REV Demonstration Projects

Quarterly Progress Reports

Dated: May 2, 2016

Table of Contents

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 demonstration projects 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 three projects for approval by Department of Public Service Staff (DPS Staff): Connected Homes Platform, Building Efficiency Marketplace, and the Clean Virtual Power Plant. Each project was ultimately approved by DPS Staff during the course of 2015. Subsequent to each project's approval, Con Edison filed implementation plans for each project with the Commission.

In the 1st quarter of 2016, we focused on both the execution of the existing projects as well as development of additional projects.

1.1.1 RFI Process for Developing New Demonstration Projects

On February 2, 2016, Con Edison and Orange & Rockland Utilities, Inc. (O&R; collectively, the Companies) issued a request for information (RFI) to solicit information from qualified parties so that the Companies can develop and execute a demonstration project related to grid-scale energy storage, consistent with the NYSPSC December 12, 2014 Memorandum and Resolution on Demonstration Projects (see Section 4). The Companies expect that both Con Edison and O&R will file with the Commission for approval of a new demonstration project.

Con Edison plans to use the RFI process in the future as a means by which the Companies are complying with both the letter and spirit of REV initiatives. The Companies seek to use the RFI process to increase transparency, broaden the potential solution set (particularly to those who lack a direct connection with those involved in the REV processes), improve the efficiency of the process for both vendors and the Companies, and to yield actionable projects that align with customer and shareholder interests. For these same reasons, the Company anticipates releasing RFIs later in 2016 on the topics of serving Low-to-Moderate Income (LMI) customers and electrification of transportation. If the RFI process is successful, the Companies may continue to utilize it beyond 2016.

1.1.2 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 REV demonstration projects 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. Additionally, projects that have operational cybersecurity implications, including the Clean Virtual Power Plant project, will incorporate industry best practices related to cybersecurity into the design where appropriate.

1.1.3 Accounting Procedure Established

On February 16, 2016, in Case 15-E-0229, Con Edison filed an accounting procedure necessary to effectuate the accounting and recovery of the 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.

1.2 COSTS, BENEFITS, AND OPERATIONAL SAVINGS

Budget information for all of the 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 Company's REV demonstration projects, there are no operational savings at this time related to the REV demonstration projects.

1.3 CONNECTED HOMES PLATFORM

The Connected Homes Platform 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 Connected Homes Platform 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 via targeted marketing campaigns to demonstrate and evaluate the proof of concept. The targeted marketing campaign will utilize various channels to

communicate with customers, including direct, digital, online Marketplace, and contact center, and will be administered by Con Edison's partner in the project, Opower.

In Q1 2016, Con Edison and its stakeholders began work on the Connected Homes Platform. The team submitted the Implementation Plan to the Commission and negotiated terms with DER providers. Project kick-off meetings were held with the relevant parties, data integration began, and inputs required for launch were gathered. In addition to hitting significant milestones related to set up and data transfer, the Connected Homes Platform team also developed and approved the key program materials, including sign-off on printed Home Energy Reports, emailed Home Energy reports, printed Welcome Inserts, program FAQs and a Con Edison-specific tip library. Con Edison executed an agreement with SunPower, the solar panel partner for Connected Homes.

1.4 BUILDING EFFICIENCY MARKETPLACE

The Building Efficiency Marketplace is designed to examine how interval meter data analytics can be leveraged to enable targeting and multi-channel engagement of commercial customers with high energy efficiency savings and demand reduction potential. The project will develop web-based portals to engage customers with details about how their buildings consume energy today, as well as their potential energy savings and demand reduction opportunities, as well as a marketplace to streamline connections between customers and energy efficiency market partners. Virtual, automated savings measurement and verification will be provided to customers, giving them visibility into achieved savings and maximizing the likelihood that implemented projects continue to perform over time. Con Edison is implementing the project with its partner Retroficiency, a leading provider of data analytics and software solutions to utilities and commercial customers.

In Q1 2016, Con Edison and Retroficiency began work on the Building Efficiency Marketplace. The team submitted an Implementation Plan to the Commission and finalized the project scope of work as well as terms and conditions with Retroficiency. Project kick-off meetings were held with internal and external teams to establish data integration and inputs required for launch.

