

REV Demonstration Project: Connected Homes Platform

2016 2Q Quarterly Progress Report

Dated: July 29, 2016

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1.0 EXECUTIVE SUMMARY

Consolidated Edison Company of New York, Inc. (Con Edison or the Company) submits this quarterly report on the progress of the Connected Homes Platform REV demonstration project (the Project) it is implementing as part of the Reforming the Energy Vision (REV) proceeding, as required by the Order Adopting Regulatory Policy Framework and Implementation Plan, issued by the New York State Public Service Commission (the Commission) on February 26, 2015.

1.1 PROGRAM ACHIEVEMENTS

On July 1, 2015, Con Edison submitted the Project for approval by Department of Public Service Staff (DPS Staff); on January 8, 2016, DPS Staff approved the Project. Con Edison filed an implementation plan for the Project with the Commission on January 29, 2016. In the first quarter of 2016, the Company focused on clearly defining the scope of the Project and initiating development. In the second quarter of 2016, the Project was launched to approximately 280,000 customers in Con Edison's Brooklyn and Westchester territories.

1.2 CYBERSECURITY AND PERSONALLY-IDENTIFIABLE INFORMATION PROTECTION

Consistent with corporate instructions and Commission policy related to cybersecurity and the protection of personally-identifiable information (PII), each partner agreement executed for the implementation of the Project includes specific protections related to cybersecurity and PII. Assurance of this protection is critical in encouraging customers to sign up with new and innovative services offered by utilities.

1.3 ACCOUNTING PROCEDURE ESTABLISHED

On February 16, 2016, in Case 15-E-0229, Con Edison filed an accounting procedure for the accounting and recovery of all REV demonstration project costs. This accounting procedure establishes a standardized framework that will govern how the Company categorizes and allocates the costs of the REV demonstration projects, and will facilitate analyzing each project to determine the overall financial benefits of the program to customers.

1.4 COSTS, BENEFITS, AND OPERATIONAL SAVINGS

Budget information for all of the Company's REV demonstration projects is being filed confidentially with the Commission, concurrently with the filing of this document. All costs filed are incremental costs needed to implement the projects. To date, no tax credits or grants have been available to reduce the net costs of the projects, but Con Edison will take advantage of such offsetting benefits when they are available. Due to the early stage of implementation for the Project, there are no operational savings to report at this time.

1.5 CONNECTED HOMES PLATFORM

The Project seeks to provide targeted residential customers in selected areas of Con Edison's service territory with a set of tools designed to proactively connect them with cost-effective energy efficiency products and services and distributed generation offerings that will be most relevant to them. The Project is designed to remove barriers to residential adoption of distributed energy resources (DERs) and animate the DER market by using customer usage data and advanced data analytics to match customer needs with vetted DER products. A set of pre-qualified vendors will be promoted to participating customers through targeted marketing campaigns to demonstrate and evaluate the proof of concept. The targeted marketing campaigns will utilize various channels to communicate with customers, including direct, digital, an online marketplace, and contact center, and will be administered by Con Edison's partner in the project, Opower.

In Q2 2016, the Connected Homes demonstration project successfully launched to approximately 280,000 customers in Con Edison's Brooklyn and Westchester territories. The web portal with marketplace became available to all customers in late May. Customers received their first paper Home Energy Reports (HERs) with personalized insights in late May-early June and their first email HERs in late June. For visuals of the reports, see Appendix A: Print Home Energy Report Mock Up and Appendix B: Email Home Energy Report Mock Up. Call center support tools were launched and representatives were fully trained. Creative targeted offerings for solar, thermostats, marketplace and Sealed home services are in development and will be sent to customers in Q3 2016.

