Case 09-E-0115 – Proceeding on Motion of Commission to Consider Demand Response Initiatives

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
TARGETED DEMAND SIDE MANAGEMENT PROGRAM
ANNUAL REPORT
No. 3

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Dated: December 1, 2014
TABLE OF CONTENTS

1. INTRODUCTION ......................................................................................................................... 1
2. T&D PROJECTS TARGETED FOR DEFERRAL ............................................................................. 4
   2.1. Program Planning .................................................................................................................. 4
   2.2. Projects Targeted .................................................................................................................. 8
   2.3. Mechanisms for Load Reductions ....................................................................................... 8
3. MARKET ENGAGEMENT ACTIVITIES ...................................................................................... 13
4. SECONDARY SYSTEM TARGETING ......................................................................................... 14
5. TOTAL RESOURCE COST (TRC) .............................................................................................. 15
   5.1. Energy Efficiency Added Incentives .................................................................................... 15
   5.2. Potential CHP Incentives .................................................................................................... 16
   5.3. Steam AC Program ............................................................................................................. 16
6. PROGRAM SPENDING and BUDGET FORECAST .................................................................... 16
7. COST RECOVERY EMBEDDED IN BASE RATES FOR T&D PROJECTS TARGETED ............ 17
8. CONCLUSION ............................................................................................................................ 17
9. ATTACHMENTS ....................................................................................................................... 19

TABLE OF TABLES

Table 1: Spending and Forecast ...................................................................................................... 16

TABLE OF FIGURES

Figure 1: Targeted DSM Project Planning Process ......................................................................... 5
1. INTRODUCTION

Consolidated Edison Company of New York, Inc. (“Con Edison” or the “Company”) submits this annual report (“2014 Report”) for its Targeted Demand Side Management (“TDSM”) Program (“Targeted Program” or “the Program”) pursuant to the New York Public Service Commission’s (“Commission” or “PSC”) June 1, 2011 Order Adopting with Modifications a New Targeted Demand Side Management Program for Consolidated Edison Company of New York, Inc. (the “June Order”) requiring the Company to submit an annual report on the Program to the Commission.¹

The June Order requires that:

This report shall include details on all T&D projects that were targeted for deferral, the RFPs issued and the contracts awarded, as well as the results from its efforts on the secondary system and an accounting of all other costs incurred. The annual report shall also provide the TRC test results by project for all contracts that were entered into or other programs funded during that period. Furthermore, the report shall detail the Company’s accounting for deferring for the benefit of ratepayers of any cost recovery embedded in base rates related to the T&D projects that were deferred as a result of the Targeted DSM Program, to insure

¹Case 09-E-0115 - Proceeding on Motion of the Commission to Consider Demand Response Initiatives, Order Adopting with Modifications a New Targeted Demand Side Management Program for Consolidated Edison Company of New York, Inc., issued and effective June 1, 2011. The Annual Report date in the June Order was changed from September 1 to December 1 in a ruling by the Commission’s Secretary. Ruling on Extension Request, issued July 18, 2012.
that ratepayers are not paying for both the targeted DSM measure and the carrying charges on projects that were deferred.\(^2\)

The June Order authorized the Company to achieve 100 MW of load relief by committing funding of up to $25 million per year on (i) DSM projects in targeted networks to achieve permanent demand reductions subject to meeting certain criteria such as passing a specified cost-effectiveness test, and (ii) additional marketing and added incentives to Energy Efficiency Portfolio Standard (“EEPS”), the New York State Energy Research and Development Authority (“NYSERDA”) and New York Power Authority (“NYPA”) demand-side management programs, including coordination with other efficiency providers and program sponsors; inclusive of costs incurred to develop and manage the program.\(^3\) The June Order approved the collection of any such incurred costs on a monthly basis through the Monthly Adjustment Clause (“MAC”) mechanism and stated that actual recovery may occur beyond the annual period when the commitment was first entered into.