1.5 CLEAN VIRTUAL POWER PLANT

The Clean Virtual Power Plant project is designed to demonstrate how aggregated fleets of solar and energy storage assets in hundreds of residential dwellings can collectively provide network benefits to the grid, resiliency services to customers, monetization value to Con Edison, and results that will help inform future rate design and development of distribution-level markets. Con Edison will execute the project in partnership with SunPower.

In Q1 2016, Con Edison and SunPower finalized the Scope of Work to be performed under the Virtual Power Plant Development Agreement and the Maintenance Services Agreement, and are working to finalize the contracts needed to begin customer acquisition. This includes the design for the SCADA link and use cases to be deployed, as well as a performance guarantee for the systems at purchase, and our ongoing relationship with SunPower for the operation and maintenance of the systems.

2.0 CONNECTED HOMES – QUARTERLY PROGRESS

2.1 DEMONSTRATION HIGHLIGHTS

2.1.1 Since Previous Quarter – Major Tasks Completion

- Submitted Implementation Plan to NYSPSC
- Held initial kick-off meetings across the organization (Energy Efficiency team, IT team, Call Center team, Marketing team)
- Held initial kick-off meeting with DERs: SunPower (solar vendor), Nest (thermostat vendor), and Enervee (Marketplace/Storefront vendor)
- Developed, reviewed and approved templates for the following key program materials:
    - Printed Home Energy Reports
    - Emailed Home Energy Reports
    - Welcome Inserts
    - Program FAQs
    - Tip Library with Con Edison-specific rebates and incentives
- Completed key technical milestones in order to successfully transfer data from Con Edison to Opower

2.1.2 Activities Overview

This quarter the team aligned on project timelines, held multiple kick-off meetings with relevant stakeholders and began data integration between Con Edison and Opower. Content and branding inputs were also gathered for the print and email Home Energy Reports, Welcome Insert, program FAQs and the Tip Library. The team is still finalizing these materials, but preliminary mock-ups of the reports can be found in Appendices A and B.

2.1.3 Key Metrics

Measurement of key outcomes will be reported in Q3 2016 when Con Edison begins including targeted offerings into the Connected Homes Energy Reports. A full list of metrics to be reported on in Q3 2016 is listed in Appendix C. Key tasks achieved in Q1 2016 are listed in the table below.

Task	*Status*
Submit Implementation Plan	Complete
Hold IT kick-off for HER, eHER and Web	Complete
Hold Call Center kick-off	Complete
Hold Marketplace and Storefront kick-off	Complete
Approve print Home Energy Report template	Complete
Approve email Home Energy Report template	Complete
Approve Welcome Insert	Complete
Approve program FAQs	Complete
Approve Con Edison-specific Tip Library	Complete

2.1.4 Next Quarter Forecast

In Q2 2016, the Connected Homes Platform will launch to ~270k electric and dual-fuel Con Edison customers in Westchester and Brooklyn, New York. Customers will begin receiving their initial program communications in Q2, including a Welcome Insert, print Home Energy Reports and email Home Energy Reports. The Web Portal with Marketplace functionality will be available to customers in June 2016. Targeted offerings will be included in reports in September 2016.

2.1.5 Checkpoints/Milestone Progress

Checkpoint/Milestone	Timing*	Status
DER Sales: *Market Animation and Customer Choice*	Phase 2 Midpoint / End	
Channel and Messaging Effectiveness: *Customer Motivation*	Phase 2 Midpoint / End	
Digital Engagement: *Integrated Online Experience*	Phase 3 start + 6 months	
Revenue Realization: *New Business Models*	Phase 2 Midpoint / End	

Checkpoint/Milestone	Timing*	Status
Demand Side Management: *Customer Co-Benefits*	Phase 2 Midpoint / End	● ○ ○

*Detailed descriptions of the Phases can be found in the Appendix.

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 under-performing 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.

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 testing. 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.

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.

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: First, maximize digital engagement and channel and messaging effectiveness in order to prove-out the value of the Marketplace and personalized communications as a valuable advertising channel to maximize DER sales. Second, establish a mechanism for competition between DER vendors who wish to feature their products through the Platform in order to identify vendors who can benefit the most from participation in the program and who are willing to offer the most competitive terms.

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.

