



Orange & Rockland

**Final Energy Efficiency Transition Implementation
Plan (ETIP) 2017-2020**

Orange & Rockland Utilities, Inc.

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Case 15-M-0252

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1. Introduction

Orange & Rockland Utilities, Inc.'s ("O&R" or the "Company") submits this draft Energy Efficiency Transition Implementation Plan ("ETIP") to provide a program plan for the period 2018-2020 that is consistent with the initiatives described in the Public Service Commission's ("Commission") *Order Adopting Regulatory Policy Framework and Implementation Plan* ("REV Track One Order")¹ in the Reforming the Energy Vision ("REV") proceeding. This ETIP supports the Commission's August 2016 *Order Adopting a Clean Energy Standard* that adopted the State Energy Plan goal that 50 percent of New York's electricity is to be generated by renewable sources by 2030.² The programs and initiatives described in this document do not contain all of O&R's energy efficiency and demand reduction initiatives; additional initiatives and energy efficiency opportunities continue to be advanced through the Company's REV demonstration projects, non-wires alternative solutions, and Dynamic Load Management ("DLM") programs.

The Company's 2018-2020 ETIP budgets and goals are set forth in the Commission's *Order Authorizing Utility-Administered Energy Efficiency Portfolio Budgets and Targets for 2016 – 2018* ("ETIP Order").³ O&R will work within these budgetary constraints to develop, implement, and advance innovative customer-oriented and cost effective programs as discussed in this 2018-2020 ETIP.

O&R's energy efficiency portfolios will continue to expand to engage customers on a more personal level by providing: (1) tools to help them understand how they use energy; (2) recommendations on how to better manage their energy needs; and (3) a streamlined customer experience designed to increase participation. This summer the Company will begin its first phase of Advanced Metering Infrastructure ("AMI") deployment, which will impact future energy efficiency initiatives by providing customers with detailed information on how and when they use energy. The detailed near-time information will help customers better manage their energy use and if the customer takes action, ultimately reduce their energy bills by using energy when it costs less and lowering their overall consumption. The Company is coordinating these AMI efforts with energy efficiency and DLM programs to help customers receive the maximum benefit afforded by this technology.

The Company plans to integrate its demand side management ("DSM") programs and offerings to better address the needs of the Company's customers, utility operations, and ultimately a distributed system platform ("DSP") centered energy market as envisioned by the REV proceeding. The ultimate goal is a more thorough integration of energy efficiency, permanent demand reduction, and demand response programs into a single regulatory framework that enables a customer-oriented approach to achieving greater penetration of distributed energy resources ("DERs") throughout the Company's territory. The Company's goal will be implemented over several cycles of ETIP filings that, in conjunction with O&R's Distribution System Implementation Plan ("DSIP") filings,⁴ will support the REV proceeding goals of animating the

¹ 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.

² Case 15-E-0302, *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard*, Order Adopting a Clean Energy Standard (issued August 1, 2016), p. 2.

³ Case 15-M-0252, *In the Matter of Utility Energy Efficiency Programs*, Order Authorizing Utility-Administered Energy Efficiency Portfolio Budgets and Targets for 2016 – 2018 (issued January 22, 2016), Appendix B, p. 18-19.

⁴ Case 14-M-0101, *O&R's Initial DSIP*, filed June 30, 2016.

clean energy marketplace, reducing utility infrastructure costs, and achieving state environmental policy objectives. While non-ETIP programs (*e.g.*, the Pomona Non-Wires Alternative project, REV demonstration projects, and the Dynamic Load Management programs) were authorized in separate proceedings, the Company anticipates that the innovative solutions being considered and implemented as part of such offerings will be coordinated with ETIP program implementation.

Coordination between utilities and New York State Energy Research and Development Authority (“NYSERDA”) administered energy efficiency programs has begun with monthly meetings and quarterly in-person meetings of the Clean Energy Implementation and Coordination Committee (“CEIC”). The CEIC has proven to be valuable in planning program initiatives and leveraging complementary programs. Coordination with NYSERDA allows the Company to focus on setting appropriate rebate levels necessary for customers to take action so that the electric portfolio will maintain energy savings at current budget targets.

2. Portfolio Description

O&R will continue to implement its existing electric and gas portfolio of programs, with the modifications described in this ETIP, and manage them at the portfolio level so that funding can be shifted from under-performing programs to over-performing or new program initiatives. The Company will continue to monitor individual programs and measures to guide performance and make adjustments intra-year and inter-year and move funds accordingly. The REV Track One Order provides the flexibility to add new delivery mechanisms and initiatives within the existing framework of program offerings, which will allow the Company to react quickly to market conditions and customer feedback as described below.

The Company continues to coordinate its energy efficiency efforts with demand response initiatives, non-wires alternative solutions, REV demonstration projects and its AMI roll out. Broadly, these ETIP 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 demand response programs recently approved by the PSC.⁵ The Company has recently partnered with SUEZ North America (“SUEZ”) to coordinate water and energy conservation messaging. Last fall, elementary school students in Rockland County were taught how to save energy and water through small behavioral changes and conservation. Low cost energy kits are being designed to promote energy and water conservation so that students can reinforce the in classroom lessons with parents at home. SUEZ will also engage with customers on the Customer Engagement and Marketplace Platform (“CEMP”) to provide customers with water savings messaging and low flow measures. The CEMP is a REV demonstration project that provides a one-stop shop for consumers to purchase energy savings products with instant rebates applied at the time of purchase and messaging to help reduce their consumption. When measures save both energy and water, rebates may be combined to encourage customers to invest in higher cost energy efficient equipment.

O&R’s Residential Electric Program now provide rebates for efficient central air conditioner and heat pump upgrades and cross-markets demand response initiatives to customers. Customers who participate in one

⁵ 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 and effective June 18, 2015).

energy efficiency program are much more likely to participate in additional programs. The CEMP provides instant rebates to customers purchasing smart thermostats, smart power strips, Light Emitting Diode (“LED”) lighting, air conditioner tune-ups and low flow devices. The Company plans to expand the energy efficient offerings on the CEMP and when possible provide instant rebates to customers to streamline their experience and increase customer engagement. Customer engagement and education initiatives will continue to help customers manage their energy use and incorporate demand reduction efforts through the use of software analytics applied to their actual usage. Once customers better understand how they use energy and have access to the tools to manage it, customers can take action to lower or shift energy use. The AMI roll out will provide a platform for a more robust energy usage analysis and demonstrate the impact of efficient product upgrades and behavioral changes in near real-time. The Company’s recently completed residential customer segmentation study will guide program messaging and marketing campaigns to target customers and increase participation.