This 2014 Report covers the period January 1, 2014 through December 31, 2014.\(^4\) TDSM projects during 2014, described in detail below, include partial implementation of the Brooklyn Queens Demand Management (“BQDM”) Program and a completed incentive payment to one project under the targeted Steam AC program in Manhattan.

On July 15, 2014 the Company submitted a petition (“BQDM Petition”) to address forecasted sub-transmission feeder overloads on feeders supplying Brownsville 1 and 2 substations.\(^5\) The Company proposed a 52 MW mix of non-traditional customer-side (~41 MW) and utility-side (~11 MW) solutions to be implemented by 2018, in conjunction with a limited set of traditional utility-side solutions to defer more expensive traditional utility investments that include an extension of a transmission substation and the building of a new distribution substation. The BQDM Petition furthers both the objectives of the June Order through consideration of DSM solutions and the goals of the Commission as articulated in its Reforming the Energy Vision (“REV”) proceeding that include enhancing customer engagement and

\(^2\) June Order, p. 11.

\(^3\) June Order, p. 5-6.

\(^4\) The Company is providing actual data through October 31, 2014 and estimated data for November and December, 2014.

increasing penetration of distributed energy resources. Further, the proposed approach in the BQDM Petition provides an opportunity to learn about, identify, develop associated management tools, and effectively test the use of non-traditional solutions in furtherance of market animation and customer engagement objectives, consistent with objectives identified in the REV proceeding. In the BQDM petition, the Company noted its ability to focus the current year’s Targeted Program efforts on achieving the needed short-term load relief in the Brooklyn-Queens area served by the forecasted constrained sub-transmission feeders.

Under the Targeted Program, the Company acquires solutions that pass the cost-effectiveness test required by the June Order. In order to evaluate different DSM measures comparably, both for the BQDM Program and in anticipation of the need to do so in future years for similar projects, the Company has developed new modeling tools and an evaluation protocol to: (i) analyze cost-effectiveness of projects and evaluate multiple load-relief solutions with similar daily availability attributes based on both quantitative and qualitative criteria; (ii) evaluate the technical risk of various DSM technologies; and (iii) build a portfolio of solutions that, in aggregate, meet reliability needs and achieve the intended infrastructure deferral.

Customer and stakeholder engagement is a key component of the Targeted Program’s approach and also a focus of the Staff Proposal on Track One Issues in the REV proceeding. Providing customers with actionable information and opportunities to understand their energy use and identify beneficial opportunities to reduce or manage their consumption is an essential element of such engagement. During the course of 2014, the Company has held over 100 meetings with customers, community representatives, NYC representatives, vendors, regulators, state and local government agencies, non-governmental organizations (“NGOs”) and other

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7 References to areas served by sub-stations Brownsville 1 and 2 in this document refer to north central and eastern Brooklyn neighborhoods, including parts of Greenpoint, East Williamsburg, Bushwick, Bedford-Stuyvesant, Crown Heights, East Flatbush, Brownsville, and East New York, and southwestern Queens neighborhoods, including parts of Richmond Hill, Howard Beach, Broad Channel, Ozone Park, South Ozone Park, Woodhaven and Kew Gardens.

stakeholders. This series of meetings included formal meetings of the Brownsville Collaborative group established in the Company’s electric rate case proceeding.\(^9\)

As authorized by the June Order, the Company has expanded upon the incentives already available under the EEPS programs administered by the Company to small businesses that are eligible to participate in the Small Business Direct Install ("SBDI") program, and are located in the area targeted by the BQDM Petition. These incentive adders are anticipated to result in targeted project commitments of 5.6 MW by the first BQDM check point date of February 28, 2015. The Company is in the process of instituting a similar strategy of added incentives for multi-family dwellings of 4-75 units in the BQDM area. The Company is currently in the contracting stage and expects commitments of nearly 1 MW in the three to four months following commencement of the incentive offering to multi-family dwellings.

