

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, abstained

CASE 14-M-0101 - Proceeding on Motion of the Commission in
Regard to Reforming the Energy Vision.

MEMORANDUM AND RESOLUTION ON DEMONSTRATION PROJECTS

(Issued and Effective December 12, 2014)

BY THE COMMISSION:

INTRODUCTION

Demonstration projects will be an important step in implementing Reforming the Energy Vision (REV) policy changes and will inform decisions with respect to developing Distributed System Platform (DSP) functionalities, measuring customer response to programs and prices associated with REV markets, and determining the most effective implementation of distributed energy resources (DER). These projects are also a means of presenting REV to the customer and gauging their receptiveness to REV technologies, products, and services. Data collected from these projects will inform regulatory changes, rate design, and the most effective means to integrate DER on a larger scale.

By this memorandum and resolution, the Commission encourages utilities and third parties that have not already done so to begin working together at this time to develop potential demonstration projects. Although the Commission has

not yet acted on REV Track One in general, and cannot do so until the State Environmental Quality Review Act (SEQRA) environmental review process is completed, the Commission urges utilities and third parties to commence consultations and to begin developing proposals so that they will be prepared to initiate their proposals once the Commission has made its REV Track One policy determinations.

BACKGROUND

In its August 22, 2014 Straw Proposal,¹ Staff recognized the need for demonstration projects to develop Distributed System Platform (DSP) functionalities and measure customer response to programs and prices associated with REV markets. A comment period, including a September 22, 2014 deadline, was established for the submission of responses to the Straw Proposal.

The Commission also notes that there are various pilot or demonstration projects currently underway or proposed by the utilities within New York State. These projects are also expected to provide valuable feedback and to inform the REV initiative.

Central Hudson Gas & Electric Corporation (Central Hudson) has begun a pilot project to test its communication system with certain intelligent devices in a portion of its service territory. In its most recently filed rate case,² Central Hudson proposed a system-wide communications and distribution automation project designed to enable distribution

¹ Case 14-M-0101, Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision, Developing the REV Market in New York: DPS Staff Straw Proposal on Track One Issues (Issued August 22, 2014) (Straw Proposal).

² Case 14-E-0318 - In the Matter of Central Hudson Gas & Electric Corporation.

system control and optimization and allow for the future integration and analysis of DER.

In July 2014, Consolidated Edison of New York, Inc. (Con Edison) filed a petition for approval of a non-traditional customer-sided and electric utility-sided demand management program intended to defer major transmission and distribution capital investments that would otherwise be needed to address increased electricity demands in its Brooklyn and Queens service areas. The proposed program calls for distributed energy resources including demand management, energy efficiency and distributed generation.

National Grid Corporation (National Grid) in partnership with EPRI, the University of Buffalo and the Buffalo Niagara Medical Campus, will study the feasibility of a microgrid system in the city of Buffalo. This project was one of the award recipients of the funding announced by in February 2014 for the development or research of new techniques and "Smart Grid" technologies that add resiliency and efficiency to the state's electric grid. The projects were awarded funding from the New York State Energy Research and Development Authority's (NYSERDA) Electric Power Transmission and Distribution Smart Grid Program. In order to qualify for funding, recipients had to propose projects that improve the reliability, efficiency, quality, and overall performance of the electric power delivery system in New York State. Proposals were required to demonstrate significant statewide public benefit and quantify all energy, environmental and economic impacts.

Iberdrola USA (Iberdrola) previously issued a request for information regarding the design, planning, implementation and management of a "smart community" demonstration program. Through various investments, programs and partnerships, the

proposed project would incorporate distributed energy resources including distributed generation, energy storage, energy efficiency, demand management and storage; advanced metering infrastructure; distribution system automation including volt/var optimization; home and building management; and, home and building energy management systems.

In its rate case filed November 14, 2014,³ Orange and Rockland Utilities, Inc. (Orange and Rockland) proposed an Advanced Metering Infrastructure (AMI) project in the Rockland County portion of the company's service territory which will, according to the company, provide significant benefits to customers in the areas of: managing their energy use, participation in Energy Efficiency ("EE") and Demand Response ("DR") product offerings, improved electric outage detections and restoration, and enhanced system engineering and planning. The company also claims that the investment will reduce operating costs.

