System Energy Efficiency Plan (SEEP) 2019-2025

Orange and Rockland Utilities, Inc.
Revised: July 6, 2023

Cases 15-M-0252, 18-M-0084

Contents

1. Executive Summary

Orange and Rockland Utilities, Inc. ("O&R" or the "Company") submits this System Energy Efficiency Plan ("SEEP") to provide a program plan for 2022-2025 consistent with the initiatives described in the Public Service Commission's ("Commission") *Order Authorizing Utility Energy Efficiency and Building Electrification Portfolios Through 2025*, issued January 16, 2020 ("January Order")[1] and the Commission's Order in the Reforming the Energy Vision ("REV") proceeding.[2] The January Order adopted the statewide energy efficiency ("EE") target of 185 TBtu by 2025. This SEEP similarly supports the Climate Leadership and Community Protection Act ("CLCPA") goals of 70 percent of New York's electricity supply being generated by renewable sources by 2030 and 100 percent emissions free electricity supply by 2040. The programs and initiatives described in this document contain O&R's EE and demand reduction initiatives as well as additional initiatives and EE opportunities advanced through the Company's non-wires alternative ("NWA") solutions, beneficial electrification and low and moderate income ("LMI") programs. Although the Company's Dynamic Load Management ("DLM") Programs are coordinated with SEEP initiatives, per the SEEP guidance ("Guidance Document"),[3] they are not included in this filing because they do not have EE components.

The Company's 2019-20221 EE budgets and goals are set forth in the Joint Proposal ("RCJP"), adopted in the Company's prior base rate cases,[4] and are different from the budgets in the January Order. However, the Company's 2022-2025 EE budgets and goals are set forth in the January Order. The Company would note that the 2019-2021 performance exceeded the targets and expended less than the approved budgets found in the January Order. For the 2023 electric portfolio, O&R included savings from LED lighting measures with Energy Independence and Security Act of 2007 standards effective July 1, 2023. The Company is planning to increase its midstream program efforts in all sectors to continue to meet the targets with the approved budgets found in the January Order.

O&R has expanded its EE portfolios to engage customers on a more personal level by providing: (1) tools to help them understand how they use energy; (2) recommendations to better manage energy needs; (3) a streamlined customer experience; and (4) increased program offerings. The Company is using granular AMI data to enhance its EE and DLM programs. AMI provides customers with the capability to access near real-time energy information, including how and when they use electricity and gas. Weekly electricity reports are emailed to customers along with high bill alerts to help customers manage their usage along with a link to view their hourly usage data. The detailed near-time information from these weekly reports helps customers better manage their energy use, allowing customers to reduce their energy bills by shifting energy use to time periods when prices are lower and by reducing overall consumption.

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[1] Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative*, Order Authorizing Utility Energy Efficiency and Building Electrification Portfolios Through 2025 (issued January 16, 2020).

[2] Case 14-M-0101, *Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision*, Order Adopting Regulatory Policy Framework and Implementation Plan (issued February 26, 2015), p. 133.

[3] DPS Office of Markets and Innovation, Clean Energy Guidance CE-02: SEEP Guidance, September 1, 2020.

[4] Case 18-E-0067, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Orange and Rockland Utilities, Inc. for Electric Service*; Case 18-G-0068, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Orange and Rockland Utilities, Inc. for Gas Service*, Order Adopting Terms of Joint Proposal and Establishing Electric and Gas Rate Plans (issued March 14, 2019).

To help customers receive the maximum AMI benefit, the Company will leverage granular AMI data and capabilities to recommend specific EE and DLM program offerings to certain customers.

The Company integrates its demand side management ("DSM") programs and offerings to address the needs of the Company's customers, including LMI customers and customers located in disadvantaged communities, utility operations, and the distributed system platform ("DSP") envisioned by the REV proceeding. O&R is integrating EE, permanent demand reduction, demand response ("DR") programs, NWAs, and beneficial electrification programs into a single regulatory framework that enables a customer-oriented approach to achieve greater penetration of distributed energy resources ("DERs") throughout the Company's territory. This will be done over the next several cycles of SEEP filings that, in conjunction with O&R's Distribution System Implementation Plan ("DSIP") filings,[5] will support the REV goals of providing customers with the information and opportunity to take control of their energy use, providing a more modern and resilient grid, and integrating clean energy.

O&R is coordinating with other New York State utilities and New York State Energy Research and Development Authority ("NYSERDA") administered clean energy programs. Specifically, the utilities and NYSERDA have filed the Statewide Low- and Moderate-Income Portfolio Implementation Plan on August 15, 2022 and the NYS Clean Heat Statewide Heat Pump Program Implementation Plan on September 1, 2022 in Case 18-M-0084. These statewide efforts will help meet the needs of our LMI customers to achieve energy affordability, as well as support beneficial electrification initiatives to meet the energy needs of all New York customers.

Finally, in response to COVID-19, the Company has continued to adapt its program offerings to comply with state and federal health directives. Following the resumption of EE programs in spring 2020 after a pause in response to the pandemic, programs were modified to help customers hit hardest by COVID-19. For example, the Business Direct Install Program that targets customers with peak demands of 110 kW and below, increased incentives from 70% to 85% of the installed cost of the project along with increasing incentives across the electric and gas portfolios, a change that continued through 2022. In addition, O&R increased contractor incentives in the NYS Clean Heat Program for full heating load projects to help contractors get back into customer homes after the COVID-19 Pause. Many of these increases continue into 2022 as program participation is still impacted by the pandemic. Virtual audits in both residential and C&I facilities have become commonplace to further EE, helping to reduce in-person pandemic-associated risks. Though virtual engagement and the ability to quickly adapt has been a critical component to program success, the Company will also monitor the public health situation and stay abreast of federal and local guidelines so that in-person engagement opportunities can be utilized when it is safe to do so.

[5] Case 14-M-0101, 16-M-0411, O&R's DSIP, filed June 30, 2020.

2. NE:NY EE Portfolio Description

O&R continues to expand its existing electric and gas portfolio to achieve the energy targets found in the January Order. The Company is administering clean energy initiatives, including the NYS Clean Heat Program[6] and the LMI program.[7] The statewide partnership, including NYSERDA, will expand the penetration of clean heating and cooling equipment across residential and commercial market segments and provide whole home space conditioning solutions particularly where fossil fuels are either not available or constrained. In addition, the LMI plan will expand the reach of free direct install programs by using O&R's unique customer relationship as the trusted energy advisor, while we enhance program offerings and increase participation for this hard-to-reach community. Implementation of these free EE measures will lower customer energy burdens so LMI customers can manage their consumption and reduce their energy bills.

The Company continues to coordinate its EE efforts with its DR initiatives, NWA solutions, non-pipeline solutions, REV demonstration projects, beneficial electrification, and AMI. Broadly, these SEEP initiatives can be segmented into residential and commercial initiatives. Specifically, for residential electric and gas customers, O&R is implementing educational and engagement components in coordination with DR programs approved by the PSC.[8] These include partnerships with Veolia North America (formerly SUEZ), the local water utility, and Boces P-Tech.

In 2019, the Company's EE goals[9] increased from 2018 levels by 136% and 95% for electric and gas, respectively, while portfolio budgets increased by smaller amounts (*i.e.*, 13% for electric and 31% for gas). The Company increased program participation while maintaining program budgets and ramped up additional delivery initiatives quickly and effectively by engaging trade allies. As a result, the Company was able to exceed its targets while spending 93% of its $7.1 million electric budget and 79% of its $703,000 gas budget. In fact, O&R exceeded its maximum Earnings Adjustment Mechanism ("EAM") electric target of 50,525 MWh and achieved 98% of its maximum EAM gas target of 31,764 Dth.

In 2020, the Company's EE goals increased for its electric portfolio and despite the COVID-19 pandemic, the Company increased program participation while maintaining program budgets and expanded delivery channels while effectively engaging trade allies. As a result, the Company was able to exceed its maximum EAM targets, while spending 70% of its $8.1 million electric budget and 83% if its $703,000 gas budget. O&R exceeded its maximum EAM electric target of 57,693 and exceeded its maximum EAM gas target of 31,764 Dth achieving 59,374 MWh and 33,572 Dth, respectively.

In 2021, the Company's EE goals increased for its electric portfolio. Despite ongoing complications from the COVID-19 pandemic, the Company increased program participation while maintaining program budgets. The Company expanded delivery channels, leveraging midstream programs to streamline the

[6] See filing. NYS Clean Heat: Statewide Heat Pump Program Implementation Plan, filed March 16, 2020, updated April 30, 2020, July 1, 2021, September 1, 2022 in Case 18-M-0084.
[7] See filing. Statewide Low- and Moderate-Income Portfolio Implementation Plan filed in Cases 18-M-0084 and 14-M-0094 on July 24, 2020, April 29, 2022, and August 15, 2022.
[8] Case 14-E-0423, *Proceeding on Motion of the Commission to Develop Dynamic Load Management Programs*, Order Adopting Dynamic Load Management Filings with Modifications (issued June 18, 2015).
[9] Case 18-E-0067, 18-G-0068, Order Adopting Terms of Joint Proposal and Establishing Electric and Gas Rate Plans (issued March 14, 2019).

customer experience and provide increased safety precautions to customers and trade allies alike by minimizing in-person contact. As a result, the Company was able to exceed its maximum EAM targets by 121% and 117% for the electric and gas portfolio respectively, while spending 77% of its electric budget and 73% of its gas budget. O&R exceeded its maximum EAM electric target of 60,561 MWh and exceeded its maximum EAM gas target of 31,764 Dth achieving 73,833 MWh and 37,160 Dth, respectively.

Much of the Company's historical success is attributable to O&R's relationship with its customers, as evidenced by survey feedback from O&R's online community; customers believe O&R provides accurate energy savings information. For example, the C&I Program continues to exceed its goals as several large customers have repeatedly participated in this program, with some moving beyond lighting to more comprehensive projects that include building management and HVAC systems. Data analytics incorporates historical hourly usage data to provide personalized energy reports to engage customers to develop an energy plan perpetuated through realized bill savings. These personalized reports will provide a road map for C&I customers to move beyond lighting and view their buildings holistically, which could include taking advantage of DR opportunities and capitalizing on additional revenue streams. Customers view O&R as a reliable energy expert that provides accurate information. Customers are increasingly investing in EE because they realize the positive impact to their bottom-line and supports their environmental and sustainability efforts.

O&R's Customer Engagement Marketplace Platform ("CEMP", "MY ORU Store", or "myorustore.com") remains a critical component in the Company's residential EE portfolio. The CEMP provides customers a one-stop shop to purchase energy-efficient products online with instant rebates applied at the time of purchase. Custom offers, instant incentives, and manufacturer discounts have allowed customers to find affordable products to help them better manage their energy use. Through a multi-channel marketing approach, including targeted personalized emails, customers are made aware of the variety of products and programs that can help them reduce their consumption and lower their energy bills.

Beyond LED lighting, energy savings products including thermostats, dehumidifiers, air purifiers, advanced power strips, and low flow devices are rebated instantly at time of purchase. The My ORU Store also connects customers with home service providers through the safety and convenience of a digital platform. The platform offers links to a solar and storage marketplace providing free online assistance to customers interested in solar and/or battery storage equipment. Customers are provided a solar and storage expert who can guide them through the entire process from inquiry to installation. The Company continues to collaborate with Veolia to offer mutual customers combined rebates on water and energy saving measures sold on the My ORU Store. This partnership helps raise awareness of water and energy conservation among its residential customer segment.