For commercial and industrial customers, O&R will continue to expand its targeted and personalized customer engagement delivery mechanism. For example, the Commercial and Industrial (“C&I”) Existing Buildings Program has achieved 200 percent of its goal for the 2012-2015 Energy Efficiency Portfolio Standard Proceeding (“EEPS”) period and expected to achieve 312 percent of its 2016 goal once all committed projects are installed. Customers trust O&R to provide accurate energy savings information and several customers have participated repeatedly. Customers have used the bill savings from one project to fund the upgrades of the next project. O&R is establishing itself as the energy expert that customers can rely on to provide accurate information and customers are increasingly investing in energy efficiency because they realize the impact to their bottom-line. The Company provides business customers with a direct install turn-key experience with a free energy survey and up to 70 percent of the installed cost of the recommended measures incentivized on lighting and refrigeration upgrades. A no-interest payment plan is available for customers who are not able to fund their contribution, with monthly bill savings, funding their monthly payment plan. A pay for performance model has been very well received by the contractor community and has proven efficient in implementing the direct install program.

Cross-marketing energy efficiency offerings and demand response initiatives has increased enrollments in the Company’s demand response programs from 3.0 MW in 2015 to 25.3 MW in 2016. O&R will continue to engage customers in the Company’s Commercial System Relief, Distribution Load Relief, and Direct Load Control Programs.⁶ In addition, pairing low-interest project financing through NYSERDA’s Green Bank, New York Power Authority (“NYPA”), or other financial institutions with the Company’s programs will continue to streamline the customer experience and increase participation.

The delivery mechanisms and initiatives described above will transition the existing O&R portfolio to meet the objectives of REV by: 1) engaging customers and providing them with tools to control their energy; 2) increasing overall system efficiency by coordinating energy efficiency and demand response program offerings to reduce peak requirements during the limited period of time the system operates at peak levels; 3) targeting measures that reduce both peak demand and energy to help customers better manage their energy use and potentially lower their bills; and 4) engaging other utilities and NYSERDA to implement programs that are complementary and best practices across the energy industry.

⁶ *Id.*

3. Portfolio Forecast 2017-2020

BUDGET AND TARGET SUMMARY:

| TABLE 1: FOUR-YEAR BUDGETS | | | | |
|---|--------------------|--------------------|--------------------|--------------------|
| ELECTRIC PORTFOLIO | 2017 | 2018 | 2019 | 2020 |
| <i>Commercial & Industrial Sector</i> | | | | |
| Incentives & Services | \$3,487,989 | \$3,487,989 | \$3,487,989 | \$3,487,989 |
| Program Implementation | \$962,759 | \$962,759 | \$962,759 | \$962,759 |
| Total Budget | \$4,450,748 | \$4,450,748 | \$4,450,748 | \$4,450,748 |
| <i>Residential Sector</i> | | | | |
| Incentives & Services | \$246,590 | \$246,590 | \$246,590 | \$246,590 |
| Program Implementation | \$167,132 | \$167,132 | \$167,132 | \$167,132 |
| Total Budget | \$413,722 | \$413,722 | \$413,722 | \$413,722 |
| <i>Total Portfolio</i> | | | | |
| Total C&I Programs | \$4,450,748 | \$4,450,748 | \$4,450,748 | \$4,450,748 |
| Total Residential Programs | \$413,722 | \$413,722 | \$413,722 | \$413,722 |
| Portfolio Administration | \$1,122,586 | \$1,122,586 | \$1,122,586 | \$1,122,586 |
| Portfolio EM&V | \$315,108 | \$315,108 | \$315,108 | \$315,108 |
| Total Portfolio Budget | \$6,302,164 | \$6,302,164 | \$6,302,164 | \$6,302,164 |
| GAS PORTFOLIO | 2017 | 2018 | 2019 | 2020 |
| <i>Residential Sector</i> | | | | |
| Incentives & Services | \$418,818 | \$418,818 | \$418,818 | \$418,818 |
| Program Implementation | \$32,956 | \$32,956 | \$32,956 | \$32,956 |
| Total Budget | \$451,774 | \$451,774 | \$451,774 | \$451,774 |
| <i>Total Portfolio</i> | | | | |
| Total Residential Programs | \$451,774 | \$451,774 | \$451,774 | \$451,774 |
| Portfolio Administration | \$58,325 | \$58,325 | \$58,325 | \$58,325 |
| Portfolio EM&V | \$26,847 | \$26,847 | \$26,847 | \$26,847 |
| Total Portfolio Budget | \$536,946 | \$536,946 | \$536,946 | \$536,946 |

| TABLE 2: FOUR-YEAR TARGETS¹ | | | | |
|--|-------------|-------------|-------------|-------------|
| ELECTRIC PORTFOLIO | 2017 | 2018 | 2019 | 2020 |
| <i>Commercial & Industrial Sector</i> | | | | |
| MWh (Net) | 17,059 | 17,059 | 17,059 | 17,059 |
| <i>Residential Sector</i> | | | | |
| MWh (Net) | 2,243 | 2,243 | 2,243 | 2,243 |
| <i>Total Portfolio</i> | | | | |
| MWh (Net) | 19,302 | 19,302 | 19,302 | 19,302 |
| GAS PORTFOLIO | 2017 | 2018 | 2019 | 2020 |
| <i>Residential Sector</i> | | | | |
| Dth (Net) | 14,691 | 14,691 | 14,691 | 14,691 |
| | | | | |
| ¹ Additional metrics to be tracked include: greenhouse gas emissions, MW reduction. | | | | |

FORECAST PORTFOLIO LEVEL ACTIVITY:

| TABLE 3: FORECAST EXPENDITURES | | | | | |
|---------------------------------------|---------------------|--------------------|--------------------|--------------------|--------------------|
| Electric Budgets | | 2017 | 2018 | 2019 | 2020 |
| <i>2017</i> | \$6,302,164 | \$6,302,164 | \$0 | \$0 | \$0 |
| <i>2018</i> | \$6,302,164 | \$0 | \$6,302,164 | \$0 | \$0 |
| <i>2019</i> | \$6,302,164 | \$0 | \$0 | \$6,302,164 | \$0 |
| <i>2020</i> | \$6,302,164 | \$0 | \$0 | \$0 | \$6,302,164 |
| Total Electric Portfolio | \$25,208,656 | \$6,302,164 | \$6,302,164 | \$6,302,164 | \$6,302,164 |
| Gas Budgets | | 2017 | 2018 | 2019 | 2020 |
| <i>2017</i> | \$536,946 | \$536,946 | \$0 | \$0 | \$0 |
| <i>2018</i> | \$536,946 | \$0 | \$536,946 | \$0 | \$0 |
| <i>2019</i> | \$536,946 | \$0 | \$0 | \$536,946 | \$0 |
| <i>2020</i> | \$536,946 | \$0 | \$0 | \$0 | \$536,946 |
| Total Gas Portfolio | \$2,147,784 | \$536,946 | \$536,946 | \$536,946 | \$536,946 |