In addition to individual utility pilot and demonstration projects, New York State has initiated a state-sponsored competition to encourage the development of community microgrids to spur clean distributed energy and improve resiliency and reliability in the wake of Super Storm Sandy.

The comments received on the Straw Proposal indicate that there is general support among parties for such demonstration projects. Some parties also raised concerns about the criteria to be applied to such projects and about cost recovery issues.

³ Case 14-E-0493 - Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Orange and Rockland Utilities, Inc. for Electric Service.

SUMMARY OF COMMENTS

A majority of the comments received on demonstration projects show support for the quick implementation of such projects.⁴ The comments recognize the need to test different methods of implementing DER and gauging customer acceptance to REV initiatives and generally accept the criteria proposed in the Straw Proposal.

Advanced Energy Economy Institute, Alliance for Clean Energy New York, Inc. and New England Clean Energy Council (collectively, "the Advanced Energy Community") believe that the criteria established in the Straw Proposal may be too restrictive and express concern that demonstration projects might have difficulty meeting all the proposed requirements.⁵ Joint Utilities express a similar sentiment and propose a more flexible approach that would encourage innovation and allow utilities to propose their own demonstration projects at times when such opportunities develop.⁶

On the other hand, AARP New York (AARP) and Public Utility Law Project of New York, Inc. (PULP) recommend additional criteria to govern the development and approval of

⁴ Including the comments of Agreen Energy LLC, Vanguard Renewables, LLC, Center for Climate Change Law at Columbia University, Environmental Advocates of New York, New York Public Interest Research Group, Pace Energy and Climate Center, Sierra Club, Vermont Energy Investment Corp., ChargePoint, Inc., Clean Coalition, Consumer Power Advocates, Direct Energy, Energy Technology Savings LLC, Infinite Energy, Inc., Multiple Interveners, Simple Energy, The Nature Conservancy, The New York Battery and Energy Storage Technology Consortium, The New York Geothermal Organization, and The NRG Companies.

⁵ Comments of the Advanced Energy Community, p. 34-35.

⁶ Comments of Joint Utilities, p. 24-25.

demonstration projects.⁷ These parties propose that while demonstration projects are needed, those with cost recovery from ratepayers should require pre-approval. Further, AARP and PULP believe that utilities need to agree that the recovery of costs in a future rate case will be subject to an evaluation of prudence. Lastly, these parties state that low income customers should not be required to pay for additional technology and that programs should be designed in a way that provides bill credits or rebates for reducing usage instead of punitive prices resulting from their lack of resources to acquire DER technology.

Finally, Exelon Corp. suggests that we should only proceed with demonstration projects after some of the foundational REV issues are addressed.⁸ These issues include the method of ensuring fair compensation for use of the grid by all customers and confirming the role of existing, clean, base load resources such as nuclear.

DISCUSSION AND CONCLUSION

The Commission will make specific determinations addressing the individual comments when it acts on REV Track One following completion of its SEQRA environmental review. However, the Commission encourages utilities and third parties that have not already done so to begin working together at this time to develop potential demonstration projects and to consult with potential stakeholders in the affected communities so that they will be better prepared to act promptly once the Commission has made its REV Track One policy determinations. To assist in

⁷ Comments of AARP New York and Public Utility Law Project of New York, Inc., p. 16-17.

⁸ Comments of Exelon Corp., p. 28.

that effort, the Commission makes the observations set forth below.

Flexibility

The criteria to be established are intended to be appropriately flexible to achieve the goals the Commission wishes to accomplish with demonstration projects. The criteria being considered are set forth in Appendix A attached hereto, and are further discussed below. It is not the Commission's intent to specify the types of projects expected, but instead to establish guiding criteria that are not overly-restrictive and do not impose an insurmountable barrier to utilities and third parties as they develop projects. Proposals that depart from the criteria should contain explanation for the departure.