It should be noted that currently the TDSM program is controlled by Order language which was written prior to the development of the REV proceeding and some of the Order requirements are limiting in regard to the scope anticipated by the REV proceeding. For example the Company is required to apply a 25 percent discount to transmission and distribution benefits, incentives can only be added to existing energy efficiency programs which are not designed with the primary purpose of demand reduction, expenditures be primarily focused towards measure resulting in permanent load reductions, and it is required that each project have a positive total resource cost test. Such a set of conditions are limiting to a broader and more innovative set of solutions.

2. T&D PROJECTS TARGETED FOR DEFERRAL

2.1. Program Planning

The Company’s Targeted Program for each year is based upon a careful analysis of forecasted peak demands and potential DSM projects. The Company issues a new peak demand forecast at the end of the third quarter of each year. This forecast is then used to update the Company’s short- and long-term capital plans, including the preliminary Area Substation and Sub-transmission Feeder Ten-Year Load Relief Program ("Load Relief Program"), which is

Generally completed in the fourth quarter. Based upon the Load Relief Program, a preliminary “Projects to be Considered for Potential Deferral by Additional DSM” list is developed and distributed to Program staff and other internal stakeholders in the fourth quarter each year. This potential Targeted DSM project list is then reviewed for likely viable DSM projects – from both timing and MW needed perspectives.

In the first quarter each year, project cost estimates are developed for the identified load relief projects. In the second quarter, the final Load Relief Program and potential DSM projects list are issued and circulated. From the final list and engineering cost estimates, the Company evaluates the potential and cost effectiveness of DSM as load relief. Projects which are appropriate from a timing and cost-benefit perspective move forward as TDSM projects. The Company anticipates that this approach will continue to evolve in a fashion consistent with the REV proceeding. See Figure 1 below for a high-level diagram of the current TDSM project planning process.

**Figure 1: Targeted DSM Project Planning Process**

[Diagram of the Targeted DSM Project Planning Process]

5
On November 5, 2013, the Preliminary 2014-2023 Load Relief Program was published by Area Station Planning. This was followed by a final report (“Final Report”) that was issued on June 3, 2014. The Final Report includes potential DSM opportunities in two different regions, i.e., the region targeted in the BQDM petition and the Bensonhurst 2 substation (in 2022), identified for area substation load relief. The Company and Program utilized the Final Report project list for evaluation of load relief project needs, including potential DSM projects.

The extended timeframes noted above for sub-transmission and area substation load relief needs create challenges for the existing Targeted Program model (as shown in Figure 1). The model relies on a specific sequence of tasks culminating in a Request for Proposals (“RFP”) process suitable for procuring resources with highly specific technical attributes. Such model, however, is unsuitable for evaluating a diverse portfolio of resources each of which can satisfy only a select attribute or address a select portion of the reliability need individually. The Company has sought to overcome such rigidity by developing a complex suite of tools to evaluate different DSM measures comparably. These tools enable the Company to select a portfolio of solutions from a diverse range of resources that are not always amenable to solicitation from a traditional RFP approach.

Specifically, the Company has developed new modelling tools and an evaluation protocol to (i) analyze cost-effectiveness of projects and evaluate multiple load-relief solutions with similar daily availability attributes on both quantitative and qualitative criteria, (ii) evaluate the technical risk of various DSM technologies, and (iii) build a portfolio of solutions that, in aggregate, meets the reliability need over the entire duration of forecasted overload and achieves the intended infrastructure deferral. The tools allow the Company to allocate a differential value to any given hour of need during a peak day based on the expected extent of the overload during that hour. The Company matches that value with the ability and flexibility of any resource to be available and potentially dispatchable during that hour. The Company has the ability to adjust the value of such a resource based both on constraints, such as maximum run hours or maximum number of calls per day, and on technology risk driven by factors, such as maturity of technology and past demonstrations of effectiveness. The tools also enable the Company to incorporate additional qualitative criteria when evaluating such disparate resources. The Company is developing new methods to assemble efficient portfolios of resources in a manner that allows resources to compete fairly while assuring reliability and other portfolio priorities.
Multiple challenges arise when buying demand reductions with short-life measures and/or new, emerging technology. Complex issues that must be resolved include reduction of risk from diversification of technology and vendors in a portfolio, anticipated lifespan of resources, degradation, expected decline in costs of emerging technologies, arrangements of ownership and maintenance, and purchasing and contracting strategies. Given the different attributes of load relief that may be needed or available, the Company is working to determine appropriate new methods to incorporate such strategic considerations into its evaluation protocols.

