

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION



Reforming the Energy Vision
Demonstration Project Assessment
Report

Orange & Rockland:
DER Residential Offering

November 10, 2015

INTRODUCTION

In an order issued February 26, 2015, 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 development of 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 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

Orange and Rockland's Proposal

In compliance with the Commission Track One Order, Orange and Rockland Utilities, Inc. (O&R or the Company) filed its demonstration project on July 1, 2015. O&R's Residential Customer Marketplace will be a customer engagement platform (the Marketplace) that O&R will create with Simple Energy, a third party partner specializing in digital customer engagement. The Marketplace will provide O&R's customers with an online website where they can browse information about a variety of DER products and services while learning about their own energy usage. This marketplace will engage customers through targeted messaging, which will be enabled through an analysis of consumers' billing information and behavioral patterns. The Marketplace will also provide customers with rewards for engaging in "energy wise actions," and O&R hopes the use of their brand will help customers trust the Marketplace to help match consumers and third party suppliers.

O&R's Marketplace will be targeted towards several different groups of its 196,000 New York customers. O&R will target: residential customers for whom O&R has an e-mail address on file and have a monthly usage of at least 1,000 kWh per month (12,185 customers); residential customers who are on a time-of-use plan (727 customers); residential customers with high energy usage (greater than 2,000 kWh per month) and/or electric hot water heating (48,739 customers); residential customers who are located in ten identified load pockets where load relief would provide value to the distribution system (approximately 6,000 additional customers). Eventually, the demonstration will target all residential customers whose usage is greater than 1,000 kWh/month.

Department of Public Service Staff (Staff) Review

Staff reviewed O&R's Residential Customer Marketplace 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.

Staff also evaluated the extent to which the demonstration project maintains a reasonable relationship between costs and estimated benefits and believes the Marketplace is a demonstration project with the potential to add significant value to both ratepayers and the Commission's REV proceeding. The cost projections included in O&R's project filing are reasonable in comparison to the benefits of the project. These benefits include not only the potential revenues generated by the Marketplace, but also the learning aspect of the demonstration. Staff's approach included examination of both qualitative and quantitative benefits and to the extent possible, understanding how the project would leverage third party capital as a way to achieve that goal. While O&R's Marketplace demonstration project does not utilize third party capital in this way, O&R's projections predict profitability beyond the conclusion of the demonstration project in 2018. As Staff compared each of the electronic marketplace demonstration projects submitted by the utilities, Staff found that the assumptions related to both costs and revenues varied, and therefore concluded each should be examined on its own merits. Staff found O&R's assumptions to be reasonable, and indicate that the Marketplace will become self-sustainable.

O&R's Marketplace is designed to increase customers' knowledge of how the various available DER products and services will affect their usage. Staff believes that the O&R Marketplace will provide the opportunity for O&R to evolve from a monopoly provider to a market facilitator by demonstrating the effectiveness of an online DER marketplace that brings together a variety of third party providers and residential customers while increasing customers' knowledge of their own energy usage.

The Marketplace will add value for consumers by maintaining a set of trusted DER products and third party installers. O&R's marketplace development partner, Simple Energy, has developed a network of third party product providers that it has pre-vetted to offer products on the Marketplace. O&R will additionally provide a network of third party installers and service providers (capable of installing DER products and other services) that will be able to offer their services on the marketplace. O&R intends to ensure that these third party installers meet certain quality requirements and will stand behind the products and services offered. As discussed below, expansion of the marketplace to include providers outside of this initial group is being explored. Once a product or service is purchased, the marketplace will offer consumers a "Real Energy Impact Analysis" to put into context the savings they have achieved from their purchase.

Staff concludes the marketplace will add value for DER providers through the reduction of acquisition costs. O&R will provide its marketplace development partner with customer usage data for analysis, which will then be used by O&R to engage in personalized messages to consumers regarding appropriate DER products and services increasing customer engagement. O&R believes this increased engagement will help drive DER adoption while reducing the cost of acquiring customers for DER.

In the Commission's Track One Order, the Commission states "...utilities acting in concert will constitute a statewide platform that will provide uniform market access to customers and DER providers." Staff finds that marketplace REV Demonstration Projects such as O&R's will provide crucial insight into the optimal design and pricing of these marketplaces. The lessons learned from this demonstration project will be utilized in the creation of the statewide platform.

As documented in the August 3, 2015 letter from Staff, O&R's Residential Customer Marketplace demonstration project complies with the requirements of the Commission's Track One Order and the utility will file the implementation plan with the Secretary of the Commission within the next thirty days.

REV OBJECTIVES ADDRESSED

Enhanced Customer knowledge and the Provision of Tools That Will Support Effective Management of the Total Energy Bill.

O&R's project filing states that one of the primary goals of the project is to encourage the wide scale adoption of DER by targeting the "...lack of customer understanding of which types of DER are best suited to their energy needs."² Additionally, a critical aspect of REV is raising consumers' awareness of the energy they consume. Once consumers are aware of the how and why they consume energy, they will be able to better control and reduce that usage in an economic manner.

