

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION



Reforming the Energy Vision
Demonstration Project Assessment
Report

Central Hudson:
Central-E: Your Energy Exchange

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 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

Central Hudson's Proposal

In compliance with the Commission Track One Order, Central Hudson Gas & Electric Corporation (Central Hudson or the Company) filed its demonstration project on July 1, 2015. As proposed, "Central-E, Your Energy Exchange" (Central-E) is a web-based, energy services platform designed to provide customers with information on energy management and access to third party products and services. The main hypothesis to be tested is that customers engaged through various media channels and provided with customized energy usage and savings information will be more likely to purchase energy related products and services, while this platform provider/facilitator role will create new revenue sources for the utility.

During the demonstration period, all residential customers will receive free personalized information and tailored strategies for managing energy usage and costs based on customer-provided information about their home. Various engagement methods will be tested during the demonstration period. To test customers' desire for more granular and timely information, Central Hudson will offer an enhanced data service on a subscription basis. The enhanced data service will require installation of a smart meter and will include the ability to: view daily and hourly energy consumption; correlate energy consumption with average daily temperature; set bill and usage alerts; and, participate in various rate structures and demand response programs as the demonstration evolves.

Central Hudson will work together with a third party partner under a new business model to create a customer driven,² web-based, energy services platform. The third party partner in this demonstration will provide and maintain elements that make

² Because Central Hudson is still in negotiations with third parties, the specific partner(s) remain unnamed.

up Central-E such as the customer interface; ecommerce platform; access to the products and services offered; the meter data and analytics tools; and, behavioral methodologies. This should be distinguished from a third party provider who will provide products and services on the platform. The exchange will provide a platform for third party providers to offer Central Hudson customers energy efficiency products and services in a central location.

The platform will be accessible to all residential customers and Central Hudson indicates that product and service offerings can be expanded over time. Through the platform, Central Hudson will offer customers incentives towards the purchase of new energy efficiency products and services. The proposed platform will not preclude alternative providers of energy products and services and will not limit customers' ability to choose alternative providers.

Department of Public Service Staff (Staff) Review

Staff reviewed Central Hudson's demonstration project filing for consistency with the Track One Order as well as the Commission's REV policy objectives and demonstration project principles. The REV policy objectives are: enhanced customer knowledge and tools to support effective management of their total energy costs; market animation and leverage of customer contributions; system wide efficiency; fuel and resource diversity; system reliability and resiliency; and, reduction of carbon emissions. REV demonstration project principles, as defined in the Commission's December 12, 2014 Resolution on Demonstration Projects³ 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

³ Case 14-M-0101, supra, Memorandum and Resolution on Demonstration Projects (Issued December 12, 2014).

effectiveness; and, implementation with constructive feedback within reasonable timeframe. Staff also evaluated the extent to which the demonstration project maintains a reasonable relationship between estimated costs and estimated benefits, including demonstration value.

The Central-E demonstration project will allow Central Hudson to test various elements of acting as a market facilitator through the online energy platform. Central-E will integrate, within a user friendly interface: personalized customer usage data; tips, recommendations and other information tailored for individual customer usage and housing circumstances; and, convenient access to the products and services for helping customers manage their energy usage. Staff believes the novel combination of individually tailored information, which has been shown to improve customer interest and thoughtfulness regarding energy related decisions, and focused energy related commercial offerings to facilitate energy management actions and purchases will improve customer/utility engagement. At the same time, it will help inform Central Hudson and other stakeholders about customer reactions and other behaviors related to this information and available third party offerings.

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 Central Hudson'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.

For these reasons, Staff concludes that Central-E has the potential to improve the relationship and depth of

engagement between Central Hudson and its customers. It will also allow exploration of third party offerings and their role in utility customers' energy management practices and utility business model evolution. Therefore, as documented in the August 3, 2015 letter from Staff, Central Hudson's Central-E demonstration project complies with the requirements of the Commission's Track One Order and the utility will file the implementation plan with the Secretary within the next thirty days.

REV OBJECTIVES ADDRESSED

Enhanced Customer Knowledge and Tools for Effective Total Energy Bill Management

Central Hudson's filing identifies a lack of customer engagement related to household energy use as a key barrier it seeks to address with the demonstration project. The Company states that the absence of engagement is tied directly to five primary factors or barriers: 1) lack of awareness; 2) availability of information; 3) customer effort or lack of convenience; 4) understanding the value of products and services; and, 5) a trust in available solutions. Staff believes that the Central-E demonstration will address these barriers by providing actionable information through various user friendly formats in order to improve customer understanding and acceptance of existing solutions and the customer value those solutions can provide.