In partnership with NYSERDA, the Company launched an EV managed charging pilot program with Uplight and Enel X designed to provide instant rebates to qualified customers when they purchase select Wi-Fi enabled EV charging stations from the My ORU Store and enroll in the Charge Smart Program. This innovative initiative automatically charges a connected EV during times of the cleanest power generation, decreasing the amount of greenhouse gas emissions and supporting the State's clean energy goals. Additionally, the Company promotes heat pumps and geothermal through its third-party partnerships on the online marketplace.

The My ORU Store offers customer enrollment in Smart Savers, the Company's residential demand response program. If qualified, a customer can purchase a smart thermostat and enroll in the program at checkout to receive both the EE incentive and demand response enrollment bonus. By driving down the barriers of cost, customers are more readily adopting energy efficient technologies and behaviors. The Company is expanding the My ORU Store platform to better serve low-moderate income customers as well as small businesses through incentives on products, custom offers, and programs.

3. NE:NY EE Program Descriptions

Residential Efficient Products Program

Program Design

The Residential Efficient Products Program targets energy savings throughout the residential electric customer base of O&R's service territory. The program provides rebates for ENERGY STAR® appliance upgrades, recycling of refrigerators, freezers and room air conditioners, high efficiency central/mini-split air conditioners, advanced power strips, LEDs, pool pumps, washing machines, dehumidifiers, air purifiers, and smart thermostats.

Customer incentives are designed to cover 50% of the incremental cost of the measure as this program targets equipment that has either failed or reached the end of its useful life and is being replaced. Higher incentives may be offered in NWA areas to defer capital investments and reduce system constraints.

In addition to the traditional rebate application process for ENERGY STAR® appliance upgrades, the CEMP provides instant rebates for energy efficient equipment at the point of sale to streamline the rebate process and promote ease of participation. In addition, the CEMP incorporates an advisory suite to provide solutions to customers with personalized recommendations based on factors including price, EE, carbon emissions, personal preferences, and rebate eligibility. The Company partners with Sealed to provide customers with a free virtual or in-home audit and rebates for professionally installed insulation and energy savings measures, saving customers money throughout the year. Veolia and O&R have partnered to provide combined rebates for energy and water savings measures, including high efficiency showerheads and faucet aerators.

2021 CEMP Enhancements

- Expanded Sealed's weatherization services by launching the Climate Control Program, promoting the installation of residential cold climate heat pumps. Marketing campaigns tailored to promoting the benefits of electrifying home heating were sent to customers;
- Provided customers with educational information on solar and energy storage. An online tool allows customers to easily compare offers from pre-approved solar and energy storage providers. A personal energy advisor guides them through the process and discusses the best solutions to meet their individual needs;
- Supported Company and State beneficial electrification goals through the EV Advisor tool, EV Charge Smart program, and partnerships with geothermal installers. EV Advisor continued to engage customers and raise awareness of electric vehicles. Recent enhancements to the tool included a total cost of ownership heat pump calculator and a frequently asked questions (FAQ) module;
- Launched product offering for geothermal heat pump technology with functionality to schedule a virtual consultation with a geothermal technology provider;
- Coordinated marketplace offerings with Charge Smart, a managed charging program. Customers who purchased a level 2 charge from the CEMP had the opportunity to bundle their purchase with enrollment into Charge Smart and receive an instant rebate on the charger. Program participants

were given access to a smart charging mobile app allowing them to monitor and control their charging routines, as well as shift charging behavior to times when greenhouse gas emissions were lowest.
- Expanded lighting, thermostat, and EV charging products.

2022-2025 CEMP Enhancements
The Company is expanding the CEMP to LMI and business customers. The CEMP expansion will increase participation in the existing residential and small business electric programs through:

- Enhanced offerings for LMI customers to receive targeted offerings and customized recommendations on how to reduce consumption and lower their energy bills and remove cost barriers to facilitate participation in EE and DR programs;
- Expanded marketplace platform for business customers to obtain instant rebates for easy to install lighting products, smart thermostats, power strips and more;
- Integration of weatherization measures to increase customer savings and improve comfort;
- Develop a comprehensive marketing media campaign to expand customer outreach and engagement through a variety of mediums including social, search, and digital in addition to existing print and email channels.

These modifications will increase the capabilities of the CEMP, allowing it to become a one-stop shop for O&R's residential EE, LMI EE, business EE, renewable energy, beneficial electrification, and DR offerings. Through the effective use of personalized data and payback scenarios, instant rebates, and potential financing, the Company will encourage customers to install more comprehensive measures across programs, fuel type, and expand distributed energy opportunities including renewable energy and storage systems. The Company will work with Sealed and other home contractors to expand weatherization offerings.

Program Delivery Method

The CEMP supports stocking, promotion and sale of high efficiency appliances by providing rebates for products whose efficiency levels are set at or above ENERGY STAR® specifications. Product incentives are offered directly to customers as a rebate and local contractors are made aware of rebated appliances through regular communications to reinforce the energy savings message and increase the impact of direct incentives to accelerate the adoption of high efficiency appliances. Virtual in-home audits provide customers with energy savings recommendations and professional whole home solutions, including insulation, high efficiency equipment, and smart home technology that save customers energy and money for years to come. The pick-up and recycling of appliances is performed by an implementation contractor.

Target Market/Customer Eligibility

Although the target audience is primarily residential customers, the expansion of the marketplace platform will allow business customers to participate. Additionally, enhanced offerings will also be made available to specifically benefit the LMI community. The initiative will continue to consider a variety of marketing approaches to encourage both customer and trade ally participation, including retailers and distributors.

Coordination with Other Programs

O&R will coordinate this program with the remaining residential and commercial electric and gas programs, the Bring Your Own Thermostat Program, targeted NWA areas, the NYS Clean Heat Program, the Statewide LMI Program, and with the residential suite of electric programs offered by O&R's affiliate Con Edison of New York ("Con Edison").

Quality Assurance/Quality Control

Applications and tracking will include information necessary to verify that the customer and equipment information submitted meet the program qualification criteria. This includes confirming the customer account, eligibility information and sales data, including equipment make and model numbers, to meet rebate requirements. In addition, unique equipment serial numbers are verified to prevent multiple rebates issued for the same equipment. O&R and/or third-party contractors will perform on-site verification inspections for at least ten percent of participants to confirm that equipment is purchased and installed as required to meet the program guidelines. Data tracking software streamlines rebate processing, increases productivity, and minimizes reporting inaccuracies.

Anticipated Project Timeframe

Residential upgrades often occur from equipment failure and therefore the pipeline for this program will be short with most equipment rebates and installations occurring within 90 days of application submission.

Residential Electric Midstream Program

Program Design

The Residential Electric Midstream Program launched in 2019 and targets energy savings in the residential electric customer base of O&R's service territory. The program provides rebates for ENERGY STAR® appliance purchases at retailers including LEDs, pool pumps, smart thermostats, central/mini-split air conditioners, circulator pumps, dehumidifiers and air purifiers. Additional appliances are being added as we expand and transition our rebate offerings to a midstream model. As a direct result of this expansion, the residential electric portfolio achieved 23,031 MWh, or 137% of its 16,761 MWh goal, while spending $1,455,469, or 89% of its $1,635,743 budget for 2019. For 2020, the residential electric portfolio continued to grow and achieved 41,364 MWh or 185% of its 22,336 MWh goal, while spending $2,904,939 or 140% of its $2,080,474 budget. In 2021, the residential electric portfolio saw the largest expansion to date, achieving 50,829 MWh, or 164% of its 30,080 MWh goal, while spending $3,061,300, or 98% of its $3,125,000 budget for 2021.

Customer incentives are designed to cover 50% of the incremental cost of the measure as this program targets equipment that has either failed or reached the end of its useful life and is being replaced and may vary based on market conditions and limited time offerings. Higher incentives may be offered in NWA areas to defer capital investments and reduce system constraints.

Since 2019, O&R has partnered with its affiliate, Con Edison, and an implementation contractor to incentivize residential LED lighting. By delivering incentives midstream, rather than through a customer rebate form, O&R receives the following advantages:

- Increased availability and distribution of LED lighting via partnerships with a select group of large distributors and retailers;
- Larger discounts for customers by paying the incentive before various supply chain markups are applied; and
- Seamless participation in the midstream program from the customer perspective.

The midstream lighting incentive model leverages existing distributor networks and infrastructure to influence the thousands of equipment purchasing decisions that customers and contractors make every day.

In preparation of EISA standards going into effect,[10] the Company will seek to expand programmatic offerings beyond lighting. For the 2022-2025 period, O&R will continue to add EE measures to the midstream model and will engage with contractors and distributors to include clothes washers, refrigerators, and any other measures that are suited for the midstream program model.

Program Delivery Method

This program supports stocking, promotion and sale of high efficiency lighting and energy efficiency measures by rebating products whose efficiency levels are set at or above ENERGY STAR® specifications. This program is delivered via partnerships with trade allies, and retailers. Incentive levels are designed to reduce the differential between the efficient product and the baseline alternative. Program incentives are provided directly to the distributor or retailer so that these measures become the recommended solution. Marketing materials at participating retailers are co-branded to identify that the instant in-store markdowns are provided by O&R.

Target Market/Customer Eligibility

The target market for this initiative is O&R residential electric customers. However, residential style lighting and other energy efficiency measures are also used in business, so some participation from small business electric customers is expected. O&R performed a drive time analysis to identify retailers that would be eligible to serve customers within the service territory.

Coordination with Other Programs

O&R will coordinate this program with the remaining residential and commercial electric and gas programs, the Bring Your Own Thermostat Program, targeted NWA areas, the NYS Clean Heat Program, the Statewide LMI Program, and with the residential suite of electric programs offered by O&R's affiliate Con Edison.

[10] https://www.regulations.gov/document/EERE-2021-BT-STD-0005-0034

Quality Assurance/Quality Control

O&R will work with its retailer/distributor partners so that only quality ENERGY STAR® or DLC certified bulbs and equipment are incentivized, and that the partner is able to track all measures purchased through the initiative. Energy savings products will be added to move rebates midstream, streamline customer participation, and to increase stocking patterns of energy saving equipment. The third-party implementation vendor visits retail locations regularly to verify that signage communicates O&R instant rebates to facilitate participation and tracks data points necessary to calculate energy savings for products rebated in midstream efforts.

Anticipated Project Timeframe

Midstream savings will be reported within 45 days of the sales transactions.

Residential Electric Behavioral Program

Program Design

The Residential Electric Behavioral Program launched in 2019 targets energy savings through recommended voluntary behavioral changes personalized to each customer. The primary method to reduce consumption is a home energy report ("HER"). This HER benchmarks customers' energy usage against their historical usage and similar homes in the area. This report also compares monthly energy usage and prompts consumers to reduce usage to improve against their previous month's usage and benchmark relative to their neighbors. Similar programs have been implemented throughout the country and have consistently produced a relatively small decrease in an individual customer's energy usage. Over a large participant population, these small savings produce significant overall savings.

