STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

Reforming the Energy Vision Demonstration Project Assessment Report

Con Edison:
Building Efficiency Marketplace

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 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 reasonable.

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[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

In compliance with the Commission Track One Order, Consolidated Edison Company of New York, Inc. (Con Edison or the Company) filed its Building Efficiency Marketplace Demonstration Project on July 1, 2015. The Building Efficiency Marketplace will examine how interval meter data analytics can be leveraged to identify potential energy saving projects and encourage customers and third parties to take advantage of those opportunities. Con Edison will guide commercial customers that currently have interval meters through the development and implementation of these energy saving projects with the support of a web-based portal. Advanced data analytics, engineering expertise, and online tools will generate recommendations specific to the customer's building. Con Edison will use fee-based engineering services to further define and scope certain projects. The Building Efficiency marketplace will streamline connections between customers and collection of over 800 vetted market partners, including contractors, distributors, suppliers, and manufacturers of energy efficiency equipment. The Building Efficiency Marketplace will have a structured RFP (request for proposals) and bidding process, employing a set of standardized methods, documentation, and timelines, to provide market partners the opportunity to bid on customer energy efficiency projects. Third Party project financing options will also be identified when appropriate. The vetting of market partners participating in the Marketplace who provide products and services will aid in ensuring a high level of customer confidence and will include a demonstrated capability, reliability, and safety record.

This portal will engage participating commercial customers through analysis of data provided by Con Edison's third party partner, Retroficiency, using information about energy consumption, their buildings and their equipment, which

is subject to strict terms of appropriate use, confidentiality, and security. These customers are then provided with quarterly virtual energy assessments which assess a building's performance and identify distinct energy efficiency and demand management opportunities. These assessments incorporate a variety of data including premise information, weather, and the last 12 months of interval usage data and do not require a visit to the premises or the installation of specialized equipment. Retroficiency uses only a building's address and its energy consumption interval data (provided by Con Edison) in combination with commercial building models and advanced data analytics which significantly reduces the audit time and expense. Under the demonstration, they will be provided at no charge to participating Customers. This information will be used for each project to measure and verify its effectiveness, evaluate progress and changes, and identify additional energy saving projects best matched for the particular circumstances.

Department of Public Service Staff (Staff) Review

Staff reviewed the demonstration project compliance filing for consistency with the Track One Order as well as the Commission's REV policy objectives and the Commission's REV 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[2] are: third party participation; new business models;

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

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. Staff has also evaluated the extent to which the demonstration project maintains a reasonable relationship between costs and estimated benefits, including demonstration value.

Staff believes that the Building Efficiency Marketplace Demonstration Project will provide Con Edison the opportunity to test its role as a market facilitator by demonstrating the effectiveness of an online marketplace that connects commercial customers with an assortment of third party providers and facilitates the process of turning energy saving possibilities into actual projects. Several aspects of the demonstration project are focused on customer engagement. One example is the proactive and ongoing engagement planned for mid-to-large sized customers across all major commercial building types, including offices, retail, hotels, hospitals, warehouses, and schools. These customers will be encouraged to explore analytics-based insights furnished by Con Edison's third party partner Retroficiency. The analysis and related energy messaging will be provided through print mail, text messaging, email, phone calls, in-person meetings, and free access to a secure web portal with access to their virtual energy assessments. Support for implementing DER projects, including identifying projects and their value, engineering services, and finding qualified vendors and contractors, and financing options, will all be available through the portal from beginning to end. For these reasons, Staff concludes that the Building Efficiency Marketplace will create a valuable relationship in which customers, Con Edison, and participating third parties would all experience benefits. In addition, the demonstration

project should inform the design and development of new electric utility business models.

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 Con Edison'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, Con Edison's Building Efficiency Marketplace Demonstration Project appropriately reflects 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 Tools for Effective Management of Their Total Energy Bill

Con Edison's filing states that impediments to building owners participating in energy saving activities include: lack of specific action inducing information; the lack of comfort in evaluating potential contractors; and difficulty in verifying the value of energy efficiency measures over time.

Staff believes that the Building Efficiency Marketplace project addresses these challenges. Participating customers with be given access to virtual energy assessments which are based on advanced data analytics at no charge. These virtual energy assessments are similar to on-site audits; they are comprehensive energy consumption information and guidance for actionable, building-specific energy conservation. In

addition, any confusion or other concerns can be addressed through Con Edison's direct support.