| TABLE 4: FORECAST ACHIEVEMENTS | | | | | |
|---------------------------------------|---------------|---------------|---------------|---------------|---------------|
| MWH Targets | | 2017 | 2018 | 2019 | 2020 |
| <i>2017</i> | 19,302 | 19,302 | 0 | 0 | 0 |
| <i>2018</i> | 19,302 | 0 | 19,302 | 0 | 0 |
| <i>2019</i> | 19,302 | 0 | 0 | 19,302 | 0 |
| <i>2020</i> | 19,302 | 0 | 0 | 0 | 19,302 |
| Total Electric Portfolio | 77,208 | 19,302 | 19,302 | 19,302 | 19,302 |
| DTH Targets | | 2017 | 2018 | 2019 | 2020 |
| <i>2017</i> | 14,691 | 14,691 | 0 | 0 | 0 |
| <i>2018</i> | 14,691 | 0 | 14,691 | 0 | 0 |
| <i>2019</i> | 14,691 | 0 | 0 | 14,691 | 0 |
| <i>2020</i> | 14,691 | 0 | 0 | 0 | 14,691 |
| Total Gas Portfolio | 58,764 | 14,691 | 14,691 | 14,691 | 14,691 |

EVALUATION MEASUREMENT AND VERIFICATION:

O&R will coordinate Evaluation Measurement and Verification (“EM&V”) activities with Con Edison whenever possible since they share the same 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 program administrators and participate in statewide studies that will inform O&R program design. The EM&V process will transition away from traditional program-specific process and impact evaluations and instead focus on conducting more strategic and targeted studies so it can proactively modify programs 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, and product offerings.

The Company will continue to maintain EM&V funding levels at five percent of the total annual portfolio budget level.

The EM&V process will assess the performance of programs, projects and measures through the utilization 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 measure level 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 recommendations for improvements in program processes and performance and to provide regional specific information to update the Technical Resource Manual (“TRM”).

Impact Evaluation

In future program years, 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; segmenting measure savings by sector, building type and geography; informing TRM updates and future program planning efforts; informing cost-effectiveness; and providing other recommendations that would add value to program design and operations. All impact evaluation work will meet and comply with the prevailing New York State Department of Public Service (“DPS”) evaluation guidelines.

By focusing more 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 the new measure. The determination of more defined baselines and the usage patterns of the higher efficiency equipment will lead to better quantification of efficiency savings over a shorter period of time. Net-To-Gross (“NTG”) analysis and surveys will continue to assess and quantify free ridership and NTG in a less traditional manner by administering questions immediately following the installation of efficient equipment. This mitigates the need to ask these questions many months or years after installation to

quantify and assess what that customer would have done in the absence of the program. As a result, the Company will be able to better assess what drives customer participation and other choices with respect to programs and measures while customers can remember their actual experiences.

Process Evaluation

Process evaluations focus on documenting the effectiveness of the design and delivery of energy efficiency programs. In light of the new delivery methods that will be initiated as a result of the REV proceeding, 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. Since process evaluations most often examine program or portfolio operations, they 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 Company believes that utilizing EM&V results in a near real-time environment will allow for program changes that best reflect current market conditions. All process evaluation work will comply with the prevailing DPS evaluation guidelines.

Measurement & Verification

Measurement & Verification ("M&V") will play a critical role in updating the TRM, 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 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:

- 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 can 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, or offset required impact data to reduce costs. M&V will also provide oversight of a contractor's work and verify reported savings. Findings from various M&V reviews will be summarized and used by program administrators for future measure specific savings estimates and internal analytics. Additionally, the M&V data collected will provide system based intelligence for load forecasting efforts to aid in the development of strategies to assess peak load characteristics and accurately define a project's impact on system related operating conditions.

Quality Assurance / Quality Control:

Quality Assurance/Quality Control (“QA/QC”) is a method used to verify work adheres to a set standard and delivers expected energy savings safely to the customer’s satisfaction. QA/QC is an important check and balance procedure to determine 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 (*i.e.*, customer survey, operating hour verification, etc.).

TABLE 5: THREE-YEAR EM&V ACTIVITY SCHEDULE

| EM&V Activity (Electric & Gas) | Expected Plan Submission Date | Expected Start Date | Expected Completion Date | Cycle Year Informed | Status |
|-----------------------------------|-------------------------------|---------------------|--------------------------|---------------------|-------------|
| Impact Evaluation | Q3 2017 | Q3 2017 | Q3 2018 | 2018-2020 | Delayed |
| Process Evaluation | Q3 2017 | Q3 2017 | Q3 2018 | 2018-2020 | Delayed |
| Measurement & Verification | Ongoing | Ongoing | Ongoing | 2018-2020 | In Progress |
| Quality Assurance/Quality Control | Ongoing | Ongoing | Ongoing | 2018-2020 | In Progress |

TABLE 6: EM&V ACTIVITY EXPENDITURES

| EM&V Activity (Electric) | 2017 | 2018 | 2019 | 2020 |
|-----------------------------------|------------------|------------------|------------------|------------------|
| Impact Evaluation | \$170,108 | \$170,108 | \$170,108 | \$170,108 |
| Process Evaluation | \$35,000 | \$35,000 | \$35,000 | \$35,000 |
| Measurement & Verification | \$65,000 | \$65,000 | \$65,000 | \$65,000 |
| Quality Assurance/Quality Control | \$20,000 | \$20,000 | \$20,000 | \$20,000 |
| Statewide Studies ¹ | \$25,000 | \$25,000 | \$25,000 | \$25,000 |
| Total EM&V Budget | \$315,108 | \$315,108 | \$315,108 | \$315,108 |
| | | | | |
| EM&V Activity (Gas) | 2017 | 2018 | 2019 | 2020 |
| Impact Evaluation | \$21,000 | \$21,000 | \$21,000 | \$21,000 |
| Process Evaluation | \$5,847 | \$5,847 | \$5,847 | \$5,847 |
| Statewide Studies ¹ | TBD | TBD | TBD | TBD |
| Total EM&V Budget | \$26,847 | \$26,847 | \$26,847 | \$26,847 |

¹ Statewide studies budgets may be increased where the scope of work includes aspects of impact evaluations that may be reallocated to statewide efforts.

