides additional value to the customer or company such as additional incentives to facilitate greater participation by low and moderate-income customers, customers who are located in constrained areas, customers who participate in demand response programs or to customers who install multiple measures.

Program Collaborations

National Grid has contracted with a vendor to deliver the Online Marketplace in a coordinated manner. Customers are directed to the online marketplaces through links on the National Grid website and will also be informed through other marketing and outreach efforts. Lead vendors are responsible for managing the online marketplace as well as customer education, data tracking, and analytics. Customer insights will inform future initiatives, offerings, and strategies, as well as customized and targeted messaging.

Target Market

Residential and Non-residential gas customers are eligible to participate in the Online Marketplace, if they contribute to the EES component of the SBC.

Quality Assurance/Quality Control Procedures

The success of the online assessment and the marketplace will be evaluated using key performance metrics that may include: number of visits to the website, completion of online assessments, email information received, subsequent energy efficiency measures purchased, and/or non-instant measures researched. National Grid will perform regular tests of the website to ensure a seamless customer experience by modifying and refining the online process, as needed, to maximize the success of the online experience. Periodic evaluations are conducted on different aspects of the program, including program administration, operations and reporting by third-party vendors to verify the effectiveness of the current program processes and validity of savings.

Anticipated Project Timeframe

Not Applicable

GAS RESIDENTIAL PROGRAM

Program Design

The primary objective of the Gas Residential Program is to overcome market barriers and increase market awareness with a penetration of high-efficiency equipment, including but not limited to gas heating, water heating, associated controls, and pipe insulation within the residential sector. Rebates are provided to customers to offset the higher cost of their investment in high-efficiency equipment. Weatherization is also offered under the Gas Residential Program by providing incentives for customers to participate in weatherization improvements.

The Gas Residential Program consists of the following sub-initiatives. Below are brief details about each sub-initiative:

- *Prescriptive* – The prescriptive initiative includes multiple offerings through the program. Customers who take advantage of offerings in prescriptive measures will fill out an application, potentially with the help of the contractor who installed the equipment, to apply for a given rebate. The rebate is then processed and given to the customer. Some examples of prescriptive offerings include hot water boilers, steam boilers, combination furnace-water heaters, furnaces, water heaters, controls, energy recovery ventilators, and pipe insulation. These offerings have predetermined requirements that must be met in order to qualify for the rebate.
- *Midstream* – The midstream initiative includes multiple offerings through the program. Customers who take advantage of offerings in the midstream measure do not need to fill out an application to receive the rebate. Instead, the rebate is received as a discount off the retail price when the item/equipment is purchased. Some examples of midstream offerings include aerators, faucet, insulation, pipe insulation, water heaters and air conditioning covers. These offerings have predetermined requirements that must be met in order to qualify for the rebate.
- *Weatherization* – This sub-initiative is a critical tool to meet our demand reduction goals at an accelerated rate due to our gas supply constraints. Components of the weatherization program are comprised of any measures that improve energy efficiency through building envelope improvements including air sealing, insulation, and window replacements. The weatherization program will be expanded using an Implementation Vendor. The weatherization program is designed to engage trusted partners in the territory to maximize participation in the program. These partners have extensive networks of trade allies to support the weatherization program.

2019-2021

The Company continued to implement prescriptive measures to the program in 2021. Along with this, the midstream delivery method will be introduced in Fall 2021. These midstream measures will allow customers more opportunities to take advantage of offerings in the Gas Residential Program. Exploration and evaluation of additional offerings in each measure has been continuous throughout the year. Leads generated from the online assessment are being used to directly market to customers and take advantage of any opportunity to virtually connect with local contractors to maintain relationships during the COVID-19 pandemic. In addition, National Grid is working with a thermal mapping and rating vendor that will be used to target residential customers in the territory using flyovers to detect customers with the most need to weatherize their homes. This will be used as behavioral tool to engage more customers to understand their home's energy loss and participate in weatherization programs to better insulate their building envelope. National Grid collected this thermal imaging data in the Fall of 2020 in preparation to launch a residential weatherization program in September of 2021.

2022-2025

A key focus in 2022 will be the launch of the "Savings Your Way" program. The Savings Your Way program is a no-cost home energy assessment which can be done in-person or virtually. During the assessment, customers will learn about potential energy saving that are specific to their home, receive customized recommendations to reduce energy costs and increase comfort and receive exclusive rebates on qualifying equipment offered by The Company.

Along with the launch of the new Savings Your Way program, the Gas Residential Program continues to explore prescriptive and midstream measures to add to the program. Leads generated from the online assessment and contractor suggestions will be taken into consideration throughout this process. The program will continuously review the opportunity for new delivery methods, collaborations, or measures to be added to the program. Leads generated from the online assessment will be used to directly market to customers.

For long term success in the Gas Residential Program, it will be important to consider and explore non-HVAC gas measures to add to the program's portfolio. These potential measures will be evaluated to determine feasibility and which delivery method to utilize. Along with this, partnerships between community groups, organizations and relators will be explored to increase program awareness.

An extension to the thermal mapping and rating vendor contract will provide the weatherization program with data over the course of the weatherization program to monitor its results and provide the implementation vendor feedback on where additional

resources should be allocated. Additionally, the data collected will be used to expand the Partner and Trade Ally networks to further accelerate DNY demand reduction goals.

Program Incentives & Delivery

The Gas Residential Program educates customers, plumbing/heating installers, and vendors regarding the benefits of high-efficiency gas equipment to increase customer acceptance of these products and to encourage consumers to purchase high efficiency equipment or models when they shop.

Customers may apply for equipment rebates online or by mail that are processed and distributed by a vendor. National Grid will continue to assess and drive success of this program by improving processes for prescriptive applications for new developments with individually metered units. Additionally, the Company will continue to leverage new gas connection data to generate leads for this program.

The Company will be exploring and evaluating the opportunity to provide increased incentives for circumstances in which the energy efficiency product being purchased provides additional value to the customer or company, such as customers located in gas capacity-constrained areas, customers who participate in Demand Response programs, or to customers who install multiple measures. Throughout the year, seasonal enhanced rebates may be added to encourage the adoption of certain measures.

Program Collaborations

This program employs a rebate processing contractor to process both mail-in and online rebates. This vendor provides documentation for program tracking and evaluation purposes. National Grid has well-established trade ally networks in place. Through periodic training and virtual contractor meetings, these trade allies are educated on the benefits of high-efficiency equipment and controls along with the current incentive offerings and online rebate application process. In addition, a third-party vendor does outreach for this program to local retail stores and supply houses to educate customers and provide rebate information at the point of purchase. This program also partners with retailers to buydown certain in-store items that save energy for customers.

