



Reforming the Energy Vision

Reforming the Energy Vision Demonstration Project Assessment Report

Iberdrola, USA: Community Energy Coordination

January 4, 2016

INTRODUCTION

In an order issued February 26, 2015, the New York State Public Service Commission (the Commission) directed the six large investor owned electric utilities to develop, and file initial demonstration projects, consistent with the guidelines adopted by the Order, on or before July 1, 2015.¹ These projects are intended to demonstrate the potential of various aspects of the Reforming the Energy Vision (REV), the regulatory initiative launched by the Commission as part of Governor Cuomo's comprehensive energy strategy for New York.

As the Commission noted, the projects are intended to demonstrate new business models, i.e., new revenue stream opportunities for third parties and the electric utilities. In that regard, the projects will inform decisions related to developing Distributed System Platform (DSP) functionalities, measure customer response to programs and prices associated with REV markets, and determine the most effective implementation of Distributed Energy Resources (DER). Further, as demonstration projects, they are intended to test new technology and approaches to assess value, explore variables, and innovate before committing to full-scale implementation. Therefore, demonstration projects should also be designed to deliver observable results and actionable information within a reasonable timeframe. During the demonstrations, the projects will be assessed regularly. Lessons learned should be incorporated into the projects or as appropriate into the utilities' operations as expeditiously as is reasonable.

¹ Case 14-M-0101, Reforming the Energy Vision, Order Adopting Regulatory Policy Framework and Implementation Plan (Issued February 26, 2015) (Track One Order).

DISCUSSION

NYSEG's Proposal

In compliance with the Commission Track One Order, New York State Electric and Gas Corporation (NYSEG or the Company), an Iberdrola, USA subsidiary, filed its Community Energy Coordination (CEC) demonstration project on July 1, 2015. This project is intended to demonstrate the value of community-level market coordination and purchasing of energy products and services, thereby enabling community energy initiatives to be self-funded and provide the potential for an additional revenue source for the Company. Along with this, the project will test the benefit of NYSEG taking on new roles within the DER value chain. The demonstration project initially focuses on the community comprised of the entirety of Tompkins County.

Local stakeholders, including Cornell University, the City of Ithaca, Tompkins County municipal leaders, and other community members, have established goals to reduce the community's energy consumption and to increase the energy that comes from clean-renewable sources. The goals of the CEC project will coincide with the existing energy and sustainability goals in Tompkins County and Ithaca, such as reducing greenhouse gas emissions by 40% by 2025, as well as creating a sustainable and carbon neutral campus for Cornell University by 2035. Within the scope of this demonstration project, the Company will test if it is able to reduce the cost of acquiring customers for third parties, and increase the adoption of DER through pre-qualification of participants and aggregation of market opportunities, at the same time as testing the ability to earn fees for such services.

The CEC project will involve NYSEG taking on three specific roles within the DER value chain: (1) community facilitation of integrated energy planning among stakeholders;

(2) facilitating customer solicitation for DER; and (3) market coordinator. The community facilitation and market coordinator roles will be a joint effort between the Company and its partner Taitem Engineering (Taitem). Community facilitation will include coordinating input from Tompkins County community stakeholders to develop projects that support the community's energy goals and initiatives. Utilizing the input from the community stakeholders, the Company will carry out its facilitation of customer solicitations role by identifying distributed energy resources that will be valuable to the consumer base and will create a product offering that will help the community reach its energy related goals. This will be accomplished using customer and system data to identify optimal customer candidates for product offerings at locations with specific system features (i.e., distribution system constraints, etc.). The initial list of product and service offerings includes residential premise located solar photovoltaic (PV), community distributed generation (CDG), commercial solar PV, distributed wind, and residential weatherization. Finally, the market coordinator role will initially involve providing participating service providers with leads identified during the customer solicitation phase. The company proposes that if the demonstration moves to scale, the market coordinator role could include aggregating customer interest and soliciting competitive offers from service providers to meet the customer requirements. Community facilitation will take place through Q2 2016, with customer sales and market coordination following in Q3 2016 through Q3 2017.