The June Order describes how targeting DSM projects with existing programs could eliminate or mitigate the cost of subsequent firm contracts and resolve forecasting uncertainty prior to entering into DSM contracts. While the current TDSM authorization may be somewhat limiting in the context of the full REV approach, the Company continues to anticipate opportunities to leverage existing energy efficiency and demand management programs while also exploring new areas where a forward-looking approach such as that being pursued under the BQDM Petition is applicable. The Program will also continue to investigate opportunities to leverage other Company programs via mechanisms such as additional marketing, incentives, and/or market coordination, and initiatives such as those undertaken for storm hardening. Of particular note is the Commission Order authorizing the Company and NYSERDA to implement a demand reduction program, now known as the Demand Management Program (“DMP”), to support wholesale system reliability in the event the Indian Point Energy Center is not relicensed. The Program will seek opportunities to coordinate with the DMP where mutually beneficial or complementary benefits may be achieved; the goal is to obtain demand reductions that both reduce system peak demand and, as a corollary benefit, reduce load relief needs in specific networks. One example of such multi-program coordination is the Company’s exploration of an opportunity to develop a community micro-grid that also includes potential for solar generation and fuel switching of an emergency generating unit from diesel to gas. While this type of project is not specifically covered under the current TDSM Order, the Company is investigating opportunities to implement such an important initiative. Additionally, there may be

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opportunities to focus on other existing technologies that were eligible for Phases 1-4 of the Program, but for various reasons were not deployed by the Program’s vendors.

2.2. Projects Targeted

In late 2013, the Company identified the major near-term project as the constraint on the sub-transmission feeders serving the Brownsville 1 and 2 sub-stations. The Company identified the need to promptly build and deploy a new substation in support of growth in the demand for electricity in the area served by the Brownsville 1 and 2 sub-stations. This area covers the three electrically independent networks of Ridgewood, Richmond Hill and Crown Heights of the BQDM area. Discussions regarding the Company’s ability to defer the building of the new substation eventually resulted in the development of the BQDM project and the associated BQDM Petition.

2.3. Mechanisms for Load Reductions

The Program has undertaken a number of initiatives in 2014 that include both load reductions in the area addressed by the BQDM Petition, as well as additional customer engagement activities that serve to facilitate the dissemination of information and education to customers.

EEPS Program Adders

To produce immediate results, the Company has reviewed existing resources, in place and operating today, that may be applied to produce load reduction within the targeted networks. This has included a review of existing EEPS programs offered by NYSERDA and the Company. To capitalize on the ability of certain of these programs to respond quickly, the SBDI Program and the Multi-Family Energy Efficiency Program (“MFEE”), also a direct installation program, have been augmented to produce immediate results in the three BQDM networks where such reductions are most beneficial. Under the SBDI Program, commercial customers with a peak demand of 110 kW or less receive a walk-through survey and the identification of cost-effective electric efficiency measures. Customers are eligible to receive up to 70 percent of costs needed to install the identified measures through the SBDI program. Using funding from the Targeted Program, additional incentives of up to 30 percent of the cost were made available to such customers to enable the installation of recommended measures with no out-of-pocket costs. The
additional incentives were offered beginning on August 1, 2014. As of the submission of this Report, more than 1,400 customers have accepted work scopes for installation of measures which the Company expects to result in 4.6 MW (over 2 MW was installed by the date of this Report) of load reduction. The Company projects that at least 5.6 MW of load relief will be achieved before February 28, 2015.\(^\text{11}\)

The MFEE program offers multi-family dwellings of 4-75 units a survey identifying load-reduction measures and includes both measures installed within the dwelling units and measures installed within the common areas. The program normally covers 100 percent of the cost of measures installed within the dwelling units and requires a landlord contribution for a percentage of the cost of measures installed in the common areas. Augmenting funding available under the EEPS programs with funding from the TDSM Program, the Company intends to cover the landlord’s costs for installation for measures applied to common areas in such buildings. Current projections indicate that this initiative has the potential to produce load reduction of approximately 1 MW in early 2015.