The weatherization program is coordinating with other programs in the NG portfolio including electrification initiatives. There are also ongoing conversations with PSEG-LI and Con Ed to provide customers with maximum savings and create a rewarding customer journey.

Target Market

Residential gas customers in one (1) to four (4) unit buildings are currently eligible to participate in the Gas Residential Program if they contribute to the EES component of the SBC.

Quality Assurance/Quality Control Procedures

Random post-inspection of up to ten percent (10%) of approved rebates are conducted to verify the incentivized equipment is installed. The Company is actively working to improve the quality assurance/quality control process through regular review of procedures and business practices.

Anticipated Project Timeframe

On average, a residential high efficiency heating project cycle is approximately sixty (60) days.

GAS RESIDENTIAL COMFORT PLAN PROGRAM [CLOSED]

Design Overview

This program is a pilot marketing partnership between National Grid and SEALED, an energy and financial technology company that offers comprehensive home weatherization and energy efficiency services through customer education, a network of local contractor partners, and a performance payment system called the Comfort Plan. SEALED enables customers to implement comprehensive home improvements, improve home comfort and reduce their environmental footprint with lower upfront costs than available under other programs. Customers pay the cost of the home improvements back to SEALED over time based on the amount of energy that customers save compared to each customer's past energy usage (weather adjusted). Customers are encouraged to implement deep energy efficiency measures and retrofits they may not have otherwise had the financial resources to undertake.

2019-2021

The Company and SEALED entered into a pilot marketing partnership to co-market energy efficiency products to customers and to share details on estimated and/or actual energy savings, NY Customer participation, and lessons learned including uploading necessary data to National Grid's system.

This program closed at the end of Q3 2021.

2022-2025

The co-marketing portion of the pilot marketing partnership between the Company and SEALED will end, but the relationship between National Grid and SEALED will continue as the data sharing component of the partnership is transitioned into the weatherization program—under the Gas Residential Program. Through the weatherization program, SEALED and other Partners will benefit from National Grid marketing. In order to avoid providing SEALED with an unfair advantage, the co-marketing portion of this pilot will discontinue.

Delivery Overview

National Grid launched and tested the program providing eligible residential customers with home energy upgrades (primarily weatherization services and heating upgrades) that are paid for through their energy bill savings.

Strategic Partnerships

National Grid will engage an implementation vendor to develop a database of aggregators and trade allies to offer customers weatherization services. National Grid will co-brand

marketing materials and the vendor's landing page. Additionally, the Residential Comfort Plan will be offered as a service on the National Grid Marketplace.

Target Market

National Grid residential customers in single-family, detached housing who meet the vendor's eligibility requirements will be eligible for the program.

Quality Assurance/Quality Control Procedures

The vendor performs remote quality assurance ("QA") and quality control ("QC") for installed projects. Prior to payment, contractor partners are required to send the vendor documentation of the installed measures, including the blower door test (pre and post project), a completion form signed by the customer, a lien waiver signed by the contractor partner, and a final invoice. If the project was not completed to the vendor quality standards, the vendor may require the contractor partner to return to the home to document the work more clearly and/or fix a problem. Contractor partners that exhibit poor performance receive additional training via webinar and/or in person.

Anticipated Project Timeframe

Not applicable

III. SUPPLEMENTAL EE PROGRAMS

MICRO-COMBINED HEAT AND POWER GAS REV DEMONSTRATION PROJECT

Program Design

The Micro-Combined Heat and Power (“microCHP” or “mCHP”) Gas REV Demonstration Project (the “Project”)¹³, is being implemented in the service territories of The Brooklyn Union Gas Company d/b/a National Grid NY and KeySpan Gas East Corporation d/b/a National Grid (collectively, “National Grid” or the “Companies” and individually, “KEDNY” and “KEDLI”). The Project is designed to test, evaluate and determine if this type of program would work in the downstate NY gas service territories and with electric service which is from Con Ed and PSEG-LI.

This Project is in two phases; Phase 1 is limited to the installation of one (1) Yanmar 5 kW mCHP unit at the Island Park Fire Dept. This unit has now operated through two (2) heating seasons with close to rated performance. Host sites for Phase 2 have been selected and include a 6 kW M-Trigen combination mCHP and gas engine heat pump at a Brooklyn residence and four (4) Aisin 1.5 kW Coremo units with backup capability and new thermal energy storage that can reduce peak gas load. One (1) Aisin unit on Long Island and three (3) in NYC are operating at close to rated performance after a period of below rated performance. These are the first CHP units permitted through a Limited Alteration Application by the NYC Dept. of Buildings. The remainder includes the M-Trigen and six (6) 1.5 kW SOLIDPower fuel cells. One (1) Fuel cell is installed at a home on Long Island and five (5) fuel cells will be installed at the Brookhaven National Lab, with one to operate only with hydrogen.

¹³ Cases 16-G-0058 and 16-G-0059, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of KeySpan Gas East Corporation d/b/a National Grid and Brooklyn Union Gas d/b/a National Grid NY for Gas Service, Gas REV Demonstration Projects – Implementation Plans*

EXPANDED DOWNSTATE NY GAS DEMAND RESPONSE PORTFOLIO

Program Design

Building on the experience gained in the gas demand response pilot that was approved in the 2016 rate case,¹⁴ KEDNY and KEDLI have developed a portfolio of firm GDR programs, focused on engaging both residential/small business and large C&I customers. These programs are designed to support the operational needs of the gas system while serving as a complement to the existing non-firm demand response customer class. The GDR programs will be refined so that the Companies will be able to operate their assets in the most efficient way possible.

The Companies will work to increase the amount of enrollment in their DR programs beyond the level achieved during winter 19/20. The data from all of the DR programs will be analyzed to modify the programs for future years. The Companies are already undertaking coordination efforts to incorporate DR more directly into system planning work.

ENVIRONMENTAL JUSTICE EQUITY PLAN

Program Design

The Environmental Justice Equity Plan is being developed to support an Equity Program within the EE portfolios. The Company is researching the best offerings for customers in these territories and will look to make targeted offerings to customers in the Disadvantaged Communities within the National Grid Service Territory. The intent of these offerings is to break down barriers to participation in our programs created by systemic racism and economic inequality. Areas of investigation include barriers to weatherization, small businesses incentives, and minority and women-owned business training and support. National Grid is planning to use shareholder funds (funding outside of NE:NY) to support these special initiatives.