BENEFIT COST ANALYSIS:

The table below contains the annual total resource cost test Benefit Cost Analysis (“BCA”) for the electric and gas portfolio by program.

| TABLE 7: FOUR-YEAR BENEFIT/COST RATIOS | | | | |
|--|--------------------|--------------------|--------------------|--------------------|
| ELECTRIC PORTFOLIO | 2017 | 2018 | 2019 | 2020 |
| <i>Commercial & Industrial Sector</i> | | | | |
| Benefits | \$17,180,679 | \$16,636,641 | \$16,202,519 | \$15,731,985 |
| Costs | \$10,141,856 | \$9,473,058 | \$8,848,363 | \$8,264,864 |
| <i>Benefit/Cost Ratio</i> | <i>1.69</i> | <i>1.76</i> | <i>1.83</i> | <i>1.90</i> |
| <i>Residential Sector</i> | | | | |
| Benefits | \$2,116,803 | \$2,057,362 | \$2,019,249 | \$1,974,983 |
| Costs | \$1,074,432 | \$1,003,579 | \$937,399 | \$875,583 |
| <i>Benefit/Cost Ratio</i> | <i>1.97</i> | <i>2.05</i> | <i>2.15</i> | <i>2.26</i> |
| <i>Total Portfolio</i> | | | | |
| Total Benefits | \$19,297,482 | \$18,694,003 | \$18,221,768 | \$17,706,967 |
| Total Costs | \$11,216,288 | \$10,476,637 | \$9,785,762 | \$9,140,447 |
| Portfolio Benefit/Cost Ratio | <i>1.72</i> | <i>1.78</i> | <i>1.86</i> | <i>1.94</i> |
| GAS PORTFOLIO | 2017 | 2018 | 2019 | 2020 |
| <i>Residential Sector</i> | | | | |
| Benefits | \$1,356,830 | \$1,317,215 | \$1,277,234 | \$1,236,162 |
| Costs | \$1,196,912 | \$1,117,982 | \$1,044,258 | \$975,395 |
| <i>Total Budget</i> | <i>1.13</i> | <i>1.18</i> | <i>1.22</i> | <i>1.27</i> |
| <i>Total Portfolio</i> | | | | |
| Total Benefits | \$1,356,830 | \$1,317,215 | \$1,277,234 | \$1,236,162 |
| Total Costs | \$1,196,912 | \$1,117,982 | \$1,044,258 | \$975,395 |
| Portfolio Benefit/Cost Ratio | <i>1.13</i> | <i>1.18</i> | <i>1.22</i> | <i>1.27</i> |

| TABLE 8: FOUR-YEAR PORTFOLIO BCA RESULTS | | | | |
|---|-------------|-------------|-------------|-------------|
| ELECTRIC PORTFOLIO | 2017 | 2018 | 2019 | 2020 |
| Societal Test Ratio | 1.72 | 1.78 | 1.86 | 1.94 |
| Utility Cost Ratio | 2.20 | 2.31 | 2.43 | 2.55 |
| Ratepayer Impact Measure Test Ratio | 0.78 | 0.81 | 0.86 | 0.90 |
| GAS PORTFOLIO | 2017 | 2018 | 2019 | 2020 |
| Societal Test Ratio | 1.13 | 1.18 | 1.22 | 1.27 |
| Utility Cost Ratio | 1.42 | 1.48 | 1.54 | 1.59 |
| Ratepayer Impact Measure Test Ratio | 0.78 | 0.81 | 0.86 | 0.90 |

4. Program Descriptions

Residential Electric Program

Program Design

The Residential Electric Program targets energy savings throughout the residential electric customer base of O&R's New York service territory. The program provides rebates for ENERGY STAR® appliance upgrades, recycling of refrigerators, freezers and room air conditioners, high efficiency central air conditioners and heat pumps, smart strips, and smart thermostats. Participating customers may be invited to use a coupon on the CEMP for a free or discounted energy saving kit containing LED bulbs as a thank-you. The program supports the stocking, promotion and sale of high efficiency appliances by rebating 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.

Program Delivery Method

O&R will implement the program utilizing current program level budgets and goals and will continue to provide direct rebates to the customer. O&R will manage residential energy efficiency and demand response offerings in an integrated approach so that customers can be engaged seamlessly across end-uses, while lowering their energy use and providing needed demand response during peak times. Tracking, analysis, and EM&V activities will continue at the measure and program level, with a more flexible framework that allows for consideration of what the customer wants, what the utility needs, and how to align the objectives for a positive outcome. Third parties and trade allies for this program will be appliance retailers, recycling vendors, kit distributors, and the contractor community. Program information will be distributed to contractors via direct mail and email identifying the equipment specifications required for incentives and providing rebate application forms as well as contractor meetings. O&R staff will visit retailer sites for in-person training on equipment eligibility, rebate amounts, and to place in-store advertising at the point of sale. Customers who purchase space conditioning equipment will be cross-marketed with the recently approved Direct Load Control Program to obtain additional rebates.

Target Market/Customer Eligibility

The target audience is primarily residential electric customers, however, O&R's small business customers may participate. The Program will continue to consider a variety of marketing approaches to encourage both customer and trade ally participation, including retailers and distributors.

Anticipated Participation Levels

Program participation is expected to be 6,500 customers annually throughout this ETIP cycle.

Anticipated Changes

O&R will continue to integrate energy efficiency and demand response initiatives to provide for a more streamlined customer experience and engage customers to better manage their energy use. Expanded offerings on the CEMP will provide opportunities for instant rebates and customer engagement. The partnership with SUEZ will expand customer engagement and combine incentives for measures that save energy and water. An online audit tool will be utilized to increase awareness of customer rebate programs and to provide low-cost no-cost recommendations to lower energy use. The installation of AMI will provide a platform to engage customers on a more personalized level and provide customers with real-time feedback to energy efficient actions. The Company's recently completed residential market segmentation study will help to target messaging and strengthen marketing campaigns to increase participation. By targeting messaging, customers are more likely to realize the value of energy efficient decisions and more likely to take action.

O&R will continue to engage with elementary and middle-school students through math and science curriculums to integrate the value proposition of upgrading to energy efficiency equipment and to reinforce the utility brand recognition as the energy experts. After completing the curriculum, students will be encouraged to install energy saving kits with parents and explore the potential of additional equipment upgrades. O&R has partnered with SUEZ to provide in-classroom curriculum and is investigating the potential to provide kits containing low-flow devices and LEDs that will conserve water and energy.

