

Appendix I

ORDER ESTABLISHING BROOKLYN/QUEENS DEMAND  
MANAGEMENT PROGRAM

STATE OF NEW YORK  
PUBLIC SERVICE COMMISSION

At a session of the Public Service  
Commission held in the City of  
Albany on December 11, 2014

COMMISSIONERS PRESENT:

Audrey Zibelman, Chair  
Patricia L. Acampora  
Garry A. Brown  
Gregg C. Sayre  
Diane X. Burman

CASE 14-E-0302 - Petition of Consolidated Edison Company of New  
York, Inc. for Approval of Brooklyn Queens  
Demand Management Program.

ORDER ESTABLISHING BROOKLYN/QUEENS DEMAND MANAGEMENT PROGRAM

(Issued and Effective December 12, 2014)

BY THE COMMISSION:

INTRODUCTION

On July 15, 2014, Consolidated Edison Company of New  
York, Inc. (Con Edison or Company) filed a petition seeking  
approval of its proposed Brooklyn/Queens Demand Management  
(BQDM) Program.<sup>1</sup> The Company submitted the petition in order to  
address an overload condition of the electric subtransmission  
feeders serving the Brownsville No. 1 and 2 substations using a  
combination of traditional utility-side solutions and non-  
traditional customer-side and utility-side solutions. The  
Company has complied with newspaper publication as required  
pursuant to Public Service Law §66(12)(b) and 16 NYCRR §720-8.1.

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<sup>1</sup> The filing was made pursuant to the recent electric rate  
Order. Case 13-E-0030, et al., Con Edison - Electric Rates,  
Order Approving Electric, Gas and Steam Rate Plans in Accord  
With Joint Proposal (issued February 21, 2014).

This is the first time that the Commission is requiring a utility to actively and vigorously work to address growth in system demand in a manner other than through traditional utility investment. By encouraging deployment of distributed energy resources according to grid needs, offering increased clean energy solutions for customers, and promoting innovation through competition, this proposal is consistent with the vision set forth in the Reforming the Energy Vision (REV).<sup>2</sup> By this Order, the Commission is making a significant step forward toward a regulatory paradigm where utilities incorporate alternatives to traditional infrastructure investment when considering how to meet their planning and reliability needs. The program established herein provides an important opportunity to consider and observe the means by which the Commission's objectives for the REV proceeding may be achieved in the marketplace, through a demand-side management program using non-traditional utility and customer-side solutions to offset or eliminate the need for traditional utility infrastructure.

#### BACKGROUND

Beginning in 2013, increased customer electric demand growth in Brooklyn and Queens began to overload the capabilities of the subtransmission feeders serving the Brownsville No. 1 and 2 substations. Con Edison forecasts that, unless the anticipated load growth in these areas is alleviated, by 2018 the subtransmission feeders serving the area will be overloaded by 69 megawatts (MW) above the system's current capabilities for approximately 40 to 48 hours during the summer months. To

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<sup>2</sup> Case 14-M-0101, Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision, Order Instituting Proceeding (issued April 25, 2014).

alleviate these adverse conditions, Con Edison reports that it would need to construct a new area substation, establish a new switching station on the existing property of the Gowanus station, and construct subtransmission feeders between the new Gowanus switching station and the new area substation by 2017. The total cost of these projects is estimated by the Company to be approximately \$1 billion. Instead, the Company would implement a number of operational measures, such as voltage reduction, in order to address the forecast overload condition in 2015. The Company also proposes to implement a new demand management program and other low cost traditional utility-side solutions specifically targeting this growth pocket, to ensure that forecasted summer overloads are addressed.

The BQDM Program is composed of a total of approximately 52 MW of non-traditional utility-side and customer-side solutions. In conjunction with the BQDM Program, the Company plans to also undertake approximately 17 MW of traditional utility infrastructure investment, consisting of capacitor bank installations that will provide 6 MW of capability and 11 MW of load transfers from the affected area to other networks.<sup>3</sup> The Company states that if the BQDM Program proves successful, its implementation, along with the 17 MW of traditional utility infrastructure investment, will defer the need for the construction of a new area substation from its forecast need date of 2017 to 2019. Furthermore, the Company indicates that the combination of the these alternate solutions in concert with a proposed 80 MW load transfer to the Glendale substation, addition of a fourth transformer at the Newtown

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<sup>3</sup> The Company forecasts that it will spend \$12.3 million to implement the capacitor bank installations that will provide 6 MW of capability and the load transfers of 11 MW.

substation, and the installation of a fifth transformer at the Glendale substation,<sup>4</sup> could potentially defer the need for a new substation and Gowanus expansion to 2026 or beyond.

Customer-Side and Utility-Side Non-Traditional Solutions

On July 15, 2014, Con Edison issued a Request for Information (RFI) seeking information and proposals from third parties for customer-side and utility-side non-traditional solutions for the BQDM Program and the Indian Point contingency plan.<sup>5</sup> Con Edison received a combined total of 78 responses to this RFI, primarily consisting of proposals for energy efficiency, energy management/audit software, energy storage, customer engagement, demand response, and proposals incorporating multiple categories. The Company has contracted with two consultants to assist it in evaluating the responses to the RFI. The Electric Power Research Institute (EPRI) will help the Company evaluate the technical feasibility of specific responses. The second consultant, Nexant, will develop a "scorecard" for the Company's use in selecting which feasible proposals to implement. Con Edison will ultimately be responsible for selecting the final portfolio of non-traditional customer-side and utility-side solutions to implement. The Company intends to commence contracting with RFI respondents as early as the fourth quarter of 2014.

Regarding customer-side non-traditional solutions, the Company anticipates implementing 41 MWs of solutions including energy efficiency, demand management, distributed generation, and other innovative solutions which may be proposed. In order

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<sup>4</sup> Con Edison forecasts that it will spend \$305 million for these projects.

<sup>5</sup> Case 12-E-0503, Proceeding on the Motion of the Commission to Review Generation Retirement Contingency Plans.

to achieve its goals in a timely manner using already-authorized funding, Con Edison intends to use some, or all, of its \$25 million budget in the Targeted Demand-Side Management (TDSM) Program toward the BQDM Program.<sup>6</sup> The Company plans to use the TDSM funding to provide a further "adder" to already existing incentives such as the Energy Efficiency Portfolio Standard (EEPS), the Indian Point demand management program, and the New York State Energy and Research Development Authority (NYSERDA) Combined Heat and Power (CHP) program in order to leverage additional load reductions in the Brownsville substations No. 1 and 2 load area. The Company also plans to use TDSM funds to target load reductions through local New York City Housing Authority (NYCHA) and other New York City agency-based programs including incentives to upgrade building envelopes, improve the efficiency of air conditioning equipment, encourage greater use of energy controls, and establish energy storage, distributed generation, or even microgrids at these locations. In addition, the Company plans to directly market to customers through the Green Team and customer account executives, as well as engage with community groups, the City, key community stakeholders, and other non-governmental organizations.

The Company has proposed a number of checkpoint dates for contracting customer-side solutions to ensure the BQDM Program meets its load-reduction goals. By January 1, 2015, the Company plans on having contracts for a total of 9 MW to be in service by June 1, 2016. By January 1, 2016, Con Edison plans on having contracts for a total of 32 MW to be in service by

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<sup>6</sup> Case 09-E-0115, Proceeding on the Motion of the Commission to Consider Demand Response Initiatives, Order Adopting with Modifications a New Demand Side Management Program for Consolidated Edison Company of New York, Inc. (issued June 1, 2011).

June 1, 2017. Finally, by January 1, 2017, Con Edison plans on having contracts for a total of 41 MW to be in service by June 1, 2018. The Company will develop backup plans which will include additional utility-side solutions or advancement of the deferred traditional utility infrastructure to meet its needs in the event that the above customer-side non-traditional solution checkpoints are not met.

Regarding utility-side non-traditional solutions, the Company seeks to employ approximately 11 MW of solutions drawn from a combination of the RFI, its own plans for the area, and a Request for Proposals (RFP) for utility-side battery energy storage to be installed in the Brownsville substations No. 1 and 2 load area. These utility-side battery solutions will be managed remotely by the Company and will automatically follow a set daily charge and discharge cycle, and will possess a manual override capability which would allow the Company's control center operator to make changes to their operations as required by system conditions or contingencies.

Con Edison's own plans for non-traditional solutions include developing one or more microgrids located at apartment complexes in the Brownsville load area. It proposes to deploy Company-owned generation on a parcel of Company-owned land adjacent to the Brownsville substations that will be synchronized to the secondary grid using a DC Link. The Company also plans on deploying Voltage and Reactive Power (Volt/VAR) Optimization on the 4 kilovolt (kV) grid to affect a 2.25% reduction in voltage, which would result in a demand reduction of approximately 2 MW. In addition, Con Edison proposes to demonstrate a Demand Management System (DMS) to manage the 4kV grid, energy storage capacity, microgrid DG unit, and Volt/VAR optimization equipment.

BQDM Program Costs and Cost Recovery

Con Edison estimates that the BQDM Program will cost a total of \$200 million, inclusive of capital costs, program administrative costs, and customer incentive payments, and requests approval to spend up to that amount on the program. The Company proposes to offset this amount by using up to \$25 million of already-approved funding from the existing TDSM budget, and recover the remaining balance of the \$175 million from customers through a surcharge.