O&R's Marketplace will enhance customer knowledge by providing its customers with information about products and third party installers, and integrating these offers with energy data analysis. This combination is expected to provide

² O&R's July 1, 2015 Residential Offering Platform Demonstration Project filing, p. 4.

customers with information about how they are using energy and how the various products and services they can purchase on the Marketplace will affect that energy usage. Staff believes this provides a unique value to customers by allowing them to evaluate the expected benefit of DER using information from an additional known source (O&R).

Market Animation and Leverage of Customer Contributions

O&R's Marketplace, by facilitating transactions between DER providers and customers, will help animate the market for DER. Since consumers will purchase these DER products and services, this will also increase the adoption of DER without direct utility investment.

Staff finds that O&R's Marketplace effectively leverages customer contributions to facilitate DER adoption, but Staff has some concerns that, because the Marketplace is "closed" in the sense that a third party provider must be included in the marketplace development partner's or O&R's network to be allowed on the Marketplace, development of fair market competition may be stifled. In order to create a truly animated market, there must be no significant barriers of entry for reputable parties, even when this is at the expense of existing third parties, who may lobby for market barriers to prevent increased competition. Staff discussed with O&R the potential to develop a standardized procedure for a competitively neutral evaluation of third party providers of DER and data analytic services to apply for inclusion in the Residential Customer Marketplace.³ Such development will be reflected in the implementation plan.

³ Following initial discussions, O&R agreed to work with Staff in the implementation process to develop a mechanism for expanding the Marketplace to facilitate participation by additional interested DER providers.

DEMONSTRATION PROJECT ELEMENTS

New Utility Business Models

In the Track One Order, the Commission notes that utility earnings should depend on creating value for customers and achieving policy objectives, and so utilities "...[can] find earning opportunities in enhanced performance and in transactional revenues."⁴ Consequently, utilities were challenged to find alternative revenue sources that are consistent with the REV vision and policy objectives.

O&R's Marketplace represents a new business model for the utility and an opportunity to earn revenues by creating a marketplace that is valuable to its customers and third-party DER providers. Instead of being a uni-directional network delivering electricity to end-users, O&R is testing its ability to be a transaction platform provider. This platform is designed to provide information to consumers and DER providers, while facilitating the exchange of information between customers through product reviews, allowing consumers to learn about the various DER providers in the market.

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 also be identified. As noted above, this project creates value through increased consumer awareness of their own energy usage through data analysis, and the use of this data by the marketplace to facilitate transactions between customers and DER providers.

⁴ Track One Order at 12.

The value generated by the marketplace will benefit the utility, O&R's marketplace development partner, and customers. O&R and its partner will each enjoy a share of the revenue streams indicated above that are generated by the platform, and O&R (and consequently ratepayers) will eventually enjoy any reductions in investments allowed by increased DER penetration and energy efficiency. Consumers will benefit from an increased understanding of their energy usage, and the energy savings from the products and services offered on the platform.

Scalability

This demonstration project has the potential to grow past the initial demonstration filing in both scale and scope. O&R states that it expects that as their Residential Marketplace matures, customer awareness and usage will increase. O&R has plans to expand the number of DER providers on the system (detailed below), as well as expanding the types of services offered on the platform, potentially adding services such as solar aggregation, electric vehicle management, and the ability to remotely control devices purchased from the Marketplace.⁵

Timeframe

O&R's Residential Customer Marketplace will be implemented in a way that will provide valuable data with respect to the DER marketplaces within a reasonable timeframe. O&R proposes rolling out the Marketplace in five separate phases. Phase One, beginning at the end of 2015, will include the launch of the Marketplace for a subset of O&R's service territory and will include a limited number of DER categories. Phase Two, beginning at the start of 2016, will expand the categories of DERs offered in the Marketplace as well as

⁵ Devices can be controlled by customers for convenience or controlled by the Company for system benefits.

offering additional connected home or smart products, and will be implemented within one year of completing the first phase. Phases Three and Four will be implemented in the third and fourth quarter, respectively, of 2016, and will include the expansion (or decision not to expand) to O&R's full service territory, and the integration of AMI⁶ and alternative rate design into the marketplace. Phase Five, beginning at the start of 2017 and continuing until the end of the project, will mark a shift from establishing the marketplace to optimizing pricing and other structures for long-term profits and platform sustainability.

Private Contribution of Capital to the Distribution Network

While the Marketplace does not directly address the opportunity for private contribution of capital to the distribution network (in the form of DER), the Marketplace's engagement of customers through customer-targeted messaging and data analytics will encourage the increased penetration of customer-financed DER in the distribution system.