2.0 CONNECTED HOMES – QUARTERLY PROGRESS

2.1 DEMONSTRATION HIGHLIGHTS

2.1.1 Since Previous Quarter – Major Tasks Completion

- Finalized partnership agreements with all DER partners (Enervee, SunPower, Sealed)
- Finalized program design and timing of targeted offerings
- Finalized selection of customers to include in the program
- Finalized list of products to be sold on the marketplace
- Launched the Customer Service Interface (CSI) tool for Con Edison call center representatives handling customer inquiries about the program
- Launched single sign-on functionality for REV customers to log into the web portal and customer service representatives to log into the CSI tool
- Launched an Interactive Voice Response (IVR) opt out system for customers to opt out of the Connected Homes Project by phone
- Launched the Connected Homes web portal with Marketplace
- Launched printed Home Energy Reports
- Launched emailed Home Energy Reports
- Held creative development kick-off meetings with all DER partners to begin the targeted offering creative process
- Began developing creative materials for solar, marketplace, thermostat and Sealed targeted offerings (including inserts and marketing modules)
- Developed guidelines for data transfer between DER partners and Con Edison

2.1.2 Activities Overview

In this quarter the Project team focused on selecting customers for the project, finalizing the timing of targeted offering promotions, and launching the initial communications: printed Home Energy Reports, emailed Home Energy Reports, and the web portal with Marketplace. Storefront configuration for the marketplace, scheduled to launch in late July 2016, also began. The storefront functionality allows customers to purchase certain products (thermostats, power strips and light bulbs) directly on the marketplace website, as opposed to being transferred to a third party (e.g., Home Depot) to complete the purchase. In addition to these tasks, the Project team concentrated on setting up the targeted offerings for the Project: the data transfer process between DER partners and Con Edison, as well as the creative materials.

2.1.3 Key Metrics

Measurement of key outcomes will not be reported until Q3 2016 when Con Edison begins including targeted offerings into the Homes Energy Reports. A full list of metrics to be reported out on in Q3 2016 is listed in Appendix C: Full List of Metrics. Key tasks achieved in Q2 2016 from Phase 1 are listed in the table below.

Task	Status		
Data Acquisition			
Complete historical data transfer	Complete		
Configure and load historical/parcel data and prepare automatic	Complete		
data transfer			
Incorporate third party and DER data	Complete		
Project Design and Configuration			
Finalize marketing, branding and content materials	Complete		
Define customer segmentation strategy and configure application	Complete		
Implement Web, Marketplace, and Call Center Tools			
Configure Marketplace	Complete		
Configure web portal	Complete		
Contact Center integration	Complete		
Quality Assurance Testing and Go Live			
Conduct QA testing and receive final sign off	Complete		
Customer service training	Complete		
Deploy web, Marketplace, print and email HERs	Complete		

2.1.4 Next Quarter Forecast

In Q3 2016, the Project will begin sending solar targeted offerings to eligible customers included in the Project. These targeted offerings consist of paper inserts, paper marketing modules included in the paper HERs, and digital marketing modules included in the digital HERs. A preliminary mockup of one of these communications can be found in Appendix D: Printed Home Energy Report with Solar Targeted Offering Mock Up.

The storefront feature of the marketplace (direct payment for light bulbs, thermostats and power strips) will also go live in Q3 2016. At that time, the marketplace will also highlight Con Edison's Bring Your Own Thermostat (BYOT) program.

In August, eligible customers will begin receiving high bill alert emails if they are on track to receive a high bill based on historical weather and usage data.

Lastly, the Project team will be working on finalizing the targeted offering creative materials and the data transfer process for all DERs included in the project.

2.1.5 Checkpoints/Milestone Progress

Checkpoint/Milestone	Timing*	Status
DER Sales: Market Animation and Customer Choice	Phase 2 Midpoint / End	

Checkpoint/Milestone	Timing*	Status
Channel and Messaging Effectiveness: Customer Motivation	Phase 2 Midpoint / End	•00
Digital Engagement: Integrated Online Experience	Phase 3 start + 6 months	•00
Revenue Realization: New Business Models	Phase 2 Midpoint / End	•00
Demand Side Management: Customer Co-Benefits	Phase 2 Midpoint / End	

^{*}Detailed descriptions of the Phases can be found in the Appendix E: Description of Phases.