Department of Public Service Staff (Staff) Review

Staff has reviewed NYSEG's CEC demonstration project filing for consistency with the Commission's REV policy objectives and the Commission's demonstration project

principles. The REV policy objectives are enhanced customer knowledge and tools that will support effective management of the total energy bill; market animation and leverage of customer contributions; system wide efficiency; fuel and resource diversity; system reliability and resiliency; and reduction of carbon emissions. The Commission's demonstration project principles defined in the Commission's December 12, 2014 Resolution on Demonstration Projects are: third party participation; new business models; customer/community engagement; identification of economic value; pricing and rate design; transactive grid; scalability; market rules and standards; system benefits; cost effectiveness; and implementation with constructive feedback within reasonable timeframe.²

Staff found the CEC to be strong on community engagement, integrated resource planning, and the use of community based funding. Staff agrees with the Company that the CEC project will help the participating customers benefit from reduced costs associated with DER procurement as well as give customers a more accessible process to help when searching the DER market. For Tompkins County residents, this project will also help with achieving the community energy goals of Tompkins County and its residents. The CEC program will provide a coordinated approach to energy planning and implementation at the community level that includes the incumbent distribution utility. Based on preliminary discussion with Community stakeholders, the Company and its coordination market partner will create partnerships with multiple qualified service providers, for which there is a high level of interest, who will

² Case 14-M-0101, Reforming the Energy Vision, Memorandum and Resolution on Demonstration Projects (Issued December 12, 2014).

provide energy services and share data throughout the implementation of the program.³ If the CEC business model proves to be successful, the Company will then evaluate the opportunity to provide additional product and service offerings within Tompkins County and will evaluate the opportunity to provide various products and services in other communities.

Staff also evaluated the extent to which the demonstration project maintains a reasonable relationship between costs and estimated benefits, and concludes that the CEC is a demonstration project with the potential to add value to both the ratepayers and the Commission's REV proceeding. The cost projections included in NYSEG's project filing are reasonable in comparison to the benefits of the project. Staff's approach included examination of both qualitative and quantitative benefits. As documented in the August 3, 2015 letter from Staff, NYSEG's CEC demonstration project complies with the requirements of the Commission's Track One Order.

REV OBJECTIVES ADDRESSED

Enhanced Customer Knowledge and Tools for Effective Management of Their Total Energy Bill.

NYSEG's CEC filing identified issues that the utility sees as currently inhibiting the growth of DER products and services. For example, it explained that customers, municipalities, states, and utilities are all pursuing DER independently which it concludes has created a complex and inefficient DER market that lacks coordination. The CEC project intends to address this issue through community-level aggregation of interested customers likely to purchase energy products and services.

³ The criteria to be used to determine the qualified service providers will be defined in the implementation plan.

Based on discussions with community stakeholders since the July 1 filing, the Company identified a number of resources as having a high level of interest and high probability of success in this area. These offerings include residential premise solar PV, community solar PV, commercial solar PV, and residential weatherization and other energy efficiency measures.

CEC will leverage the solar PV, wind, and energy efficiency service providers' already existing relationships within the community, as well as relationships with Tompkins County, the City of Ithaca, the Town of Ithaca, and Cornell University to enhance the customers' knowledge. In addition to existing communication channels already utilized by NYSEG, the demonstration project will also include community forums, websites, social media, email, and advertizing to reach out to the community. This approach will contribute to addressing the issue of limited community understanding of DER products and services. The Company plans to utilize its customer and system specific data to help identify candidates in the optimal locations for these planned product offerings.