- **Integration with CEMP and SUEZ**

O&R will leverage the CEMP to increase the dissemination of energy efficient equipment and provide instant rebates for measures that reduce both energy and demand. O&R will integrate the CEMP to create a streamlined experience where customers can learn how to reduce their energy use through simple lifestyle changes, purchase high efficiency equipment, obtain instant rebates or price discounts where applicable, and engage with third-party installers. Product and service offerings will be tailored to customers' specific needs based on their actual individualized energy usage, lifestyle behaviors, and responses to energy related questions. The CEMP directly addresses the REV objective of enhancing customer knowledge and providing tools that allows a customer to effectively manage their total energy bill. New energy efficiency measures will be identified and added to the eligible measure list to increase savings opportunities for customers. The partnership with SUEZ will increase customer awareness and acceptance of energy and water savings measures through complimentary rebates and education. Customers have responded positively to the one-stop shop CEMP and the addition of smart thermostats and lighting measures. With the installation of AMI, energy software data analytics with targeted messaging will enable the utility to encourage both energy management and peak demand reduction during times of system need. AMI data will allow customers to view the impact of their actions to reduce their energy use through lifestyle, behavioral changes and equipment upgrades in near real-time.

- **Statewide Coordination**

O&R will continue coordination and collaboration among utilities and NYSERDA to share best practices, facilitate program participation, and increase customer engagement to better manage energy use. The recently formed CEIC working group will serve as platform for this collaboration and has already identified areas of potential collaboration. O&R will coordinate with other utilities, NYSERDA, NYPA, and the retailer community to evaluate the potential of a statewide upstream initiative designed to increase the stocking and adoption of energy efficient products in the residential marketplace. This effort will augment the effectiveness of the residential electric and gas program offerings and reinforce the practice of purchasing ENERGY STAR® certified products. Market transformation through a managed upstream approach will develop and enhance relationships with trade allies, distributors, contractors, and retailers through cooperative marketing and outreach efforts.

Quality Assurance/Quality Control

Program 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. Additionally, unique equipment serial numbers are verified to prevent multiple rebates issued for the same equipment. O&R staff and third-party contractors perform on-site verification inspections for at least 10 percent of participants to confirm that equipment is purchased and installed as required to meet the program guidelines. New data tracking software will help streamline rebate processing, increase productivity, and minimize inaccuracies.

Incentives and Services, Program Implementation Budgets

Please refer to Table 1: Four-Year Budgets.

Primary and Secondary Performance Targets

Please refer to Table 2: Four-Year Targets.

Review of 2016 Activities and Accomplishments

Through December 2016, the Residential Electric Program expended \$372,980 and acquired 1,564 MWh. An additional 260 MWh of the fourth quarter rebates from the CEMP have been committed with an additional \$52,222 in funds. As a result, the program will achieve 81percent of its program goal.

The Residential Electric Program utilized the CEMP to provide customers with a one-stop shopping experience with instant rebates, two recycle and win campaigns, email blasts, social media, outreach events, radio and cable television advertising, and contractor outreach to assist in meeting program goals. A majority of the energy savings resulted from the recycling of refrigerators and freezers and removing inefficient equipment from the grid. Working with an implementation contractor, 1,790 refrigerators and freezers were recycled in 2016. The program expanded its ENERGY STAR® measure rebates to include super high efficiency refrigerators, dishwashers and clothes washers, smart power strips, pool pumps, programmable thermostats, central and mini-split air conditioning/heat pump systems, and electric heat

pump water heaters. As the energy savings potential from recycling moderates, the program will need to focus on energy savings from efficient equipment upgrades and savings from small behavioral adjustments.

Residential Gas Program

Program Design

The Residential Gas Program provides incentives to customers who purchase energy efficient heating and water heating equipment. Participating customers may be invited to use a coupon on the CEMP for a free or discounted energy saving kit containing low-flow devices as a thank-you. O&R currently engages with the HVAC contractor community to assist in promoting the upgrade to high efficiency space and water heating equipment as well support the stocking of high efficiency equipment. O&R conducts regular contractor outreach and provides quarterly contractor communications to keep trade allies informed of currently eligible equipment and rebate offerings.

Program Delivery Method

O&R will implement the program utilizing current program level budgets and goals and will continue to provide direct rebates to customers. Tracking, analysis, and EM&V activities will continue at the measure and program level, with a more flexible framework that allows for consideration of what the customer wants, what the utility needs, and how to align the objectives for a positive outcome. Third parties and trade allies for this program will be the HVAC contractor community, appliance retailers, and distributors. Program information will be sent to contractors via direct mail and email identifying the equipment specifications required for incentives and providing rebate application forms as well as contractor meetings. O&R staff will visit retailer sites for in-person training on equipment eligibility, rebate amounts, and to place in-store advertising at the point of sale.

Target Market/Customer Eligibility

The target audience is primarily residential gas customers. The Program will continue to consider a variety of marketing approaches to encourage both customer and trade ally participation, including retailers and distributors.

Anticipated Participation Levels

Program participation is expected to be 1,000 customers annually throughout this ETIP cycle.

Anticipated Changes

O&R will continue to integrate its energy efficiency message to gas residential customers and utilize the CEMP to provide instant rebates for energy savings low flow measures and smart thermostats and energy messaging to reduce usage through small behavioral changes. An online audit tool will be utilized to increase awareness of customer rebate programs and to provide low-cost no-cost recommendations to lower energy use. The Company's recently completed residential market segmentation study will help to target

messaging and strengthen marketing campaigns to increase participation. Through targeted messaging, customers are more likely to realize the value of energy efficient decisions and more likely to take action.

O&R will continue to engage with elementary and middle-school students through math and science curriculums to integrate the value proposition of upgrading to energy efficiency equipment and to reinforce the utility brand recognition as the energy experts. After completing the curriculum, students will be encouraged to install energy saving kits with parents and explore the potential of additional equipment upgrades. O&R has partnered with SUEZ to provide in-classroom curriculum and is investigating the potential to provide kits containing low-flow devices that will conserve water and energy.

- **Integration with Electric and Gas Conversion Program Offerings**

O&R will continue to integrate its energy efficiency message with the residential electric program through measures that can assist customers in managing their energy use throughout the year. Smart thermostats rebated in the gas program may also be used to reduce peak electric demand during periods of high peak demand. Gas customers with central air conditioning will be cross-marketed and made aware of additional rebates to enroll in demand response initiatives in an effort to integrate program messaging. Contractors installing space conditioning equipment will be made aware of all rebate offerings available to electric and gas customers to help increase the adoption energy efficient appliances. Customers converting to natural gas will be made aware of the additional rebates for upgrading to high efficiency. Coordination between the gas conversion and energy efficiency team is ongoing.