Legend

On Schedule	Delayed w/out Major Impact	Delayed or Stopped – Project Goals Impacted

2.1.6 Planned Activities

2.1.6.1 DER Sales: Market Animation and Customer Choice

Status: Green

Expected Target by Phase 2 Midpoint: 31,000 purchases

Actual Sales by Phase 2 Midpoint: N/A

Solutions/strategies in case of results below expectations: First, review overall DER sales by channel and product category to identify over- or underperforming products and services. Examine the possibility of changing the mix of DERs offered through each channel based on this review. Second, review "Channel and Messaging" effectiveness (below) to identify strategies for engaging customers at a higher rate. If the expected target is missed, the Project team will evaluate the larger impact to the overarching goals of the Project.

2.1.6.2 Channel and Messaging Effectiveness: Customer Motivation

Status: Green

Expected Target by Phase 2 Midpoint: 50% recall rates; 16% open rates; 2.5%

click through rates

Actual by Phase 2 Midpoint: N/A

Solutions/strategies in case of results below expectations: Evaluate results of the content and messaging effectiveness. First, evaluate potential changes in content or layout informed by A/B, or split testing. A/B testing compares two versions of a communication to see which one performs better. Second, evaluate responses by customer segment and assess possibility of customizing content by unique customer segment. Third, evaluate channel effectiveness and assess resource allocation between channels. If the expected target is missed, the Project team will evaluate the larger impact to the overarching goals of the Project.

2.1.6.3 Digital Engagement - Integrated Online Experience

Status: Green

Expected Target by Phase 2 Midpoint: 70,000 unique visitors each 6-month

period

Actual by Phase 2 Midpoint: N/A

Solutions/strategies in case of results below expectations: Evaluate strategies for generating traffic to online tools. Shift investment between strategies if optimization is needed, add incremental investment to the most effective strategies or develop additional strategies for lead generation if needed. If the expected target is missed, the Project team will evaluate the larger impact to the overarching goals of the Project.

2.1.6.4 Revenue Realization: New Business Models

Status: Green

Expected Target by Phase 2 Midpoint: \$627,000

Actual by Phase 2 Midpoint: N/A

Solutions/strategies in case of results below expectations: Evaluate the effectiveness of all messaging strategies (A/B tests, digital and paper channels) and shift communications towards the most effective means to maximize DER sales. Establish a mechanism for competition between DER vendors who wish to feature their products through the Connected Homes Platform in order to identify vendors who can benefit the most from participation in the Project and who are willing to offer the most competitive terms. If the expected target is missed, the Project team will evaluate the larger impact to the overarching goals of the Project.

2.1.6.5 Demand Side Management: Customer Co-Benefits

Status: Green

Expected Target by Phase 2 Midpoint: 19,000 MWh (Marketplace); 10,300 MWh (behavioral energy efficiency); 2.74 MW (behavioral energy efficiency); 5% lift in program participation.

Actual by Phase 2 Midpoint: N/A

Solutions/strategies in case of results below expectations: Review balance of energy insights vs. promotional content included in outbound content and optimize as needed. If the expected target is missed, the Project team will evaluate the larger impact to the overarching goals of the Project.

2.1.7 Changes to Project Design

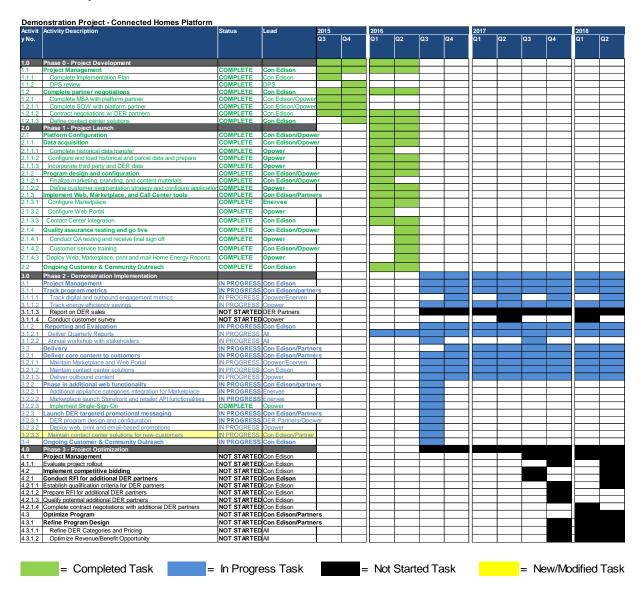
There are no significant changes expected to the current Project design.