**NYSERDA CHP Program**

The Company has worked closely with NYSERDA’s combined heat and power (“CHP”) program administrators as well as the natural gas provider in the area, National Grid (“NG”) and its CHP team, to investigate the potential for CHP development through the Targeted Program. The Company conducted an initial review of typical CHP system costs and benefits, based upon preliminary and incomplete data of very site specific projects, and found positive potential for CHP projects to pass the TRC. Not wishing to delay engagement while TRC calculations and economic evaluation continued (as explained in more detail below), the Company is working to identify viable potential candidates for new CHP system installations. This has included working with NG to identify where high pressure natural gas is available or could be readily supplied. Forty customers in the areas targeted under the BQDM Petition were identified based on their electric load and the likelihood of a sufficient thermal load to potentially justify CHP installations at their sites. During the first week of October, these customers were sent personalized letters jointly branded by the Company, NYSERDA and NG that identified benefits

\(^{11}\) An example of the SBDI progress report is provided as an attachment.
and potential available incentives for a CHP installation.\textsuperscript{12} While new CHP systems provide benefits to constrained load areas through reduction in electricity consumption from the grid, the installation projects are potentially complex and could require a significant lead time.

To achieve immediate benefits in the target area identified in the BQDM Petition, the Company is seeking additional opportunities, including among customers who have operational CHP systems installed with NYSERDA support, to “retro-commission” CHP systems which may either not be performing at their maximum capability or not operating in a manner that provides the best benefit for the customer or the constrained distribution system during times of need. The Company is working with NYSERDA to analyze data from already installed CHP systems to identify and understand systems which may be considered non-performing or under-performing for either the customer or for distribution system impact. This data analysis will also help to inform economic evaluation of potential incentives for CHP. Based the results of this data analysis, the Company plans to develop support and incentive mechanisms to system owner-operators to retro-commission or operate these units and maintain them to the maximum benefit of the customer and so they are available to support the distribution system needs going forward.

Customer Engagement

Customer and stakeholder engagement is a priority for the Company and is an important component of the TDSM approach. Providing customers with information and opportunities to understand their energy use and identify beneficial opportunities to reduce or manage their consumption is an essential element of such engagement.

Recognizing the need for this engagement, the Company has invested in developing and testing new market approaches. The Company engaged SBDI customers in the target area identified in the BQDM Petition through multiple channels including outreach to local business associations, street sweeps, direct mail and digital advertising. Street sweeps involve surveyors visiting local establishments door-to-door to conduct a free survey. In addition, a “Win Back” direct mail campaign was developed which targeted customers who were previously surveyed but did not proceed with an installation.\textsuperscript{13} This initiative was highly personalized to include the customer’s estimated energy savings from its previous survey, along with a picture of the

\textsuperscript{12} An example of the CHP letter is provided as an attachment.
\textsuperscript{13} Examples of the “Win back” Mailer and the Multi-Lingual Brochure are provided as an attachment.
surveyor and its cell phone number so the customer knew in advance who would be following up with it to try to win it back. This resulted in a response rate of three percent, which represents a 50 percent increase over the normal industry average of one to two percent. A mass mailing was also initiated to the entire BQDM area of approximately 21,000 eligible small businesses which included a multi-language brochure (English, Spanish, Chinese and Korean) along with a letter from the Company’s Director of Energy Efficiency and Demand Management detailing program highlights and encouraging customers to participate. The Company has also employed advanced communication strategies such as “geo-fencing,” a targeted digital advertising technique that will display a “banner ad” on a mobile device in the designated targeted area only.