¹⁴ See *id.*, Cases 16-G-0058 and 16-G-0059, Gas REV Demonstration Projects – Implementation Plans.

IV. BUDGET AND SAVINGS PLAN SUMMARY¹⁵

TABLE 1: ACTUAL VS PLANNED PROGRAM SPEND

NE:NY GAS EE	Actual Spend 2019	Actual Spend 2020	Planned Spend 2021	Actual Spend 2021	Total Spend 2019-2021
Commercial & Industrial Sector					
Gas Commercial & Industrial Program					
Incentives & Services	\$ 1,800,963	\$ 1,726,447	\$ 3,123,966	\$ 3,123,966	\$ 6,651,376
Program Implementation	\$ 530,940	\$ 914,745	\$ 1,583,582	\$ 1,583,582	\$ 3,029,267
Total Budget	\$ 2,331,903	\$ 2,641,192	\$ 4,707,548	\$ 4,707,548	\$ 9,680,643
Gas Non-Residential Online MarketPlace					
Incentives & Services	\$ -	\$ -			\$ -
Program Implementation	\$ -	\$ -			\$ -
Total Budget	\$ -	\$ -	\$ -	\$ -	\$ -
Multifamily Sector					
Gas Multifamily Program					
Incentives & Services	\$ 1,443,841	\$ 2,097,410	\$ 2,683,458	\$ 2,683,458	\$ 6,224,709
Program Implementation	\$ 398,828	\$ 362,106	\$ 670,473	\$ 670,473	\$ 1,431,407
Total Budget	\$ 1,842,669	\$ 2,459,516	\$ 3,353,931	\$ 3,353,931	\$ 7,656,116
Residential Sector					
Gas Residential Engagement Program					
Incentives & Services	\$ 1,766,000	\$ 1,675,573	\$ 2,175,000	\$ 2,175,000	\$ 5,616,573
Program Implementation	\$ 3,999	\$ 5,982	\$ 15,000	\$ 15,000	\$ 24,981
Total Budget	\$ 1,769,999	\$ 1,681,555	\$ 2,190,000	\$ 2,190,000	\$ 5,641,554
Gas Residential Online MarketPlace					
Incentives & Services	\$ 200,226	\$ 431,294	\$ 332,158	\$ 332,158	\$ 963,678
Program Implementation	\$ 162,611	\$ 182,787	\$ 181,958	\$ 181,958	\$ 527,356
Total Budget	\$ 362,837	\$ 614,081	\$ 514,116	\$ 514,116	\$ 1,491,034
Gas Residential Program					
Incentives & Services	\$ 752,580	\$ 696,703	\$ 4,047,264	\$ 4,047,264	\$ 5,496,547
Program Implementation	\$ 99,489	\$ 344,892	\$ 282,500	\$ 282,500	\$ 726,881
Total Budget	\$ 852,069	\$ 1,041,595	\$ 4,329,764	\$ 4,329,764	\$ 6,223,428
Gas Residential Comfort Plan Program¹					
Incentives & Services	\$ -	\$ -	\$ -		\$ -
Program Implementation	\$ -	\$ -	\$ -		\$ -
Total Budget	\$ -	\$ -	\$ -	\$ -	\$ -
Total Portfolio					
Portfolio Administration	\$ 1,318,068	\$ 5,099,510	\$ 2,942,492	\$ 2,942,492	\$ 9,360,070
Portfolio EM&V	\$ 228,779	\$ 721,421	\$ 929,488	\$ 929,488	\$ 1,879,688
Total Actual Portfolio Expenditure	\$ 8,706,324	\$ 14,258,871	\$ 18,967,339	\$ 18,967,339	\$ 41,932,534
Commission-Authorized Total Budget	\$ 15,117,521	\$ 16,877,327	\$ 18,967,339	\$ 18,967,339	\$ 50,962,187
Budget Remaining/Unspent Funds	\$ 6,411,197	\$ 2,618,456	\$ -	\$ -	\$ 6,411,197

¹ Program closed at the end of Q3 2021

¹⁵ The Portfolio Administration budget category includes all portfolio-level (non-program specific) costs other than portfolio Evaluation, Measurement and Verification (“EM&V”) costs. Costs included in Portfolio Administration include, but are not limited to, Company overhead (i.e., supplies, computer and communication equipment, staff training and industry-related sponsorships and memberships), program literature, advertising, promotion, internal and external communication, and all forms of direct and broad media. Labor costs are recovered through base rates; therefore, these costs are not reflected in the Portfolio Administration budget category.

TABLE 1A: ACTUAL VS PLANNED NYS CLEAN HEAT PROGRAM SPEND

Not Applicable

TABLE 1B: ACTUAL VS PLANNED LMI PORTFOLIO SPEND

NE:NY GAS LMI	Actual Spend 2019	Actual Spend 2020	Planned Spend 2021	Actual Spend 2021	Total Spend 2019-2021
Incentives & Services		\$ -	\$ 513,772	\$ 513,772	\$ 513,772
Program Implementation		\$ -	\$ 96,092	\$ 96,092	\$ 96,092
Total Budget		\$ -	\$ 609,864	\$ 609,864	\$ 609,864
Portfolio Administration		\$ -	\$ 177,028	\$ 177,028	\$ 177,028
Portfolio EM&V		\$ -	\$ 23,174	\$ 23,174	\$ 23,174
Total Actual Portfolio Expenditure		\$ -	\$ 810,066	\$ 810,066	\$ 810,066
Commission-Authorized Total Budget		\$ 1,026,553	\$ 1,549,056	\$ 1,549,056	\$ 2,575,609
Budget Remaining/Unspent Funds		\$ 1,026,553	\$ 738,990	\$ 738,990	\$ 1,765,543