Central-E will offer an "end-to-end customer experience" by collocating tools that can assist customers through each stage of a consumer purchase decision.⁴ The program will proactively provide customers with energy information and increase awareness through targeted messaging, alerts, and tips

⁴ Generally, referred to as problem recognition; information search; evaluating alternatives; purchase; and post-purchase behavior.

that customers can select at their option through communication channels including email, text messages, etc.

In addition, Central Hudson will reach out to inform customers of the latest program offerings and associated products and services that they may be interested in based on their recent usage, or updates to their profile. The customer portal provides customers easy access to information on personal actions, as well as commercial products and services available to address their particular energy needs or habits. The portal will include an e-commerce site where products or service information is provided by multiple third parties and transactions are processed by Central Hudson as a billing service.⁵ By combining the availability of usage analytics, energy management products and services, as well as efficiency programs, and other company sponsored programs, Staff concludes that Central-E should facilitate customers' buying/action decisions and address the barriers Central Hudson believes are otherwise inhibiting those decisions.

The demonstration project will provide customers the ability to access Central-E by logging into the Central Hudson website, mobile website, or mobile application. Once logged in, customers will be greeted with a personalized home page displaying energy consumption for the billing period, estimated energy use for future billing periods, a breakdown of how energy was used, and energy comparisons with similar homes. This energy use overview will allow customers to make informed decisions in managing their energy consumption and will also provide ready and reliable information about energy products and

⁵ The Company filing makes clear that while the e-commerce component will be provided by a partner that has existing relationships with manufacturers and retailers, the exchange will also allow third party providers of products and services - bringing more choice to customers.

services provided by third parties together with a seamless process for completing the purchase.

Market Animation

The Central-E should help animate the markets for energy products and services by providing customers with customized energy usage information and facilitating purchase of such products and services through its digital platform. The platform will then allow third parties access to actively engaged customers to provide needed products and services - increasing customer convenience, and at the same time, lowering third parties' customer acquisition and other transaction costs. Further facilitating these market transactions, Central Hudson's marketing support and brand loyalty should increase customer understanding and boost confidence that the products and services will offer real value.

DEMONSTRATION PROJECT PRINCIPLES

New Utility Business Models

A critical feature of the new business model Central Hudson is testing is the value created through integrating provision of tailored customer information, the offering of products and services, and a medium through which customers can engage in conversations and share opinions with one another. If successful, the model will create value to customer and third party providers. Central Hudson will test the new business model and potential revenue opportunities by collecting customer interaction data on Central-E including: number of transactions on its Central-E site; number of customer advanced data analytics subscriptions; number of products or services offered on Central-E; dollar amount of platform service revenues from Central-E; the revenue per transaction; and, return on investment on Central-E. This information will be used to test the ability of Central Hudson to generate new revenue as a

market facilitator/platform provider offering open access to market participants while bringing value to customers. Lessons learned will be used to make changes to the project during the demonstration period. These aspects attempt to demonstrate a new business model for Central Hudson while leveraging the business experience of the third party partner to accelerate the development of a competitive market for DER.

Customer/Community Engagement

Central Hudson's filing focused on its forward looking outreach plans. As detailed in the filing, customer outreach and community engagement is an inherent part of this demonstration project and the project implementation plan will include a status check point specifically related to outreach with appropriate metrics and strategic actions. For example, Central Hudson will monitor the number of digitally engaged (those customers that are "My Account" and "Energy Exchange" users) residential customers, with the goal of having 60% of all residential customers engaged within the first twelve months of the demonstration. Based on the actual quarterly results, the customer outreach and engagement measures will be modified as necessary.

Central Hudson will use its network of service providers and community organizations to acquire and motivate customers regarding the benefits of Central-E. Outreach strategies will include grassroots efforts and community based challenges to motivate customers to become engaged in the management of their energy consumption and energy efficiency.

The platform will use behavioral science to motivate and engage customers by: setting challenging, but achievable energy goals; sending personalized and actionable steps to achieve the goal; tracking progress toward the goal; and sharing social support from others who have set similar goals. There will be other behavioral elements for engagement, including

gamification through the award of points and other rewards, normative comparison, feedback, and representation of social norms.