In addition, the Company initiated a project utilizing virtual building audits to prioritize and engage high potential commercial, institutional, and multi-family buildings with demand of 100 kW and above. The virtual building audits are evaluations of buildings’ energy profiles and their potential for energy savings, using a combination of publicly available data and building specific consumption data provided by the Company. The audits identify specific areas of opportunity (for example lighting, air conditioning, refrigeration) at a cost much less and a timeframe much quicker than an actual physical audit. Such an approach allows resources to be targeted to higher potential properties by conducting focused outreach and resource support, while avoiding the need to conduct time-consuming physical surveys of all of the properties in targeted areas. The Company is making available the virtual audit reports on high potential buildings in nine networks, including networks targeted in the BQDM Petition, to engage and directly inform customers of beneficial energy efficiency and demand reduction opportunities. The audits are generated utilizing interval meter data where it is available, and monthly data if not, in conjunction with publically available business, building and other data. Approximately 500 audits have been mailed, including 301 to customers in the BQDM area, to engage customers to adopt potentially highly beneficial energy measures. The first phase of the project included the very complex task of compilation and quality validation of the various data inputs, creating the reports and dispatching them to customers. Customers were encouraged to proactively contact the Company or current contractors to pursue action in regard to the saving

14 An example of a virtual building audit customer report is attached.
15 The Company conducted the investigation of nine diverse networks (Crown Heights, Ridgewood, Richmond Hill, Williamsburg, Borough Hall, Cooper Square, Park Slope, Bay Ridge, Northeast Bronx), rather than only the BQDM networks to inform research into opportunities in networks with different demographics.
areas identified. Additionally, the Company’s account representatives have been trained to assist customers with acting upon the audit reports. Customers may respond to the Company and the responses are forwarded to the Company business development group for follow-up. Business development representatives are available to review reports with customers, encourage their participation in appropriate energy efficiency and demand reduction programs, and facilitate their enrollment in the programs. The business development group is also able to access the reports directly, utilizing the reports as informed leads for their outreach to the customer.

As an early initial step of implementing the virtual audit initiative, the Company also created a portal access point and provided training for NYPA staff to electronically access the 168 audit reports for NYPA customers. The Company, in agreement with NYPA, also dispatched copies of the reports to key NYPA customers.

The Company is also engaged with specific customers in the areas targeted under the BQDM Petition, including through working with community partners, state and city agencies, and with NGOs that focus on demand management and other energy conservation opportunities in low-income/fixed-income communities. In particular, public administered housing buildings within the area identified in the BQDM Petition, which account for over 46 MW of demand from over 60 complexes that include over 29,000 units, have been identified as having significant potential to achieve meaningful load reductions. The Company is working with the New York City Housing Authority (“NYCHA”) and a contracted partner to identify opportunities in such facilities that have the potential to be expanded to areas beyond the focused area covered under the BQDM Petition. In addition to identifying the energy and demand savings opportunities, the Company is also working to identify additional funding opportunities which may be available but may not as yet be fully leveraged.

**Steam Air Conditioning**

The Company is currently targeting long-term load relief projects in Manhattan via the Targeted Steam Air Conditioning Incentive Program (“Steam AC Program”) and provided an incentive of $247,250 to one completed and operational project in 2014. The project was satisfactorily completed in 2014 and is anticipated to avoid 317.5 kW of peak demand in the

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10 An example of the Virtual Building Audit - Building Analysis Summary used by the Company’s account executives is attached.
Madison Square network, as originally planned. Additional information on Steam AC Program features, incentive levels, eligibility criteria, targeted networks, and other program details can be found at http://www.conEd.com/steamAC.