TABLE 2: FORECAST PROGRAM PLANNED SPEND AND BUDGETS

NE:NY GAS EE	Planned Spend 2022	Planned Spend 2023	Planned Spend 2024	Planned Spend 2025
Commercial & Industrial Sector				
Gas Commercial & Industrial Program				
Incentives & Services	\$ 6,223,064	\$ 7,715,946	\$ 9,631,319	\$ 11,984,007
Program Implementation	\$ 2,019,201	\$ 2,503,598	\$ 3,125,080	\$ 3,888,458
Total Budget	\$ 8,242,265	\$ 10,219,543	\$ 12,756,399	\$ 15,872,465
Gas Non-Residential Online MarketPlace				
Incentives & Services	\$ 80,403	\$ 99,692	\$ 124,439	\$ 154,836
Program Implementation	\$ 60,003	\$ 74,397	\$ 92,865	\$ 115,549
Total Budget	\$ 140,406	\$ 174,089	\$ 217,304	\$ 270,386
Multifamily Sector				
Gas Multifamily Program				
Incentives & Services	\$ 3,397,938	\$ 4,213,086	\$ 5,258,924	\$ 6,543,546
Program Implementation	\$ 685,848	\$ 850,379	\$ 1,061,474	\$ 1,320,765
Total Budget	\$ 4,083,785	\$ 5,063,465	\$ 6,320,398	\$ 7,864,311
Residential Sector				
Gas Residential Engagement Program				
Incentives & Services	\$ 2,400,104	\$ 2,975,877	\$ 3,714,596	\$ 4,621,978
Program Implementation	\$ 18,601	\$ 23,063	\$ 28,788	\$ 35,820
Total Budget	\$ 2,418,705	\$ 2,998,940	\$ 3,743,384	\$ 4,657,798
Gas Residential Online MarketPlace				
Incentives & Services	\$ 428,609	\$ 531,431	\$ 663,351	\$ 825,390
Program Implementation	\$ 220,200	\$ 273,025	\$ 340,799	\$ 424,048
Total Budget	\$ 648,809	\$ 804,455	\$ 1,004,150	\$ 1,249,438
Gas Residential Program				
Incentives & Services	\$ 4,560,198	\$ 5,654,166	\$ 7,057,732	\$ 8,781,758
Program Implementation	\$ 564,024	\$ 699,331	\$ 872,930	\$ 1,086,165
Total Budget	\$ 5,124,222	\$ 6,353,497	\$ 7,930,662	\$ 9,867,922
Gas Residential Comfort Plan Program¹				
Incentives & Services	\$ -	\$ -	\$ -	\$ -
Program Implementation	\$ -	\$ -	\$ -	\$ -
Total Budget	\$ -	\$ -	\$ -	\$ -
Total Portfolio				
Portfolio Administration	\$ 2,434,900	\$ 3,019,020	\$ 3,768,449	\$ 4,688,986
Portfolio EM&V	\$ 714,219	\$ 885,557	\$ 1,105,383	\$ 1,375,401
Total Actual Portfolio Expenditure	\$ 23,807,312	\$ 29,518,566	\$ 36,846,128	\$ 45,846,708
Commission-Authorized Total Budget	\$ 23,807,312	\$ 29,518,566	\$ 36,846,128	\$ 45,846,708
Budget Remaining/Unspent Funds	\$ (0)	\$ (0)	\$ (0)	\$ (0)

¹ Program closed at the end of Q3 2021

TABLE 2A: FORECAST NYS CLEAN HEAT PLANNED SPEND AND BUDGETS

Not Applicable

TABLE 2B: FORECAST LMI PORTFOLIO PLANNED SPEND AND BUDGETS

NE:NY GAS LMI	Planned Spend 2022	Planned Spend 2023	Planned Spend 2024	Planned Spend 2025
Incentives & Services	\$ 2,406,628	\$ 3,327,966	\$ 3,971,320	\$ 5,464,674
Program Implementation	\$ 491,681	\$ 687,964	\$ 830,711	\$ 1,146,586
Total Budget	\$ 2,898,308	\$ 4,015,930	\$ 4,802,031	\$ 6,611,260
Portfolio Administration	\$ 653,033	\$ 886,728	\$ 1,037,900	\$ 1,411,139
Portfolio EM&V	\$ 107,846	\$ 149,611	\$ 178,824	\$ 246,499
Total Planned Portfolio Budget	\$ 3,659,187	\$ 5,052,269	\$ 6,018,754	\$ 8,268,898
Commission-Authorized Total Budget	\$ 2,759,050	\$ 4,186,863	\$ 6,018,754	\$ 8,268,898
Budget Remaining/Unspent Funds	\$ (900,137)	\$ (865,406)	\$ (0)	\$ 0

TABLE 3: ACTUAL VS PLANNED PRIMARY AND SECONDARY PROGRAM SAVINGS

NE:NY GAS EE	Actual Savings 2019	Actual Savings 2020	Planned Savings 2021	Actual Savings 2021	Total Savings 2019-2021
Commercial & Industrial Sector					
Gas Commercial & Industrial Program					
Dth	211,952	102,506	168,440	168,440	482,898
Gas Non-Residential Online MarketPlace					
Dth	0	0	0	0	0
Multifamily Sector					
Gas Multifamily Program					
Dth	84,887	82,044	107,000	107,000	273,931
Residential Sector					
Gas Residential Engagement Program					
Dth	249,401	240,684	125,400	125,400	615,485
Gas Residential Online MarketPlace					
Dth	17,079	34,654	18,600	18,600	70,333
Gas Residential Program					
Dth	27,443	21,485	76,960	76,960	125,888
Gas Residential Comfort Plan Program¹					
Dth	0	0	0	0	0
Total Portfolio					
Dth	590,762	481,373	496,400	496,400	1,568,535

¹ Program closed at the end of Q3 2021

TABLE 3A: ACTUAL VS PLANNED PRIMARY AND SECONDARY NYS CLEAN HEAT SAVINGS

Not Applicable

TABLE 3B: ACTUAL VS PLANNED PRIMARY AND SECONDARY LMI PORTFOLIO SAVINGS

NE:NY GAS LMI	Actual Savings 2019	Actual Savings 2020	Planned Savings 2021	Actual Savings 2021	Total Savings 2019-2021
Total Portfolio					
Dth		0	18,279	18,279	36,558

TABLE 4: FORECAST PRIMARY AND SECONDARY PROGRAM SAVINGS PLANS

NE:NY GAS EE	Planned Savings 2022	Planned Savings 2023	Planned Savings 2024	Planned Savings 2025
Commercial & Industrial Sector				
Gas Commercial & Industrial Program				
Dth	237,920	300,143	376,386	465,870
Gas Non-Residential Online MarketPlace				
Dth	2,595	3,274	4,106	5,082
Multifamily Sector				
Gas Multifamily Program				
Dth	148,683	187,568	235,214	291,135
Residential Sector				
Gas Residential Engagement Program				
Dth	147,931	186,618	234,024	289,662
Gas Residential Online MarketPlace				
Dth	23,593	29,764	37,324	46,198
Gas Residential Program				
Dth	88,475	111,614	139,966	173,243
Gas Residential Comfort Plan Program¹				
Dth	0	0	0	0
Total Portfolio				
Dth	649,198	818,980	1,027,021	1,271,190