AREAS FOR FURTHER DEVELOPMENT

Third Party Participation

O&R actively engaged a third party partner and providers to identify solutions that could help customers select the DERs and other energy related products and services that help manage their energy usage. As stated earlier, the demonstration project also generates economic value between the utility, third party partner, third party providers, and ratepayers. Simple Energy's contribution includes its extensive R&D investment and ongoing operational and marketing investment

⁶ Advanced Metering Infrastructure (AMI) is the next generation of meter infrastructure that allows for the real-time collection of energy usage data.

to platform operations. In addition, Simple Energy will share with O&R, transaction margins from service providers engaged as part of the platform, thus creating a new revenue opportunity for O&R.

As proposed, the Marketplace does not include the ability for consumers to look for and switch their electric supply service. Staff has discussed with O&R the possibility of adding such functionality, and O&R has committed to adding ESCO offerings to its project and this will be reflected in the implementation plan.

Price and Rate Design

One important component of REV that can benefit from comprehensive real-world testing is alternative rate designs that better align customer incentives to be reactive to system conditions. While the Marketplace as proposed does not include a rate design component, Staff has requested the addition of alternative rates to the demonstration project. Possibilities include providing customers the option of switching to Time of Use rates on the Marketplace, or offering a customized rate plan alongside certain DER products. O&R has committed to adding a rate design component to the project, tied with its AMI rollout and this will be reflected in the implementation plan.

Milestones and Check Points

It is crucial to the success of REV demonstration projects to closely follow project progress to evaluate effectiveness and identify potential improvements. Staff finds that while O&R has defined a number of metrics that it will report quarterly including: number of customers enrolled in the program, e-mail open rates, website traffic, and number of active product vendors, the project proposal does not include projections for these metrics, and does not identify thresholds that indicate when changes to the project may be necessary.

However, Staff in collaboration with the major electric distribution utilities, has begun to work on a standard set of marketplace project metrics; the results of such collaboration will be reflected in the implementation plans of O&R and other utilities' market projects.

These metrics will then be used to test the effectiveness of O&R's communications with customers and the viability of this project to provide a viable revenue stream. Given that this is a demonstration project that breaks new ground for utilities in New York, it is expected some metrics will indicate changes that will need to be made during the phased implementation to ensure the success of the project.

Customer Access to Data

Staff concludes that while the marketplace as proposed adds significant value to DER providers and customers, the platform could provide even more value to consumers by enabling them to export their personal usage information, which can then be sent to a DER provider for analysis. Staff believes this could be achieved by including Green Button capability (the ability to download a customer's own energy usage information in a consumer and computer-friendly electronic format from the utility's secure website). This will allow customers to share such data with other third parties if so desired, even if those third parties are not included in the Marketplace network. Staff has discussed this issue with O&R, and O&R has agreed to include Green Button⁷ support in the Marketplace. Details of the

⁷ Staff and O&R have concluded that while Green Button Connect, which extends Green Button functionality by allowing customers to directly transfer their data to DER providers without the need to export it first, adds significant value, the costs and security concerns with implementing Green Button Connect are outside the scope of REV Demonstration Projects, and will be the subject of other Staff inquiries.

Marketplace's Green Button capability will be included in the implementation plan for this demonstration project.

Cross Company Collaboration

At the request of Staff, O&R, Central Hudson, Consolidated Edison, New York State Electric and Gas, and Rochester Gas and Electric have all agreed to coordinate the review and assessment of their marketplace demonstration projects. They have begun to work on a formalized quarter reporting template, standardization of key metrics and sharing of lessons learned. The unified metrics to be tracked include; marketing channels and messaging type, product offerings and revenue per sale, place of purchase, and program pricing. The Utilities have agreed to a formal sharing of lessons learned with recommendations for the utility peers and the sharing of joint lessons and recommendations for external parties for the purpose of developing a statewide marketplace. Staff has determined that this sharing of lessons learned is necessary to ensure that a variety of different marketplace configurations can be evaluated statewide without each utility having to replicate them all. Staff and these utilities plan on meeting quarterly to go over current project progress and continual evaluation of these metrics.

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 O&R Marketplace 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 O&R, the proposed Marketplace 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.⁸

O&R will not be required to obtain affirmative customer consent before sharing customer information with a third party partner who is performing the analytics function (i.e., inducing customers to manage their energy usage by providing them with specific information about their usage and how it compares to that of other similarly situated customers) and where sharing such information is necessary to perform that function. The agreements between O&R 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. O&R will be required to file with the Secretary any contract between O&R 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.

Third party providers selling products and services on the Marketplace will not gain open access to customer data. Instead, only the third party partners addressed above will have access to such data as they will be the one or two entities

⁸ Case 07-M-0548, Energy Efficiency Portfolio Standards, Order on Rehearing Granting Petition for Rehearing, p. 19 (Issued December 3, 2010).

providing the analytics service to O&R. Along with usage information and suggestions for more efficient energy use, the customer will also receive information regarding additional products and services that best suit the individual customer and may help to further the customer's energy goals. If the customer chooses to obtain one or more of these products or services from a third party provider, the customer will first need to affirmatively consent to the release of their data to that provider.

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 O&R 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 O&R 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.