Once customers are engaged, targeted messaging and highly personalized energy savings recommendations and information will facilitate customer actions. Customers will also be alerted to cross promotions of other Central Hudson offerings such as energy efficiency rebates or demand response payments. For these reasons, Staff believes that the Central-E demonstration project has strong forward looking customer/consumer engagement.

Identification of Economic Value

As detailed in the filing, Central Hudson will develop and test five new utility revenue opportunities within Central-E: a percentage of product and services sold through the platform; offering a billing service to third parties for products or services provided to Central Hudson customers; selling advertising space; vendor data subscription sales; and, selling advanced data analytics subscriptions. Staff believes that Central-E should lower customer acquisition costs; provide an informed and seamless purchasing platform to sell products and services; and provide marketing support and brand loyalty for third parties that provide products and services. These third parties can also introduce new products; sell additional services related to products and program offerings, and gain access to new customer segments.

Central-E will allow customers the ability to view their electric usage at a varying level of granularity depending on whether they use the basic access or the data analytics package. With this information customers can establish budget limits and set alerts to inform them of when they approach their target set points. Third parties have also frequently commented that this increased data granularity allows them the opportunity

to demonstrate the value their products and services can provide to consumers. These features all contribute toward providing economic values to the various stakeholders involved.

Scalability

Central-E will be available to all residential customers across the service territory. In addition, it will include the ability to scale across commercial and industrial customers. The Central-E infrastructure is being designed and implemented so all service classes across the utility's service territory can eventually participate. Also, additional third parties can be easily integrated to offer more products and services to customers. The ability to scale may also be possible for third parties beyond traditional energy products and services, and for customers beyond the Central Hudson service territory. The exchange will evolve based on customer preferences, provider offerings, and lessons learned during the demonstration period. For these reasons, Staff believes that Central-E satisfies the scalability criteria.

Reasonable Timeframe

Staff concludes that Central-E can be implemented in a way that will provide valuable data with respect to the DER marketplaces within a reasonable timeframe. The first phase of the demonstration project is expected to begin operations by March 1, 2016. Central Hudson has engaged several parties for the meter data management system, and the software components that make up the user interface, e-commerce platform, and analytics tools. Central Hudson is ready to begin implementation of those parts of the project almost immediately. Phase 2 of the demonstration project, which includes advanced service offerings such as integration of community solar and demand response programs, will be ready by July 2016. Central Hudson proposes the demonstration project continue until June 2018 to give Central Hudson and Staff ample time to assess and

measure the project's hypothesis and goals, which Staff believes is reasonable.

Cost Effectiveness

Staff's evaluation of cost effectiveness included examination of both qualitative and quantitative benefits and, to the extent feasible, understanding how the project would leverage third party capital as a resource for increasing and expanding benefits. Under Central-E, Central Hudson will develop and test five new revenue opportunities while producing savings in the form of reduced energy efficiency program costs. Staff believes that the Central-E demonstration will provide value by allowing Central Hudson to develop its new role(s) in the future electric system and allow it to explore avenues of future revenue opportunities. In addition, the Central-E demonstration project may aid in identifying and realizing the benefits of a more efficient distribution system.

The project includes costs for required information technology upgrades and ongoing operating and maintenance. Based on Central Hudson's forecasted level of revenues and costs, the filing concludes that Central-E "does not provide an income stream that would produce a self-sustaining business model." However, this conclusion is yet to be tested and the opportunity to examine the long term financial viability of this new model is valuable standing alone.

There are several qualitative benefits associated with the demonstration project that have not been identified and factored in to that conclusion. For example, the value of increased customer engagement related to energy usage and energy management 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 Central-E 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. With certain modifications to the Central-E business model, Staff believes that Central-E has the potential to be a valuable tool for Central Hudson as it develops as a DSP. For example, expanding the number of marketing channels or customer touch-points to drive an increased level of growth in customer transactions would have a very positive impact. In addition, re-exploring the possibility of third party investment, and reviewing the forecasted level of expenditures, could produce positive results. As another example, Staff determined, based on further discussions of the forecasted costs with the Company, that certain capital costs related to the development of the customer portal will have benefits beyond those associated with the Central-E demonstration.