2.2 CHANGES TO THE PROJECT DESIGN

There are no significant expected changes to the program design at this time. However, there are minor changes from our original plans:

- Con Edison and Nest will not enter into a contractual agreement. Instead, EnerVee will be a distributor of Nest thermostats and will sell the devices in Con Edison's Marketplace.
- The Marketplace will include additional brands and models of Wi-Fi thermostats in order to provide customer choice.
- Bridgevine, our contact center partner, will not perform direct sales of Nest thermostats. Rather, they will direct customers to the Marketplace where customers can make the purchase.

2.3 WORK PLAN & BUDGET REVIEW

2.3.1 Phase Review

2.3.1.1 Phase Progress

The team successfully worked through Phase 0 (Project Development) and is currently well into Phase 1 (Project Launch). Phase 0 consisted of submitting the Implementation Plan and completing partner negotiations. Phase 1 consists of all the activities required to launch the project: data acquisition, program design and configuration, implementing 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 will begin in Q3 2016. A full description of the major project phases is set forth in Appendix D.

2.3.2 Work Plan

2.3.2.1 Updated Work Plan

Demonstration Project - Connected Homes Platform

Activity No.	Activity Description	Status	Lead	2015		2016				2017				2018	
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
1.0	**Phase 0 - Project Development**														
1.1	**Project Management**	**COMPLETE**	**Con Edison**												
1.1.1	Complete Implementation Plan	**COMPLETE**	Con Edison												
1.1.2	DPS review	**COMPLETE**	DPS												
1.2	**Complete partner negotiations**	**COMPLETE**	**Con Edison**												
1.2.1	Complete MSA with platform partner	**COMPLETE**	Con Edison/Opower												
1.2.1.1	Complete SOW with platform partner	**COMPLETE**	Con Edison/Opower												
1.2.1.2	Contract negotiations w/ DER partners	**IN PROGRESS**	Con Edison												
1.2.1.3	Define contact center solutions	**IN PROGRESS**	Con Edison												
2.0	**Phase 1 - Project Launch**														
2.1	**Platform Configuration**	**IN PROGRESS**	Con Edison/Opower												
2.1.1	**Data acquisition**	**IN PROGRESS**	Con Edison/Opower												
2.1.1.1	Complete historical data transfer	**IN PROGRESS**	Opower												
2.1.1.2	Configure and load historical and parcel data and prepare automatic data transfer	**IN PROGRESS**	Opower												
2.1.1.3	Incorporate third party and DER data	**IN PROGRESS**	Opower												
2.1.2	**Program design and configuration**	**IN PROGRESS**	Con Edison/Opower												
2.1.2.1	Finalize marketing, branding, and content materials	**IN PROGRESS**	Con Edison/Opower												
2.1.2.2	Define customer segmentation strategy and configure application	**IN PROGRESS**	Opower												
2.1.3	**Implement Web, Marketplace, and Call Center tools**	**IN PROGRESS**	Con Edison/Partners												
2.1.3.1	Configure Marketplace	**IN PROGRESS**	Enervee												
2.1.3.2	Configure Web Portal	**IN PROGRESS**	Opower												
2.1.3.3	Contact Center Integration	**IN PROGRESS**	Con Edison												
2.1.4	**Quality assurance testing and go live**	**IN PROGRESS**	Con Edison/Opower												
2.1.4.1	Conduct QA testing and receive final sign off	**IN PROGRESS**	Opower												
2.1.4.2	Customer service training	**IN PROGRESS**	Con Edison/Opower												
2.1.4.3	Deploy Web, Marketplace, print and mail Home Energy Reports	**IN PROGRESS**	Opower												
2.2	**Customer Community Outreach**	**IN PROGRESS**	Con Edison												
2.2.1	Conduct Customer Outreach	**IN PROGRESS**	Con Edison												
3.0	**Phase 2 - Demonstration Implementation**														
3.1	**Project Management**	**NOT STARTED**	**Con Edison**												
3.1.1	**Track program metrics**	**NOT STARTED**	**Con Edison/partners**												
3.1.1.1	Track digital and outbound engagement metrics	**NOT STARTED**	Opower/Enervee												
3.1.1.2	Track energy efficiency savings	**NOT STARTED**	Opower												
3.1.1.3	Report on DER sales	**NOT STARTED**	DER Partners												
3.1.1.4	Conduct customer survey	**NOT STARTED**	Opower												
3.1.2	**Reporting and Evaluation**	**NOT STARTED**	**Con Edison**												
3.1.2.1	Deliver Quarterly Reports	**NOT STARTED**	All												
3.1.2.2	Annual workshop with stakeholders	**NOT STARTED**	All												
3.2	**Delivery**	**NOT STARTED**	**Con Edison/Partners**												
3.2.1	**Deliver core content to customers**	**NOT STARTED**	**Con Edison/Partners**												
3.2.1.1	Maintain Marketplace and Web Portal	**NOT STARTED**	Opower/Enervee												
3.2.1.2	Maintain contact center solutions	**NOT STARTED**	Con Edison												
3.2.1.3.	Deliver outbound content	**NOT STARTED**	Opower												
3.2.2	**Phase in additional web functionality**	**NOT STARTED**	**Con Edison/partners**												
3.2.2.1	Additional appliance categories integration for Marketplace	**NOT STARTED**	Enervee												
3.2.2.2	Marketplace launch Storefront and retailer API functionalities	**NOT STARTED**	Enervee												
3.2.2.3	Implement single-sign-on	**NOT STARTED**	Opower												
3.2.3	**Launch DER targeted promotional messaging**	**NOT STARTED**	**Con Edison/Partners**												
3.2.3.1	DER program design and configuration	**NOT STARTED**	DER Partners/Opower												
3.2.3.2	Deploy web, print and email-based promotions	**NOT STARTED**	Opower												
3.3	**Community Relations**	**NOT STARTED**													
3.3.1.	**Ongoing Community Engagement**	**NOT STARTED**	**Con Edison**												
3.3.1..2	Sub Task 1	**NOT STARTED**	Con Edison												
4.0	**Phase 3 - Project Optimization**														
4.1	**Project Management**	**NOT STARTED**	Con Edison												
4.1.1	Evaluate project rollout	**NOT STARTED**	Con Edison												
4.2	**Implement competitive bidding**	**NOT STARTED**													
4.2.1	**Conduct RFI for additional DER partners**	**NOT STARTED**	**Con Edison**												
4.2.1.1	Establish qualification criteria for DER partners	**NOT STARTED**	Con Edison												
4.2.1.2	Prepare RFI for additional DER partners	**NOT STARTED**	Con Edison												
4.2.1.3	Qualify potential additional DER partners	**NOT STARTED**	Con Edison												
4.2.1.4	Complete contract negotiations with additional DER partners	**NOT STARTED**	Con Edison												
4.3	**Optimize Program**	**NOT STARTED**													
4.3.1	**Refine Program Design**	**NOT STARTED**	**Con Edison/partners**												
4.3.1.1	Refine DER Categories and Pricing	**NOT STARTED**	All												
4.3.1.2	Optimize Revenue/Benefit Opportunity	**NOT STARTED**	All												