Twenty-nine customers, with a total potential peak demand contribution of over 33 MW, have expressed interest in the Targeted Program. Three pending applications are currently awaiting supporting material. The Steam AC Program is awaiting sixteen other applications from customers who have expressed an interest in the program and have been deemed eligible by the Company to receive incentives. While there has been strong interest in the program, there have been few new applications this year. While potential customers with long equipment lives and associated end of life timing, which may not be in the immediate future, can serve to limit applications, market interest in the program persists and as such program uptake could increase going forward as current equipment is retired from use. The geographic expansion of the AC Program as part of the DMP could also increase the pool of potential projects that could participate, and the number of projects that are actually implemented.

3. MARKET ENGAGEMENT ACTIVITIES

The Company issued a broadly crafted RFI on July 15, 2014, contemporaneous with the filing of the BQDM Petition, to solicit solutions from as wide a range of potential parties as possible, that would allow the Company to address the needs outlined in the petition. While it was expected that the some of the opportunities identified through the RFI may not be actionable under the existing TDSM authorization, the process and findings are expected to be informative for future TDSM program design. Specifically, the RFI focused on gathering information from the market on both traditional and innovative emerging technologies to address the forecasted overloads in the BQDM target area. The Company responded to more than 200 stakeholder queries about the RFI process from over 30 interested parties. The Company ultimately received 78 highly diverse responses before the September 15, 2014 deadline, which included solutions both typically implemented under the Program as well as new and possibly innovative DSM solutions. The solutions varied not merely in their price or magnitude of load relief they

could deliver, but also in the duration for which they would be available, in their marketing strategies, in their complexity and level of technical detail, in their ability to implement measures on their own or requiring Company support, in their use of proprietary or open source communications, in their proponents’ experience working with customers in New York City, and in their proponents’ ability to leverage any necessary funds for the solutions they identified for rapid implementation. To account for such variability, the Company developed tools to allow for rapid evaluation of solutions using both quantitative and qualitative criteria that are based upon valuing resources’ ability to provide reliable relief for the hours they are available. The Company has also developed knowledge of both technologies and vendors to include risks associated with RFI proposals and other potential solution providers when evaluating solutions for the BQDM Petition or other such projects in the future.

4. SECONDARY SYSTEM TARGETING

Since the 2013 Program Report, the Company has continued to review the potential for applying targeted DSM below the area substation level. The Program has focused on nearer-term needs identified in the BQDM Petition and on developing expertise in managing the solicitation and evaluation of a portfolio of diverse distributed resources that can provide learning opportunities and inform the evolving regulatory process on challenges and opportunities in fostering an innovative, next generation distribution system with significant customer engagement.

The timing of primary and secondary load relief projects continues to present issues for targeted DSM applications. First, the project assessment period (potential, feasibility, and economics) is short – only one to two months. While this timeframe is sufficient for identifying engineering solutions, since system characteristics are known and engineering solutions use proven technologies with proven results (e.g., the load relief impact of a new 1000 kVA transformer is known in advance), the short timeframe makes it very difficult to accurately determine if DSM is a viable alternative by the project approval deadline (December 31).

To partially mitigate the timing challenges, the Company explored options for a comprehensive Integrated DSM (“IDSM”) market research product, before selecting to expand on a pre-existing model in use by the Company’s affiliate, Orange and Rockland Utilities, Inc.
Based upon the O&R model, the Company has now completed an Integrated IDSM Potential Model for the initially targeted networks – a dynamic, geographically specific, and technology integrated analysis tool to assess the market potential and economics of energy efficiency (“EE”) and demand management (“DM”) for cost effective deferral or avoidance of capital expenditures required to meet growing customer demand. The model will allow for better and more detailed customer engagement by identifying EE and DM potential at the technology and customer segment level – specific to the geographic areas in question. The knowledge of these potentials will contribute to the Company’s evaluation of the feasibility of deploying DSM to address specific capital infrastructure needs and will inform go-to-market strategies. The model goes beyond more traditional energy efficiency measures to give the Company a view into possible deployments of all the commercially available and near-term available technologies applicable to customers in the Company’s service territory. The IDSM model will enhance the Company’s ability to identify and market to network level, high potential market segments.