Evidence also suggests that behavioral programs drive increased participation in other residential EE, renewable, beneficial electrification, and DR programs. An online portal through the digital customer experience platform allows customers to track near real-time and historical usage. By engaging customers, the Company expects to produce greater than average reductions and increase participation in other energy efficiency programs.

In response to COVID-19, the Company tailored messaging to customers working from home and provided recommendations to address the associated increased usage. HERs have also been tailored to promote EE and DR programs. Throughout 2021, O&R highlighted the NY Clean Heat Program in HERs to provide guidance to customers to determine if clean heat technology meets their needs. In the fall of 2022, HERs will increase customer awareness of forecasted high winter supply prices and provide low cost-no cost tips to help customers manage their bill.

For 2022-2025, the behavioral initiative will continue to engage customers with targeted customized messaging and will promote EE, DR, and beneficial electrification programs by providing customers with enrollment information and application links to residential programs. O&R will explore the potential of

expanding the behavioral platform to address DR with customers receiving texts or emails to curtail usage during peak system events.

Program Delivery Method

In 2019, O&R partnered with OPower, a third-party contractor with significant experience administering similar behavioral programs in other jurisdictions, for HERs reports. This behavioral initiative sends customers HERs both electronically via email and printed reports via direct mail, intended to change customer behavior. O&R coordinates with OPower to define the treatment and control groups, as well as the frequency and content of the mailings. As described above, customers engage with the program via several channels:

- Direct mailings and electronic HERs benchmark energy use against prior usage and against similar homes usage;
- Web portal, via the O&R website, showing near real time usage information; and
- Cross marketing, where engagement in the behavioral program is used to drive participation in other residential efficiency, renewable, and DR programs.

Target Market/Customer Eligibility

This program will target all residential electric and gas customers.

Coordination with Other Programs

O&R will coordinate this program with the remaining residential and commercial electric and gas programs, the Bring Your Own Thermostat Program, targeted NWA areas, the NYS Clean Heat Program, the Statewide LMI Program, and with the residential suite of electric programs offered by Con Edison.

Quality Assurance/Quality Control

O&R will provide quality assurance on claimed savings by using the control group to quantify the savings of the treatment group. This is performed using an industry accepted methodology. If total savings, as measured by the impact evaluation comparing the control and treatment groups, are falling short of expected results, O&R will work with the vendor to improve performance and examine other alternatives or enhancements to the program.

Anticipated Project Timeframe

Because usage from the target and control groups must be compared to calculate the behavioral savings, reconciliation reporting will take 90-120 days.

Residential Gas HVAC Program

Program Design

The Residential Gas HVAC Program targets energy savings throughout the residential customer base of O&R's service territory. The program provides rebates for ENERGY STAR® space heating and water heating appliance upgrades, weatherization upgrades, and low flow devices. Trade allies are integral to the success of this program and are made aware of program eligibility and rebate levels through newsletters, direct contractor outreach, and webinars. In light of COVID-19, contractor breakfasts are now virtual morning webinars, although the Company is planning to increase in-person contractor engagement in the future if it can be done safely. Instant rebates available through the CEMP accelerated the purchase of energy efficient equipment and contributed 40% of the gas portfolio savings in 2019 as described below. In 2019, the residential portfolio achieved 165% of its 15,931 Dth goal, or 26,215 Dth, while spending $455,500 or 173% of its $263,656 budget. In 2020, the program transitioned from a downstream to a midstream rebate program and contributed to the success of the residential portfolio achieving 154% of its 15,931 Dth goal or 24,574 Dth while spending $383,908 or 146% of its $263,656 budget. In 2021, the residential portfolio achieved 141% of its 21,382 Dth goal, or 30,068 Dth, while spending $265,475 or 74% of its $359,031 budget.

Incentives are structured to cover 50% of the incremental cost of the measure as this program targets equipment that has either failed or reached the end of its useful life or is being replaced and may be adjusted to reflect market conditions. Higher incentives may be offered in the non-pipes alternative areas to defer capital investments and reduce system constraints.

The CEMP contributes to the success of the program by pairing manufacturer rebates with Company rebates to reduce the cost of Wi-Fi thermostats in addition to other energy efficient measures. Streamlining the rebate process, which allows eligible customers to pair electric, gas, and demand response rebates at the point of checkout, has vastly improved the customer experience and driven adoption. As a result of these bundled rebates and increased outreach, As a result of combined manufacturer and program rebates, Wi-Fi thermostat sales increased in 2021 by 64%.

In 2020, O&R transitioned to a gas midstream program to incentivize the purchase of energy efficient heating and water heating equipment for both residential and C&I customers. A third-party contractor implements the program by moving rebates midstream to engage HVAC distributors and contractors in the O&R service territory. Midstream offerings are effective for HVAC equipment because contractors often drive customer decisions when HVAC equipment is failing or has failed. Providing midstream incentives increases the availability of high efficiency equipment and changes contractor behaviors. In a midstream design, the primary points of market engagement are the midstream market actors, *i.e.*, distributors and contractors. The midstream approach also allows the customer to benefit from the financial and energy savings that a downstream program would provide without investing the effort to fill out forms to claim a rebate. Distributors are the gateway to contractors, and contractors are the gateway to customers.

During the 2022-2025 period, the midstream initiative will be expanded to include additional EE measures and continue to engage distributors and contractors to promote energy efficient gas equipment controls, and other efficient equipment. In addition, the introduction of weatherization measures will expand customer opportunities to achieve long term energy savings and increase comfort.

Program Delivery Method

Midstream programs change stocking patterns so that high efficiency equipment is stocked and available, therefore, influencing the customer's final purchase decision. By changing stocking practices and reducing upfront cost, the efficient product is cost competitive and therefore, more likely in demand and worth stocking even at a higher price point. Midstream programs offer an opportunity to influence the market on a larger scale without expending the resources needed to change customer behavior at an individual level. Because the replacement must be done quickly, typically using whatever product the contractor has available, incentivizing distributors who sell more-efficient products encourages them to stock those products in larger volumes at a competitive price. When properly paired with distributor-assisted contractor training and outreach, the change in stocking at a relatively small number of distributors can impact the energy consumption of an entire region or state in less time, cost, and effort than a traditional downstream program. The midstream initiative will continue to expand to include additional EE measures to streamline the customer experience and increase the availability of energy efficient equipment. In addition, instant rebates provided on the CEMP will deliver additional energy savings for smart thermostats and low flow devices.

Target Market/Customer Eligibility

The target audience is residential customers who purchase or have high efficiency gas equipment through midstream market partners, and all residential gas customers who take advantage of instant rebates on the CEMP.

Coordination with Other Programs

O&R will coordinate this program with the remaining residential electric and gas programs, C&I electric and gas portfolios, the Bring Your Own Thermostat Program, targeted NWA areas, the NYS Clean Heat Program, the Statewide LMI Program, and with the residential suite of electric programs offered by O&R's affiliate Con Edison.

Quality Assurance/Quality Control

O&R will work with its retailer/distributor partners so that ENERGY STAR® or better HVAC equipment is incentivized, and that the partner is able to track all equipment purchased through the program. O&R and third-party contractors will perform on-site verification inspections for at least ten percent of participants to confirm that equipment is purchased and installed as required to meet program guidelines. Data tracking software will streamline rebate processing, increase productivity, and minimize reporting inaccuracies.

Anticipated Project Timeframe

The average project time will be 30-60 days for the distributor to report midstream sales.

Residential Gas Behavioral Program

Program Design

The Residential Gas Behavioral Program was launched in 2019. The primary goal of this initiative is to encourage energy savings through voluntary behavioral changes in residential customers. This initiative is coordinated with the Residential Electric Behavioral Program and details can be found in that description above.

Program Delivery Method

In 2019, O&R partnered with OPower, a third-party contractor with significant experience administering similar behavioral programs in other jurisdictions. This program is coordinated with the Residential Electric Behavioral Program above.

Target Market/Customer Eligibility

This program will target all residential electric and gas customers.

Coordination with Other Programs

O&R will coordinate this program with the remaining residential electric and gas programs, C&I electric and gas portfolios, the Bring Your Own Thermostat Program, targeted NWA areas, the NYS Clean Heat Program, the Statewide LMI Program, and with the residential suite of electric programs offered by O&R's affiliate Con Edison.

Quality Assurance/Quality Control

Similar to the Residential Electric Behavioral Program, quality assurance on claimed savings will be provided by using the control group to quantify the savings of the treatment group. This is performed using an industry accepted methodology. If total savings, as measured by the impact evaluation comparing the control and treatment groups, are falling short of expected results, O&R will work with the selected vendor to improve performance and examine other alternatives or enhancements to the program.

Anticipated Project Timeframe

Because usage from the target and control groups must be compared to calculate the behavioral savings, reconciliation reporting will take 90-120 days.

C&I Gas HVAC Program

Program Design

The C&I Gas HVAC Program was launched in 2019 and targets energy savings throughout the C&I gas customer base of O&R's service territory. The program provides rebates for ENERGY STAR® space heating and water heating appliance upgrades, low flow devices, and C&I custom gas projects. Trade allies are integral to the success of this program and are made aware of program eligibility and rebate levels through newsletters, direct contractor outreach, and webinars. In light of COVID-19, contractor breakfasts are now virtual morning webinars. Due to the strong cost-effective performance in the residential sector and the continued shift to hybrid/remote work environments, the majority of the Company's gas savings and budget was accounted for in residential programs. As a result, in 2021 the C&I HVAC program achieved 7,092 Dth, or 68% of its 10,382 Dth maximum EAM target, while spending $147,085, or 57% of its $259,031 budget. In late 2020, many eligible measures were transitioned to the midstream model that is implemented in conjunction with the Residential Gas HVAC Program. Custom projects continue under a downstream rebate model.

For prescriptive measures, incentives are designed to cover 50% of the incremental cost of the measure as the equipment that has either failed or reached the end of its useful life and is being replaced. For custom measures, customer incentives are designed to cover 25% of the installed cost of the project. Higher incentives may be offered in non-pipe alternative areas to defer capital investments and reduce system constraints or in response to changing market conditions.

A third-party contractor performs contractor outreach and training and provides rebates midstream to engage HVAC distributors and contractors in the O&R service territory. Midstream offerings are effective for HVAC equipment because contractors often drive customer decisions when HVAC equipment is failing or has failed. Providing midstream incentives increases the availability of high efficiency equipment and changes contractor behavior. In a midstream design, the primary points of market engagement are the midstream market actors, *i.e.*, distributors and contractors. The midstream approach also allows the customer to benefit from the financial and energy savings that a downstream program would provide without investing the effort to fill out forms to claim a rebate. Distributors are the gateway to contractors, and contractors are the gateway to customers.

During the 2022-2025 period, the midstream initiative will be expanded to include additional EE measures including commercial kitchen equipment. While the midstream initiative will focus on prescriptive measures, the custom portion will target commercial and industrial process improvements and data analytics will help identify C&I customers with load characteristics that may benefit from upgraded equipment and changes to industrial processes.