Completed In Progress Not Started

2.3.2.2 Updated Budget

Budget information is being filed confidentially with the Commission.

2.4 CONCLUSION

2.4.1 Lessons Learned

The team has leveraged and applied lessons learned from previous deployments to this project. For example, the program manager involved cross functional teams from various Con Edison departments, including the Customer Operations Call Center, DCX (Digital Customer Experience), Energy Efficiency, Cost Accounting, Legal, and Corporate Communications areas in the early stages of project implementation in order to leverage knowledge from lead subject experts, and improve strategies for program deployment. This resulted in the completion of Project Development Phase and maintaining progress for the Project Launch Phase.

2.4.2 Recommendations

It is recommended to continue to involve key stakeholders early on in the process to meet timelines, build buy-in and ensure smooth delivery.

2.5 INCLUDED APPENDICES

The following appendices are included at the end of this Quarterly Progress Report:

Appendix A: Connected Homes Print Home Energy Report Mock Up (preliminary)

Appendix B: Connected Homes Email Home Energy Report Mock Up (preliminary)

Appendix C: Connected Homes Full list of metrics

Appendix D: Connected Homes Description of Phases

3.0 BUILDING EFFICIENCY MARKETPLACE – QUARTERLY PROGRESS

3.1 DEMONSTRATION HIGHLIGHTS

3.1.1 Since Previous Quarter - Major Tasks Completion

- Submitted Implementation Plan
- Held initial kick-off meetings with Internal Stakeholders and Retroficiency
- Initial data securely transferred to Retroficiency
- Retroficiency has begun the preliminary building analysis

3.1.2 Activities Overview

The team has aligned on timelines, held kick-off meetings with relevant stakeholders and began data integration between Con Edison and Retroficiency. Content and branding inputs were also gathered for the Customer Facing Portal. The team is still finalizing these pages prior to Q2 launch. Preliminary mock-ups of the pages can be found in the Appendix.