- **Integration with CEMP and SUEZ**

O&R will leverage the CEMP to increase the dissemination of energy efficient equipment and provide instant rebates for measures that reduce energy. O&R will integrate the CEMP to create a streamlined experience where customers can learn how to reduce their energy use through simple lifestyle changes, purchase high efficiency equipment, obtain instant rebates or price discounts where applicable, and engage with third-party installers. Product and service offerings will be tailored to customers' specific needs based on their actual individualized energy usage, lifestyle behaviors, and responses to energy related questions. The CEMP directly addresses the REV objective of enhancing customer knowledge and providing tools that allows a customer to effectively manage their total energy bill. New energy efficiency measures will be identified and added to the eligible measure list to increase savings opportunities for customers. The partnership with SUEZ will increase customer awareness and acceptance of energy and water savings measures through complimentary rebates and education. Customers have responded positively to the one-stop shop CEMP and the addition of smart thermostats and low flow measures.

O&R will engage with elementary and middle-school students through math and science curriculums to integrate the value proposition of upgrading to energy efficiency equipment and to reinforce the utility brand recognition as the energy experts. After completing the curriculum, students will be encouraged to install energy saving kits with parents and explore the potential of additional equipment upgrades. O&R has partnered with SUEZ on this educational effort.

Quality Assurance/Quality Control

Program 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. Additionally, unique equipment serial numbers are verified to prevent multiple rebates issued for the same equipment. O&R staff and third-party contractors perform on-site verification inspections for at least 10 percent of participants to confirm that equipment is purchased and installed as required to meet program guidelines. New data tracking software will help streamline rebate processing, increase productivity, and minimize inaccuracies.

Incentives and Services, Program Implementation Budgets

Please refer to Table 1: Four-Year Budgets.

Primary and Secondary Performance Targets

Please refer to Table 2: Four-Year Targets.

Review of 2016 Activities and Accomplishments

Through December 2016, the Residential Gas Program expended \$460,583 and acquired 9,307 Dth. An additional 563 Dth of the fourth quarter rebate savings from the CEMP have been committed with an additional \$1,280 in funds. The program will achieve 67 percent of its goal of 14,691 Dth goal. As a result, the Company has reduced rebates to better align rebate funding with energy savings. An increase in the federal baseline for boilers diminished savings and so adjustments will be made for 2017 to increase energy savings while reducing rebate levels. Trade allies are being engaged to increase the installation of efficient equipment at the time of equipment failure and a new online tracking database with online application processing should facilitate participation for both contractors and customers.

The Residential Gas Program utilized the CEMP, email blasts, social media, outreach events, radio and cable television advertising, and contractor outreach to meet the goals of the program. A majority of the energy savings resulted from the installation of high efficiency furnaces and boilers. By working with trade allies so that high efficiency equipment is stocked and promoted at time of equipment failure, the program should meet its energy goals in 2017.

Small Business Direct Install Program

Program Design

O&R will continue the Small Business Direct Install (“SBDI”) Program offering in the small business market segment. The program provides a turn-key streamlined customer experience to business customers with an average peak demand of less than 110 kW. After the completion of a free on-site audit, an easy to understand audit report provides recommendations specific to that customer’s needs and the simple payback for their investment. The program covers up to 70 percent of the installed cost of a measure and targets

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.

Program Delivery Method

O&R will implement the program utilizing an implementation contractor and an internal O&R supplemental sales force. Tracking, analysis, and EM&V activities will continue at the measure and program level, with a more flexible framework that allows for consideration of what the customer wants, what the utility needs, and how to align the objectives for a positive outcome. Third parties and trade allies for this program will be implementation contractors, the electrical contractor community, and distributors. O&R staff will administer the 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.

Anticipated Participation Levels

Program participation is expected to be 1,100 customers annually throughout this ETIP cycle.

Anticipated Changes

O&R will continue to integrate its energy efficiency message across the portfolio of electric programs and cross market demand response initiatives to business customers. Customers will be alerted to new functionality provided by the Company's enhanced website to deliver insights to energy usage to drive efficiency informed by personalized recommendations. Enhanced partnerships with NYSERDA, trade allies, upstream distributors, and other utilities will also increase participation in the program as described below.

- **Integration with Electric Program Offerings**

O&R will continue to integrate its energy efficiency messaging with the electric program and cross-market the program with demand response initiatives. Whenever central air conditioning exists and a smart thermostat is present or is an audit driven recommended measure, the implementation contractor will make the customer aware of the additional rebate offered to enroll in the Direct Load Control Program. In distribution areas where investment in infrastructure is needed to address growth in peak demand, increased incentives may be offered to encourage installation of measures that reduce energy and are coincident with peak demand.

- **New Website Functionality**

O&R and Con Edison have partnered to upgrade their websites to provide customers an enhanced customer experience. O&R's new website will provide customers with high level recommendations

based on software analytics to identify and engage business customers with customized energy solutions. Software platforms combined with usage data may help to convert energy assessments into real projects that maximize energy savings. O&R sales staff will utilize these analytics to provide customer solutions and increase participation. With the anticipated installation of AMI in small businesses, the software analytics combined with hourly usage will become more robust with refined messaging to enable O&R to encourage both energy management and peak demand reduction during times of system need. AMI data will allow customers to view the impact of their actions to reduce their energy use through equipment upgrades, and lifestyle, behavioral changes in near real-time.

- **Statewide Coordination**

O&R will continue coordination and collaboration among utilities and NYSERDA to share best practices, facilitate program participation, and increase customer engagement to better manage energy use. The recently formed CEIC working group will serve as platform for this collaboration and has already identified areas of potential collaboration. O&R will coordinate with other utilities, NYSERDA, NYPA, and the distributor community to evaluate a statewide upstream distributor incentive initiative designed to increase the stocking and adoption of efficient equipment in the commercial marketplace. This effort will augment the effectiveness of the electric portfolio offerings and reinforce the practice of purchasing ENERGY STAR® certified products and high efficiency equipment for continued sustainable energy savings. Market transformation through a managed upstream approach will develop and enhance relationships with trade allies, distributors, contractors, and retailers through cooperative marketing and outreach efforts.

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 be engaged in performing on-site inspection designed to gauge both customer satisfaction and address any issues with program compliance. New data tracking software will help streamline rebate processing, increase productivity, and minimize inaccuracies.

Incentives and Services, Program Implementation Budgets

Please refer to Table 1: Four-Year Budgets.

Primary and Secondary Performance Targets

Please refer to Table 2: Four-Year Targets.