As the Company continues to seek opportunities for DSM load relief below the substation level and gains more knowledge about technology potential and market/customer needs, integration of DSM as a load relief solution could become a viable and lower risk tool for the Company. Additionally, the Company is seeking to identify opportunities for DSM deployment in networks that are forecasted to become constrained. With better and faster market evaluation capabilities and tools, the Company will be in a better position to coordinate with and meets the needs to deploy load relief alternatives.

5. TOTAL RESOURCE COST (TRC)

5.1. Energy Efficiency Added Incentives

The June Order requires that projects funded under the Program pass a TRC-based test to ensure their cost-effectiveness. For traditional energy efficiency measures, such as those being implemented under the SBDI program, cost-effectiveness as measured through a TRC test is already established through approval of such measures as eligible under the EEPS program’s stringent rules. Further, such granular establishment of cost-effectiveness of each efficiency
measure automatically extends when aggregated, such as in projects like those described in the BQDM Petition.

5.2. Potential CHP Incentives

To evaluate the feasibility of providing incentives to CHP installations, the Company conducted sample TRC analyses for some CHP systems. Results from this initial screening of CHP systems, found positive potential for CHP projects and that such projects may exceed the TRC threshold, but specific analysis would be necessary for each proposed installation for final determination of eligibility.

5.3. Steam AC Program

TRC benefit-cost test results for the Steam AC Program were provided in the 2012 Program report and are unchanged and are still applicable.

6. PROGRAM SPENDING and BUDGET FORECAST

The chart below details the spending to date, expected spending through December 31, 2014 and the forecasted spending through May 31, 2015. The Company has committed $3.7 million through November 2014 and anticipates cumulative expenditures of approximately $10.2 million through the end of existing TDSM program, as approved in the June Order, in mid-2015.

Table 2: Spending and Forecast

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<th>Expected through December 31, 2014 (Cumulative)</th>
<th>Expected through May 31, 2015 (Cumulative)</th>
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7. COST RECOVERY EMBEDDED IN BASE RATES FOR T&D PROJECTS TARGETED

The “net plant reconciliations” mechanism included in the Company’s current rate plan defers the carrying costs for projects that are included in rates, but are reduced.

The Company will defer for the benefit of customers the revenue requirement impact (i.e., carrying costs, including depreciation, as identified in Appendix 8) of the amount by which the Company’s actual expenditures for capital programs and projects result in average net plant (excluding removal costs) that is less than the amount included in the Average Plant In-Service Balances (excluding removal costs), as set forth in Appendix 8, for RYI and RY2 for each net plant category herein.\(^{18}\)

8. CONCLUSION

While there was limited need to defer capital work in the immediate aftermath of the 2008 economic downturn, the Company’s territory is now experiencing the positive impacts of an economic rebound. The Targeted DSM Program has allowed the Company to actively respond to new and dynamic load needs while being proactive in seeking new, innovative DSM strategies – such as the portfolio of solutions being sought under the BQDM Petition and the new tools such as IDSM and those being developed to evaluate a diverse set of existing and new resources as presented via the BQDM RFI. The TDSM program, in its current manifestation, was designed and approved prior to the development of the REV proceeding and the advancement of a number of innovative solutions. As such the TDSM program design has operational limitations which restrict the ability of the Company to fully engage the solutions and approaches as anticipated by REV and as envisioned by the Company through the BQDM Petition. Such limitations include the requirement to apply a 25 percent discount on T&D

benefits, the ability to primarily impact existing energy efficiency programs, and the requirement for a positive standard TRC test outcome for each project.

The development of the BQDM program, in parallel to the REV proceeding, continues to provide valuable lessons which the Company believes need to be integrated into the TDSM Program as quickly as possible.
9. ATTACHMENTS

SBDI Progress Report

CHP Letter

“Win back” Mailer and Multi-Lingual Brochures

Virtual Building Audit – Customer Report

Virtual Building Audit – Building Analysis Summary