The Company estimates that the upfront cost of the 41 MW of customer-side non-traditional solutions will be approximately \$150 million, or about \$3.7 million per MW, whereas the upfront costs of the 11 MW of utility-side non-traditional solutions are estimated at \$50 million, or about \$4.5 million per MW. Con Edison acknowledges that these per-MW unit costs are generally higher than previous network-oriented programs due to the complicated nature of the network conditions and the demographics of the area, as discussed below. The Company notes that the 12-hour peak<sup>7</sup> occurring in the Brownsville substations No. 1 and 2 load area is significantly longer than the peak durations of other targeted programs, which may increase costs by requiring certain technologies to install multiple sets of redundant equipment in order to meet the required duration of capability.

The Brownsville substations No. 1 and 2 load area is comprised mostly of residential customers (about 85% of the accounts). The remaining accounts are predominantly small commercial. According to the Company, this mix of customers will result in greater per-capita costs to achieve similar peak reduction, as compared to other demand reduction programs in the

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<sup>7</sup> The peak period is defined as 12 PM to 12 AM.



Company's service territory. The Company explains its anticipated higher per-MW unit cost of the utility-side non-traditional solutions by stating that such solutions will be more expensive, longer lasting, and will ultimately have a smaller rate impact on customers since such investments will be recovered over a longer period of time.

The Company proposes to defer BQDM Program costs and associated carrying charges and recover such costs from customers. Con Edison proposes to recover, through a new component of the Monthly Adjustment Clause (MAC), costs for customer-sided solutions over a 5-year period and utility-side costs over a 10-year period. Costs allocable to NYPA customers would be collected through a new surcharge mechanism. The Company further proposes that these recovery mechanisms be updated quarterly through filings with the Commission to update the related MAC component and the NYPA surcharge to reflect the BQDM Program costs incurred in the previous quarter, as well as any shareholder incentives due to the Company as discussed below.

#### Shareholder Incentives

In its filing, Con Edison proposed a number of shareholder incentives in order to make the Company indifferent in choosing between traditional, non-traditional, utility-side, and customer-side solutions, as well as to reward the Company for successful implementation of the BQDM Program. First, the Company proposes that it earn a return on any deferred BQDM Program costs at its overall rate of return authorized as part of its most recent electric rate proceeding. The Company states that such an incentive is consistent with the REV proceeding's goal of reducing utility company preference for traditional transmission and distribution (T&D) investment over non-

traditional or customer-side solutions.<sup>8</sup> Second, Con Edison proposes that the Commission establish a 100 basis point incentive on BQDM Program investments, incremental to the Company's authorized return on equity used when calculating the overall rate of return. The Company states that such an incentive would not only encourage it to invest in non-traditional solutions, but also give it a direct interest in the successful implementation of the BQDM Program. Finally, the Company proposes that it retain a 50% share of the annual net savings realized by customers due to the BQDM Program and other investments made by the Company, calculated as the difference between the annual carrying cost of the New Substation and Gowanus expansion package as originally anticipated by the Company and the total annual collections for the BQDM Program and all other related investments. The Company claims that the proposed incentives would align customer, Company, and Commission interests in achieving successful implementation of the BQDM Program.

Other Issues

A number of other issues were raised by the Company in its petition. The Company claims that it requires flexibility to respond to market needs and opportunities, and seeks to be able to invest in various types of business relationships with customers and DER providers. Con Edison claims that it may need to retain some or all aspects of operation of, maintenance on, and technical support for customer-side solutions in order to maximize the reliability of these assets. As such, the Company proposes that the Commission grant it broad authority to work with customers and DER providers to offer the types of business relationships which achieve the goals of the program and best

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<sup>8</sup> Case 14-M-0101, supra.

fit the needs of the customer. Potentially, these include ownership, lend/lease, and co-ownership of customer-sited behind-the-meter assets. The Company also proposes to develop and submit, as part of an implementation plan filed with the Commission, measurement and verification processes and methodologies for each type of non-traditional customer-side and utility-side solution. Finally, the Company proposes to provide the Commission with reports describing expenditures of, recoveries allocable to, and major activities of the BQDM Program on a quarterly basis.

Benefit Cost Analysis

Con Edison submitted a detailed Benefit Cost Analysis (BCA) on September 8, 2014, in its revised response to Department of Public Service staff (Staff) interrogatory (IR) DPS-1. The analysis compared the Net Present Value (NPV) of the costs and benefits of the BQDM Program, the 17 MW of traditional utility investments, the 80 MW load transfers, the installation of a fifth transformer at the Glendale substation, the installation of a fourth transformer at the Newtown substation, and the deferred construction of the new substation and Gowanus expansion package to 2024, with the NPV of the costs and benefits of the new substation and Gowanus expansion package in place by 2017. The Company estimated the costs and benefits of an assumed package of customer-side and utility-side non-traditional solutions for the BQDM Program valuation, and calculated the NPVs of each option over the estimated useful life of each asset considered. This BCA shows an NPV benefit of \$9.2 million.

On December 10, 2014, the Company submitted an updated BCA calculation. The updated BCA expanded consideration of customer-side resources, updated cost estimates of the 80 MW load transfer, updated valuation of carbon dioxide emissions,

and updated avoided costs. These updates result in further deferral of the new substation and the Gowanus expansion package from 2024 to 2026. The updated BCA shows an NPV benefit of approximately \$40 million.

COMMENTS

Pursuant to the State Administrative Procedure Act (SAPA) §202(1), a Notice of Proposed Rulemaking was published in the State Register on August 13, 2014. The comment period pursuant to SAPA expired on September 28, 2014.<sup>9</sup> Comments were received from the New York Power Authority (NYPA); the Advanced Energy Economy Institute, the Alliance for Clean Energy New York, and the New England Clean Energy Council, jointly (collectively, AEEI, et al.); the City of New York (City); the Environmental Defense Fund and National Resource Defense Council, jointly (EDF and NRDC); and, Independent Power Producers of New York, Inc. (IPPNY). Comments were also received from the New York State Department of State Utility Intervention Unit (UIU) on October 7, 2014.<sup>10</sup>

All but one of the responding parties expressed support for using alternative solutions in the place of traditional utility infrastructure investments as envisioned by the BQDM Program. A full summary of comments submitted by the six responding parties is available in Appendix A. AEEI, et al. states that they support using alternative approaches to offset traditional utility infrastructure investments as well as

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<sup>9</sup> By Notice issued September 29, 2014 by the Secretary to the Commission, interested parties were afforded an additional week (October 6, 2014) to file their comments.

<sup>10</sup> While the UIU's comments were filed a day late, the comments are accepted as they tend to further develop the record in this proceeding.

ratemaking procedures which will make the Company indifferent in choosing between traditional and non-traditional approaches to serve customers. In its comments, NYPA supports addressing utility system needs through non-traditional solutions, but asserts that BQDM Program costs and benefits should be fully and fairly valued, that BQDM Program costs allocated to NYPA should be developed fairly, and that NYPA customers should be treated fairly and comparably to other customers. NYPA seeks Commission guidance regarding its role in the BQDM Program, as well as clarification as to whether NYPA customers are eligible to receive incentive payments as a part of the BQDM Program.

In its comments, the City supports employing cost-effective alternatives to traditional infrastructure investments, but makes five general points regarding the proposed program: (1) that the City supports the use of alternatives to address electric system needs; (2) that the City has concerns regarding cost-effectiveness of the BQDM Program as proposed; (3) that some of the assumptions used by the Company in its Benefit-Cost model require closer inspection; (4) that a more formal and open process should be employed for selecting winning and losing bids of the RFI; and, (5) that the proposed shareholder incentives should be revised and reduced. The City requests that the Commission defer decision on the cost-recovery and shareholder incentive portions of the BQDM Program petition, and requests that Con Edison be directed to demonstrate that the costs the Company plans to recover through the BQDM Program are incremental to its revenue requirement currently collected through base rates.

EDF and NRDC state that while they generally support the proposed BQDM Program, they have concerns regarding benefit-cost analysis, the structure of incentive payments made to BQDM Program participants, the oversight of the RFI bid selection

process, and the level and type of shareholder incentives requested by the Company. EDF and NRDC suggest that Con Edison clarify the types of incentives it is willing to offer to BQDM Program participants, that the Company consider a critical peak pricing rate design along with subsidies for controllable load-modifying devices,<sup>11</sup> and offer guidelines for effective demand response incentives for the area. EDF and NRDC also suggest allowing for greater involvement of a pilot residential demand response and pricing program at a New York City Housing Authority (NYCHA) location as part the BQDM Program. Finally, EDF and NRDC request the continued consideration of DER employed in the BQDM Program after the program's scheduled end.