These capital investments for advanced customer information systems, bill presentation software, web content management & analytics, and the customer interface are advanced digital engagement functionalities that will enable customers to engage in a seamless online experience when accessing existing and future products and services beyond the demonstration. Staff will continue to discuss these issues with the Company as it develops the Central-E implementation plan. The plan will include measuring, monitoring, and reporting on the actual benefits and costs both qualitatively and quantitatively.

AREAS FOR FURTHER DEVELOPMENT

Third Party Participation

Central Hudson actively engaged third party partners and providers in identifying solutions that could help customers manage their energy usage and carry out the demonstration project. As stated earlier, the demonstration project also provides economic value to the utility, third party partners, third party providers, and customers. While Central Hudson was able to engage these third parties and negotiate discounts, the project does not mobilize third party capital. Demonstration projects should strive to balance the risk among the utility, ratepayers, and third party partners. Staff identified third party partner capital as a way to reduce ratepayer risk and will continue to discuss this approach with Central Hudson during the development of the implementation plan.

The Central-E project promotes the participation by third party providers, including DER providers, to offer customers an array of product and service offerings. 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 Central Hudson 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 on Central-E.⁶

Staff believes that Central-E should be expanded to include ESCO offerings as well, which would result in more opportunities for third parties and more options for customers to manage bills. Staff has discussed this with Central Hudson

⁶ Following initial discussions, Central Hudson agreed to work with Staff in the implementation process to develop a mechanism for expanding Central-E to facilitate participation by additional interested DER providers.

and as first step; Central-E will incorporate the ability for customers to express an interest in obtaining an ESCO offer and therefore release their usage data and allow the ESCO market to respond accordingly.

Price and Rate Design

As noted in the Track One Order, demonstration projects should inform pricing methods and rate designs that are responsive to dynamic market conditions. Projects should strive to introduce variable, market-based rates, such as time-of-use. Staff believes that an opportunity to test time-of-use rates for customers purchasing the data analytics subscription/smart meter package is present in the Central Hudson demonstration project. Through this option, customers can access the time sensitive usage and pricing information that will enable them to better manage their energy usage. Discussions with the Company indicate the Central-E implementation plan will incorporate language that addresses time-of-use-rates.

Milestones and Check Points

Central Hudson will test the new business model, potential revenue opportunities and customer engagement activity by collecting and analyzing customer interaction 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 devices, to set expectations, share status information, and develop lessons learned. In addition, the milestones and checkpoints will be used to 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 include detailed milestones and checkpoints.

Customer Access to Data

While the Central-E project would provide all participating customers the information they need to better understand their energy usage and make informed decisions, Staff believes that the demonstration should also enable consumers to access their usage data by way of Green Button (the ability to download their own energy usage information in a consumer and computer-friendly electronic format from their utility's secure website) or something similar. This will permit customers to share such data with other third parties if so desired. Staff has discussed this with the Company and Green Button⁷ functionality will be included in the implementation plan.

Cross Company Collaboration

At the request of Staff, Central Hudson, Consolidated Edison, Orange & Rockland, and Iberdrola have all agreed to coordinate the review and assessment of their marketplace demonstration projects. They have formalized a quarterly reporting template, standardized key metrics and shared lessons learned. For example, the unified metrics to be tracked include: marketing channels and messaging; product offerings and revenue per sale; place of purchase; and, program pricing. They have agreed to a formal sharing of lessons learned through making recommendations to utility peers and the sharing of joint lessons and recommendations with external parties.

The marketplace coordination efforts also include quarterly in-person meetings among the group. Staff believes that this cross company collaboration will allow REV to move

⁷ Staff and Central Hudson 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.

effectively to a statewide marketplace and provide the opportunity for full statewide collaboration and access to the lessons learned.

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 Central-E 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 Central Hudson, the proposed Central-E 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

Central Hudson 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)

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

and where sharing such information is necessary to perform that function. The agreements between Central Hudson and their third party partners will detail the protections afforded to customer information and the restrictions placed on those partners regarding the use of that information. Central Hudson will be required to file with the Secretary any contract between Central Hudson 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 Central-E 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 providing the analytics service to Central Hudson. 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

The proposed Central-E demonstration project complies with the objectives set forth in Ordering Clause 4 of the Track One Order. Staff will continue working with Central Hudson to develop a detailed implementation plan. The implementation plan 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 Central Hudson 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 within thirty days.