3.1.3 Key Metrics

Con Edison will begin reporting measurements of key outcomes after the Midpoint of Phase 1, in the 2016 Q4 report.

3.1.4 Next Quarter Forecast

In Q2 2016, the Building Efficiency Marketplace will launch the Customer Portal to 400 commercial customers across the Con Edison service territory. The Marketing Plan will be finalized with Retroficiency, as we finalize how customers will begin receiving their initial program communications. The Customer Portal will be available to customers in June 2016. The configuration of the Efficiency Project Portal will begin in Q2, and the Portal will launch at the end of Phase 1.

3.1.5 Checkpoints/Milestone Progress

Checkpoint/Milestone	Timing*	Status
Participating Market Partners Engaged in ECM	Phase 2 Initial/Midpoint / End	
Customer and Market Partner Engagement	Phase 1 Midpoint / End Phase 2 Midpoint / End	

Checkpoint/Milestone	Timing*	Status
Projects Implemented	Phase 1 Midpoint / End Phase 2: Midpoint Year 1 /End Year 1	
Revenue Realization	Phase 1 End, Phase 2 End of Year 1	
Project Impact	Phase 1 End, Phase 2 End of Year 1	

*Detailed descriptions of the Phases can be found in the Appendices.

3.1.6 Planned Activities

3.1.6.1 Participating Market Partners Engaged in ECM

Status: Green

Expected Target by Phase 2 Start: 30 market partners engaged

Solutions/strategies in case of results below expectations: In line with root-cause analysis, actions may include reassessing targets, increasing marketing and outreach efforts, or adjusting monetization strategies to encourage market partner participation.

3.1.6.2 Customer and Market Partner Engagement

Status: Green

Expected Target by Phase 1 Midpoint: 6 Customers

Actual by Phase 2 Midpoint: N/A

Solutions/strategies in case of results below expectations: In-line with root-cause analysis, actions may include reassessing target, increasing marketing and outreach efforts, or portal redesign to increase outreach and drive portal awareness along with surveying customers to inform them of other marketing and customer engagement options.

3.1.6.3 Projects Implemented

Status: Green

Expected Target by Phase 1 Midpoint: 5% under contract

Actual by Phase 2 Midpoint: N/A

Solutions/strategies in case of results below expectations: In-line with root-cause analysis, actions may include increased consumer and market partners outreach to drive portal awareness along with surveying customers to inform them of other marketing and customer engagement options.

3.1.6.4 Revenue Realization

Status: Green

Expected Target by Phase 1 End: $177,000

Actual by Phase 2 Midpoint: N/A

Solutions/strategies in case of results below expectations: In-line with root-cause analysis, actions may include assessing and analyzing the number of participants, average ECM project and projected savings, and engagement success. Depending on which area is identified as a limitation, coordinate with partners on best solution.

3.1.6.5 Project Impact

Status: Green

Expected Target by Phase 1 End: 4.32 Million KWh

Actual by Phase 2 Midpoint: N/A

Solutions/strategies in case of results below expectations: In-line with root-cause analysis, actions may include assessing and analyzing number of participants, average ECM project and projected savings, engagement success, and model validation. In addition, review ECM projects for projected versus actual outcomes and re-validate savings potential. Depending on which area is identified as a limitation, coordinate with partners on best solution.

3.2 CHANGES TO THE PROJECT DESIGN

There have been no significant changes to the project at this time.

3.3 WORK PLAN & BUDGET REVIEW

3.3.1 Phase Review

3.3.1.1 Phase Progress

The team is working through Phase 0 (Demonstration Planning.) Phase 0 has consisted of Project Management, Configuration of Customer Portal, Data Integration, and Building Analysis. Phase 1 (Demonstration Implementation) tasks will begin in Q2 2016.