Program Delivery Method

Midstream programs change stocking patterns so that high efficiency equipment is stocked and available, therefore, potentially influencing the customer's final purchase decision. By changing stocking practices and reducing cost, the efficient product is cost competitive and therefore, more likely in demand and

worth stocking even at a higher level. Midstream programs offer an opportunity to influence the market on a larger scale without expending the resources needed to change customer behavior at an individual level. Because the replacement must be done quickly, typically using whatever product the contractor has available, incentivizing distributors for selling more-efficient products encourages them to stock those products in larger volumes at a lower price. When properly paired with distributor-assisted contractor training and outreach, the change in stocking at a relatively small number of distributors can impact the energy consumption of an entire region or state at less time, cost, and effort than a traditional downstream program. The midstream initiative will continue to expand to include additional EE measures to streamline the customer experience and increase the availability of energy efficient equipment. Custom projects will continue to be rebated under a downstream rebate model.

Target Market/Customer Eligibility

The target audience is C&I gas customers who purchase high efficiency gas equipment through midstream market partners, and C&I gas customers with custom designed energy savings projects.

Coordination with Other Programs

O&R will coordinate this program with the remaining C&I electric and gas portfolios, the residential electric and gas portfolios, the Company's Dynamic Load Relief Program, targeted NWA areas, the NYS Clean Heat Program, and the C&I gas portfolio of programs offered by O&R's affiliate Con Edison.

Quality Assurance/Quality Control

O&R will work with its retailer/distributor partners so that ENERGY STAR® or better HVAC equipment is incentivized, and that the partner is able to track all equipment purchased through the program. O&R and third-party contractors will perform on-site verification inspections for at least ten percent of participants to confirm that equipment is purchased and installed as required to meet program guidelines. Custom projects require pre- and post-inspection. Data tracking software will streamline rebate processing, increase productivity, and minimize reporting inaccuracies.

Anticipated Project Timeframe

The average project time will be 30-60 days for the distributor to report midstream sales. C&I custom designed projects may have a longer timeline of six months to a year depending on the specifics of the project.

Business Direct Install Program

Program Design

O&R offers business customers with peak demand of less than 110 kW the Business Direct Install ("BDI") Program. This program provides a turn-key streamlined customer experience with a free on-site audit, an audit report with recommendations specific to that customer's needs, and the simple payback analysis for their investment. Incentives are designed to cover up to 70 percent of the installed cost of the

project, targeting lighting, refrigeration and cooling end-uses. Customers may apply for a short term no-interest payment plan offered by the implementation contractor so that their revenue stream is net positive upon installation as a result of their bill savings.

In 2019, the BDI Program achieved 2% of its target while spending 9% of its budget after retaining a new implementation contractor and ramping up the program in mid-2019. The Company is now implementing an open trade ally approach after several turnkey implementers with closed trade ally models did not meet program goals. The Company ramped up this open trade ally approach in 2019. As a result of the portfolio flexibility, O&R shifted program funding to the C&I Electric Program to provide a program offering to all C&I customers during the contracting and ramp up phase.

In 2020, COVID-19 impacted performance as the Company halted on-site audits in Spring 2020. Since these business customers were significantly impacted by the pandemic, incentive levels were increased from 70% to 85% of the installed cost of the project with zero percent financing extended from 12-24 months to help spur activity and support this market segment to lower their energy bill and improve sustainability.

In 2021, the Company continued to provide increased incentives of 85% of the installed cost of the project as well as 12 and 24-month zero percent financing terms. As a result, the BDI program achieved 3,804 MWh, or 89% of its 4,295 MWh maximum EAM target, while spending $1,172,183, or 95% of its $1,235,000 budget. The Company also launched Energy Savings badges that cling to storefront windows to promote business customers' participation in a clean energy sustainable program to provide additional visibility.

For 2022-2025, the Company will encourage trade allies to move beyond lighting to increase the depth of savings and increase participant benefits. Strategies will include enhanced training on advanced lighting, refrigeration, electric and gas HVAC equipment/controls, to engage trade allies to seek opportunities beyond lighting. AMI will provide opportunities to combine hourly data with weather data to provide customized proposals using software analytics for deeper energy savings. Additionally, in coordination with the CEMP, BDI-eligible customers will be able to obtain instant rebates for easy to install lighting products, smart thermostats, power strips and more.

Program Delivery Method

O&R uses an implementation contractor, a trade ally network, and an internal O&R staff to implement this program. Tracking, analysis, and EM&V activities continue at the measure and program level. Third parties and trade allies for this program will be implementation contractors, the electrical contractor community, and distributors. O&R staff will administer this program and manage the implementation contractor activities.

Target Market/Customer Eligibility

The target audience is commercial and industrial business customers with average peak demands less than 110 kW and non-profit or religious facilities with average peak demands less than 200 kW.

Coordination with Other Programs

O&R will coordinate this program with the remaining C&I electric and gas portfolios, the residential electric and gas portfolios, the Company's Dynamic Load Relief Programs, NWAs, the NYS Clean Heat Program, and the BDI program offered by O&R's affiliate Con Edison.

Quality Assurance/Quality Control

O&R will conduct a sampling of pre- and post- on-site inspections to confirm that contractor surveys are accurate, and that equipment installed meets the program eligibility guidelines. O&R internal staff and third-party contractors will perform on-site inspections designed to gauge both customer satisfaction and address any issues with program compliance. Data tracking software will help streamline rebate processing, increase productivity, and minimize reporting inaccuracies.

Anticipated Project Timeframe

Project installation will take place within 30-60 days of the on-site survey.

Commercial and Industrial Electric Rebate Program

Program Design

The C&I Electric Rebate Program is designed to provide prescriptive and custom rebates to encourage all C&I customers to identify energy saving opportunities, develop a long-term building performance improvement plan, and implement cost-effective retrofit upgrade projects. In 2021, O&R shifted program funding from the C&I sector to the Residential Electric Midstream program. This was done primarily due to continued hybrid/remote work environments and an ongoing effort to move as many measures from a downstream model to a midstream model. This programmatic change provides a seamless customer experience and more cost-effective savings. As a result of these modifications, C&I programs achieved 19,200 MWh, or 76% of its 25,186 MWh maximum EAM target, while spending $2,363,218 or 52% of its $4,513,582 budget in 2021. Internal sales staff met one-on-one with decision makers to promote HVAC, refrigeration, and custom measure upgrades with lower cost lighting measures contributing most of program savings. The targeted one-on-one approach has facilitated the achievement of program goals and developed long-term relationships with facility managers. For example, several large C&I customers have continually participated in our programs and seek our advice when upgrading equipment or renovating facilities, while also participating in commercial demand response programs.

In 2021, the Company increased rebates across all C&I programs for up to 25% in Q3 and Q4 to spur participation, while also launching Energy Savings badges that cling to storefront windows to promote business customers' participation in a clean energy sustainable program to provide additional visibility.

For the 2022-2025 program period, this program will continue to include rebates for high efficiency lighting and controls, HVAC measures and variable speed drives, high efficiency refrigeration equipment, building management systems, along with rebates for custom designed efficiency projects. The Company expects to shift significant budget back into the C&I sector in response to impending residential lighting changes and to move C&I customers to a more holistic approach to generate deeper savings beyond lighting. C&I customers will be encouraged to develop an energy plan to address all facility end-uses where the potential for energy savings exists.

In light of COVID-19, the utilities are coordinating with NYSERDA and the American Society of Heating, Refrigerating and Air-Conditioning Engineers ("ASHRAE") to develop the baseline for efficient air filtration systems resulting from COVID-19. Custom incentives will encourage the installation of higher efficiency equipment and behaviors to help reduce the increased consumption realized from new ASHRAE standard to keep buildings safe.

O&R will also facilitate the potential of pairing customers with low-interest financing options available through NYSERDA's Green Bank, NYPA, or other financial institutions. Low-cost financing will accelerate the installation of all cost-effective energy savings and should increase energy savings by enabling customers to move beyond lighting and invest in more sophisticated equipment to obtain more significant energy savings.

Finally, O&R will examine data for C&I customers to determine which customers may have unusual on-peak usage, or odd usage patterns that may be a good fit for a particular load shifting strategy or emerging technology that may only be cost-effective in special situations. O&R will provide higher rebates for these emerging and advanced technologies, in order to encourage initial market acceptance.

For prescriptive measures, incentives are designed to cover 50% of the incremental cost of the measure as the equipment that has either failed or reached the end of its useful life and is being replaced. For custom measures, incentives are designed to cover 25% of the installed cost of the project. Higher incentives may be offered in NWA areas to defer capital investments and reduce system constraints.

O&R will continue to integrate its EE message across the portfolio of electric programs and cross-market DR initiatives to business customers. Because most program savings to date have been achieved through efficient lighting upgrades, customers will be encouraged to focus on whole building efficiency. The Company will use meter data and virtual software analytics to deliver insights to customers to provide a detailed view of the energy usage so customers will be engaged to drive efficiency informed by personalized recommendations. Enhanced partnerships with NYSERDA, trade allies, midstream or upstream retailers and other utilities will also increase participation in the program.

Program Delivery Method

O&R is implementing the program with internal staff and trade allies for the prescriptive and custom rebate components. Incentive levels will be designed to reduce the differential between the efficient product and the baseline alternative. O&R will target C&I customers with the potential for savings and meet with decision makers to upgrade equipment and to help manage their usage. O&R engages with trade allies to increase awareness of prescriptive rebates, eligible equipment, and the availability of custom designed project rebates. C&I customers will be provided with the results of the remote virtual audit that will identify EE, DR, renewable, or load shifting opportunities, and provided with customized incentives to move forward with upgrades. The incentives will be structured to expand energy savings beyond lighting.

Tracking, analysis, and EM&V activities will continue at the measure and program level. Third parties for this program will be the contractor community, trade allies, and distributors. O&R staff will administer the program and use consulting services when necessary to identify baselines, perform engineering analysis, and quantify savings for custom designed projects.

Target Market/Customer Eligibility

Although the target is C&I customers over 110 kW, all C&I customers are eligible to participate to facilitate participation in the pathway that best meets their needs. Targeted marketing is focused on high usage customer segments that will realize the most benefit from EE improvements. The initial target market for virtual audit software analytics is hourly metered customers with peak demand of at least 350 kW. With AMI fully deployed, the target market can be expanded to all business customers.

Coordination with Other Programs

O&R will coordinate this program with the remaining C&I electric and gas portfolios, the residential electric and gas portfolios, the Company's Dynamic Load Relief Programs, targeted NWA areas, the NYS Clean Heat Program, and the C&I electric portfolio of programs offered by O&R's affiliate Con Edison.

Quality Assurance/Quality Control

O&R will conduct pre-inspections on all custom projects to determine the existing baseline conditions and post-inspections to determine if the project was installed as approved. Post-inspections will be performed on a minimum of ten percent of all other prescriptive projects. O&R staff and third-party contractors will be engaged in performing on-site inspections designed to gauge both customer satisfaction and address any issues with program compliance. Data tracking software will streamline rebate processing, increase productivity, and minimize reporting inaccuracies.

Anticipated Project Timeframe

Project installation varies significantly in this market segment because of such factors as project complexity and investment levels. While most projects are installed within 90 days, some larger more complex projects that target end-use measures beyond lighting have taken over two years to install.