IPPNY, in general, was not supportive of the Company's proposed BQDM Program. IPPNY states that energy services are best procured by private companies versus from a regulated utility, and Con Edison's proposal to own DER as a part of the BQDM Program is in violation of the Commission's Vertical Market Power policy. IPPNY takes issue that the Company's plans to recover costs related to the BQDM Program differs from the method already used under the Targeted Demand-Side Management (TDSM) Program despite the programs similar goals, and expresses concern that Con Edison has not sufficiently shown that the benefits of the BQDM Program will outweigh its costs. IPPNY also notes concern over the Company's RFI project selection process, and recommends that the Commission reject all of Con Edison's proposed shareholder incentives. IPPNY requests that

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<sup>11</sup> In Case 13-E-0030, Con Edison filed a proposed time-sensitive pilot to establish a voluntary time-sensitive rate in all of Brooklyn and the portions of Queens supplied by the Corona 1 and 2 area substations. The comments of EDF and NRDC related to critical peak pricing rate design will be addressed when the Commission takes action on that petition.

ruling be delayed on the BQDM Program until after the Vertical Market Power policy issues are addressed in the REV proceeding.

The UIU expresses support for the Company's proposal to implement non-traditional solutions to resolve load growth and infrastructure investment needs, however, it also expresses concern with a number of aspects of the proposed BQDM Program. The UIU is concerned that: Con Edison has not demonstrated that the BQDM Program is cost-effective; that the Company has not justified its requested shareholder incentives and sharing proposals; that the Company does not align the costs and savings of implementation of the BQDM Program over the same 10-year period; and, that the RFI project selection process fails to emphasize minimization of costs. UIU requests that the Commission not approve Con Edison's petition, and that the Commission should instead direct the Company to submit a new and more detailed benefit cost analysis.

#### DISCUSSION

The proposed BQDM Program represents a significant step forward toward a regulatory paradigm where utilities incorporate alternatives to traditional infrastructure investment when considering plans to meet their planning and reliability needs. The BQDM Program established in this Order offers a unique opportunity to consider and observe the effects of the Commission objectives for the ongoing REV proceeding. The proposed BQDM Program is among the first of its kind, either in New York State or elsewhere. Therefore, the Commission considers the BQDM Program to be a demonstration of a REV-like demand-side management program using non-traditional utility- and customer-side solutions to offset or eliminate the need for traditional utility infrastructure.

The BQDM Program provides an opportunity and challenge for Con Edison to demonstrate how a market and new technologies can provide solutions for a reliability need that heretofore was met simply by deployment of additional capital on the T&D system. Con Edison is to be commended for its willingness to explore these alternatives. The Commission recognizes that, because these are initial efforts, the regulatory process needs to provide the Company the flexibility to respond to real as opposed to theoretical market responses. This flexibility should be afforded to the Company to the extent that it is needed to develop a market that will enhance consumer value, reduce risk, and ensure safe and reliable service.

While many aspects of the BQDM Program proposal are under consideration in the REV proceeding, the primary issue in this case is establishing a regulatory structure that will allow Con Edison and the market to advance solutions that can provide tangible consumer benefits. Important and critical lessons will be learned as changes to traditional utility operations and ratemaking are explored, which are consistent with the core elements of the REV proceeding. The determinations in this Order recognize that this Commission must itself innovate in order to support innovation by utilities and third parties. Demonstrations of this type will create consumer value in the near term by accelerating the achievement of the fundamental objectives of the REV proceeding.

RFI and RFP Review and Selection Process

Regarding concerns of the City, EDF and NRDC, IPPNY, and the UIU on the RFI process, the Commission finds persuasive many of the parties' arguments for the need of additional oversight of the RFI and RFP selection process. While it is and should continue to be the Company's prerogative to manage and operate its system subject to the requirements of the Public



Service Law, Commission regulations and Orders, the Company is embarking on a number of new roles in the BQDM Program.

To ensure that the Company is impartial in its selection of those projects which are most beneficial, it is imperative that the RFI and RFP project selection process be as transparent as possible while maintaining the Company's ability to enter into contracts on a timely and confidential basis, as necessary. Therefore, Con Edison is directed to retain, in consultation with Staff, an independent third-party to oversee its RFI and RFP project selection activities. This third-party is in addition to the existing engagements of EPRI and Nexant.<sup>12</sup> The third-party shall report to the Commission and Staff. The Company and Staff are to establish written protocols and scope of work for the third-party engagement and submit them to the Secretary within 60 days of issuance of this Order. Third-party oversight of this process will ensure that project selection proceeds in a timely manner and that the selection of the portfolio is fair and equitable to all. The third-party overseeing the RFI and RFP selection will file a report with the Secretary to the Commission regarding its findings and observations of the current and future RFI and RFP selection process and results once the Company has made its selections. Staff will review these filings and the Commission will take appropriate action should Staff disagree with the selection of projects. Con Edison may recover the reasonable costs of the third-party consultant through the BQDM Program. The use of a

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<sup>12</sup> To ensure the independence of this third-party review, should EPRI or Nexant be selected to perform the evaluation of the selection process, there shall be established safeguards, with input from Staff, to prevent personnel working on the technical review and economic modeling from impacting the decision making of the personnel evaluating the selection process.

third-party to evaluate the selection process allows transparency in the process of selecting alternate ownership solutions.

Con Edison has requested flexibility to respond to market needs and opportunities. The Company seeks broad authority to work with customers to offer them business terms that will achieve the desired outcomes and best fit their needs. These terms might include ownership, lend/lease agreements, and co-ownership of materials and assets installed in or on their premises and behind the utility meter. To the extent that Con Edison determines that various partnering approaches will enhance the BQDM Program, these should be brought forward to the Commission for consideration.

The success of the BQDM Program will depend to a large extent on the active participation of customers in the involved areas. Con Edison has expressed its intention to engage with community leaders and non-governmental organizations to promote participation. The Company is directed to file a detailed outreach plan within 60 days of issuance of this Order, with updates annually or more frequent if necessary.

Project selection must also take environmental justice concerns into account. The environmental justice protections enumerated in the 2009 Order related to Con Edison's demand response programs<sup>13</sup> shall apply to BQDM project selections, and are incorporated by reference in this Order. Any proposed combustion source must be closely scrutinized as to emissions, noise, location, and hours of operation. In addition, community engagement in decisions related to such sources shall be

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<sup>13</sup> Case 09-E-0115, supra, Order Adopting in Part and Modifying in Part Con Edison's Proposed Demand Response Programs (issued October 23, 2009) at 19-21.

included in the Company's outreach efforts. Moreover, projects shall not reduce the availability of public open or recreational space.

Benefit Cost Analysis

While the BCA submitted by Con Edison generally provides an acceptable framework for analysis, the Commission finds that the level of detail necessary to inform final portfolio selection decisions is currently lacking. As noted by numerous parties, it is impossible to perform a detailed and accurate BCA without full knowledge of the costs and benefits of specific projects selected for participation in the BQDM Program. The Company is directed to re-submit its BCA once the portfolio of customer-side and utility-side non-traditional solutions has been selected, and their costs and benefits finalized, using the same framework as the most recent BCA, with the revisions described below. The revised BCA must identify any non-monetized benefits of the BQDM Program in its calculation, including the benefit of learning opportunities arising from implementation of the BQDM Program, which will be instructive for the REV proceeding. The Commission expects that the Company will select a portfolio of solutions having a positive net benefit, and the expected outcomes and earnings opportunities discussed below are intended to maximize those benefits.

Although the Commission acknowledges the concerns of the City, IPPNY, and the UIU that certain individual elements of the BQDM Program may not appear cost-beneficial, their arguments are not persuasive. The proposed BQDM Program has a large scope and performing the BCA analysis at the portfolio level is reasonable. Therefore, for purposes of the BQDM Program established in this Order and without prejudging the outcome of the REV proceeding, the revised BCA submitted by Con Edison will

be evaluated on a portfolio basis, and not on a project by project basis.

The BCA framework relies on a comparison of the cost and benefits of the BQDM Program and other traditional investments versus the costs and benefits of the traditional substation project investment. A component of that analysis is the deferral of construction costs. Assuming the need for a substation is deferred until 2026 or later, the longer term value of the BQDM Program is tied to implementation of REV markets. The Company's current projections are based on a traditional approach to forecasting and satisfying system needs. The successful implementation of REV markets would create a new planning and operating environment that could eliminate the need for construction that is typical under current planning models.

BQDM Program Costs and Cost Recovery

Concerns over the total cost of the BQDM Program raised by the City and IPPNY are well founded and persuasive. While it is the Commission's intention to institute a demand management program which will save money for ratepayers compared to traditional T&D infrastructure investments, which in this instance are estimated by the Company to be approximately \$1 billion, customers need to be protected from excessive costs. Therefore, the Company may not spend more on the BQDM Program than the \$200 million requested, inclusive of the \$25 million remaining in the TDSM program budget.

While some of the customer-side projects undertaken as part of the BQDM Program will, in fact, be new and innovative, the Commission expects that the composition of the remaining projects will be time-tested measures such as energy efficiency, demand response, and combined heat and power. Furthermore, the Company anticipates spending 75% of the proposed \$200 million budget on customer-side solutions. The comments of the UIU are

also persuasive, since the difference in bill impacts could be substantial if the Company were to recover the anticipated \$150 million of customer-side costs over five years, instead of over 10 years as is currently authorized for costs related to the Indian Point Contingency Plan.<sup>14</sup> Since the scope of projects does not differ significantly from the already-approved Indian Point plan, and to mitigate customer bill impacts, Con Edison is directed to recover its deferred BQDM Program-related costs uniformly over a 10-year period for both customer-side and utility-side non-traditional solutions.