The virtual energy assessments will provide continuous tracking of savings which enhances customer motivations to participate and further engage in other DER adoptions. Informing the customer about usage and identifying effective energy saving opportunities, using a transparent RFP process for the implementation of DER, will support a competitive platform where the customer can select the contractor from the pool of vetted providers that it finds best suited for the project. This will provide customers with the ability to manage their total energy bill.

Market Animation

The RFP process will create a competitive market providing customers with the best value. The transparent bidding platform will animate associated markets, such as engineers, building professionals, and an assortment of DER providers that are needed once a customer chooses to move forward with one or more of the projects that have been recommended. Further facilitating these market transactions, Con Edison's ongoing support should increase customer understanding and confidence in the products and services to provide real value.

DEMONSTRATION PROJECT ELEMENTS

Third Party Participation/Partnerships

Con Edison will enter into a partnership with Retroficiency to develop the Building Efficiency Marketplace platform. This partnership will leverage both Con Edison's and Retroficiency's assets and experience. Retroficiency will provide the analytics element which develops the virtual energy assessments and associated software and customer engagement via its Building Efficiency Intelligence (BEI) platform. While Con

Edison will contribute funds toward extending the capabilities of the BEI, Retroficiency will bear the majority of the costs as a capital contribution to the demonstration project. In that regard, Retroficiency will have overall responsibility for continuous portal improvements and upgrades.

New Utility Business Models

A critical feature of the new business model Con Edison is testing is the value created through integrating provision of tailored customer information, and the offering of products and service. The demonstration project will create a marketplace where customers engage in a user friendly, low cost of entry platform. Building owners can easily identify opportunities that are then evaluated, scoped, and made bid-ready. Market partners and vendors will participate in providing engineering services and associated products. Con Edison will collect a fee for transactions that stem from the Building Efficiency Marketplace. In addition, Con Edison will test other sources of revenue from the market partners such as fees or advertising on the portal, fees for customer leads, and fees to access to the marketplace portal.

Customer/Community Engagement

Marketing and outreach to the targeted customers will begin before and continue throughout the demonstration period. Numerous marketing channels will be used, including direct mail, email, telephone calls, and in person communication. The customer engagement plan includes creating awareness of the program provided by a utility that customers know and trust, generating interest based on direct benefits, creating desire to participate by validating project opportunities and revealing success stories, and facilitating action with analytics and customer service. The initial launch in 2016 will focus on 400 customers, expanding to 1,400 customers a year later and up to 2,100 thereafter.

The community outreach will be focused on territory-wide engagement with groups of potential customers, market partners, and associations such as the Building Owners and Managers Association. These groups will also include the real estate community, financial institutions, large property managers, New York City Department of Citywide Services, and the Office of the Mayor of New York City.

Identification of Economic Value

This Building Efficiency Marketplace will directly address the high costs to begin a commercial building energy efficiency project, the lack of comprehensive information detailing commercial building energy consumption, and the lack of expertise in determining proper solutions, in order to bring economic value to the customer. This will be accomplished by providing valuable information and recommendations to building owners at no cost. A traditional building audit can cost anywhere from $5,000 for a small building to as much as $100,000 for detailed audits in larger buildings. Retroficiency's virtual energy assessment is a lower cost means to introduce the energy conservation measures. With this information, combined with the market facilitation portal, commercial building owners will be able to quickly realize the benefits of energy efficiency and demand management. In addition, by expanding opportunities and reducing soft costs, this will increase the pace and volume of market activity thereby increasing the economic value for the market partners.

Cost Effectiveness

Staff’s evaluation of cost effectiveness 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 increase and expand benefits. Under the Building Efficiency Marketplace, Con Edison will develop and test three new revenue opportunities; project

development-related fees (e.g. market partner advertising on the customer portal, emails providing market partner customer leads, providing market partner portal access), engineering fees, and financing fees. Staff believes that the Building Efficiency Marketplace project will provide value by allowing Con Edison to develop its new role(s) in the future electric system and allow it to explore avenues of future revenue opportunities.