Market Animation

The CEC demonstration project will attempt to animate the markets for energy products and services, and could expand to include other communities served by both NYSEG and Rochester Gas & Electric Corporation (RG&E), an Iberdrola, USA subsidiary. During the demonstration, NYSEG will facilitate the solicitation of customers by encouraging a large segment of customers who otherwise may not have adopted DER, to do so. NYSEG will utilize its customer and system data to identify optimal candidates for product offerings at locations with specific system features (i.e., distribution system constraints, etc.). Participating service providers will receive leads identified during the customer solicitation phase. The service providers

will pursue sales with customers that have already expressed interest, thus reducing acquisition costs. Service providers will then pay the Company a lead generation fee for this service. As such, this aspect of the demonstration will help inform decisions related to developing DSP functionalities.

DEMONSTRATION PROJECT ELEMENTS

New Utility Business Models

NYSEG's CEC project will create economic value through the creation of an aggregated DER marketing and sales model. This model will distribute value among customers, project partners, and the products and services providers. NYSEG's role in this demonstration will be facilitating customer solicitation for third party service providers, this approach will help accelerate adoption of DER products and services by reducing customer acquisition costs. At the same time, NYSEG will earn lead generation fees for this service, thus creating value for the Company.

The participating community members will provide input on the community energy goals, which the Company will consider when developing a market proposal. This market proposal will be used to create an aggregated purchase plan.

The CEC demonstration project is similar in design to Community Choice Aggregation (CCA), in that it uses bulk purchasing to provide lower costs to customers. The CEC, however, looks to incorporate demand side products and services to meet the community goals, and customers will opt-in to the products and service as opposed to CCA programs, which may potentially operate on an opt-out basis. In this program, contracts for DER services will be directly between the customer and the provider. NYSEG in its new role, in conjunction with its market partner Taitem, will help communities reach their

energy goals by increasing the customer adoption of DER and ultimately reducing customer acquisition costs, while at the same time receive a referral fee from the service providers for each customer DER adoption. The CEC proposal will present an innovative and comprehensive approach to community planning and procurement of DER that can be scalable and replicable.

Customer/Community Engagement

Since June 2015, the Company has been discussing the CEC project concept with many stakeholders in Tompkins County including elected officials, county and city planning staff, faculty and staff at Cornell University, as well as engaged citizens. Community engagement will be a driving force in this project with the focus of the messaging being presenting the utility as an enabler of community energy goals. Planned outreach efforts will leverage the existing Company communication channels: direct mail, bill inserts, and web-based communications, with a key message being community energy goals and that individual action that can be taken to support these goals.

Identification of Economic Value

The Commission expects that each REV Demonstration Project will create value for a number of stakeholders, including the utility, the utility's third party partner(s), and consumers/ratepayers. It is also important that the beneficiaries of this value are identified. NYSEG plans to utilize a coordinating market partner to help manage the overall process and to increase the scale of the project. The Company envisions that the number of product and service offerings can be increased (e.g., innovative thermostats, heat pumps, water heaters, HVAC systems) and that the CEC can expand geographically beyond the initial focus of Tompkins County, to additional areas including all NYSEG and RG&E service

territories. They also plan to partner directly with service providers who will deliver products and services to customers. Community based funding will be explored to help customers who may not have access to traditional sources of capital. Staff concludes that all of these features contribute toward providing economic values to the various stakeholders involved.

The Company explained in meetings with Staff that CEC offers opportunities for longer-term involvement more directly with customer financing by aggregating customer debts that could then be sold as financial products. The Company will also consider including a monthly financing charge on a participating customer's utility bill thereby expanding "on-bill financing" of DER projects.

Scalability

Initially the scale of the project is limited to Tompkins County, but has the potential to expand to all of NYSEG and RG&E service territories. Additional growth opportunities will be based on the success of the initial program. NYSEG will also use the experience gained from this demonstration project to expand the range of products and services available to customers and expand the geographic applicability.