Finally, while the Commission is sensitive to the Company's need to undertake and begin recovery of non-traditional customer-side and utility-side costs as soon as possible, the Commission also finds that the comments from NYPA and the City that BQDM Program costs are most appropriately recovered through base rates to be persuasive. However, in order to effectuate the BQDM Program in a timely manner, Con Edison may begin deferring and recovering its BQDM Program-related costs through the MAC and a NYPA surcharge. The intent of the BQDM Program is to avoid or defer T&D infrastructure, and all delivery customers including the NYPA delivery rate customers will benefit from such avoidance or deferral.<sup>15</sup> Therefore, NYPA customers are to be assigned a portion of the BQDM Program costs. The Company is directed to allocate a portion of the BQDM Program costs to the NYPA delivery rate classes (those customers served under the Schedule for PASNY

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<sup>14</sup> Case 12-E-0503, supra, Order Accepting IPEC Reliability Contingency Plans, Establishing Cost Allocation and Recovery, And Denying Requests For Rehearing (issued November 4, 2013) at 36.

<sup>15</sup> See, Case 09-E-0115, supra, at 13-14.

Delivery Service, P.S.C. No. 12). The allocation shall be performed on a pro-rata basis based on forecasted rate year delivery revenues under each rate schedule to the total combined forecasted delivery revenues under the full-service (P.S.C. No. 10-Electricity) and PASNY rate schedules. To effectuate this change, Con Edison shall, within 30 days of issuance of this Order, submit compliance tariff revisions, on not less than one day's notice, incorporating tariff language regarding the collection of a portion of the BQDM Program costs from the NYPA delivery rate classes.

With the recovery of the BQDM Program costs from NYPA customers, such customers shall be allowed to participate in the program and receive payments for any services provided. In its next request for electric revenue requirement relief, Con Edison should propose to end its recovery of BQDM Program costs through the MAC and NYPA surcharges and propose to recover the balance of unrecovered costs through base rates.

#### Earnings Opportunity

The Company's proposed incentives consist of the regulated rate of return on the alternative investments, a return on equity (ROE) adder of 100 basis points tied to certain MW achievement levels, and a 50% share of the calculated savings of the alternative portfolio as compared to the traditional utility investments. The Commission finds that providing a regulated return on investment to the Company, along with the 10-year amortization period is a reasonable earnings opportunity that should make the Company indifferent to selecting the alternative solutions over traditional capital expenditures. In addition, a 100 basis point ROE adder on BQDM Program costs, tied to outcomes that the Company is expected to achieve to further Commission policy objectives, is provided as an additional benefit. These outcomes are DER market animation and

lower costs to customers. The 100 basis points will be tied to metrics related to achieving these outcomes. The Commission rejects the Company's shared savings proposal.

First, 45 basis points will be tied to performance in achieving the proposed 41 MW of alternative measures and exceeding that level, if possible. Second, 25 basis points will be tied to performance in increasing the diversity of DER in the marketplace. That is, the Company would achieve greater earnings by contracting with more DER providers, each providing a smaller market share, than by contracting with fewer DER providers, each providing a larger share. Third, 30 basis points will be tied to the Company's ability to assemble a portfolio of solutions that achieves a lower \$/MW value than the traditional investment solution presented. Such \$/MW value will be based on the present value of the lifecycle benefits and costs of the portfolio and the traditional investment. For example, if the portfolio includes measures that result in reduced energy usage, or increased renewable energy generation, those benefits can be included in the lifecycle analysis, thereby reducing the resulting \$/MW. Details of the additional earnings opportunity mechanisms are in Appendix B.

Utility DER Ownership and Vertical Market Power

In regard to Con Edison's proposal to own, operate, and/or maintain DER as part of the BQDM Program, a substantial outcome of the BQDM Program should be to increase the DER penetration in the affected Brooklyn/Queens area by primarily relying on the market to provide solutions. It is anticipated that the majority of the DER employed in the BQDM Program will be customer-owned and operated. However, the Company proposed that some DER, such as the proposed battery storage solutions placed at unit substations in the Richmond Hill network could be owned, operated, and/or maintained by Con Edison.

IPPNY asserts that allowing utility-ownership of DER is against the Commission's Vertical Market Power policy.<sup>16</sup> The City's argument that the growth of DER at this time is more important than which entity owns such assets is persuasive. The City also expressed concern that Con Edison could exploit its position in order to unfairly favor its business interests, concerns which are persuasive.

The Vertical Market Power policy statement, like any such statement of policy, is intended to provide guidance to market participants and reflect conditions at that time. Therefore, it is appropriate to evaluate this policy as the Commission moves forward with the substantial changes to the electric market contemplated by REV. The substantial tenet of the Vertical Market Power policy, however, is still in effect. The goal of REV, as implemented here, is to animate markets and foster third-party investment in addressing system needs and improving system efficiency and the decisions here regarding Vertical Market Power policy will facilitate these goals.

Regarding Con Edison's proposed ownership of battery storage solutions, it will be permitted for several reasons. First, the Commission is not precluding customer-sided battery storage, only authorizing, as appropriate, ownership by the Company where installation is on the distribution system. Batteries are similar to capacitor banks, which provide energy storage and VARs to the system, and are a standard component of the traditional distribution system. The Commission believes that there is value in gaining experience with storage-based solutions. In addition, Con Edison's ownership of batteries

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<sup>16</sup> Case 96-E-0090, et al., Orange & Rockland Utilities, Inc.'s Plans for Electric Rate Restructuring Pursuant to Opinion 96-12, Statement of Policy Regarding Vertical Market Power (issued July 17, 1998).



will facilitate the deployment and use of third-party DER. While one objective of REV is to encourage the development of a vibrant DER market without a preference for any one type of technology, there is demonstration value in particular technology projects, such as grid based storage solutions that can enhance the reliability of the grid and at the same time allow for the integration of other DER behind the meter such as solar. For these reasons, Con Edison is permitted to own battery storage solutions that are located on utility property and directly integrated into grid operations. This does not preclude ownership by third-parties. If the RFI review process results in the selection of a battery storage solution owned by a third party, the Company is encouraged to incorporate the necessary dispatch and control into the transaction to enable the Company to maximize the expected reliability and DER acceleration benefits. As the market for storage solutions develops and the battery technology matures, the Commission expects to see a trend toward market-based solutions.

For resources other than grid-based storage, Con Edison may own DER resources only as a backstop where the market fails to respond, specifically, the Company needs to meet the following five conditions, which build upon those contained in the Staff Track One straw proposal for utility ownership of DER.<sup>17</sup> Con Edison will only be allowed to own DER resources if: (1) the Company must demonstrate that a market solicitation was performed and determined to be ineffective; (2) any DER asset owned by the Company must be located on Con Edison owned property; (3) the Company must demonstrate that the DER assets it proposes to undertake and own address a substantial system need; (4) the Company must demonstrate that the benefits of its

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<sup>17</sup> Case 14-M-0101, supra, at 72-73.

ownership of such assets outweigh the costs of such ownership; and, (5) the Company must enter into a competitive solicitation for construction and operation, or otherwise demonstrate compelling reasons why such processes should not be required or are not appropriate.<sup>18</sup>

As stated above, the Commission's decisions regarding ownership of DER assets by Con Edison under the BQDM Program should not be considered precedential, as the Commission is still considering these issues in a larger context as part of the REV proceeding.

#### Reporting Requirements

The Company will prepare implementation plans including detailed measurement and verification procedures, the portfolio of projects to be completed, and are to also demonstrate that the costs incurred are incremental to the Company's revenue requirement and are fairly allocated between the Company's customers and NYPA. The Company is directed to file the implementation plan within 60 days of the issuance of this Order, and to submit annual updates to the implementation plan, or more frequently as necessary. These implementation plans shall be submitted to the Secretary to the Commission by January 31<sup>st</sup> of each year.

Within 60 days of issuance of this Order, Con Edison shall file with the Secretary to the Commission the accounting procedures necessary to effectuate the accounting and recovery of the BQDM Program costs. These procedures will be reviewed to

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<sup>18</sup> This is somewhat analogous to the manner in which transmission owners provide backstop if there is a lack of sufficient viable market solutions to meet reliability needs under the New York Independent System Operator (NYISO) Open Access Transmission Tariff (OATT). NYISO OATT, Attachment Y, §31.2.4.2.

determine whether they appropriately effectuate the accounting and recovery of the BQDM Program costs. Staff will report to us if Staff believes that the Company's procedures do not properly effectuate the accounting and recovery of costs.

Also, Con Edison is directed to submit to the Secretary to the Commission a quarterly report on its expenditures and program activity. Such reports will include all relevant details including project costs, project in-service dates, MAC recoveries, incremental costs incurred, operational savings, and all other benefits. Project costs associated with these investments will be accumulated in separate sub-accounts. MAC recoveries will be credited against the deferred project costs at the time they are received. In addition to the reporting requirements described above, the Company shall also file periodic reports regarding the 100 basis point opportunity, pursuant to the instructions contained in Appendix B.

#### CONCLUSION

The BQDM Program established in this Order is composed of approximately 52 MW of non-traditional utility-side and customer-side solutions. If the BQDM Program proves successful, its implementation along with approximately 17 MW of traditional utility infrastructure investment, will defer the need for the construction of a new area substation, the establishment of a new switching station on the existing property of the Gowanus station, and the construction of new subtransmission feeders between the new Gowanus switching station and the new area substation from their forecast need date of 2017 to 2019. Furthermore, the Company indicates that by also implementing its proposed 80 MW load transfer to the Glendale substation, installation of a fifth transformer at the Glendale substation, and installation of a fourth transformer at the Newtown

substation, it could potentially defer the new substation and Gowanus expansion to 2026 or beyond.