The project includes costs related to fees to license and configure the analytics software, project management, project resources, support, and training. Con Edison forecasts total demonstration costs of $8 million and revenue of $5.1 but states that forecasts for the final year of the project show revenues exceeding costs. Further, Staff believes that the opportunity to examine the long term financial viability of this new business model is itself valuable.

There are several qualitative benefits associated with the demonstration project that factor in to that conclusion. For example, the value of increased customer engagement related to energy usage and energy management potentially resulting in reduced bills; the environmental benefits in the form of reduced carbon emissions; and the value of a substantial level of knowledge and insight that can be gained as a result of the Building Efficiency Marketplace Demonstration Project are all positive benefits that will be measured and monitored during the demonstration period.

The utilities submitted multiple electronic marketplace demonstration projects and the assumptions related to costs and revenues varied. Therefore, Staff examined each project on its own merits. The implementation plan will include measuring, monitoring, and reporting on the actual benefits and costs both qualitatively and quantitatively.

Reasonable Timeframe

Staff concludes that Building Efficiency Marketplace can be implemented in a way that will provide valuable data with respect to the DER marketplaces within a reasonable timeframe. Con Edison has already begun the customer portal configuration and data integration activities in 2015. The first phase, Demonstration Implementation, will begin by April 1, 2016. This will include customer and market engagement, customer portal configuration, building analysis and reporting, and efficiency project portal configuration. Phase 2, Market Launch, will begin by April 1, 2017 and continue through December of 2018. Staff believes that this timeframe will give Con Edison and Staff ample time to assess and measure the project and its goals and therefore it is reasonable.

Scalability

The Building Efficiency Marketplace will focus on medium to large sized customers across all major commercial building types with demands greater than 500 kW, that have at least one year of interval meter data. There are currently 2,100 commercial buildings that meet those criteria. Only 400 of those customers will make up the test population in Phase 1, with plans to scale up to 1,400 and to 2,100 as the demonstration progresses through Phase 2. If the proof-of-concept is successful, the Building Efficiency Marketplace has the ability to scale to all 130,000 of Con Edison's commercial customers with demands greater than 10 kW. This group of customers consumes approximately 85% of the energy delivered to Con Edison's commercial and industrial customers. For these reasons, Staff believes that the Building Efficiency Marketplace satisfies the scalability criteria. Since the ability to scale across a greater number of commercial requires interval usage data Staff concludes that scaling should be considered in

combination with the Company's plans for full advanced metering rollout which is being defined and developed in Case 15-E-0050.[3]

AREAS FOR FURTHER DEVELOPMENT

Milestones

Con Edison will test the new business model, potential revenue opportunities, customer engagement activity, market partner's activity, projects implemented, and project impacts by collecting and analyzing the appropriate data. For each test scenario, acceptance or performance criteria will need to be developed and included in the implementation plan. The project milestones will be used as communication and quality control mechanisms, and to set expectations, share status information, and develop lessons learned. In addition, the milestones and checkpoints will be used to provide opportunities to evaluate the program and if appropriate make changes. 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 Building Efficiency Marketplace project appropriately balances existing policy and the exploration of a new business model.

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[3] Case 15-E-0050, Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service.

With respect to the sharing of customer data with core third parties providing analytics functions for Con Edison, 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]

Con Edison 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 where sharing such information is necessary to perform that function. The agreements between Con Edison and their third party partner will detail the protections afforded to customer information and the restrictions placed on those partners regarding the use of that information. Con Edison will be required to file with the Secretary any contract between Con Edison 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 partner addressed above will have access to such data as they will be the entity providing the analytics service to Con Edison. Along with usage information and suggestions for more efficient energy use, the customer will

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

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 Con Edison Building Efficiency Marketplace Demonstration Project complies with the objectives set forth in Ordering Clause 4 of the Track One Order. Staff will continue working with Con Edison to develop a detailed implementation plan. The implementation plan will include a detailed schedule, budget, projected milestones, and checkpoints. Staff will also continue to discuss the areas of further development with Con Edison and identify any issues that may require Commission action. The implementation plan will incorporate the results of these discussions.

The implementation plan is expected to evolve and incorporate lessons learned or new developments within the scope of the project. The project implementation plan will be updated quarterly. The implementation plan and updates will be filed with the Secretary of the Commission within thirty days.