3.3.2 Work Plan

3.3.2.1 Updated Work Plan

Demonstration Project - Building Efficiency Marketplace

Activity No.	Activity Description	Status	Lead	2015	2016				2017				2018				
				Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1.0	**Phase 0 - Demonstration Planning**																
1.1	**Project Management**	**IN PROGRESS**	**Con Edison & Retroficiency**														
1.1.1	Complete Implementation Plan	**COMPLETE**	Con Edison														
1.1.2	DPS Review	**COMPLETE**	DPS														
1.1.3	Complete MSA with partner	**COMPLETE**	Con Edison & Retroficiency														
1.1.4	Complete SOW with partner	**COMPLETE**	Con Edison & Retroficiency														
1.1.5	Marketing Planning	**IN PROGRESS**	Con Edison & Retroficiency														
1.1.6	Monetization Planning	**IN PROGRESS**	Con Edison & Retroficiency														
1.1.7	Engagement Specialist Onboarding	**IN PROGRESS**	Retroficiency														
1.2	**Customer Portal Configuration**	**IN PROGRESS**	**Con Edison & Retroficiency**														
1.2.1	Software Development (Configuration/Testing/Launch)	**IN PROGRESS**	Retroficiency														
1.2.1.1	Requirements Gathering	**COMPLETE**	Retroficiency														
1.2.1.2	Design Spec / Development	**COMPLETE**	Retroficiency														
1.2.1.3	Software Confirguration/Testing	**IN PROGRESS**	Retroficiency														
1.2.1.4	Software/Launch	**IN PROGRESS**	Con Edison & Retroficiency														
1.2.2	Customer Validation and Access	**IN PROGRESS**	Con Edison & Retroficiency														
1.2.3	Internal Stakeholder Training	**IN PROGRESS**	Retroficiency														
1.3	**Data Integration**	**IN PROGRESS**	**Con Edison & Retroficiency**														
1.3.1	Define Data Integration Requirements	**COMPLETE**	Con Edison & Retroficiency														
1.3.2	Execute Systems/Data Integration	**IN PROGRESS**	Con Edison & Retroficiency														
1.3.3	Initial Data Transfer to Retroficiency	**COMPLETE**	Con Edison														
1.4	**Building Analysis and Reporting**	**IN PROGRESS**	**Retroficiency**														
1.4.1	Conduct/Update Virtual Energy Assessments (VEA)	**IN PROGRESS**	Retroficiency														
1.4.2	Post VEA results	**IN PROGRESS**	Retroficiency														
2.0	**Phase 1 - Demonstration Implementation**																
2.1	**Project Management**	NOT STARTED	**Con Edison & Retroficiency**														
2.2	**Customer and Market Engagement**	NOT STARTED	**Con Edison & Retroficiency**														
2.2.1	Execute Marketing Plan/Customer Awareness Campaigns	NOT STARTED	Con Edison & Retroficiency														
2.2.2	Customer Engagement Specialist	NOT STARTED	Retroficiency														
2.2.3	Monetization Testing	NOT STARTED	Con Edison & Retroficiency														
2.3	**Customer Portal Configuration**	**NOT STARTED**	**Retroficiency**														
2.3.1	Continuous gathering of requirements for product enhancements	NOT STARTED	Retroficiency														
2.3.2	Continuous release of updates (every 2 weeks)	NOT STARTED	Retroficiency														
2.4	**Building Analysis and Reporting**	**NOT STARTED**	**Con Edison & Retroficiency**														
2.4.1	Ongoing Data Transfers to Retroficiency	NOT STARTED	Con Edison														
2.4.2	Ongoing Data Analysis (VEA)	NOT STARTED	Retroficiency														
2.4.3	Ongoing Data Analysis (M&V)	NOT STARTED	Retroficiency														
2.5	**Efficiency Project Portal Configuration**	**NOT STARTED**	**Con Edison & Retroficiency**														
2.5.1	Software Development (Configuration/Testing/Launch)	NOT STARTED	Retroficiency														
2.5.2	Market Partner Validation and Access	NOT STARTED	Con Edison & Retroficiency														
2.5.3	Internal Stakeholder Training	NOT STARTED	Retroficiency														
3.0	**Phase 2 - Market Launch**																
3.1	**Project Management**	**NOT STARTED**	**Con Edison & Retroficiency**														
3.2	**Customer and Market Engagement**	**NOT STARTED**	**Con Edison & Retroficiency**														
3.2.1	Execute Marketing Plan/Customer Awareness Campaigns	NOT STARTED	Con Edison & Retroficiency														
2.2.3	Monetization Testing	NOT STARTED	Con Edison & Retroficiency														
2.3	**Customer Portal Configuration**	**NOT STARTED**	**Retroficiency**														
2.3.1	Continuous gathering of requirements for product enhancements	NOT STARTED	Retroficiency														
2.3.2	Continuous release of updates (every 2 weeks)	NOT STARTED	Retroficiency														
2.4	**Building Analysis and Reporting**	**NOT STARTED**	**Con Edison & Retroficiency**														
2.4.1	Ongoing Data Transfers to Retroficiency	NOT STARTED	Con Edison														
2.4.2	Ongoing Data Analysis (VEA)	NOT STARTED	Retroficiency														
2.4.3	Ongoing Data Analysis (M&V)	NOT STARTED	Retroficiency														