Review of 2016 Activities and Accomplishments

Through December 2016, the SBDI Program expended \$1,443,729 and acquired 4,119 MWh. An additional 2,669 MWh was committed in 2016 and will be closed out in 2017 for an additional \$447,277 in encumbered funds and 62 percent of its annual energy goal. A new implementation contractor began work in April 2017 with program ramp-up over the next few months leading to the under-performance for the year. The implementation contractor is now performing at expected levels and is projected to achieve the

annual program goal in 2017. A pay for performance model has proven to be an efficient implementation model. O&R's internal sales staff has assisted the implementation contractor in converting free surveys into installed projects. This successful sales support delivery mechanism will continue into 2017 and beyond.

Vertical marketing and business segmentation performed by the implementation contractor has proven to be a driving force when engaging customers to improve their bottom-line, increase worker productivity, reduce maintenance costs, and improve lighting aesthetics. Customer testimonials have also been effective in converting surveys to installations. Since the implementation contractor is only compensated when installations of measures occur, the motivation to convert the survey to an installation is paramount.

Commercial and Industrial Electric Program

Program Design

The C&I Program is designed to provide prescriptive and custom rebates to encourage C&I customers to identify energy saving opportunities, develop a building performance improvement plan, and implement cost-effective retrofit upgrade projects. The program will continue to include rebates for high efficiency lighting and controls, HVAC measures and variable speed drives, along with rebates for custom efficiency projects.

Program Delivery Method

O&R implements the Program utilizing internal staff and engaging trade allies. Trade allies may be incentivized to achieve a greater depth of savings by assessing all the customers' energy needs. Tracking, analysis, and EM&V activities will continue at the measure and program level, with a more flexible framework that allows for consideration of what the customer wants, what the utility needs, and how to align the objectives for a positive outcome. Third-parties and trade allies for this program will be the contractor community, trade allies, and distributors. O&R staff will administer the program and utilize consulting services when necessary to identify baselines, perform engineering analysis, and quantify savings.

Target Market/Customer Eligibility

The Program will target C&I customers over 110 KW, however, all C&I customers are eligible to participate. Targeted marketing is focused on high usage customer segments that will realize the most benefit from energy efficiency improvements.

Anticipated Participation Levels

Program participation is expected to be 175 customers annually throughout this ETIP cycle.

Anticipated Changes

O&R will continue to integrate its energy efficiency message across the portfolio of electric programs and cross-market demand response initiatives to business customers. Since the majority of the program savings to date has been achieved through efficient lighting upgrades, customers will be encouraged to move beyond lighting savings to focus on whole building efficiency. Meter data and software analytics may be utilized 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. O&R will investigate the potential of pairing customers with low-interest financing available through NYSERDA's Green Bank, NYPA, or other financial institutions. Enhanced partnerships with NYSERDA, trade allies, upstream retailers and other utilities will also increase participation in the Program as described below.

- **Integration with Electric Program Offerings**

O&R will continue to integrate its energy efficiency messaging across the electric portfolio and cross-market the program with demand response initiatives. Customers participating in the program that meet the specifications of the Commercial System Relief and Distribution Load Relief Programs will be targeted to participate in these programs. In distribution areas where investment in infrastructure is needed to address growth in peak demand, increased incentives may be offered to encourage installation of measures that reduce energy and are coincident with peak demand.

- **New Website Functionality**

O&R's new website will provide customers with high level recommendations based on software analytics to identify and engage business customers with customized energy solutions. Software platforms combined with usage data may help to convert energy assessments into real projects that maximize energy savings. O&R sales staff may utilize analytics to provide customers solutions to customers to increase participation. Customers over 300 kW of demand with 15 minute interval data will initially be targeted to provide a more robust energy assessment and provide a more engaging customer experience. With the anticipated installation of AMI meters that threshold will be lowered to allow all C&I customers to benefit from the enhanced analytics.

- **Self-Direct Component**

No C&I customers elected to participate in the self-direct component of the program⁷.

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 10 percent of all prescriptive projects. O&R staff and third party contractors will be engaged in performing on-site inspection designed to gauge both customer satisfaction and address any

⁷ The REV Track One Order directed utilities to implement a Self-Direct program for large energy users to administer their own energy efficiency program in lieu of participating in a utility program. While the Company made large customers aware of the program's availability, no customers opted to participate.

issues with program compliance. New data tracking software will help streamline rebate processing, increase productivity, and minimize inaccuracies.

Incentives and Services, Program Implementation Budgets

Please refer to Table 1: Four-Year Budgets.

Primary and Secondary Performance Targets

Please refer to Table 2: Four-Year Targets.

Review of 2016 Activities and Accomplishments

Through December 2016, the C&I Program expended \$1,014,288 and acquired 8,254 MWh. An additional 10,842 MWh was committed in 2016 and will be closed out in 2017, resulting in an additional \$1,354,512 in encumbered funds, and achieving 312 percent of its annual goal. This program has been the main driver in exceeding the electric portfolio goal for the 2012-2016 periods. Implementing this program with internal staff has proven to be a successful model and customers trust O&R energy experts to provide accurate energy efficiency information. On-site meetings with facility managers and decision makers have proven to be successful in convincing customers to spend resources to upgrade equipment.

Out of the 138 projects completed in the 2016, 123 were custom designed projects with the remainder prescriptive projects. In 2017, the prescriptive measure list will be expanded to simplify participation for customers and contractors. Contractor participation is a driving force while the Company's internal sales force is educating businesses to understand that these investments improve their bottom-line, increase worker productivity, reduce maintenance costs, and improve aesthetics. While 87 percent of 2016 completed projects were lighting upgrades, the Company's efforts going forward will focus on expanding customer knowledge so they will move beyond lighting upgrades and consider all building end-uses.

Annual Report Appendix

Budget and Target Activity Summary:

Below is a summary of 2016 activity through December 31, 2016. The 2016 Portfolio Administration budget category includes support functions necessary to implement successful energy efficiency programs. Costs include, but are not limited to labor, marketing, and training.