¹ Program closed at the end of Q3 2021

TABLE 4A: FORECAST PRIMARY AND SECONDARY NYS CLEAN HEAT SAVINGS PLANS

Not Applicable

TABLE 4B: FORECAST PRIMARY AND SECONDARY MI PORTFOLIO SAVINGS PLANS

NE:NY GAS LMI	Planned Savings 2022	Planned Savings 2023	Planned Savings 2024	Planned Savings 2025
Total Portfolio				
Dth	25,542	38,760	55,719	76,550

V. EVALUATION, MEASUREMENT & VERIFICATION ("EM&V")

National Grid plans to conduct comprehensive evaluations of its program portfolio through 2025. The tables below outline National Grid's plan and schedule for EM&V activities for this time period. The tables identify the specific EM&V activities, forecasted expenditures, and the estimated timeframe in which EM&V information will be obtained to support the overall program cycle and ensure compliance with the EMV Guidance¹⁶ and Gross Savings Verification Guidance¹⁷. Industry best practices will be followed in performing traditional process and impact/Gross Savings Analysis studies. In addition, the Company will incorporate, as applicable, "real-time EM&V" approaches to provide timely feedback to the program implementation team as the evaluation is proceeding, and will explore new evaluation methods that utilize automation, smart devices, and/or software solutions. The EM&V plan will also assess energy efficiency markets to maximize feedback to the energy efficiency programs. The Company will aim to provide comprehensive evaluation of all offerings while prioritizing efforts based on the level of established understanding of various technologies and program elements, as well as the relative contribution of those technologies to savings.

The EM&V plan includes the timeline and proposed approaches for determining Verified Gross Savings ("VGS") within Appendix A of this document. The VGS specifications plan includes the programs which will need to undergo this analysis through 2025. The Company will conduct verification, measurement and evaluation activities necessary for the implementation of EAMs and will ensure that EM&V activities comply with the current Gross Savings Verification Guidance.

The EM&V plan also incorporates work needed to assist in maintaining the New York State Technical Reference Manual ("TRM"), as well as activities to inform the benefit cost analysis ("BCA"). Factors such as energy efficiency measure costs, non-energy impacts, and impacts resulting from New York State building code changes may be explored as applicable. In addition, efforts may be undertaken to assess the full range of benefits being realized in New York as a result of energy efficiency efforts (e.g., other resource benefits and non-resource benefits).

¹⁶ CE-05: *Evaluation Measurement and Verification Guidance*, New York State Department of Public Service, Office of Markets and Innovation, (issued Nov. 1, 2016).

¹⁷ CE-08: *Gross Savings Verification Guidance*, New York State Department of Public Service, Office of Markets and Innovation, (issued Aug. 23, 2019).

Opportunities to perform some of the EM&V work collaboratively across the State, and where applicable, to build upon existing studies, will also be explored. If all Program Administrators (“PAs”) use similar approaches to measuring impact factors, then results can be more easily compared and combined across the state. For example, the Company is exploring whether a battery of survey questions can be developed for the consistent measurement of free ridership and spillover.

EM & V ACTIVITY DESCRIPTIONS

EM&V Activity		Description	Sector	Fuel	Company
NG-2004	Gas C&I Process & Impact Evaluation	This activity was known previously as the "C&I Gas Custom & Prescriptive Process & Impact Evaluation". This study will consist of coordinated process and impact evaluations of National Grid's three NY C&I gas energy efficiency programs, including custom, prescriptive, and direct install components. The process evaluation will examine the effectiveness of each program's delivery mechanisms and marketing, assess the level of customer satisfaction, and make recommendations to improve the programs. The impact evaluation will confirm measure-level and program-level gross savings, calculate realization rates per the VGS guidelines, recommend cost-effective M&V techniques to improve the accuracy of future savings estimates, and make recommendations for increasing the accuracy of applicable parameters included in the NY TRM.	C&I	Gas	NMPC-G/ KEDNY/ KEDLI
NG-2005	Gas Resi & C&I Market Study	Formerly this activity was known as the "Residential and C&I Gas Market Study". This evaluation will research the structure and functioning of the gas energy efficiency market, identifying the key market actors and their decision-making processes that affect the energy efficiency of homes and buildings in New York.	Res/ C&I	Gas	NMPC-G/ KEDNY/ KEDLI
NG-2006	Market & Measure Evaluation	The vendor team will develop a measure and market model specific to The Brooklyn Union Gas Company and KeySpan Gas East Corporation to estimate DSM potential and market insights. The model uses a bottom-up approach for building-based energy efficiency measures and will leverage New York-specific data and company-specific program data and customer bases.	Res/ C&I	Gas	KEDNY/ KEDLI
NG-2008	Gas Resi Program Process & Impact Evaluation	Formerly this activity was known as the "HEHE Process and Impact Evaluation". The overall objective of the impact evaluation is to develop gas savings impacts based on measures installed by participants in the High Efficiency Heating and Water Heating Equipment Program and calculate realization rates based on VGS guidelines. The process evaluation will assess the effectiveness of program design, processes, and customer satisfaction; identify any implementation issues; and make recommendations for program improvements.	Res	Gas	NMPC-G/ KEDNY/ KEDLI