2.2 WORK PLAN & BUDGET REVIEW

2.2.1 Phase Progress

The team successfully worked through Phase 0 (Project Development) and Phase 1 (Project Launch), and is now working through Phase 2 (Demonstration Implementation). Phase 0 consisted of submitting the Implementation Plan and completing partner negotiations. Phase 1 consisted of all the activities required to launch the Project: data acquisition, program design and configuration, implementation of the web/marketplace and call center tools, quality assurance testing and go-live, as well as initial customer community outreach efforts. Phase 2 (Demonstration Implementation) tasks focus on overall maintenance and reporting for the Project. A full description of the major Project phases is set forth in Appendix E: Description of Phases.

2.2.1.1 Updated Work Plan



2.2.1.2 Updated Budget

Budget information is being filed confidentially with the Commission.

2.3 CONCLUSION

2.3.1 Lessons Learned

After a thorough review of the customer data files, the Project team noticed a few inconsistencies impacting a small number of customers under unique billing scenarios. These inconsistencies were discovered early on in the acquisition process, so the team was able to clean the data before launching to this customer

base. Moving forward, a thorough analysis of all unique customer scenarios and the data that supports those experiences is recommended prior to the data acquisition process.

2.3.2 Recommendations

The team recommends close analysis and consideration of all unique customer types and scenarios at the beginning of the project to avoid customer confusion, inconsistent experiences, and timeline delays.

2.4 INCLUDED APPENDICES

Included in the Appendices are mock ups, a full list of metrics to be reported out on in Q3 2016 as well as descriptions of all project Phases.

Appendix A: Print Home Energy Report Mock Up

Appendix B: Email Home Energy Report Mock Up

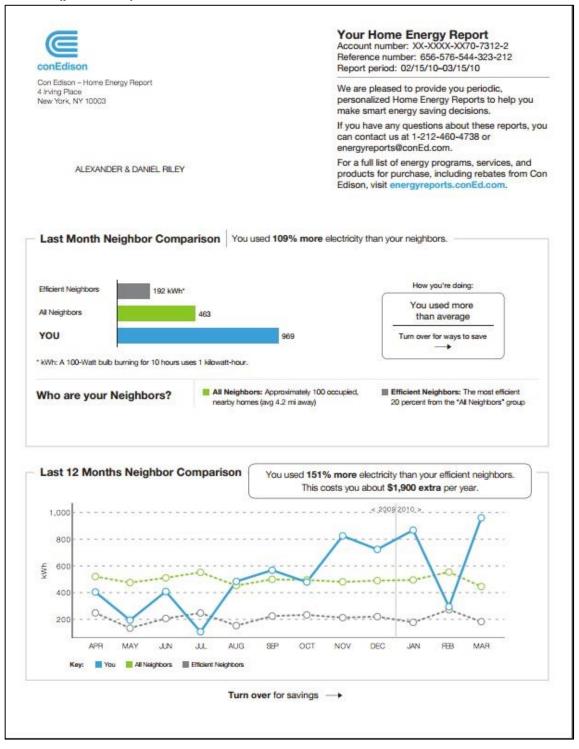
Appendix C: Full list of metrics

Appendix D: Printed Home Energy Report with Solar Targeted Offering Mock Up

Appendix E: Description of Phases

Appendix A: Printed Home Energy Report Mock Up

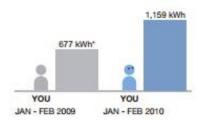
FRONT (print HER)



BACK (printed HER)



How you're doing compared to last year:



* kWh: A 100-Watt bulb burning for 10 hours uses 1 kilowatt-hour.