Con Edison will pursue the BQDM Program with a \$200 million cap on costs. Costs will be recovered through the MAC with a 10-year amortization period until base rates are reset. The RFI and RFP review and selection process will be monitored by an independent third party that reports directly to Staff. The benefit/cost framework comparing the business as usual case to the alternate portfolio case is adopted, but Con Edison is required to report the results of its revised BCA once the portfolio of solutions has been determined.

The Commission orders:

1. Consolidated Edison Company of New York, Inc., in consultation with Staff, shall retain an independent third-party consultant to oversee its portfolio selection process as described in the body of this Order. The written protocols and scope of work for the third-party engagement shall be submitted to the Secretary to the Commission within 60 days of issuance of this Order.

2. Consolidated Edison Company of New York, Inc. shall submit a revised Benefit Cost Analysis as described in the body of this Order within 30 days after selecting a portfolio of BQDM Program projects.

3. Costs incurred by Consolidated Edison Company of New York, Inc. to achieve the BQDM Program shall not exceed \$200 million, inclusive of the \$25 million remaining in the Targeted Demand Side Management program budget.

4. Consolidated Edison Company of New York, Inc. shall make the necessary tariff filings to comply with this Order, within 30 days of issuance of this Order, to be effective on not less than one day's notice.

5. Consolidated Edison Company of New York, Inc. shall amortize all BQDM Program costs over a 10-year period, and begin recovery through the MAC and NYPA surcharge as directed in the body of this Order.

6. Consolidated Edison Company of New York, Inc. shall file with the Secretary to the Commission the accounting procedures necessary to effectuate the accounting and recovery of the BQDM Program costs within 60 days of issuance of this Order.

7. During its next major electric rate proceeding Consolidated Edison Company of New York, Inc. will propose to remove unrecovered deferred BQDM Program costs from the surcharge and propose to include such costs in the Company's revenue requirement to be collected from customers through base rates.

8. Consolidated Edison Company of New York, Inc. shall, within 60 days of issuance of this Order, file with the Secretary to the Commission an Implementation Plan and Outreach Plan for the BQDM Program and shall submit an updated plan at least annually thereafter.

9. As discussed in the body of this Order, Consolidated Edison Company of New York, Inc. shall file with the Secretary to the Commission quarterly reports regarding BQDM Program activities and expenditures within 60 days after the end of each quarter.

10. The Secretary at her sole discretion may extend the deadlines set forth in this Order, provided the request for such extension is in writing, including a justification for the extension, and filed on a timely basis, which should be on at least one day's notice prior to any affected deadline.

11. This proceeding is continued.

By the Commission,

(SIGNED)

KATHLEEN H. BURGESS  
Secretary

Comments

Comments were submitted by the Advanced Energy Economy Institute, the Alliance for Clean Energy New York, and the New England Clean Energy Council, (collectively, AEEI, et al.), the New York Power Authority (NYPA), the City of New York (City), the Environmental Defense Fund and National Resource Defense Council (collectively, EDF and NRDC), the Independent Power Producers of New York (IPPNY) and the Utility Intervention Unit of the Department of State (UIU). While the nearly all of the comments expressed some level of support for the proposed BQDM program, most of the comments received recommended modifications to certain aspects of the Company's proposal. Comments submitted by parties generally present several themes: concern for the cost effectiveness of the BQDM program, concerns regarding the rigor and granularity of the Benefit-Cost Analysis performed by the Company, oversight of the RFI bid selection process, and objection to the funding and shareholder incentive mechanisms proposed by the Company.

AEEI, et al.

AEEI, et al. states that they "strongly support a regulatory approach that makes utilities indifferent between investments in traditional 'wires' solutions and distributed energy resources (DER), or even encourages DER." They "broadly support regulatory treatments that make utilities indifferent between traditional capital investments and 'non-wires' alternatives and allow utilities to be motivated by cost-effectiveness and alignment with state policy". According to AEEI, et al. the BQDM program "will be seen as a potential model for the application of REV's goals and principles going-forward." "We also concur with Consolidated Edison's assessment that the costs will be higher for the BQDM than previous network

programs... but total costs will still be lower than the traditional investment."

NYPA

NYPA, in general, supports "the general approach of the BQDM Program." "NYPA agrees with the goals of addressing imminent utility system needs through the development of non-traditional solutions, many of which are anticipated to be on the 'customer-side' of the meter," however, "NYPA seeks Commission guidance to ensure the value of [its] customers' contributions are recognized and fairly compensated" and that "NYPA's customers should be treated comparably to non-NYPA customers in this BQDM Program." NYPA has also expressed a desire for the Commission to "affirm NYPA's role" in the BQDM program, since NYPA's role regarding this proceeding is somewhat unclear. On one hand, "NYPA understands from at least some of its customers that they are looking to NYPA to take a lead role in providing demand management solutions for them," while on the other hand, "NYPA does not represent itself as the exclusive provider of such solutions, because [its] customers have the ability to solicit and procure solutions from other providers."

NYPA also requests that the Commission clarify whether its customers are eligible to receive the planned incentive payments as part of the BQDM program, and that the BQDM program costs allocated to NYPA are developed fairly. To that end, NYPA raises three principles in its comments which it believes should be applied to the BQDM Program: "First, the cost-avoidance provided by customer-side solutions should be fully and fairly valued. Second, all customers providing such value to Con Edison should be reasonably compensated. And third...our public sector customers...should be treated comparable to any other market participant." NYPA furthermore suggests that instead of recovering the costs of the BQDM program through a new



surcharge, that such costs are "more properly recovered through base delivery rates."

City of New York

In its comments, the City "...strongly supports the concept of employing alternatives to traditional infrastructure investments, provided the alternatives are cost-justified." The City makes five general points: first, that it supports the use of alternatives to address electric system needs; second, that the City has concerns regarding cost-effectiveness of the BQDM program as proposed; third, that some of the assumptions used by the Company in its Benefit-Cost model require closer inspection; fourth, that a more formal and open process should be employed for selecting winning and losing bids of the RFI, and; fifth, that the proposed shareholder incentives should be revised and reduced.

Regarding its first point, the City states that "it is appropriate for Con Edison to consider alternatives to traditional infrastructure investments to address local reliability needs and the growing demand for electricity," and "because the BQDM program many aspects of the City's and State's public policy goals, it has merit." The City expresses support for "the Company's proposal to solicit customer-based projects" and "the Company's pursuit of similar measures" despite the view held by some parties that Con Edison should not compete with other market participants in the provision of DER. The City states that with proper oversight, performance metrics, and penalties for inappropriate behavior, the issue of vertical market power can be addressed. The City explains that if alternative solutions are cost-justified, and private developers are unwilling to engage in those projects, then the Company should, because "the deployment of such measures is ultimately more important than the identity of the installer." The City

urges the Commission to establish performance metrics and other measures to monitor and control Con Edison's conduct in this regard via an interactive stakeholder process prior to the Company being allowed to engage in aspects of the BQDM program which would put it in competition with third parties.

The City expressed concern regarding the cost-effectiveness of the BQDM program. Specifically, the City notes that "of the 45 MW of customer-based measures included in the Program, Con Edison assumes that only 18 MW, or 40% will remain in service after June 1, 2019." In addition, the City notes that the \$9.2 million net present value net benefit of the BQDM program could be eliminated once the shareholder incentives are paid, or if cost-overruns during construction occur, resulting in a higher cost to ratepayers than if the Company had proceeded immediately with its plan to install a new substation. The City states that "while the concept underlying the BQDM Program is meritorious and clearly deserves exploration, some of the facts attendant to the BQDM Program may not properly justify the application of the concept as described by the Company to date."

The City also expresses concern for several of the assumptions made by the Company in its Benefit-Cost Analysis. First, issue is taken with the projected \$200 million cost of the BQDM program, stating that "the confidence level of this estimate is not high," and "there are no details or factual support for this projection." The City postulates that "the \$200 million is essentially a placeholder, and the actual cost could be substantially higher." "Because the costs of the alternative measures are not known, there is no way for the Company, or the Commission, to ensure that this aspect of the BQDM program is cost-effective," and "the Commission has never before allowed similar customer-funded utility programs to proceed regardless of their cost and cost-effectiveness." The

City proposes that the Commission direct the Company to "refine the proposal and establish clear incentive levels and spending limits that ensure its cost-effectiveness." Second, the City has concerns regarding the high-level nature of the Benefit-Cost Analysis performed by the Company, stating that "the uncertainties in the actual costs of the measures... make the validity of that overall cost-benefit analysis subject to question." Instead, the City urges the Commission to require Con Edison to require a more granular Benefit-Cost Analysis "to be conducted on an individual measures, program-by-program, or technology basis, as appropriate." Third, the City points out that the Company predicts "that 60% of the customer-based projects will last, at most, two and a half years," while also forecasting "that 66% of its customer-based measures, or almost 30 MW, will be comprised of [permanent improvement] initiatives." The City questions the Company's assumption that such installed permanent improvements will be unavailable or unproductive after June 1, 2019, and to the extent that such customer-based measures do become unproductive whether such measures are cost-effective at all. It suggests that the Company and Commission "narrow the number and type of measures and support only those that show the greatest potential for cost-effectively achieving the [BQDM] Program's goals." Fourth, the City questions Con Edison's assumption that Customer-owned distributed generation will cost roughly \$4,000 to \$5,400 per MW, whereas distributed generation owned by and sited at the Company will cost between \$2,000 and \$3,000 per MW. According to the City "the cost per MW for [DG] equipment should be the same or similar regardless of whether Con Edison or a customer or third party is purchasing it," and that it "is at a loss to see how Con Edison could construct distributed generation facilities for half the cost, or less, incurred by a private

developer if both entities are subject to the same rules and requirements." The City speculates that "there will be an unwarranted disparity in the treatment of utility-owned and third-party or customer-owned facilities by the Company," and urges the Commission to "not allow disparate treatment to continue unless it is demonstrably due to... inherent factors rather than to unwarranted forms of behavior."