| TABLE 9: TOTAL FUNDS EXPENDED AND ENCUMBERED | | | | |
|---|------------------------------|--------------------|--------------------|--------------------------------------|
| ELECTRIC PORTFOLIO | Planned Annual Budget | Expended | Encumbered | Total Expended and Encumbered |
| <i>Commercial & Industrial Sector</i> | | | | |
| Small Business Direct Install Program | | | | |
| Incentives & Services | \$2,180,401 | \$1,137,355 | \$447,277 | \$1,584,632 |
| Program Implementation | \$600,000 | \$306,373 | \$0 | \$306,373 |
| Total Budget | \$2,780,401 | \$1,443,729 | \$447,277 | \$1,891,006 |
| C&I Rebate Program | | | | |
| Incentives & Services | \$1,307,588 | \$874,773 | \$1,134,265 | \$2,009,038 |
| Program Implementation | \$362,759 | \$139,516 | \$220,247 | \$359,763 |
| Total Budget | \$1,670,347 | \$1,014,288 | \$1,354,512 | \$2,368,800 |
| <i>Residential Sector</i> | | | | |
| Residential Efficient Products Program | | | | |
| Incentives & Services | \$246,590 | \$198,246 | \$37,442 | \$235,688 |
| Program Implementation | \$167,132 | \$174,734 | \$14,780 | \$189,514 |
| Total Budget | \$413,722 | \$372,980 | \$52,222 | \$425,202 |
| <i>Total Portfolio</i> | | | | |
| Total C&I Programs | \$4,450,748 | \$2,458,017 | \$1,801,789 | \$4,259,806 |
| Total Residential Program | \$413,722 | \$372,980 | \$52,222 | \$425,202 |
| <i>Portfolio Administration</i> | \$1,122,586 | \$525,198 | \$222,189 | \$747,388 |
| <i>Portfolio EM&V</i> | \$315,108 | \$4,920 | \$310,188 | \$315,108 |
| Total Portfolio Budget | \$6,302,164 | \$3,361,115 | \$2,386,388 | \$5,747,504 |
| GAS PORTFOLIO | Planned Annual Budget | Expended | Encumbered | Total Expended and Encumbered |
| <i>Residential Sector</i> | | | | |
| Residential Gas HVAC Program | | | | |
| Incentives & Services | \$418,818 | \$435,920 | \$1,280 | \$437,200 |
| Program Implementation | \$32,956 | \$24,663 | \$0 | \$24,663 |
| Total Budget | \$451,774 | \$460,583 | \$1,280 | \$461,863 |
| <i>Total Portfolio</i> | | | | |
| Total Residential Program | \$451,774 | \$460,583 | \$1,280 | \$461,863 |
| <i>Portfolio Administration</i> | \$58,324 | \$47,837 | \$0 | \$47,837 |
| <i>Portfolio EM&V</i> | \$26,847 | \$1,618 | \$25,229 | \$26,847 |
| Total Portfolio Budget | \$536,945 | \$510,038 | \$26,509 | \$536,547 |

TABLE 10: PRIMARY AND SECONDARY TARGETS ACQUIRED AND COMMITTED THIS YEAR

| ELECTRIC PORTFOLIO | Planned Annual Targets | Acquired This Year | Committed at Year End | Year Total |
|---|-------------------------------|---------------------------|------------------------------|-------------------|
| <i>Commercial & Industrial Sector</i> | | | | |
| Small Business Direct Install Program | 10,931 | 4,119 | 2,669 | 6,788 |
| MWh (Net) | | | | |
| C&I Rebate Program | | | | |
| MWh (Net) | 6,128 | 8,254 | 10,842 | 19,096 |
| <i>Residential Sector</i> | | | | |
| Residential Efficient Products Program | | | | |
| MWh (Net) | 2,243 | 1,564 | 260 | 1,824 |
| <i>Total Portfolio</i> | | | | |
| MWh (Net) | 19,302 | 13,937 | 13,771 | 27,708 |
| GAS PORTFOLIO | Planned Annual Targets | Acquired This Year | Committed at Year End | Year Total |
| <i>Residential Sector</i> | | | | |
| Residential Gas HVAC Program | | | | |
| Dth (Net) | 14,691 | 9,307 | 563 | 9,870 |
| <i>Total Portfolio</i> | | | | |
| Dth (Net) | 14,691 | 9,307 | 563 | 9,870 |

Discussion of Significant Differences Between 2016 Program and Administration Planned and Actual Budgets and Targets

The Company spent 67 percent of its electric administration budget while achieving 144 percent of its energy target by leveraging marketing campaigns and utilizing resources efficiently. The Company anticipates administration spending to increase as it expands its customer engagement activities.

Small Business Direct Install Program

The SBDI Program spent 68 percent of its budget to achieve 62 percent of its energy target as a result of onboarding a new implementation contractor in April 2016. After an acceptable ramp-up period, the contractor is now performing as expected.

C&I Rebate Program

The C&I Program exceeded its energy target by 212 percent while exceeding its budget by 42 percent by operating the program efficiently and rebating lower cost lighting measures to achieve the majority of program savings. The targeted approach of meeting one-on-one with decision makers has proven effective at reaching program goals with limited resources. The Company expects that rebate costs will increase as customers are encouraged to move beyond lighting and begin treating all building end-uses.

Residential Gas HVAC Program

The Residential Gas HVAC Program achieved 67 percent of its target as federal baseline increases in boilers diminished savings. The Company has reduced rebates to better align rebate funding with energy savings and will engage with the trade ally community to support increased participation.

Evaluation Measurement and Verification (EM&V):

EM&V activities were delayed as a result of issuing a Request for Proposals and working through contractor selection and contract negotiation activities. Below is a summary table of 2016 activities.

| TABLE 11: EM&V ACTIVITY EXPENDITURES | | | | |
|--|---|-----------------|-------------------|--------------------------------------|
| Electric EM&V Activity | Planned Expenditures¹ | Expended | Encumbered | Total Expended and Encumbered |
| Pomona Evaluation Project | \$150,000 | \$0 | \$150,000 | \$150,000 |
| CEMP Evaluation | \$90,000 | \$12,000 | \$78,000 | \$90,000 |
| SBDI Process Evaluation | \$46,000 | \$3,200 | \$42,800 | \$46,000 |
| C&I Impact Evaluation | \$160,000 | \$42,000 | \$118,000 | \$160,000 |
| C&I Case Studies | \$18,000 | \$0 | \$18,000 | \$18,000 |
| Residential Thermostat Study | \$48,000 | \$0 | \$48,000 | \$48,000 |
| Residential Customer Segmentation Study | \$60,000 | \$37,393 | \$22,607 | \$60,000 |
| Total EM&V Budget | \$572,000 | \$94,593 | \$477,407 | \$572,000 |
| Gas EM&V Activity | Planned Expenditures | Expended | Encumbered | Total Expended and Encumbered |
| Trade Ally Study | \$15,000 | \$3,300 | \$11,700 | \$15,000 |
| Total EM&V Budget | \$15,000 | \$3,300 | \$11,700 | \$15,000 |
| ¹ Includes carry over funding from EEPS 2012-2015 evaluation budget of \$261,812. | | | | |

| TABLE 12: WITHDRAWN OR COMPLETED EM&V ACTIVITIES | | |
|---|---------------|--|
| EM&V Activity (Electric) | Status | Details & Significant Dates |
| Activity 1 | None | |
| Total EM&V Budget | | |
| EM&V Activity (Gas) | Status | Details & Significant Dates |
| Activity 1 | None | |
| Total EM&V Budget | | |