2019 - 2025 Gas SEEP

The Brooklyn Union Gas Company d/b/a National Grid NY

NG-2009	Income Eligible Market Mapping	Customers were previously mapped by census tract in the Niagara Mohawk Power Company electric territory. Repeating this effort for the Brooklyn Union Gas Company territory facilitates sharing of learnings across service territories and creates economies of scale for both efforts.	Res	Gas	KEDNY
NG-2011	Gas C&I Process & Impact Evaluation Follow-on	Formerly this activity was known as the "C&I Gas Process & Impact Evaluation Follow-on". This activity will follow up on any issues or opportunities identified in NG-2004 requiring additional research and analysis.	C&I	Gas	NMPC-G/ KEDNY/ KEDLI
NG-2012	Gas Resi Program Process & Impact Evaluation Follow-on	Formerly this activity was known as the "HEHE Process and Impact Evaluation Follow-on". This activity will follow up on any issues or opportunities identified in NG-2008 requiring additional research and analysis.	Res	Gas	NMPC-G/ KEDNY/ KEDLI
NG-2014	Gas Peak Research	This activity is a billing analysis of downstate New York residential gas load shapes.	Res	Gas	KEDNY/ KEDLI
NG-3001	Electric & Gas Resi & C&I EM&V Support	Formerly this activity was known as the "Residential and C&I Gas and Electric EM&V Support". Provides ongoing support in data analytics, evaluation results analysis and other EM&V support.	Res/ C&I	Gas/ Elec	NMPC-E/ NMPC-G/ KEDNY/ KEDLI
NG-3002	Electric & Gas Resi & C&I Free Ridership/Spillover Study	Formerly this activity was known as the "Residential and C&I Gas and Electric Free Ridership/Spillover Study". This activity seeks to develop methods and surveys to consistently quantify free ridership and spillover for both the residential and C&I sectors; participation of other PAs in New York will be sought in order to promote consistency across the state.	Res/ C&I	Gas/ Elec	NMPC-E/ NMPC-G/ KEDNY/ KEDLI
NG-3003	Measure Research	Ongoing activity to gather cost and savings data for measures not yet included in National Grid's programs. For measures not included in the NY TRM, this project includes drafting TRM write-ups to present to the TRM Management Committee for review and approval. In 2020, added Validation of Measure Savings Calculations task. This task is to validate energy savings results from National Grid's program tracking database against energy savings results determined based on the published methods prescribed by the NY TRM.	Res/ C&I	Gas/ Elec	NMPC-E/ NMPC-G/ KEDNY/ KEDLI
NG-3004	Multifamily Process & Impact Evaluation	This study will conduct coordinated process and impact evaluations of National Grid's three NY multifamily energy efficiency programs. The process evaluation will examine the effectiveness of delivery mechanisms and marketing, assess customer satisfaction, and make recommendations to improve the programs. The impact evaluation will determine measure-level and program-level gross savings, recommend cost-effective M&V techniques to improve the accuracy of future savings estimates, and make recommendations for increasing the accuracy of applicable parameters included in the NY TRM.	MF	Gas/ Elec	NMPC-E/ NMPC-G/ KEDNY/ KEDLI
NG-3006	Measure Cost Research & Analysis	The purpose of this ongoing activity is to periodically gather pricing information for products-related programs in a timely fashion.	Res	Gas/Elec	NMPC-E/ NMPC-G/ KEDNY/ KEDLI

NG-3009	Resi Engagement Program Process & Impact Evaluation	Formerly this activity was known as the "Behavioral Program Process & Impact Evaluation". The process evaluation will seek to address customer satisfaction, program-induced behavioral changes and cross-program participation, the effectiveness of various methods of delivering the reports (e.g., mail, e-mail), barriers to program participation, remaining program potential, review of the program tracking data, and identification of any actionable recommendations for program improvement. The impact evaluation will include a review of the savings estimation methodology currently used by National Grid and the implementation contractor. We will verify those savings through independent analysis. We will also review the methodology for attributing savings to the Behavioral Programs and other programs offered by National Grid. The billing analysis will estimate energy savings and savings attributable to other programs.	Res	Gas/ Elec	NMPC-E/ NMPC-G/ KEDNY/ KEDLI
NG-3011	TRM Vendor - Statewide Support	Vendor to provide technical and administrative support to the Technical Resource Manual Management Committee (TRM MC) in the revision and maintenance of the New York Technical Resource Manual (NY TRM), serving as the primary technical review contractor as well as filling the role of TRM MC Secretary.	Res/ C&I	Gas/ Elec	NMPC-E/ NMPC-G/ KEDNY/ KEDLI
NG-3012	Validation of Measure Savings Calculations	Added to NG-3003.	Res/C&I	Gas/Elec	NMPC-E/ NMPC-G/ KEDNY/ KEDLI
NG-3013	MF Process & Impact Evaluation Follow-on	This activity will follow up on any issues or opportunities identified in NG-3004 requiring additional research and analysis.	Res/ C&I	Gas/ Elec	NMPC-E/ NMPC-G/ KEDNY/ KEDLI
NG-3014	Free Ridership/Spillover Study Follow-on	This activity will follow up on any issues or opportunities identified in NG-3002 requiring additional research and analysis.	Res/ C&I	Gas/ Elec	NMPC-E/ NMPC-G/ KEDNY/ KEDLI
NG-3015	Resi and Non-Resi Online Marketplace Impact Evaluation	Formerly this activity was known as the "E-Commerce Small Business & Residential Impact Evaluation". This impact evaluation will assess gross energy savings consistent with the VGS Guidance.	Res/ C&I	Gas/ Elec	NMPC-E/ NMPC-G/ KEDNY/ KEDLI
NG-3016	Multifamily Process & Impact Evaluation 2	This study will conduct coordinated process and impact evaluations of National Grid's three NY multifamily energy efficiency programs. The process evaluation will examine the effectiveness of delivery mechanisms and marketing, assess customer satisfaction, and make recommendations to improve the programs. The impact evaluation will determine measure-level and program-level gross savings in accordance with the VGS Guidance, recommend cost-effective M&V techniques to improve the accuracy of future savings estimates, and if possible, make recommendations for increasing the accuracy of applicable parameters included in the NY TRM.	Res/ C&I	Gas/ Elec	NMPC-E/ NMPC-G/ KEDNY/ KEDLI
NG-3017	Portfolio Benefit Cost Analysis	This activity includes the development of a benefit cost tool for energy efficiency for each of the three New York Companies, as well as ongoing support for BC analysis.	Res/ C&I	Gas/ Elec	NMPC-E/ NMPC-G/ KEDNY/ KEDLI