The City expressed concern regarding the RFI and project proposal review process employed by Con Edison. According to the City "there should be general parameters governing the manner in which the review is conducted, and possibly a written scoring sheet that will allow for objective review (to the extent possible) and the ability to compare projects on an equivalent basis." The City complains that the Company's procedure for selecting projects to participate in the BQDM program has no appeal process for respondents whose projects are not selected, and that the Company is employing its "normal Company procedure" for selection of RFI bids for participation. The City states that "employing 'business as usual' review procedures is inadequate," and that "there do not appear to be appropriate procedures and guidelines in place to ensure that the selection process is fair and unbiased, and that it does not place undue emphasis on utility projects over customer and third party projects." The City requests that the Commission "direct Con Edison to (i) revise and refine its planned review process; (ii) disclose the details of the modified process in advance to the Commission and the marketplace; and, (iii) develop a process for the review of rejected proposals that comply with any formal solicitations."

Finally, according to the City the incentives offered to Company shareholders should be revised and reduced. The City anticipates that the shareholder incentives requested by the

Company will "will greatly exceed the projected \$9.2 million in net benefits of the BQDM program." While the City states that it is "not opposed to the Company's shareholders receiving a fair return on their capital investments, including a reasonable adder for truly innovative measures," and that it "may entertain the concept of a modest incentive for undertaking activities that present greater than normal risks or which require extraordinary efforts by the Company," the City contends that the BQDM Program will be entirely without risk to Con Edison shareholders, and "does not require extraordinary efforts in that the vast majority of the planned expenditures are for traditional utility infrastructure invests or expenses or for existing, well-established programs." The City objects to the Company's proposal to earn its full rate of return on non-capitalized expenditures, stating that there is neither precedent nor justification for the proposal. The City also objects to the Company's proposal to expedite cost-recovery of BQDM-related costs, citing that "the Company offers no justification for the expedited recovery, and there is no rational basis for the Commission to authorize it."

The City objects to the Company's proposal to recover all BQDM program costs through the MAC and a NYPA surcharge instead of through base rates. The City states that "the Company offers no explanation for its proposed deviation from [including BQDM program costs in rate base], and absent such a justification, there is no rational basis upon which the Commission could or should allow such extraordinary recovery." Next, the City questions whether the BQDM program costs, both capital and operations and maintenance, are actually incremental to its revenue requirement. The City argues that some of the "capital costs that comprise the BQDM Program arguable are not incremental to what the Company should be expending in this area

in 2014 and 2015," and requests that the Commission require the Company to "properly demonstrate that any costs for which it seeks recovery are truly incremental, and this demonstration should be made before any recovery is authorized."

The City finds fault with the Company's proposed 100 basis point incentive as well, stating that "the Company offers no legitimate reason for its requested 100 basis point adder for the Brownsville area investments, and the City submits that there is no meritorious basis for such an increased return." The City also objects to the Company's proposed 50% share of annual savings realized by customers. The City states that "there is no basis to split the annual savings from the Program, if any actually exist, between customers and shareholders," and furthermore that "it is notable that this proposal is asymmetric - the Company is not proposing to absorb any portion of the difference in the event the BQDM program turns out to be more costly than if it had proceeded immediately with the construction of the new substation and related infrastructure." Finally, the City contends that the Company should not receive "extraordinary incentives" at all. According to the City, "the BQDM program has become critically needed by the Company - as important as a traditional infrastructure investment." The City contends that "the Commission should not reward Con Edison's shareholders for failing to timely take action to maintain adequate and reliable service in the Brownsville area, and for now taking action that, in part, may avoid the imposition of penalties that otherwise may have been levied."

In closing, the City requests that the Commission "defer a decision on the requested shareholder incentives, including the requests for expedited recover and up front incremental cost recovery." The City requests that the Company be ordered to submit a revised and refined BQDM program proposal

so that "the parties and the Commission may assess whether there are truly innovative approaches that warrant additional incentives." It proposes that Con Edison "petition for incremental cost recovery after costs are incurred, provided that the Company fully demonstrates that such costs are incremental to its revenue requirement."

#### EDF and NRDC

EDF and NRDC state that they "overall support this important initiative," however they raise concerns regarding benefit-cost analysis, the structure of incentive payments made to BQDM program participants, the oversight of the RFI bid selection process, and the level and type of shareholder incentives requested by the Company. EDF and NRDC also make a suggestion for greater involvement of NYCHA in the BQDM program. Finally, EDF and NRDC lobby for the continued consideration of DER employed in the BQDM program after the program's scheduled end.

Regarding the benefit-cost analysis, EDF and NYCHA caution that while "some sets of measures may not only reduce costs to customers but also contribute to reducing carbon and toxic emissions associated with the electric system...other sets of measures may achieve costs reductions without environmental benefits, or could even yield negative externalities." EDF and NRDC state that it is "essential that the benefit-cost framework used in selecting resources for the BQDM program consider all costs, including environmental externalities and community impacts, associated with the DER under consideration," and that these costs and benefits "should not only inform the selection of measures, but should also inform the prices paid for various measures."

EDF and NRDC note that various solutions are best suited to solving certain system needs, and that each solution

has a unique set of costs and benefits. EDF and NRDC state that "by clearly identifying which periods are driving system investment needs and the full range of costs that customers might avoid depending on the measures selected, Con Ed can choose the most appropriate portfolio of distributed resources with which to respond, and evaluate their relative cost-effectiveness," and that "these relative costs and benefits of the different programs required to target different system problems need to be compared in order to have the best and most cost-effective outcome possible."

EDF and NRDC suggest a number of options regarding the incentives the Company plans to disburse to BQDM program participants. EDF and NRDC state that "Con Edison should inform firms responding to the RFI that it is willing to test out time- and locationally-specific price signals in conjunction with different kinds of tools and other kinds of incentives that could help to engage customers," because "it is important to identify what kinds of demand response rebates, pricing, technology offerings and other incentives would attract a rising number of customers so that a substantial portion of the escalating overload over the next 10 to 15 years could be mitigated through systemic demand response programs that engage thousands of mass market customers in the program area." EDF and NRDC suggest that Con Edison examine whether participation rates in existing utility demand response programs will increase if such participants are given a larger incentive, that the Company examine a critical peak pricing structure with lower off-peak or "non-critical" energy prices as an additional incentive for consumers to shift usage to off-peak hours, and that subsidizing or supplying devices to help shift demand could act as an additional incentive.



EDF and NRDC offer general guidelines for potential incentive structures as well, stating that "incentives for demand response efforts in the BQDM program should also be set in a manner that maximizes economic potential," for example, by providing customers a larger incentive in areas that have more congestion or at times when demand response is harder to procure, and that "Con Edison should maximize adoption of demand response in a manner that considers its implications for customers, particularly low income customers and other vulnerable populations." EDF and NRDC also suggest that the Company, in collaboration with the City and other agencies, "carry out a NYCHA pilot that would start in one building that could be a candidate for building envelope improvements, and has a modest number of tenants who would be willing to participate in a program designed to increase the efficiency of their air conditioners and encourage the use of tools to control thermostat settings during critical peak demand problems." EDF and NRDC note that the City's ongoing efforts to exchange inefficient air conditioning units for more efficient units could pay additional dividends if it is targeted within the BQDM program area.

EDF and NRDC also express concern regarding the review, acceptance, and rejection of RFI proposals. EDF and NRDC note that "Con Edison is playing a number of different roles as program planner, RFI initiator, reviewer of RFI responses and selection of third party firms and chief implementer," and explains that the RFI application selection process "should be as transparent as possible." Furthermore, EDF and NRDC believe that "the Commission needs to design a process that assures effective review by staff and other Collaborative parties of what Con Edison proposes to do with the RFI responses," which "may provide a basis for much more detail

about demand response programs, costs and customer engagement than the plan or petition does."