Commercial and Industrial Electric Midstream Program

Program Design

In 2019, the C&I Midstream Electric Program was launched to engage a trade ally network of distributors and contractors to increase participation in the program. Over 45 distributors participated in this instant lighting incentive in 2019, providing contractors with indoor and outdoor LED lighting equipment at reduced prices.

Incentives are designed to cover 50% of the incremental cost of the measure as the equipment and offset the cost of LED lighting equipment. Higher incentives may be offered in NWA areas to defer capital investments and reduce system constraints or in response to market conditions.

The Company launched the midstream program in mid-2019 and in 2021 has 28 active participating distributors and contractors and has expanded O&R's trade ally network. Lighting distributors are

incentivized to sell LED lighting products at a reduced cost. Customers receive instant lighting rebates through a discounted price and a third-party contractor implements the initiative. The Company will focus on making lighting products more common in commercial and industrial facilities. By delivering incentives midstream or upstream, rather than through a customer mail-in rebate form, O&R receives several advantages:

- Increased availability and distribution of LED lighting via partnerships with a select group of large distributors and retailers;
- Larger discounts for the customers by paying the incentive before various supply chain markups are applied; and
- Seamless participation in the upstream program from the customer perspective.

The midstream lighting incentive model leverages existing distributor networks and infrastructure to influence the thousands of equipment purchasing decisions that customers and contractors make daily.

For the 2022-2025 period, O&R will also explore the potential of offering midstream rebates for measures beyond lighting including other equipment that fit the midstream/upstream model to increase program participation to achieve the increasing program goals. In response to changes to residential lighting, the Company expects to expand the C&I Electric Midstream program through 2025. By engaging the trade ally network and moving incentives upstream to distributors and contractors, stocking patterns are influenced to have energy efficient equipment readily available, and contractors realize the benefits as they are often incentivized to promote efficient technologies.

Program Delivery Method

The midstream program is delivered via partnerships with distributors and contractors with oversight of an implementation contractor. As we expand our midstream initiative to include other prescriptive measures, trade allies will be incentivized to achieve a greater depth of savings by assessing all the customers' energy needs. Incentive levels will be designed to reduce the differential between the efficient product and the baseline alternative. Program incentives are provided directly to the distributor or contractor so that these measures become the recommended solution. O&R will work with distributors and contractors to co-brand marketing and provide rebates directly to the distributor so that the efficient lighting product is the solution offered to the customer.

Tracking, analysis, and EM&V activities will continue at the measure and program level. Third parties for this program will be the contractor community, trade allies, and distributors. O&R staff will administer the program and use consulting services when necessary to identify baselines, perform engineering analysis, and quantify savings for custom designed projects.

Target Market/Customer Eligibility

Although the Program will target C&I customers over 110 kW, all C&I customers are eligible to participate to facilitate participation in the pathway that best meets their needs.

Coordination with Other Programs

O&R will coordinate this program with the remaining C&I electric and gas portfolios, the residential electric and gas portfolios, the Company's Dynamic Load Relief Programs, targeted NWA areas, the NYS Clean Heat Program, and the C&I portfolio of electric programs offered by O&R's affiliate Con Edison.

Quality Assurance/Quality Control

O&R will conduct post-inspections on a minimum of ten percent of midstream projects. O&R staff and third-party contractors will be engaged in performing on-site inspections designed to gauge both customer satisfaction and address any issues with program compliance. Data tracking software will streamline rebate processing, increase productivity, and minimize reporting inaccuracies.

Anticipated Project Timeframe

Most projects are installed within 60 days.

4. Supplemental EE Program Descriptions

Monsey Non-Wires Alternative Program

Program Design

The Monsey NWA Program has been delayed and no EE activities have taken place in the 2019-2021 period. The program will commence in late 2022 and should be completed by 2024. The Monsey NWA was approved in the Company's most recent base rate case.[11]

The program is designed to defer capital infrastructure investments required to upgrade the Monsey Substation and associated distribution circuits to meet both short- and longer-term energy needs. The program will be coordinated with the BDI, C&I Electric, Residential Electric, Residential and C&I Gas HVAC, and DR programs. Higher incentives may be offered in this NWA area to defer capital investments and reduce system constraints.

O&R's Monsey Substation is comprised of two 138kV-13.2kV, 25 MVA transformer banks (Banks 144 and 244), each serving three distribution circuits. These banks have experienced significant load growth which can overload the banks and associated distribution circuits during system contingencies (*e.g.*, loss of service of a substation transformer bank). The Monsey NWA seeks to achieve the following two distinct goals:

- Reduce peak electric load within the area served by the Monsey Substation and the associated 25 MVA transformer banks to alleviate bank contingency conditions; and
- Reduce peak electric load on Monsey distribution circuits and associated distribution circuit ties for single distribution circuit contingency purposes.

Peak electric load in the Monsey area is currently served by six Monsey distribution circuits that all impact the load during bank contingencies. Reducing load on these distribution circuits and their associated circuit ties has the potential to alleviate not only bank contingency issues but also single distribution circuit contingency issues. As such, DERs placed in areas that serve both purposes will be given priority.

Program Delivery Method

The Monsey Substation presently serves approximately 9,100 customers, with approximately 7,900 residential customers and 2,200 C&I customers. O&R's Monsey NWA program supports REV initiatives.

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[11] Case 18-E-0067, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Orange and Rockland Utilities, Inc. for Electric Service*; Case 18-G-0068, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Orange and Rockland Utilities, Inc. for Gas Service*, Order Adopting Terms of Joint Proposal and Establishing Electric and Gas Rate Plans (issued March 14, 2019).

O&R will leverage its existing direct install program, C&I programs, and DR programs to reduce peak demand, as EE is the least-cost solution that provides permanent demand reduction for several years. Because commercial lighting, refrigeration and cooling are coincident with the Monsey substation peak, the direct install program will have a significant impact in reducing peak demand as the least-cost solution.

As such, O&R will use its existing direct install contractor to market to the target area door to door, conduct free audits, and employ local trade allies to install projects. Commercial customers who are on the constrained circuits qualify for higher incentives based on load relief potential that is coincident with the Monsey NWA in order to increase installation rates and the adoption of peak reduction measures. The Company will conduct field inspections internally on all projects in the Monsey NWA. Customers with coincident energy savings beyond the direct install program will be incentivized in the C&I programs. Residential customers who are on constrained circuits would qualify for higher incentives for measures coincident with the Monsey peak and in conjunction with O&R's Direct Load Control Demand Response program.

West Warwick Non-Wires Alternative Program

Program Design

The West Warwick NWA Program is expected to begin in late 2022 and should be completed by 2024. The West Warwick NWA was approved in the Company's most recent base rate case.[12]

The program is designed to defer capital infrastructure investments required to upgrade the West Warwick Substation and associated distribution circuits to meet both short- and longer-term energy needs. The program will be coordinated with the BDI, C&I Electric, Residential Electric, Residential and C&I Gas HVAC, and DR programs. Higher incentives may be offered in this NWA area to defer capital investments and reduce system constraints.

O&R's West Warwick Substation is comprised of two 69V-13.2kV, 25 MVA transformer banks (Banks 280 and 380). Bank 280 services three distribution circuits, while Bank 380 serves two distribution circuits. These banks have experienced significant load growth which can overload the banks and associated distribution circuits during system contingencies (*e.g.*, loss of service of a substation transformer bank). The West Warwick NWA seeks to achieve the following two distinct goals:

- Reduce peak electric load within the area served by the West Warwick Substation and the associated 25 MVA transformer banks to alleviate bank contingency conditions; and
- Reduce peak electric load on West Warwick distribution circuits and associated distribution circuit ties for single distribution circuit contingency purposes.

[12] Case 18-E-0067, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Orange and Rockland Utilities, Inc. for Electric Service*; Case 18-G-0068, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Orange and Rockland Utilities, Inc. for Gas Service*, Order Adopting Terms of Joint Proposal and Establishing Electric and Gas Rate Plans (issued March 14, 2019).

Peak electric load in the West Warwick area is currently served by five West Warwick distribution circuits that all impact the load during bank contingencies. Reducing load on these distribution circuits and their associated circuit ties has the potential to alleviate not only bank contingency issues but also single distribution circuit contingency issues. As such, DERs placed in areas that serve both purposes will be given priority.

Program Delivery Method

The West Warwick Substation presently serves approximately 3,280 customers, with approximately 3,100 residential customers and 180 C&I customers. O&R's West Warwick NWA program supports REV initiatives.

O&R will leverage its existing direct install program, C&I programs, and DR programs to reduce peak demand, as EE is the least-cost solution that provides permanent demand reduction for several years. Because commercial lighting, refrigeration and cooling are coincident with the West Warwick substation peak, the direct install program will have a significant impact in reducing peak demand as the least-cost solution.

As such, O&R will use its existing direct install contractor to market to the target area door to door, conduct free audits, and employ local trade allies to install projects. Commercial customers who are on the constrained circuits qualify for higher incentives based on load relief potential that is coincident with the West Warwick NWA in order to increase installation rates and the adoption of peak reduction measures. The Company will conduct field inspections internally on all projects in the West Warwick NWA. Customers with coincident energy savings beyond the direct install program will be incentivized in the C&I programs. Residential customers who are on constrained circuits would qualify for higher incentives for measures coincident with the West Warwick peak and in conjunction with O&R's Direct Load Control Demand Response program.