Demonstrating Innovation

The criteria are intended to elicit projects that provide useful experience with respect to DER implementation and DSP functionalities. It will be important to have a portfolio of demonstration projects that will test various technologies, business models, DER performance, and customer participation levels. Therefore, in developing demonstration projects, consideration should be given to the diversity of projects and the relevant information they will provide to the overall REV initiative. The portfolio of technology neutral projects should include, at a minimum, those that will test various DER technologies and products that can be integrated into the utility distribution system planning and operations; customer engagement and response to various programs, pricing structures and technologies; and DSP technologies that will allow for the integration, visualization, and market operations related to DERs.

Value Distribution

Among the many things the Commission is considering are methods for defining and quantifying how value is distributed between the customer, utility, and third party service providers, how revenue streams for these projects will be identified and supported by the allocation of costs among customer classes, the best way to consider cost recovery for these projects so that the cost recovery process itself does not become a barrier to the encouragement of such projects, and the best way to leverage private investment as a component of projects in order to minimize ratepayer costs.

Partnerships

The criteria should promote partnerships between utilities and third parties. Third party DER suppliers and/or service companies can contribute business know-how and capital to provide products and services that will present value to the consumer. Thus, when developing demonstration projects, utilities should seek to bring in a third party partner(s) to provide business experience and accelerate the development of a competitive market. Utilities should strive to support demonstration project proposals where third parties use their own capital, whether in cash or in kind, as indicative of their willingness to invest in the New York market.

Customer Engagement

Further, utilities should explore opportunities in their demonstrations to work with and include various residential, commercial, institutional and industrial customer participants. Customer engagement and measuring customer response to DER and data sharing will be a crucial element of these demonstrations. Demonstrations should include opportunities for third parties to demonstrate how various rate designs, information sharing, and other technologies can be used

to benefit consumers, encourage customer participation, and achieve REV's system efficiency and bill management objectives.⁹ Data on customer acceptance of DER and data sharing will provide commercial and operational benefits when implementing these programs on a larger scale. Utilities should submit proposals that involve various customer groups across the state.

Market Solutions

Rather than following a traditional RFP/RFI method where the utility has pre-diagnosed the solution, instead utilities should identify the problem and the market should propose solutions, leaving the utility to determine which third party proposal provides the most valuable solution. In that regard, as part of utility outreach to potential third party partners, utilities should provide sufficient data to enable market participants to propose solutions to clearly defined problems, as data sharing may be essential to enable market participants to propose solutions. Also, proponents of demonstration projects should strive for third party ownership of DER, keeping in mind that any regime of third party ownership must be done in a manner that ensures safety, reliability and consumer protection.

Developing Competitive Markets

When demonstrations are necessarily bilateral, and therefore may not be competitive per se, it may also be desirable for utilities and third party partners to propose rules that will further the creation of competitive markets in the future in the form of data, terms, standards, or the like.

Ensuring Cyber-security

The Commission sees cyber-security of both customer data and utility system data as a critical concern. Projects

⁹ For example, demonstrations can test demand response, real time, or time of use pricing to better understand how to motivate different consumers.

should be developed with the aspiration of maintaining customer data privacy and keeping platform operations safe and secured. Data security will be entrenched in the standards and protocols needed to develop a DSP and needs to be considered when developing protocols to connect new end-use technologies and when evaluating new products and systems.

Scalability

The Commission is also considering criteria to ensure the scalability of the technologies and products tested to a larger percentage of customers both in the same customer class and among different classes and service territories so as to maximize the potential to increase DER penetration throughout New York State, and the speed in which substantive results can be achieved. In addition, demonstrations should develop strategies that clearly define outputs and provide a means of measuring and sharing data in order to inform DSP development.

Cost Recovery

The Commission, in promoting development of demonstration projects recognizes that utility rates may not currently provide the revenue necessary to support such activity. The absence of a cost recovery mechanism should not stand as an impediment to the development and implementation of demonstration projects. Utilities should bring proposed cost allocation methodologies and cost recovery mechanisms to the Commission for consideration.

RESOLVED:

1. The six major investor-owned electric utilities and third parties are encouraged at this time to begin working together to consult with potential stakeholders in the affected communities and develop potential demonstration projects to inform the Reforming the Energy Vision (REV) initiative so that

they will be better prepared to act promptly to initiate their proposals once the Commission has made its REV Track One policy determinations, as discussed in the body of this memorandum and resolution.