TABLE 5: 2019 – 2025 EM&V ACTIVITY SCHEDULE

EM&V Activity		Sector (1)	Expected Plan Submission Date	Expected Start Date	Expected Completion Date	Status (2)
1. Evaluation, Measurement, and Verification						
NG-2004	Gas C&I Process & Impact Evaluation	C	Q2 2021	Q3 2020	Q4 2022	In Progress
NG-2008	Gas Resi Program Process & Impact Evaluation	R	Q1 2021	Q4 2020	Q4 2022	In Progress
NG-2009	Income Eligible Market Mapping	R	-	-	-	Ongoing
NG-2011	Gas C&I Process & Impact Evaluation Follow-on	C	Q2 2023	Q1 2023	Q2 2024	Upcoming
NG-2012	Gas Resi Program Process & Impact Evaluation Follow-on	R	Q4 2022	Q3 2022	Q4 2023	Upcoming
NG-2014	Gas Peak Research	R	-	Q4 2020	Q4 2021	In Progress
NG-3001	Electric & Gas Resi & C&I EM&V Support	B	-	Q4 2017	-	Ongoing
NG-3002	Electric & Gas Resi & C&I Free Ridership/ Spillover Study	B	Q1 2021	Q3 2020	Q1 2022	In Progress
NG-3004	Multifamily Process & Impact Evaluation	C	Q1 2021	Q3 2019	Q4 2021	In Progress
NG-3009	Resi Engagement Program Process & Impact Evaluation	R	-	Q1 2018	Q4 2021	In Progress
NG-3013	MF Process & Impact Evaluation Follow-on	C	Q4 2022	Q3 2022	Q4 2023	Upcoming
NG-3014	Free Ridership/ Spillover Study Follow-on	B	Q4 2022	Q3 2022	Q4 2023	Upcoming
NG-3015	Resi and Non-Resi Online Marketplace Impact Evaluation	B	Q2 2021	Q1 2021	Q4 2022	In Progress
NG-3016	Multifamily Process & Impact Evaluation 2	C	Q4 2022	Q3 2022	Q4 2023	Upcoming
NG-3017	Portfolio Benefit Cost Analysis	B	-	Q1 2021	-	Ongoing

2. TRM, BCA, Measure Costs, & Savings Impact Activities						
NG-2006	Market & Measure Evaluation	B	-	Q3 2019	Q4 2020	Complete
NG-3003	Measure Research	B	-	Q4 2016	-	Ongoing
NG-3006	Measure Cost Research & Analysis	R	-	Q4 2016	-	Ongoing
NG-3011	TRM Vendor - Statewide Support	B	-	Q2 2016	-	Ongoing
3. Market Studies						
NG-2005	Gas Resi & C&I Market Study	B	Q4 2021	Q2 2021	Q4 2022	In Progress
4. Other						
Unallocated Funds		-	Future Activities To Be Determined			Upcoming
5. Statewide Evaluations						
Low & Moderate Income (LMI) Statewide Evaluation		-	TBD based on statewide consensus			Upcoming

(1) C=Commercial & Industrial, R=Residential, and B= Both C&I and Residential

(2) Note: The status "Ongoing" is used for continuous, ongoing EM&V support activities that will not result in a filed report.

EM&V Activity		Sector (1)	Expected Plan Submission Date	Expected Start Date	Expected Completion Date	Status (2)
1. Evaluation, Measurement, and Verification						
NG-2004	Gas C&I Process & Impact Evaluation	C	Q2 2021	Q3 2020	Q4 2022	In Progress
NG-2008	Gas Resi Program Process & Impact Evaluation	R	Q1 2021	Q4 2020	Q4 2022	In Progress
NG-2009	Income Eligible Market Mapping	R	-	-	-	Ongoing
NG-2011	Gas C&I Process & Impact Evaluation Follow-on	C	Q2 2023	Q1 2023	Q2 2024	Upcoming
NG-2012	Gas Resi Program Process & Impact Evaluation Follow-on	R	Q4 2022	Q3 2022	Q4 2023	Upcoming
NG-2014	Gas Peak Research	R	-	Q4 2020	Q4 2021	In Progress
NG-3001	Electric & Gas Resi & C&I EM&V Support	B	-	Q4 2017	-	Ongoing
NG-3002	Electric & Gas Resi & C&I Free Ridership/ Spillover Study	B	Q1 2021	Q3 2020	Q3 2021	In Progress
NG-3004	Multifamily Process & Impact Evaluation	C	Q1 2021	Q3 2019	Q3 2021	In Progress
NG-3009	Resi Engagement Program Process & Impact Evaluation	R	-	Q1 2018	Q3 2021	In Progress
NG-3013	MF Process & Impact Evaluation Follow-on	C	Q4 2022	Q3 2022	Q4 2023	Upcoming
NG-3014	Free Ridership/ Spillover Study Follow-on	B	Q4 2022	Q3 2022	Q4 2023	Upcoming
NG-3015	Resi and Non-Resi Online Marketplace Impact Evaluation	B	Q2 2021	Q1 2021	Q4 2022	In Progress
NG-3016	Multifamily Process & Impact Evaluation 2	C	Q4 2022	Q3 2022	Q4 2023	Upcoming
NG-3017	Portfolio Benefit Cost Analysis	B	-	Q1 2021	-	Ongoing
2. TRM, BCA, Measure Costs, & Savings Impact Activities						
NG-2006	Market & Measure Evaluation	B	-	Q3 2019	Q4 2020	Complete
NG-3003	Measure Research	B	-	Q4 2016	-	Ongoing
NG-3006	Measure Cost Research & Analysis	R	-	Q4 2016	-	Ongoing
NG-3011	TRM Vendor - Statewide Support	B	-	Q2 2016	-	Ongoing

3. Market Studies						
NG-2005	Gas Resi & C&I Market Study	B	Q4 2021	Q2 2021	Q4 2022	In Progress
4. Other						
Unallocated Funds		-	Future Activities To Be Determined			Upcoming
5. Statewide Evaluations						
Low & Moderate Income (LMI)		-	TBD based on statewide consensus			Upcoming
(1) C=Commercial & Industrial, R=Residential, and B= Both C&I and Residential						
(2) Note: The status "Ongoing" is used for continuous, ongoing EM&V support activities that will not						