So far this year, you used 71% more electricity than last year.

Looking for ways to save? Visit energyreports.conEd.com

Action Steps | Personalized tips chosen for your home

Quick Fix

Something you can do right now

☐ Buy ENERGY STAR®

The Department of Energy tests the energy efficiency of many home appliances and electronics, and the best earn the official ENERGY STAR® label. In 2007 Americans saved \$16 billion on their energy bills thanks to this program.

The ENERGY STAR® label can be found on efficient models of clothes washers, refrigerators, televisions, computers and many other products.

Visit www.energystar.gov for more details.

SAVE UP TO PER YEAR

Smart Purchase

An affordable way to save more

Choose an efficient refrigerator Your refrigerator is on 24 hours a day, seven days a week. As a result, it uses more electricity than any other appliance.

> You could save up to 40% on your refrigerator's energy costs when you replace a model manufactured before the year 2001 with an efficient ENERGY STAR® unit.

> Remember that models with a freezer on the top are generally more efficient than side-by-side models.

SAVE UP TO

Great Investment

A big idea for long-term savings

Choose an efficient clothes dryer

Clothes dryers use almost 10 times more energy than clothes washers. If you are planning to replace your clothes dryer. choose one that can help reduce energy costs and make clothes-drying more convenient.

Look for a dryer with a moisture sensor and various settings for drying time and temperature. Use the yellow EnergyGuide label to compare energy use across different models and choose the most efficient one.

SAVE UP TO PER YEAR

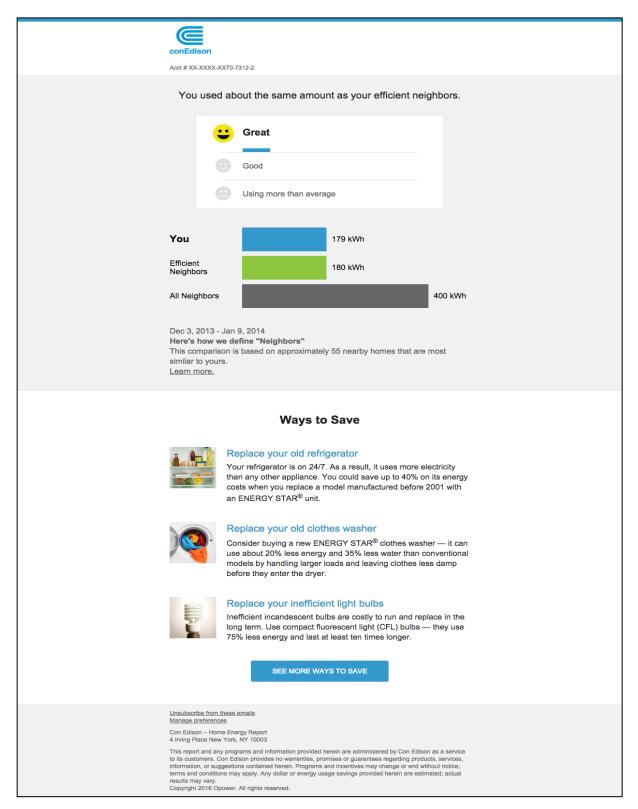


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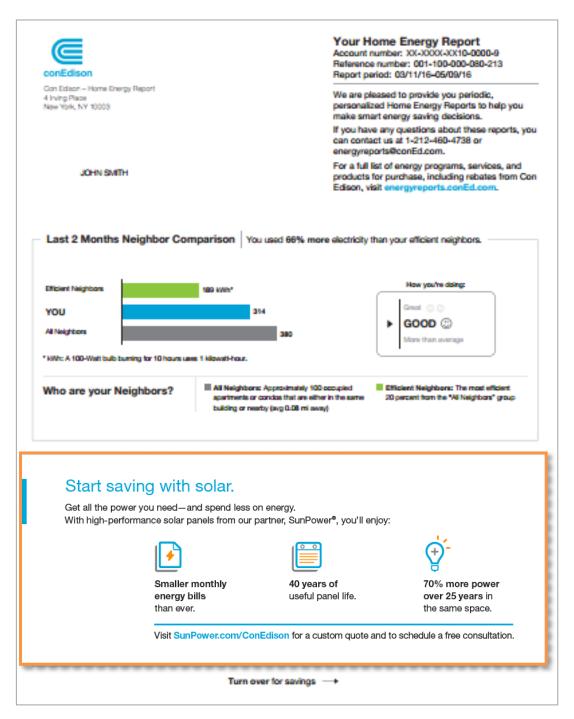
Appendix B: Emailed Home Energy Report Mock Up