Finally, EDF and NRDC express concern regarding the Company's proposed shareholder incentives. EDF and NRDC state that "the Commission must be mindful of the precedent-setting nature" of the BQDM program, stating that "compensation to the utility for trying something new in Brownville... should not necessarily resemble the compensation to a future DSP for performing its function." For example, while "a 50/50 sharing of 'savings' may merit consideration" for the BQDM program, "the DSP should ultimately be expected to choose the most efficient level of infrastructure as a first course of action, and not be viewed as having done something especially laudable when it does not overbuild the system." Furthermore, EDF and NRDC posit that "it may be appropriate for the magnitude of any [shareholder] incentives to be dependent on the outcomes of the [BQDM] Program in the form of performance-based ratemaking." EDF and NRDC also note that "it is particularly difficult to evaluate the proposed incentives without information about the possibilities that the RFI process may have identified and the process by which particular solutions are selected." EDF and NRDC also express concern regarding the Company's forecast that only 18 MW of customer-side solutions will remain in place after 2018, stating that "it is unclear why demand response, combined heat and power, and other demand management projects should not be sustainable past 2018 with effective incentives and customer engagement and education." EDF and NRDC state that they "do not consider an on-going customer [Demand Management] program of 18 MW to be robust," therefore, "it is unclear whether the proposed incentive package is appropriate." EDF and NRDC propose that "before decision is made to proceed with the traditional 80 MW transformer and new feeder line infrastructure improvements, a

reassessment would be appropriate," and that that "the Commission's mandate for Con Edison to investigate non-traditional solutions to infrastructure capacity expansion should be a continuing one rather than constrained to a short time period as described in the proposal." EDF and NRDC do, however, posit that with proper treatment the customer-side solutions proposed in the BQDM program could continue to grow, further defer infrastructure needs in the Brooklyn/Queens area, and that "the 'savings' could be substantially greater than [the amount described by Con Edison] if demand response programs continue to grow after 2018."

#### IPPNY

IPPNY, in general, does not support the Company's proposed BQDM program. IPPNY states that "energy services should be provided cost effectively by private developers on a competitive basis rather than by T&D utilities through rate-of-return regulation," and that the proposed BQDM program is in violation of the Commission's Vertical Market Power policy. IPPNY cautions that "the Commission should proceed cautiously so it does not prejudge pending issues in the REV proceeding as a ruling on Con Edison's petition may be precedential," and recommends delaying ruling on the BQDM program until after addressing these issues in the REV proceeding. IPPNY requests that, should the Commission act on the BQDM program petition prior to the REV proceeding, the Commission should "require Con Edison to demonstrate that the benefits of the Program exceeds its actual costs by performing a through and transparent [Benefit Cost Analysis]...before authorizing Con Edison to recover such costs," that the Commission "reject Con Edison's proposed rate recovery treatment because it is inconsistent with how Con Edison recovers costs under its Targeted DSM program," and that the Commission "prohibit Con Edison from owning, or having any

commercial interest in, any DER that is employed pursuant to the Program." IPPNY also notes that the Company "does not provide any detail on the criteria it will use to 'select' projects or how projects will be compensated."

IPPNY makes several points regarding its assertion that the Commission should require Con Edison to justify the cost-effectiveness of its proposed BQDM program. IPPNY states that the Company's proposed program "fails to realize the Commission's goal of reducing costs to ratepayers," that "the absence of any requirement in its program to justify expenditures through a [Benefit Cost Analysis] is contrary to Department of Public Service Staff's Straw Proposal on Track One Issues," and that "Con Edison's program is devoid of any of this [Benefit Cost] analysis." IPPNY further states that "Con Edison disregards its own commitment in its Rate Plan because it does not demonstrate that the [BQDM] Program will meaningfully reduce the investment needed to serve the peak demand growth in the Brownsville Load area." IPPNY claims that "after calculating the impact of its proposed 100 basis point incentive and its shared savings incentive proposal, ratepayers save only \$1.4 million on total spending estimated by Con Edison to be \$1.25 billion by 2024," that "it is entirely possible that the actual costs that Con Edison incurs to meet its goals may be far greater than \$200 million and turn its estimate of a tiny benefit to ratepayers into a huge loss," and that "in essence, Con Edison's program is a costly experiment." IPPNY requests that "before authorizing Con Edison to recover Program costs, the Commission should require Con Edison to demonstrate through a [Benefit Cost Analysis] that the benefits of the Program exceeds its actual costs obtained through responses to the RFI and RFP."

IPPNY also objects to the Company's proposed cost recovery and shareholder incentives. IPPNY argues that while "the Targeted DSM program has the same main goal as the [BQDM] program - to seek and deploy demand side management to delay or displace future capital reinforcement projects needed to meet projected loads," the Company's BQDM proposal "is in stark contrast to the way that the Commission authorized Con Edison to incur and recover costs under its Targeted DSM program." IPPNY argues that Con Edison "has made no demonstration that the return it proposes to earn on [BQDM] Program expenditures is just and reasonable compensation", that "[BQDM] Program expenditures should not be treated as capital expenses... nor should Con Edison be allowed to share in any of the savings to ratepayers potentially provided by the [BQDM] program." IPPNY furthermore states that "Con Edison committed in its Rate Plan to deploy DER, to the extent practicable, to reduce investment needs on its distribution system," and that the Company "should not be rewarded for honoring its commitment." IPPNY posits that "if the Commission grants Con Edison's requested ratemaking treatment, it will set a precedent and other utilities will claim it is only fair to provide the same treatment to them," and that therefore "until these issues are resolved in the REV proceeding, the Commission should require Con Edison to use the cost recovery model in the Targeted DSM Program for recovery of its [BQDM] Program costs."

Finally, IPPNY raises concerns regarding Con Edison's proposal to own and operate DER as part of the BQDM program, and its effects on the Commission's Vertical Market Power policy. IPPNY argues that the Company's proposed cost recovery mechanism is "contrary to the Commission's long-standing policy to rely as much as possible on private investors, rather than captive ratepayers, to meet electricity needs," that "competitive

markets are harmed by cost-of-service, rate-regulated generation because it artificially depresses the market clearing price from competitive levels," and that utility-ownership of DER unjustly shifts risks of cost overruns of such projects from investors to ratepayers. IPPNY states that "problems such as cost overruns and negative impacts on competitive markets can be avoided by continuing to prohibit T&D utilities and their affiliates from owning cost-of-service, rate-regulated generation assets, this time in the form of DER, in their service territories," and proposes instead that "any contracts Con Edison signs with DER developers should be for the acquisition of the project's capability to reduce demand during peak hours" instead of utility ownership of such assets. IPPNY, therefore, requests that "the Commission should prohibit Con Edison from owning, or having any commercial interest in, any DER that is deployed pursuant to the [BQDM] program unless and until the Commission rules otherwise in the pending REV proceeding."

#### UIU

The UIU states that it "supports the Company's efforts to implement demand-reduction policies and procedures as alternatives to the typical practice of investing in infrastructure as a response to load growth," however it also expresses concern that "a number of aspects should be reviewed carefully to protect the public interest." UIU advances four topics of concern regarding the BQDM program: that Con Edison has not demonstrated that the BQDM program is cost-effective, that the Company has not justified its requested shareholder incentives and sharing proposals, that the Company does not align the costs and savings of implementation of the BQDM program over the same 10-year period, and that the RFI project selection process fails to emphasize how costs would be minimized. UIU requests that the Commission not approve Con

Edison's petition, and that the Commission should instead "direct the Company to submit a robust [Benefit Cost Analysis] and clarification of all ambiguities in the petition, for the parties' review," and to amend the BQDM program petition pursuant to UIU's proposals.

In its comments the UIU notes that it is "concerned that, if the impact of the various shareholder benefits sought by the Company is included in the [Benefit Cost Analysis] calculation, then the BQDM program may not result in any net benefit." UIU further states that "without the Commission having a robust Benefit Cost Analysis... to review, it is possible that the Commission would approve a proposal that is more expensive than the traditional approach of developing the New Substation at this time," and that "the cost data provided by the Company does not consider the components of the BQDM program separately." The UIU requests that the Commission "direct Con Edison to conduct a thorough [Benefit Cost Analysis] in the manner described in the UIU's comments on the REV Straw Proposal that were filed on September 22, 2014."

The UIU also questions the Company's proposed shareholder incentives, stating that "the Company's incentive proposal for the BQDM program may not be appropriate given that the company is currently unprepared to commence work on the traditional solution of building a new distribution substation." The UIU argues that since "the Company does not have a viable alternative to the BQDM program," then the "consumers should not be paying for an incentive for a non-traditional program that the Company itself needs in order to carry out its statutory mandate to provide adequate service." The UIU requests that the Commission "deny the Company's request for an incentive payment for the implementation of the BQDM program."

In the event that the Commission does approve shareholder incentives for the BQDM program, the UIU states that "the level should be far less than 100 basis points over the authorize rate of return being requested and should include negative adjustments for not achieving the BQDM targeted capacity." The UIU notes that the enforcement of negative adjustments would also "reinforce the Company's direct interest" in the success of the BQDM program. The UIU also requests that the Commission deny Con Edison's request for a 50% share in customer savings as a result of the BQDM program, stating that "as a matter of practice, a utility should pursue the least cost option for any project and should not be rewarded for minimizing costs," and furthermore that "Con Edison has provided no explanation for this request."