5. Budget and Plan Summary

Table 1: Actual vs. Planned Program Spend						
NE:NY Electric EE Portfolio	**Actual Spend 2019**	**Planned Spend 2020**	**Actual Spend 2020**	**Planned Spend 2021**	**Actual Spend 2021**	**Total Actual Spend 2019-2021**
Commercial & Industrial Sector						
Business Direct Install						
Incentives & Services	$37,266	$1,627,500	$215,924	$975,000	$909,610	$1,162,800
Implementation	$154,499	$415,013	$205,998	$260,000	$262,573	$623,069
Total BDI Budget	**$191,764**	**$2,042,513**	**$421,922**	**$1,235,000**	**$1,172,183**	**$1,785,869**
C&I Electric Rebate						
Incentives & Services	$1,887,998	$1,000,000	$964,055	$2,227,162	$1,041,822	$3,893,874
Implementation	$50,788	$210,000	$211,802	$466,420	$190,183	$452,773
Total C&I Electric Rebate Budget	**$1,938,785**	**$1,210,000**	**$1,175,857**	**$2,693,582**	**$1,232,005**	**$4,346,647**
C&I Electric Midstream						
Incentives & Services	$2,248,546	$1,565,558	$500,717	$1,365,000	$901,091	$3,650,354
Implementation	$127,851	$270,913	$177,062	$455,000	$230,121	$535,035
Total C&I Electric Midstream Budget	**$2,376,397**	**$1,836,471**	**$677,779**	**$1,820,000**	**$1,131,213**	**$4,185,389**
Residential Sector						
Residential Efficient Products						
Incentives & Services	$197,197	$130,000	$115,312	$450,000	$117,012	$429,521
Implementation	$62,226	$48,274	$47,200	$100,000	$52,528	$161,955
Total Residential Electric Budget	**$259,424**	**$178,274**	**$162,512**	**$550,000**	**$169,541**	**$591,476**
Residential Electric Midstream						
Incentives & Services	$769,807	$952,200	$1,333,172	$1,250,000	$1,748,819	$3,851,799
Implementation	$180,479	$300,000	$771,912	$625,000	$435,983	$1,388,373
Total Residential Electric Midstream Budget	**$950,286**	**$1,252,200**	**$2,105,084**	**$1,875,000**	**$2,184,802**	**$5,240,172**
Residential Electric Behavioral						
Incentives & Services	$0	$0	$0	$0	$0	$0
Implementation	$245,759	$650,000	$637,344	$700,000	$706,957	$1,590,059
Total Residential Electric Behavioral Budget	**$245,759**	**$650,000**	**$637,344**	**$700,000**	**$706,957**	**$1,590,059**
Portfolio Administration	$437,359	$609,844	$392,787	$620,400	$640,548	$1,470,694
Portfolio EM&V	$177,512	$320,698	$99,350	$406,018	$400,267	$677,129
Total Portfolio Expenditure	**$6,577,286**	**$8,100,000**	**$5,672,634**	**$9,900,000**	**$7,637,515**	**$19,887,435**
Commission Authorized Total Budget	**$7,100,000**	**$8,100,000**	**$8,100,000**	**$11,260,121**	**$11,260,121**	**$26,460,121**
Budget Remaining/Unspent Funds	**$522,714**		**$2,427,366**	**$1,360,121**	**$3,622,606**	**$6,572,686**
NE:NY Gas EE Portfolio						
Commercial & Industrial Sector						
C&I Gas HVAC						
Incentives & Services	$53,610	$311,861	$125,216	$220,098	$147,085	$325,911
Implementation	$0	$33,265	$0	$38,933	$0	$0
Total C&I HVAC Budget	**$53,610**	**$345,126**	**$125,216**	**$259,031**	**$147,085**	**$325,911**
Residential Sector						
Residential Gas HVAC						
Incentives & Services	$305,400	$103,954	$188,915	$220,098	$184,136	$678,450
Implementation	$0	$9,702	$44,280	$38,933	$6,474	$50,754
Total Residential Gas HVAC Budget	**$305,400**	**$113,656**	**$233,195**	**$259,031**	**$190,610**	**$729,204**
Residential Gas Behavioral						
Incentives & Services	$0	$0	$0	$0	$0	$0
Implementation	$150,100	$150,000	$150,713	$100,000	$74,865	$375,679
Total Residential Behavioral Budget	**$150,100**	**$150,000**	**$150,713**	**$100,000**	**$74,865**	**$375,679**
Portfolio Administration	$37,949	$66,531	$70,942	$55,000	$37,066	$145,957
Portfolio EM&V	$5,154	$27,687	$2,404	$29,938	$65,222	$72,780
Total Portfolio Expenditure	**$552,212**	**$703,000**	**$582,470**	**$703,000**	**$514,848**	**$1,649,530**
Commission Authorized Total Budget	**$703,000**	**$703,000**	**$703,000**	**$1,527,207**	**$1,527,207**	**$2,933,207**
Budget Remaining/Unspent Funds	**$150,788**		**$120,530**	**$824,207**	**$1,012,359**	**$1,283,677**

Table 1A: Actual vs. Planned NYS Clean Heat Program Spend						
NYS Clean Heat Portfolio	**Actual Spend 2019**	**Planned Spend 2020**	**Actual Spend 2020**	**Planned Spend 2021**	**Actual Spend 2021**	**Total Actual Spend 2019-2021**
Total Portfolio Expenditure		$1,236,326	$542,743	$1,973,311	$2,915,865	$3,458,607
Commission Authorized Total Budget		$1,236,326	$1,236,326	$1,973,311	$1,973,311	$3,209,637
Budget Remaining/Unspent Funds			**$693,584**	**$0**	**($942,554)**	**($248,970)**

Table 1B: Actual vs. Planned LMI Portfolio Spend						
LMI Electric Portfolio	**Actual Spend 2019**	**Planned Spend 2020**	**Actual Spend 2020**	**Planned Spend 2021**	**Actual Spend 2021**	**Total Actual Spend 2019-2021**
Incentives & Services		$20,019	$0	$366,578	$0	$0
Implementation		$0	$0	$0	$0	$0
Total LMI Electric Budget		**$20,019**	**$0**	**$366,578**	**$0**	**$0**
Portfolio Administration		$2,500	$0	$10,000	$0	$0
Portfolio EM&V		$0	$0	$5,955	$0	$0
Total Portfolio Expenditure		**$22,519**	**$0**	**$382,533**	**$0**	**$0**
Commission Authorized Total Budget		**$22,519**	**$22,519**	**$382,533**	**$382,533**	**$405,051**
Budget Remaining/Unspent Funds		**$0**	**$22,519**	**$0**	**$382,533**	**$405,051**
LMI Gas Portfolio						
Incentives & Services		$47,543	$0	$406,090	$0	$0
Implementation		$0	$0	$0	$0	$0
Total LMI Gas Budget		**$47,543**	**$0**	**$406,090**	**$0**	**$0**
Portfolio Administration		$5,000	$0	$20,000	$0	$0
Portfolio EM&V		$0	$0	$11,909	$0	$0
Total Portfolio Expenditure		**$52,543**	**$0**	**$438,000**	**$0**	**$0**
Commission Authorized Total Budget		**$52,543**	**$52,543**	**$438,000**	**$438,000**	**$490,543**
Budget Remaining/Unspent Funds		**$0**	**$52,543**	**$0**	**$438,000**	**$490,543**

Table 2: Forecast Program Planned Spend and Budgets					
NE:NY Electric EE Portfolio	**Planned Spend 2021**	**Planned Spend 2022**	**Planned Spend 2023**	**Planned Spend 2024**	**Planned Spend 2025**
Commercial & Industrial Sector					
Business Direct Install					
Incentives & Services	$975,000	$925,113	$909,272	$585,000	$585,000
Implementation	$260,000	$247,013	$298,063	$298,063	$298,063
Total BDI Budget	**$1,235,000**	**$1,172,126**	**$1,207,335**	**$883,063**	**$883,063**
C&I Electric Rebate					
Incentives & Services	$2,227,162	$1,824,983	$1,551,331	$1,941,985	$1,904,686
Implementation	$466,420	$342,717	$358,744	$377,237	$365,209
Total C&I Electric Rebate Budget	**$2,693,582**	**$2,167,700**	**$1,910,075**	**$2,319,222**	**$2,269,895**
C&I Electric Midstream					
Incentives & Services	$1,365,000	$2,782,138	$3,069,207	$4,181,038	$4,189,144
Implementation	$455,000	$1,244,418	$1,368,393	$978,315	$1,081,481
Total C&I Electric Midstream Budget	**$1,820,000**	**$4,026,555**	**$4,437,600**	**$5,159,353**	**$5,270,625**
Residential Sector					
Residential Efficient Products					
Incentives & Services	$450,000	$238,473	$191,957	$220,782	$236,609
Implementation	$100,000	$192,974	$395,101	$395,101	$395,101
Total Residential Efficient Products Budget	**$550,000**	**$431,447**	**$587,058**	**$615,883**	**$631,710**
Residential Electric Midstream					
Incentives & Services	$1,250,000	$1,437,540	$1,565,406	$999,494	$1,000,455
Implementation	$625,000	$916,741	$1,102,566	$1,058,957	$1,065,549
Total Residential Electric Midstream Budget	**$1,875,000**	**$2,354,281**	**$2,667,972**	**$2,058,451**	**$2,066,004**
Residential Electric Behavioral					
Incentives & Services	$0	$0	$0	$0	$0
Implementation	$700,000	$665,036	$318,473	$318,473	$318,473
Total Residential Electric Behavioral Budget	**$700,000**	**$665,036**	**$318,473**	**$318,473**	**$318,473**
Portfolio Administration	$620,400	$627,747	$641,811	$693,042	$706,644
Portfolio EM&V	$406,018	$495,290	$509,887	$538,751	$543,534
Total Portfolio Expenditure	**$9,900,000**	**$11,940,181**	**$12,280,211**	**$12,586,238**	**$12,689,948**
Commission Authorized Total Budget	**$11,260,121**	**$11,940,181**	**$12,280,211**	**$12,586,238**	**$12,689,948**
Budget Remaining/Unspent Funds	**$1,360,121**	**$0**	**$0**	**$0**	**$0**
NE:NY Gas EE Portfolio					
Commercial & Industrial Sector					
C&I Gas HVAC					
Incentives & Services	$220,098	$511,904	$710,683	$887,452	$1,058,209
Implementation	$38,933	$112,677	$139,582	$175,851	$208,353
Total C&I HVAC Budget	**$259,031**	**$624,581**	**$850,265**	**$1,063,303**	**$1,266,562**
Residential Sector					
Residential Gas HVAC					
Incentives & Services	$220,098	$735,317	$931,293	$1,182,317	$1,409,255
Implementation	$38,933	$175,168	$207,730	$266,298	$343,065
Total Residential Gas HVAC Budget	**$259,031**	**$910,486**	**$1,139,023**	**$1,448,615**	**$1,752,320**
Residential Gas Behavioral					
Incentives & Services	$0	$0	$0	$0	$0
Implementation	$100,000	$127,156	$195,193	$195,193	$195,193
Total Residential Behavioral Budget	**$100,000**	**$127,156**	**$195,193**	**$195,193**	**$195,193**
Portfolio Administration	$55,000	$102,573	$105,456	$133,403	$140,073
Portfolio EM&V	$29,938	$87,145	$110,422	$141,463	$159,183
Total Portfolio Expenditure	**$703,000**	**$1,851,941**	**$2,400,359**	**$2,981,977**	**$3,513,331**
Commission Authorized Total Budget	**$1,527,207**	**$1,851,941**	**$2,400,359**	**$2,981,977**	**$3,513,331**
Budget Remaining/Unspent Funds	**$824,207**	**$0**	**$0**	**$0**	**$0**

Table 2B: Forecast LMI Program Planned Spend and Budgets					
LMI Electric Portfolio	**Planned Spend 2021**	**Planned Spend 2022**	**Planned Spend 2023**	**Planned Spend 2024**	**Planned Spend 2025**
Incentives & Services	$366,578	$179,148	$330,000	$355,000	$355,000
Implementation	$0	$0	$28,000	$28,000	$28,000
Total LMI Electric Budget	**$366,578**	**$179,148**	**$358,000**	**$383,000**	**$383,000**
Portfolio Administration	$10,000	$10,000	$7,563	$10,000	$10,000
Portfolio EM&V	$5,955	$7,694	$5,000	$5,000	$5,000
Total Portfolio Expenditure	**$382,533**	**$196,841**	**$370,563**	**$398,000**	**$398,000**
Commission Authorized Total Budget	**$382,533**	**$196,841**	**$370,563**	**$398,000**	**$398,000**
Budget Remaining/Unspent Funds	**$0**	**$0**	**$0**	**$0**	**$0**
LMI Gas Portfolio					
Incentives & Services	$406,090	$503,343	$565,000	$206,067	$90,000
Implementation	$0	$0	$25,000	$25,000	$25,000
Total LMI Gas Budget	**$406,090**	**$503,343**	**$590,000**	**$231,067**	**$115,000**
Portfolio Administration	$20,000	$20,000	$18,886	$10,000	$10,000
Portfolio EM&V	$11,909	$15,388	$35,000	$10,000	$10,000
Total Portfolio Expenditure	**$438,000**	**$538,730**	**$643,886**	**$251,067**	**$135,000**
Commission Authorized Total Budget	**$438,000**	**$538,730**	**$643,886**	**$251,067**	**$135,000**
Budget Remaining/Unspent Funds	**$0**	**$0**	**$0**	**$0**	**$0**