Appendix C: Full List of Metrics

Checkpoint	Category	Metric	Definition	Reporting Cadence
		Customers aware of DER partners	Response to customer survey questions about awareness of DER offerings in Con Edison's territory	Annually
		Total number of impressions	Total number of paper and digital communications sent to customers, cut by DER	Quarterly
		Open rates (eHERs)	Percent of customers who open eHERs with targeted offerings, cut by DER	Quarterly
	Awareness and	Open rates (HBAs)	Percent of customers who open HBAs with targeted offerings, cut by DER	Quarterly
DER Sales: Market	Engagement	Click through rates (eHERs)	Percent of customers who click on the link/s included in eHERs with targeted offerings, cut by DER	Quarterly
Animation and Customer Choice &		Click through rates (HBAs)	Percent of customers who click on the link/s included in HBAs with targeted offerings, cut by DER	Quarterly
Digital Engagement:		Unique web visits	Number of unique customers who visit the web portal	Quarterly
Integrated Online Experience		Customers who recall HERs	Percent of homes that receive HERs who recall receiving HERs	Annually
VI. 9. VII. 10. VI.		Qualified solar leads generated	Number of qualified leads from the targeted offerings	Quarterly
	Leads and Acquisition	Solar installations reported	Number of installations	Quarterly
		Thermostats sold	Number of thermostats sold through the targeted offerings	Quarterly
		Recipients and controls	Number of leads and acquisitions among recipient customers and control customers	Quarterly
Channel and Messaging	Partners	DER partners retained	Percent of DER partners who choose to continue with the targeted offerings	Annually
Effectiveness: Customer Motivation	Customers	Positive customer experience	Percent of customers who respond positively to survey questions on their satisfaction with targeted offerings	Annually
Revenue Realization	Total Revenue	Total revenue to Con Edison	Revenue gained through the targeted offerings	Annually
	Energy / Demand / Benefits	Energy efficiency savings	Energy savings generated by customers as a result of participating in the program	Monthly
Demand Side		Demand savings (MW)	Demand savings generated by customers as a result of participating in the program	Monthly
Management: Customer Co-Benefits		Indirect energy savings	Total kWh savings from product sales from the Marketplace/Storefront	Quarterly
		Reduction in greenhouse gas emissions	Greenhouse gas emissions reduction from product sales from Marketplace/Storefront	Quarterly

Appendix D: Printed HER with Solar Targeted Offering Mock Up



Appendix E: Description of Phases

Phase	0.	1.	2.	3.
i naos	Product Management	Project Launch	Demonstration Implementation	Project Optimization
Milestone (Stage Gate to Next Phase)	Negotiations Complete Partner contracts signed DPS approval	Successful Platform Build Attract vendors in key categories Successful data transfer	 Platform Utilization Click through rates Qualified leads Contact center volume Vendor retention Customer satisfaction 	Revenue Realization Revenue per source Customer satisfaction Vendor retention
Key Elements	 Platform provider contracted DER providers signed-on 	 Develop platform End-to-end testing Contact center training Program go-live 	Evaluate response of specific audiences to • DER combinations • Channels • Messages	 Learn how to leverage more granular customer data Optimize profit by refining categories and pricing Optimize for energy efficiency gains
DER Categories	N/A	N/A	Rooftop solarHome energy efficiency auditsSmart thermostats	 Further expansion of DER products and providers Expand to ESCOs