2. The six major investor-owned electric utilities are also encouraged to propose cost allocation methodologies and cost recovery mechanisms that would enable implementation of demonstration projects.

3. The Secretary shall issue a notice in substantial conformance with Appendix B attached hereto.

4. This proceeding is continued.

By the Commission,

(SIGNED)

KATHLEEN H. BURGESS
Secretary

Principles for REV Demonstrations

The intent of early REV demonstrations is to advance the development of new utility and third party service or business models and to gain experience with integration of distributed energy resources. Demonstrations will inform regulatory changes, rate design, and provide utilities with the opportunity to learn how best to use these resources in system development, planning, and operations.

1. REV demonstrations should include partnership between utility and third party service providers. These partnerships may be unique to each demonstration depending on the situation. Utilities should endeavor to support demonstrations where third parties use their own capital.
2. The utility should identify questions it hopes to answer or problems or situations on the grid and the market should respond with solutions. Hence, third party participation through a traditional RFP/RFI method where the utility has pre-diagnosed the solution(s) does not meet this requirement. Data sharing will be essential to enable market participants to propose solutions.
3. Demonstrations should delineate how the generated economic value is divided between the customer, utility, and third party service provider(s). The demonstrations should propose how much of the projected capital expense needs to go into the rate-base versus competitive markets.
4. The market for grid services should be competitive. The regulated utility should only own distributed energy resources if market participants are unwilling to address the need and the utility is acting as the service provider of last resort (in this instance, "provider of last resort" and "needed" means that no one in the market is providing the solution and the distributed solution is less costly than alternatives for the problem).
5. While some demonstrations may be bilateral, and therefore may not be "competitive" per se, utilities and service provider should propose rules (data, terms, standards, etc.) that will help create subsequently competitive markets. In addition, utility and third party providers need to establish regulatory proposals to ensure safety, reliability and consumer protection. Service providers can retain intellectual property that results from base data that would be available to others.

6. Demonstrations should inform pricing and rate design modifications. For example, a component of a trial can test demand response, real time, or time of use pricing to better understand how to motivate different consumers. Demonstrations should include opportunities for third parties to demonstrate how various rate designs, information sharing, adjusted standby tariffs, and other technologies can be used to benefit consumers, encourage customer participation, and achieve REV's efficiency and bill management objectives.
7. Utility and third party service provider(s) should consider deploying in their demonstrations advanced distribution systems, including two way communications, real time operation of dynamic load, and other system technologies that support awareness, flexibility, efficiency and cost-effectiveness.
8. Utilities should explore opportunities in their demonstrations to work with and include various residential, commercial, institutional and industrial customer participants.

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NOTICE ENCOURAGING DEVELOPMENT OF
DEMONSTRATION PROJECT PROPOSALS

(Issued)

TAKE NOTICE that the New York State Public Service Commission hereby encourages utilities and third parties that have not already done so to begin working together at this time to consult with potential stakeholders in the affected communities and develop potential demonstration projects to inform the Commission's Reforming the Energy Vision (REV) policy initiative so that they will be better prepared to act promptly to initiate their proposals once the Commission has made its REV Track One policy determinations.

The Commission anticipates that demonstration projects will be an important step in implementing the expected REV policy changes and will inform decisions with respect to developing Distributed System Platform (DSP) functionalities, measuring customer response to programs and prices associated with REV markets, and determining the most effective implementation of Distributed Energy Resources (DER). These projects are also a means of presenting REV to the customer and gauging their receptiveness to REV technologies, products, and services. Data collected from these projects will inform regulatory changes, rate design, and the most effective means to integrate DER on a larger scale.

The Commission notes that as demonstration projects are developed, utilities may need to propose cost allocation methodologies and cost recovery mechanisms to support such

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projects, especially when projects emerge outside the rate case process.

(SIGNED)

KATHLEEN H. BURGESS
Secretary

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Commissioner Diane X. Burman, abstained

As reflected in my comments made at the public session on December 11, 2014, I abstain.