Table 2C: Complete NENY Order 2019-2025 Budget Alignment								
	Planned Spend 2019	**Planned Spend 2020**	**Planned Spend 2021**	**Planned Spend 2022**	**Planned Spend 2023**	**Planned Spend 2024**	**Planned Spend 2025**	**TOTAL**
Non-LMI Electric Portfolio	**$ 1,458,252**	**$ 1,823,157**	**$ 11,260,121**	**$ 11,940,181**	**$ 12,280,211**	**$ 12,586,238**	**$ 12,689,948**	**$ 64,038,108**
Non-LMI Gas Portfolio	**$ 303,727**	**$ 531,522**	**$ 1,527,207**	**$ 1,851,941**	**$ 2,400,359**	**$ 2,981,977**	**$ 3,513,331**	**$ 13,110,064**
NYS Clean Heat Portfolio		**$ 1,236,326**	**$ 1,973,311**	**$ 2,397,539**	**$ 2,828,131**	**$ 3,164,633**	**$ 3,403,947**	**$ 15,003,887**
	Actual Spend 2019	**Actual Spend 2020**	**Actual Spend 2021**	**Actual Spend 2022**	**Planned Spend 2023**	**Planned Spend 2024**	**Planned Spend 2025**	**TOTAL**
LMI Electric Portfolio	**$ -**	**$ -**	**$ -**	**$ 1,155,096**	**$ 370,563**	**$ 398,000**	**$ 398,000**	**$ 2,321,659**
LMI Gas Portfolio	**$ -**	**$ -**	**$ -**	**$ 2,681,749**	**$ 643,886**	**$ 251,067**	**$ 135,000**	**$ 3,711,702**

Table 3: Actual vs. Planned Primary and Secondary Program Savings						
NE:NY Electric EE Portfolio	**Actual Savings 2019**	**Planned Savings 2020**	**Actual Savings 2020**	**Planned Savings 2021**	**Actual Savings 2021**	**Total Actual Savings 2019-2021**
Commercial & Industrial Sector						
Business Direct Install						
MWh	194	8,333	1,272	4,295	3,804	5,270
MW	0.0	1.3	0.2	0.5	0.6	0.8
C&I Electric Rebate						
MWh	17,568	17,024	10,327	14,019	9,995	37,890
MW	2.7	2.7	1.9	3.1	1.4	6.0
C&I Electric Midstream						
MWh	12,581	10,000	6,411	11,167	9,205	28,197
MW	4.2	1.6	1.6	2.4	2.6	8.4
Residential Sector						
Residential Efficient Products						
MWh	1,345	1,400	1,144	1,718	1,088	3,576
MW	0.4	0.4	0.3	0.2	0.5	1.2
Residential Electric Midstream						
MWh	20,505	12,936	32,501	21,475	39,099	92,105
MW	1.5	0.9	2.3	3.1	3.0	6.8
Residential Electric Behavioral						
MWh	1,181	8,000	7,720	7,887	10,642	19,543
MW	0.0	0.0	0.0	0.0	0.0	0.0
Total Electric Portfolio						
MWh	**53,373**	**57,693**	**59,374**	**60,561**	**73,833**	**186,580**
MW	**8.9**	**6.9**	**6.3**	**9.3**	**8.0**	**23.2**
NE:NY Gas EE Portfolio						
Commercial & Industrial Sector						
C&I Gas HVAC						
Dth	4,884	15,833	8,997	10,382	7,092	20,973
Residential Sector						
Residential Gas HVAC						
Dth	17,628	7,931	15,761	10,382	19,469	52,858
Residential Gas Behavioral						
Dth	8,587	8,000	8,813	11,000	10,599	27,999
Total Gas Portfolio (Dth)	**31,100**	**31,764**	**33,572**	**31,764**	**37,160**	**101,831**

Table 3A: Actual vs. Planned Primary and Secondary NYS Clean Heat Savings						
NYS Clean Heat Portfolio	**Actual Savings 2019**	**Planned Savings 2020**	**Actual Savings 2020**	**Planned Savings 2021**	**Actual Savings 2021**	**Total Actual Savings 2019-2021**
Total Portfolio						
MMBtu		6,440	4,434	10,421	20,829	25,262

Table 3B: Actual vs. Planned LMI Portfolio Savings						
LMI Electric Portfolio	**Actual Savings 2019**	**Planned Savings 2020**	**Actual Savings 2020**	**Planned Savings 2021**	**Actual Savings 2021**	**Total Actual Savings 2019-2021**
Total Electric Portfolio						
MWh		30	0	929	0	0
MW		0	0	0	0	0
LMI Gas Portfolio						
Total Gas Portfolio						
MMBtu		418	0	8,880	0	0

Table 4: Forecast Primary and Secondary Program Savings Plan					
NE:NY Electric EE Portfolio	**Planned Savings 2021**	**Planned Savings 2022**	**Planned Savings 2023**	**Planned Savings 2024**	**Planned Savings 2025**
Commercial & Industrial Sector					
Business Direct Install					
MWh	4,295	4,750	3,354	2,421	2,440
MW	0.5	0.5	0.4	0.3	0.3
C&I Electric Rebate					
MWh	14,019	15,250	6,511	8,180	8,417
MW	3.1	1.4	1.3	1.7	1.7
C&I Electric Midstream					
MWh	11,167	12,310	32,008	40,233	40,511
MW	2.4	4.1	6.5	8.1	8.2
Residential Sector					
Residential Efficient Products					
MWh	1,718	1,753	978	1,028	1,053
MW	0.2	0.5	0.2	0.2	0.2
Residential Electric Midstream					
MWh	21,475	21,037	13,193	5,849	5,855
MW	3.1	4.6	2.0	0.9	0.9
Residential Electric Behavioral					
MWh	7,887	9,091	10,000	10,000	10,000
MW	0.0	0.0	0.0	0.0	0.0
Total Electric Portfolio					
MWh	**60,561**	**64,191**	**66,044**	**67,711**	**68,276**
MW	**9.3**	**11.3**	**10.4**	**11.2**	**11.3**
NE:NY Gas EE Portfolio					
Commercial & Industrial Sector					
C&I Gas HVAC					
Dth	10,382	19,457	17,184	21,371	30,173
Residential Sector					
Residential Gas HVAC					
Dth	10,382	21,981	20,285	33,099	39,829
Residential Gas Behavioral					
Dth	11,000	15,000	35,000	35,000	35,000
Total Gas Portfolio (Dth)	**31,764**	**56,438**	**72,469**	**89,470**	**105,002**

Table 4A: Forecast NYS Clean Heat Savings Plan					
NYS Clean Heat Portfolio	**Planned Savings 2021**	**Planned Savings 2022**	**Planned Savings 2023**	**Planned Savings 2024**	**Planned Savings 2025**
Total Portfolio					
MMBtu	10,421	13,027	16,109	18,912	21,748

Table 4B: Forecast LMI Portfolio Savings Plan					
LMI Electric Portfolio	**Planned Savings 2021**	**Planned Savings 2022**	**Planned Savings 2023**	**Planned Savings 2024**	**Planned Savings 2025**
LMI Electric Portfolio					
Total Electric Portfolio					
MWh	929	290	745	650	829
MW	0.1	0.0	0.0	0.0	0.0
LMI Gas Portfolio					
Total Gas Portfolio					
MMBtu	8,880	4,052	16,500	10,500	4,675

Table 4C: Complete NENY Order 2019-2025 Savings Alignment								
	Planned Savings 2019	**Planned Savings 2020**	**Planned Savings 2021**	**Planned Savings 2022**	**Planned Savings 2023**	**Planned Savings 2024**	**Planned Savings 2025**	**TOTAL**
Non-LMI Electric Portfolio (MWh)	7,946	9,933	60,561	64,191	66,044	67,711	68,276	344,662
Non-LMI Gas Portfolio (MMBtu)	9,233	16,158	31,764	56,438	72,469	89,470	105,002	380,534
NYS Clean Heat Portfolio (MMBtu)		6,440	10,421	13,027	16,109	18,912	21,748	86,657
	Actual Savings 2019	**Actual Savings 2020**	**Actual Savings 2021**	**Actual Savings 2022**	**Planned Savings 2023**	**Planned Savings 2024**	**Planned Savings 2025**	**TOTAL**
LMI Electric Portfolio (MWh)	-	-	-	1,803	745	650	829	4,027
LMI Gas Portfolio (MMBtu)	-	-	-	2,687	16,500	10,500	4,675	34,362

EVALUATION MEASUREMENT AND VERIFICATION

O&R will coordinate Evaluation Measurement and Verification ("EM&V") activities with its affiliate, Con Edison, whenever possible, as the two companies share evaluation contractors and synergy savings may be gained from engaging in similar evaluation studies. In addition, O&R will coordinate with other New York State utility program administrators (as well as NYSERDA) and participate in statewide studies that will inform O&R program design. The EM&V process will be transitioned from traditional program-specific processes and impact evaluations to an emphasis on conducting more strategic and targeted studies so that programs can be proactively modified and be responsive to changing market conditions. For example, the Company will be better able to design offerings with customer segmentation analysis and evaluate the energy impacts of specific market driven technologies, such as smart thermostats and building management systems. Traditional efficiency program related evaluations will be conducted when required to evaluate the effectiveness of new initiatives, delivery mechanisms, free ridership, and product offerings.

The EM&V process will assess the performance of programs, projects and measures through the use of third-party evaluations, engineering and quality assurance/quality control contractors under O&R oversight as well as internal inspection personnel. The Company will assess numerous portfolio attributes including measuring energy and demand savings as well as program processes to determine if a program is achieving the projected level of savings. EM&V data will be collected to inform improvement recommendations in program processes and performance and to provide regional specific information to update the Technical Resource Manual ("TRM").

Impact Evaluation

O&R intends to conduct strategic and targeted impact evaluation activities during the program year cycle to provide rapid feedback to stakeholders for use in strategic program planning and to inform TRM updates.

O&R program administrators, marketing staff, and implementation contractors will collaborate with Con Edison to identify the focus of the evaluation research and determine where synergies may exist to perform joint or similar studies. This may include: assessing measure specific realization rates through appropriate IPMVP options; segmenting measure savings by sector, building type and geography; informing TRM updates and future program planning efforts; informing cost-effectiveness; and providing other recommendations to add value to program design and operations.

By focusing on measurement and verification on the front end of proposed projects, a true baseline can be obtained to determine the actual savings acquired and achieved from the installation of new measures. These early EM&V activities will allow for the determination of more accurate baselines and estimates of usage patterns which will lead to better quantification of efficiency savings for efficient equipment over a shorter time period. The Company will begin to report estimated Verified Gross Savings ("VGS"), adjusted by the best information from all EM&V activities available within reasonable time and budget constraints as defined in the prevailing DPS Staff guidance. The Company currently performs pre- and post-inspections for all its custom projects, including customer LED lighting, where baseline conditions

are captured along with operating hours to verify savings calculations and compare expected savings to the customer's annual usage.