The UIU also expressed concern regarding the Company's proposed cost recovery amortization period and RFI project selection process. The UIU "generally agrees with the Company's approach to amortize costs over a period of 10 years for non-traditional utility projects," because the 10-year period was selected in the recent Indian Point Contingency Plan (Case 12-E-0503) "in order to mitigate immediate rate impacts while also aligning the recovery of allocated costs with the time period when benefits of [the Indian Point] program would generally occur." However, the UIU argues that "it is unclear how a 5-year amortization for the \$150 million of customer-sided advanced technologies and 10-year amortization for the \$50 million of non-traditional utility projects would sufficiently mitigate the price shock to consumers." The UIU, therefore "proposes the reevaluation of the amortization process to find a solution that would minimize customer rate impacts, avoid rate shock, and align costs over the life of the technology." Similarly, the UIU suggests that "costs should be given the most



weight in the Company's [RFI and RFP] project selection process."

### **100 Basis Points Earnings Opportunity**

This earnings opportunity mechanism allows Con Edison to earn up to an additional 100 basis points (bps) on BQDM program costs, split among three objectives:

1. To achieve customer sided MW reductions beyond the 41 MW proposed by Con Edison;
2. To increase the diversity of DER providers in the service territory; and,
3. To reduce the \$/MW of the BQDM Program<sup>1</sup> portfolio of solutions relative to the traditional T&D solution.

### **Value of Additional Earnings Opportunities**

For the BQDM non-traditional projects, the Company may achieve additional earnings annually over the ten-year amortization period (estimated to end 2024). Based on the Company's October 31, 2014, Benefit/Cost analysis, the net present value<sup>2</sup> of 100 basis points on non-traditional expenditures of \$160 million for the \$200 million<sup>3</sup> BQDM Program is \$5.1 million.

In order to achieve the additional earnings in any given year, the Company must meet its Reliability Performance Mechanisms.

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<sup>1</sup> The BQDM Program includes customer sided solutions, non-traditional utility sided solutions, load transfers, and substation/transmission investments.

<sup>2</sup> The NPV calculation reflects the period beginning the year 2014 through the year 2026.

<sup>3</sup> The \$200 million figure is a maximum estimated placeholder. The Company will provide the final DER investment figure when it makes its final portfolio selection of alternative solution providers/projects and finalizes the agreements. The value of the additional earnings will be updated to conform to the final figures and Commission-approved cost amortization period.

**Additional Earnings Descriptions****1. Peak Demand Reductions from Customer-Side DER (45 bps)**

- a. The reduction in the MWS of demand resulting from customer-side measures on the independent peak period of the Brownsville No. 1 and 2 substation peak-day load curve shall be calculated. This calculation shall not include demand reductions resulting from utility-side non-traditional measures.
- b. If the BQDM customer-side measures result in peak demand reductions of less than or equal to 20 MWS, the additional earnings will be zero.
- c. Beginning at a peak demand reduction of 21 MWS, the Company will earn 1.0 bps for each MW reduction (up to a maximum of 45 bps).
- d. Additional Earnings Determination
  - i. The additional earning opportunity related to the peak demand reduction will be calculated and submitted to the Secretary to the Commission by January 31, 2017, and applied to the applicable effective earnings base for the cost amortization period.
- e. Reporting Requirements
  - i. Each year, after the Company enters into contracts for the subsequent summer capability period, it must submit a report to the Secretary to the Commission that indicates total peak demand reduction in MW from customer-side DER.

**2. Diversity of Customer-Side DER Providers (25 bps)**

- a. A diversity index shall be calculated based on the portfolios of customer-side DER selected to satisfy the independent peak periods of the Brownsville No. 1 and 2 substations peak-day load curves for the 2016, 2017, and 2018 summer capability periods.

b. Additional Earnings Determination

- i. The additional earnings opportunity related to Diversity of Customer-Side DER Providers will be based on the normalized entropy index.<sup>4</sup>
  1. Con Edison will earn one additional basis point for each 0.01 increase in the normalized entropy index over the baseline level of 0.75.
  2. The maximum additional earnings opportunity of 25 basis points related to DER diversity occurs when the value of the normalized entropy index reaches 1.0.
  3. To the extent that the portfolio includes multiple DER solutions from the same market provider, the total MWH of all solutions from such a provider will be combined when calculating market shares for inclusion in the index.
  4. To the extent that the portfolio includes DER provided by both a Con Edison affiliate and customer-side DER owned by the Company, the total MWH of all such solutions will be combined when calculating market shares for inclusion in the index.
- ii. The additional earnings opportunities associated with Diversity of DER Providers will be calculated and submitted to the Secretary to the Commission by January 31, 2017, and applied to the applicable effective earnings base for the cost amortization period.

c. Reporting Requirements

- i. Each year, after the Company enters into contracts for the subsequent summer capability period, it must submit a report to the Secretary to the Commission that describes its portfolio of customer-side DER and associated contracts to meet its peak load requirements.

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<sup>4</sup> The normalized entropy index shall be calculated as follows:

$$\text{normalized entropy index} = \frac{-\sum_{i=1}^N S_i \ln(S_i)}{\ln(N)}$$

where N is the number of DER Providers and  $S_i$  is the share, in MWHs, of each provider in the selected portfolios.

### 3. Reduction in Dollar/MW Costs (30 bps)

- a. This additional earnings opportunity is based on the percentage reduction in the Dollar (\$)/MW unit cost that the Company is able to achieve under the BQDM Program portfolio and associated investments as compared to the traditional T&D solution.
  - i. The \$/MW shall be based on the net present value (NPV) of the lifecycle benefits and costs of each approach.<sup>5</sup>
  - ii. The lifecycle costs will be calculated by January 31, 2017 and will be calculated using the Company's then-applicable Weighted Average Cost of Capital.
  - iii. Calculate the lifecycle costs of the portfolio using the data on Tables 1 through 4 below.
- b. For every full 1% reduction in the \$/MW for the BQDM Program portfolio and associated investments relative to the traditional T&D investment, up to a 30% reduction, the Company may earn 1 bp (up to 30 basis points).
- c. The baseline \$/MW unit cost of the traditional T&D investment solution is \$6 million/MW based on the Company's estimated NPV revenue requirement of \$915.6 million to achieve a total capability of 152 MWs.
- d. Additional Earnings Determination
  - i. The additional earnings associated with Reduction in Dollar/MW Costs will be calculated and submitted to the Secretary to the Commission by January 31, 2017, and applied to the applicable effective earnings base for the cost amortization period.
- e. Reporting Requirements
  - i. The Company must provide a report to the Secretary to the Commission by January 31, 2017, that indicates total lifecycle costs, benefits and MWs for the BQDM Program portfolio and associated investments.

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<sup>5</sup> This reduction in dollar/MW costs is to the lifecycle cost of the traditional T&D investment solution versus the lifecycle cost of the BQDM Program portfolio and associated investments. This differs from the dollar/MW costs for the non-traditional solutions discussed in the Order, which are upfront costs.

<b>TABLE 1: Capital Structure</b>				
	Ratio	Cost Rate	Weighted Average Ratio	Pre Tax Average Ratio at 60.385%
Long Term Debt	50.56%	5.23%	2.64%	2.64%
Customer Deposits	1.44%	1.25%	0.02%	0.02%
	52.00%		2.66%	2.66%
Common Equity	48.00%	9.20%	4.42%	7.31%
<b>Total</b>	<b>100.00%</b>		<b>7.08%</b>	<b>9.98%</b>

<b>TABLE 2: State and Federal Taxes</b>			
Base			1.0000
SIT		6.5%	0.0650
MTA (25.6% of SIT rate)		1.7%	0.0166
			0.9184
FIT		35.0%	0.3214
Net Retained			0.5970
Tax Amount			0.4030

<b>TABLE 3: Revenue Gross Up Factor (Case 13-E-0030)</b>			
GRT Revenue Taxes		2.900%	1.0299
		-	-
LPC Revenues		0.385%	0.9962
Uncollectible Factor		0.820%	1.0083
Advertising		0.080%	1.0008
<b>Total Revenue Gross Up</b>		<b>3.415%</b>	<b>1.0354</b>

No.	Description		Net Book Life	Tax Life	In Service	Book Life	Salvage Factor	Net Book Rate
1	Original CSS 5-Year Program	treat as Reg Asset; 100 basis point Incentive (1%)	10	1	various			
2a	Battery Installation (2 MWs by 2017)	treat as Plant; 100 basis point incentive (1%)	10	7N	2016/17	10	0%	0
2b	Utility Solutions (9 MWs - 3MWs 2016 and 6MW more 2017)	treat as Plant	10	7N	2016/17	10	0%	0
3a	135 MW from Brownsville to Gateway Park SS	treat as Plant	50	20N	various	50	-25%	0.025
3b	5 MW from Brownsville No. 1 to Glendale	treat as Plant	50	20N	2016	50	-25%	0.025
3c	6 MW from Brownsville No. 1 to Water St.	treat as Plant	50	20N	2016	50	-25%	0.025
3d	80 MW from Brownsville to Glendale	treat as Plant	50	20N	2019	50	-25%	0.025
4a	Capacitor Installation	treat as Plant	50	20N	2016	50	-25%	0.025
4b	Glendale 5th Transformer	treat as Plant	50	20N	2019	50	-25%	0.025
4c	NEW Gateway Park SS	treat as Plant	50	20N	various	50	-25%	0.025
4d	NEW Gowanus Expansion	treat as Plant	50	20N	various	50	-25%	0.025
4e	Newtown 4th Transformer	treat as Plant	50	20N	various	50	-25%	0.025