Reasonable Timeframe

Staff has determined that the CEC demonstration project will be implemented within a reasonable timeframe. Since its July 1 filing, the Company has revised the project plan and has noted that it will be implemented in seven phases; project development, planning & community engagement, project planning, customer solicitation, market solicitation, construction, and evaluation. All of the phases of the demonstration will be completed by December 2017. The development of the Company's implementation plan, finalizing the contract with the project partner, and community stakeholder

engagement are currently ongoing. The potential product offerings and scope of the project will be reviewed with, and input will be gathered from, key community stakeholders beginning in Q2 of 2016 with a completion date of Q4 2016. The creation of the detailed product specifications, along with a marketing plan should have the project available to customers by Q2 2017. Sales and installation of DER will take place throughout 2017. A detailed schedule will be included in the implementation plan.

AREAS FOR FURTHER DEVELOPMENT

Price and Rate Design

One important component of REV that can benefit from comprehensive real-world testing is the application of alternative rate designs that better align customer incentives to be reactive to system conditions. No pricing methods or rate designs were included in the CEC project filing. In an effort to keep the project within an executable timeline, NYSEG did not explore price and rate design in this first iteration. In discussions with Staff, NYSEG noted that there could be opportunities to further explore testing different rate designs, such as combining peak reducing rate designs with bulk purchasing of smart thermostats. Such opportunities shall be considered during the demonstration period.

Milestones

It is crucial to the success of REV demonstration projects to closely follow progress to evaluate effectiveness and identify potential improvements. Staff discussed with NYSEG that while the proposal contained milestones for the CEC project, there were no success or failure thresholds included. NYSEG has reworked the project plan and broken it down into seven phases, each of which has at least one milestone used to

indicate successful completion of that phase. The project milestones will function as communication and quality devices, to set expectations, share status information, and develop lessons learned. In addition, the milestones and checkpoints can trigger actions to modify various aspects of the demonstration. This is an essential activity to develop effective project recommendations to inform REV and therefore the implementation plan will reflect detailed milestones and checkpoints.

POTENTIAL LEGAL BARRIERS AND/OR
AREAS OF COMMISSION ACTION

Protection of Customer Information

The Commission's existing customer data policy is that electric utilities and third parties must protect customer privacy when proposing projects that involve the collection and use of granular customer data. Staff believes that the CEC project appropriately balances existing policy and the exploration of a new business model.

With respect to the sharing of customer data with core third parties providing analytics functions for NYSEG, the proposed demonstration project must comply with the December 3, 2010 Order, where the Commission considered earlier Opower projects with Central Hudson and Niagara Mohawk and stated:

Opower is prohibited from using the information for any purpose other than to perform the utility function of administering this program and may not contact customers in any fashion beyond what it was specifically contracted to do; provide usage analysis reports.⁴

⁴ Case 07-M-0548, Energy Efficiency Portfolio Standards, Order on Rehearing Granting Petition for Rehearing, p. 19 (Issued December 3, 2010).

NYSEG will not be required to obtain affirmative customer consent before sharing customer information with a third party partner who is performing the analytics function, and where sharing such information is necessary to perform that function. The agreements between NYSEG and their third party partner(s) will detail the protections afforded to customer information and the restrictions placed on those partners regarding the use of that information. NYSEG will be required to file with the Secretary any contract between the Company and a third party partner in order for Staff to ensure that sufficient consumer protections are offered in conformance with the December 3, 2010 Order.

CONCLUSION

Staff has determined that the proposed demonstration project complies with the objectives set forth in Ordering Clause 4 of the Track One Order. Staff will continue working with NYSEG to develop a detailed implementation plan, which will include a detailed schedule, budget, projected milestones and checkpoints, and reporting requirements. Staff will also continue to discuss the areas of further development with the Company and identify any issues that may require Commission action. The implementation plan will incorporate the results of these discussions, and will be updated quarterly, incorporating lessons learned and new developments within the scope of the project. The implementation plan will be filed with the Secretary of the Commission within thirty days.