TABLE 6: 2019 – 2025 EM&V ACTIVITY FORECASTED EXPENDITURES

EM&V Activity		2019 Expended	2020 Expended	2021	2022	2023	2024	2025
1. Evaluation, Measurement, and Verification								
NG-2004	Gas C&I Process & Impact Evaluation	\$0	\$222,345	\$47,500	\$190,000	\$0	\$0	\$0
NG-2008	Gas Resi Program Process & Impact Evaluation	\$0	\$104,625	\$53,550	\$22,950	\$0	\$0	\$0
NG-2009	Income Eligible Market Mapping	\$11,557	\$901	\$0	\$0	\$0	\$0	\$0
NG-2011	Gas C&I Process & Impact Evaluation Follow-on	\$0	\$0	\$0	\$0	\$304,000	\$103,000	\$0
NG-2012	Gas Resi Program Process & Impact Evaluation Follow-on	\$0	\$0	\$0	\$28,000	\$90,000	\$0	\$0
NG-2014	Gas Peak Research	\$0	\$0	\$44,000	\$0	\$0	\$0	\$0
NG-3001	Electric & Gas Resi & C&I EM&V Support	\$8,330	\$9,294	\$6,000	\$8,000	\$10,000	\$11,000	\$12,100
NG-3002	Electric & Gas Resi & C&I Free Ridership/ Spillover Study	\$0	\$44,153	\$27,000	\$0	\$0	\$0	\$0
NG-3004	Multifamily Process & Impact Evaluation	\$22,485	\$171,773	\$0.00	\$0	\$0	\$0	\$0
NG-3009	Resi Engagement Program Process & Impact Evaluation	\$50,779	\$12,477	\$22,000	\$0	\$0	\$0	\$0
NG-3013	MF Process & Impact Evaluation Follow-on	\$0	\$0	\$0	\$36,000	\$60,000	\$0	\$0
NG-3014	Free Ridership/ Spillover Study Follow-on	\$0	\$0	\$0	\$11,000	\$37,000	\$24,000	\$26,400
NG-3015	Resi and Non-Resi Online Marketplace Impact Evaluation	\$0	\$0	\$18,000	\$12,000	\$0	\$0	\$0
NG-3016	Multifamily Process & Impact Evaluation 2	\$0	\$0	\$0	\$18,000	\$77,000	\$0	\$0
NG-3017	Portfolio Benefit Cost Analysis	\$0	\$0	\$30,000	\$30,000	\$0	\$0	\$0
2. TRM, BCA, Measure Costs, & Savings Impact Activities								
NG-2006	Market & Measure Evaluation	\$70,908	\$82,381	\$0	\$0	\$0	\$0	\$0
NG-3003	Measure Research	\$21,941	\$43,979	\$41,000	\$47,000	\$53,000	\$58,300	\$64,130
NG-3006	Measure Cost Research & Analysis	\$11,424	\$7,217	\$0	\$0	\$0	\$0	\$0
NG-3011	TRM Vendor - Statewide Support	\$13,344	\$14,088	\$15,000	\$16,000	\$17,000	\$18,700	\$20,570
3. Market Studies								
NG-2005	Gas Resi & C&I Market Study	\$0	\$0	\$110,000	\$110,000	\$0	\$0	\$0
Subtotal EM&V Forecasted		\$210,768	\$713,233	\$414,050	\$528,950	\$648,000	\$215,000	\$123,200
4. Other								
Expenses		\$18,012	\$8,188	\$0	\$0	\$0	\$0	\$0
Unallocated Funds		\$0	\$0	\$515,438	\$185,269	\$237,557	\$890,383	\$1,252,201
Subtotal EM&V Forecasted Expenditure		\$228,780	\$721,421	\$929,488	\$714,219	\$885,557	\$1,105,383	\$1,375,401
5. Statewide Evaluations								
Low & Moderate Income (LMI)		\$0	\$0	\$68,158	\$121,398	\$184,222	\$264,825	\$363,832
Total EM&V Forecasted Expenditures		\$228,780	\$721,421	\$997,646	\$835,617	\$1,069,779	\$1,370,208	\$1,739,233

VI. BENEFIT COST ANALYSIS (“BCA”)

TABLE 7: 2019 – 2025 PRIMARY BCA

NE:NY GAS EE	2021	2022	2023	2024	2025
Commercial & Industrial Sector					
Gas Commercial & Industrial Program					
Benefits (2021\$)	\$25,652,705	\$34,206,636	\$40,535,614	\$48,252,220	\$56,960,264
Costs (2021\$)	\$8,270,143	\$11,302,451	\$13,233,582	\$15,619,305	\$18,395,348
BCR	3.10	3.03	3.06	3.09	3.10
Gas Non-Residential Online MarketPlace					
Benefits (2021\$)	\$0	\$187,575	\$218,447	\$257,769	\$303,057
Costs (2021\$)	\$0	\$179,412	\$209,387	\$246,013	\$288,128
BCR	-	1.05	1.04	1.05	1.05
Multifamily Sector					
Gas Multifamily Program					
Benefits (2021\$)	\$16,295,651	\$21,376,704	\$25,331,872	\$30,154,144	\$35,596,038
Costs (2021\$)	\$5,290,657	\$5,877,055	\$6,886,459	\$8,136,597	\$9,595,153
BCR	3.08	3.64	3.68	3.71	3.71
Residential Sector					
Gas Residential Engagement Program					
Benefits (2021\$)	\$979,220	\$1,577,752	\$1,585,293	\$1,684,457	\$1,944,274
Costs (2021\$)	\$2,347,817	\$2,417,832	\$2,821,779	\$3,315,366	\$3,882,932
BCR	0.42	0.65	0.56	0.51	0.50
Gas Residential Online MarketPlace					
Benefits (2021\$)	\$1,439,611	\$1,705,377	\$1,985,906	\$2,343,148	\$2,754,948
Costs (2021\$)	\$1,226,499	\$1,228,048	\$1,439,204	\$1,700,834	\$2,006,258
BCR	1.17	1.39	1.38	1.38	1.37
Gas Residential Program					
Benefits (2021\$)	\$15,486,031	\$16,869,416	\$20,086,101	\$23,954,682	\$28,303,259
Costs (2021\$)	\$9,735,928	\$6,731,746	\$7,867,376	\$9,261,673	\$10,873,332
BCR	1.59	2.51	2.55	2.59	2.60
Gas Residential Comfort Plan Program					
Benefits (2021\$)	\$0	\$0	\$0	\$0	\$0
Costs (2021\$)	\$50,000	\$0	\$0	\$0	\$0
BCR	-	-	-	-	-

TABLE 8: 2019 – 2025 PORTFOLIO BCA RATIOS

NE:NY GAS EE	2021	2022	2023	2024	2025
Societal Cost Test Ratio	2.22	2.74	2.76	2.79	2.79
Utility Cost Test Ratio	2.59	2.76	2.77	2.78	2.78
Ratepayer Impact Measure Test Ratio	0.82	0.84	0.82	0.81	0.80

VII.APPENDIX A: VGS SPECIFICATIONS

In compliance with Clean Energy Guidance documents *CE-02: SEEP Content Guidance* and *CE-08: Gross Savings Verification Guidance*, please find attached the Company's verified gross savings specifications.

VIII.APPENDIX B: BCA SUPPORTING DOCUMENT

In compliance with Clean Energy Guidance documents *CE-02: SEEP Content Guidance* and *CE-07: Benefit Cost Analysis Filing Requirements Guidance*, please find attached the active BCA excel workbook detailing the inputs used for the Company's BCA analysis.