Process Evaluation

Process evaluations focus on documenting the effectiveness of the design and delivery of EE programs. These evaluations will be used to document program operations for new delivery methods in the portfolio of residential and C&I programs. Process evaluations are also effective at diagnosing problems in programs that are under-performing or experiencing operational challenges. These evaluations can identify ways to make enhancements and improvements that reduce operating costs, expedite delivery, improve satisfaction, and fine-tune objectives. The Company's challenge is to conduct this research and communicate the findings in an expedited fashion so that program improvements can be implemented quickly and positively affect performance. The use of EM&V results in a near real-time environment will allow for program changes that best reflect current market conditions.

Measurement & Verification

Measurement & Verification ("M&V") will play a critical role in updating the TRM for calculating GVS, providing data for use in Company load forecasts (*i.e.*, load shapes), and in identifying potential impacts of new technologies for inclusion into the program portfolio. All M&V work will be designed to comply with the International Performance Measurement and Verification Protocol ("IPMVP") standards. The protocol selected within IPMVP will depend on the measures included within a project and/or historical performance of the measure. Projects selected for M&V will receive pre- and post-onsite audits including:

- A site-specific measurement and verification plan ("SSMVP");
- A preliminary report showing results of an engineering desk review and/or pre-installation M&V; and
- A final report with results of measured savings.

M&V data may be more robust than data collected in traditional impact evaluation work because it verifies baseline conditions before a project is implemented. The Company intends to use M&V data to enhance impact evaluations and more accurately identify baseline conditions. The data will supplement the impact evaluation to provide more accurate results, as well as offset required impact data to reduce costs. M&V will also provide oversight of a contractor's work and verify reported savings. Program administrators will summarize and use findings from various M&V reviews for future measure-specific savings estimates and internal analytics. In addition, the M&V data collected will provide system-based intelligence for load forecasting efforts to develop strategies to assess peak load characteristics and accurately define a project's impact on system related operating conditions and provide continuous feedback to inform program design.

Quality Assurance/Quality Control

Quality Assurance/Quality Control ("QA/QC") verifies savings based on the existing baseline conditions and the customer's expected energy savings. QA/QC is an important check and balance procedure to verify that implementation contractors and trade allies are performing work in compliance with contract agreements and that they are achieving any performance related metrics. QA/QC work will serve as an additional safeguard to maintain work integrity. QA/QC site work also provides an opportunity to collect additional data that would supplement the process and/or impact evaluation (*e.g.*, customer survey and operating hour verification).

Tables 5 and 6 below set forth the EM&V activity schedule and forecasted expenditures for 2019 - 2025.

Table 5: 2019-2025 EM&V Activity Schedule

NE:NY Electric EM&V Activity	Expected Plan Submission Date	Expected Start Date	Expected Completion Date	Status
Impact Evaluation[1]	Q1 2023	Q2 2023	Q4 2023	Started
Process Evaluation[2]	Q3 2020	Q3 2020	Q4 2022	Complete
Process Evaluation[4]	Q1 2024	Q1 2024	Q4 2024	Not Started
NTG Study[4]	Q3 2023	Q3 2023	Q2 2024	Not Started
NE:NY Gas EM&V Activity				
Impact Evaluation[3]	Q1 2023	Q2 2023	Q4 2023	Started
Process Evaluation[4]	Q1 2024	Q1 2024	Q4 2024	Not Started
NTG Study[4]	Q3 2023	Q3 2023	Q2 2024	Not Started

[1] Includes Residential, C&I, and BDI Programs

[2] Includes BDI and Portfolio Level

[3] Includes Residential and C&I Programs

[4] Includes Portfolio Level

Table 6: 2019-2025 EM&V Activity Forecasted Expenditures

NE:NY Electric EM&V Activity	Actual Spend 2019	Actual Spend 2020	Planned Year 2021	Actual Spend 2021	Planned Year 2022	Planned Year 2023	Planned Year 2024	Planned Year 2025
Impact Evaluation	$110,000	$64,578	$200,000	$324,217	$297,174	$305,932	$323,251	$326,120
Process Evaluation	$30,072	$0	$100,000	$56,037	$123,822	$127,472	$134,688	$135,884
Measurement & Verification	$37,440	$34,773	$106,018	$20,013	$74,293	$76,483	$80,813	$81,530
Total EM&V Forecasted Expenditures	**$177,512**	**$99,350**	**$406,018**	**$400,267**	**$495,290**	**$509,887**	**$538,751**	**$543,534**
Unallocated Budget	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
NE:NY Gas EM&V Activity								
Impact Evaluation	$5,154	$2,404	$24,938	$52,830	$52,287	$66,253	$84,878	$95,510
Process Evaluation	$0	$0	$2,500	$9,131	$21,786	$27,606	$35,366	$39,796
Measurement & Verification	$0	$0	$2,500	$3,261	$13,072	$16,563	$21,219	$23,877
Total EM&V Forecasted Expenditures	**$5,154**	**$2,404**	**$29,938**	**$65,222**	**$87,145**	**$110,422**	**$141,463**	**$159,183**
Unallocated Budget	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

Benefit Cost Analysis

The table below sets forth the annual Benefit Cost Analysis ("BCA") for the Company's electric and gas portfolio by program for 2019 – 2025.

Table 7: 2019-2025 Primary Benefit Cost Analysis							
NE:NY Electric EE Portfolio	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Commercial & Industrial Sector							
Business Direct Install							
Benefits	$6,804,134	$1,454,852	$2,404,202	$2,491,170	$2,578,618	$2,664,649	$2,752,309
Costs	$3,201,346	$1,250,000	$1,939,427	$1,923,868	$1,974,917	$1,974,917	$1,974,917
Benefit Cost Ratio	**2.13**	**1.16**	**1.24**	**1.29**	**1.31**	**1.35**	**1.39**
C&I Electric Rebate							
Benefits	$20,391,915	$15,243,966	$6,885,558	$7,123,863	$7,364,373	$7,602,663	$7,842,770
Costs	$7,133,843	$6,813,388	$4,096,746	$4,249,280	$4,265,307	$4,283,800	$4,271,772
Benefit Cost Ratio	**2.86**	**2.24**	**1.68**	**1.68**	**1.73**	**1.77**	**1.84**
C&I Midstream							
Benefits		$13,925,893	$26,963,332	$27,780,935	$43,199,224	$44,466,195	$45,716,640
Costs		$2,916,514	$6,106,242	$7,141,876	$16,658,789	$16,344,209	$16,279,138
Benefit Cost Ratio		**4.77**	**4.42**	**3.89**	**2.59**	**2.72**	**2.81**
Residential Sector							
Residential Efficient Products							
Benefits	$10,481,065	$517,337	$648,681	$568,830	$571,988	$582,757	$596,033
Costs	$2,837,303	$377,646	$509,139	$479,961	$648,174	$636,954	$628,705
Benefit Cost Ratio	**3.69**	**1.37**	**1.27**	**1.19**	**0.88**	**0.91**	**0.95**
Residential Electric Midstream							
Benefits		$19,740,800	$5,968,901	$24,623,607	$25,445,550	$26,253,855	$27,055,447
Costs		$4,496,995	$762,583	$5,726,168	$5,912,454	$5,869,273	$5,875,479
Benefit Cost Ratio		**4.39**	**7.83**	**4.30**	**4.30**	**4.47**	**4.60**
Residential Electric Behavioral							
Benefits		$656,846	$813,590	$848,447	$888,304	$922,364	$953,610
Costs		$635,274	$883,696	$731,532	$318,473	$318,473	$318,473
Benefit Cost Ratio		**1.03**	**0.92**	**1.16**	**2.79**	**2.90**	**2.99**
NYS Clean Heat							
Benefits		$734,198	$2,459,347	$1,601,817	$2,063,177	$2,525,272	$2,991,371
Costs		$679,567	$1,410,566	$865,736	$1,496,212	$1,588,028	$1,578,817
Benefit Cost Ratio		**1.08**	**1.74**	**1.85**	**1.38**	**1.59**	**1.89**
Total Electric Portfolio							
Total Benefits	**$37,677,114**	**$52,273,892**	**$46,143,611**	**$65,038,669**	**$82,111,234**	**$85,017,755**	**$87,908,180**
Total Costs	**$13,172,492**	**$17,169,384**	**$16,749,213**	**$22,241,457**	**$32,426,024**	**$32,247,447**	**$32,177,479**
Electric Portfolio Benefit Cost Ratio	**2.86**	**3.04**	**2.75**	**2.92**	**2.53**	**2.64**	**2.73**
NE:NY Gas EE Portfolio							
Commercial & Industrial Sector							
C&I Gas HVAC							
Benefits	$1,538,249	$1,211,822	$1,726,185	$2,000,313	$2,153,902	$2,287,902	$2,407,586
Costs	$1,353,093	$707,733	$825,402	$1,051,090	$1,111,614	$1,172,636	$1,220,011
Benefit Cost Ratio	**1.14**	**1.71**	**2.09**	**1.90**	**1.94**	**1.95**	**1.97**
Residential Sector							
Residential Gas HVAC							
Benefits	$577,532	$1,292,198	$2,634,787	$2,793,933	$2,940,274	$3,061,796	$3,184,647
Costs	$685,437	$993,661	$1,509,570	$1,757,063	$1,826,398	$1,899,000	$1,988,140
Benefit Cost Ratio	**0.84**	**1.30**	**1.75**	**1.59**	**1.61**	**1.61**	**1.60**
Residential Gas Behavioral							
Benefits		$75,707	$251,020	$526,557	$559,022	$588,245	$615,871
Costs		$150,000	$247,220	$127,156	$124,506	$150,000	$150,000
Benefit Cost Ratio		**0.50**	**1.02**	**4.14**	**4.49**	**3.92**	**4.11**
Total Gas Portfolio							
Total Benefits	**$2,115,781**	**$2,579,728**	**$4,611,992**	**$5,320,803**	**$5,653,198**	**$5,937,943**	**$6,208,104**
Total Costs	**$2,038,530**	**$1,851,393**	**$2,684,480**	**$3,125,027**	**$3,278,396**	**$3,496,502**	**$3,657,407**
Gas Portfolio Benefit Cost Ratio	**1.04**	**1.39**	**1.72**	**1.70**	**1.72**	**1.70**	**1.70**

Table 8: 2019-2025 Portfolio BCA Ratios							
NE:NY Electric EE Portfolio	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Societal Cost Test Ratio	2.86	3.04	2.75	2.92	2.53	2.64	2.73
Utility Cost Test Ratio	3.92	3.63	2.54	2.73	4.24	4.55	4.61
Ratepayer Impact Measure Test Ratio	0.67	0.73	0.82	0.88	1.00	1.02	1.03
NE:NY Gas EE Portfolio	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Societal Cost Test Ratio	1.04	1.39	1.72	1.70	1.72	1.70	1.70
Utility Cost Test Ratio	0.89	1.81	2.77	1.62	1.56	1.75	1.73
Ratepayer Impact Measure Test Ratio	0.38	0.54	0.63	0.58	0.58	0.62	0.62