Completed In Progress Not Started

3.3.3 Updated Budget

Budget information is being filed confidentially with the Commission.

3.4 CONCLUSION

3.4.1 Lessons Learned

The Building Efficiency Marketplace project team has leveraged previous experience with project deployments to engage with the appropriate stakeholders internal to the Company in the early stages of project implementation. The program manager has involved teams from the DCX (Digital Customer Experience), Information Technology, Cybersecurity, Energy Efficiency, Cost Accounting, Legal, and Corporate Communications. This inclusive approach has been critical to progress achieved to date, in order for the project team to identify and resolve potential issues before the schedule was impacted. The project team will continue to identify and include key contributors as we move forward into the next phase of the project.

3.4.2 Recommendations

It is recommended to continue to involve key stakeholders; both internal to the Company and external, early on in the process to meet timelines, build support and ensure smooth delivery.

3.5 INCLUDED APPENDICES

The following appendices are included at the end of this Quarterly Progress Report:

Appendix E: Building Efficiency Marketplace Customer Facing Portal - Overview Mock Up (preliminary)

Appendix F: Building Efficiency Marketplace Description of Phases

4.0 CLEAN VIRTUAL POWER PLANT – QUARTERLY PROGRESS

4.1 DEMONSTRATION HIGHLIGHTS

4.1.1 Since Previous Quarter - Major Tasks Completion

- Finalized scope of partnership with SunPower for the installation, commissioning and long-term operation and maintenance of the Clean Virtual Power Plant.
- Completed Scope of Work for marketing and installation.
- Cyber security review of partners' existing systems.
- Finalized design for SCADA interface and cyber-secure communication between Con Edison's control centers and partner's VPP control application.
- Preliminary marketing materials prepared.

4.1.2 Activities Overview

It was anticipated that the Company's contract negotiations would conclude in Q1 2016 and that Con Edison and its partner, SunPower, could move from Phase 0 of the project planning, into Phase 1, marketing and installation. The Company did not complete negotiations in Q1 as planned. An agreement will be in place shortly and there is no material delay to the project as a result. It is not anticipated that this delay will affect the overall schedule or budget of the project.

Key to the anticipated learnings of this REV demonstration project is the best practice to incorporate control of third party systems into existing control platforms of the Regional Distribution Control Centers of Con Edison. To understand how this will be done, and agree upon work scope and pricing for Phase II of this project, significant work on the design of this integration has been completed during the previous two quarters. This includes a heavy focus on the cybersecurity of the communications, and the functionality of the control screens for Con Edison operators.

4.1.3 Key Metrics

Measurement of key findings for customers' willingness to pay for resiliency services will be reported after Q2 2016, once SunPower begins customer acquisition.

4.1.4 Next Quarter Forecast

In Q2 2016, following contract execution with SunPower, the marketing materials will be finalized and New York SunPower dealers will begin to offer qualified prospective solar customers a Sunverge Solar Integration System that stores electrical energy. The energy storage systems will be owned and operated by Con Edison and maintained by SunPower. This unique program provides resiliency to critical loads when the grid goes out to host

customers. Various contract lengths and prices will be used to test how much customers are will to pay for such a system. This test, combined with knowledge from Phase III of this project, will provide insight into how strong of an incentive can be given to third party companies to install similar systems with their own capital in the future.

4.1.5 Checkpoints/Milestone Progress

Checkpoint/Milestone	Timing	Status
Planning and Contract Negotiations	Phase 0 End	○ ● ○
Residential Design and Installation: Resiliency Pricing	Phase 1 Quarterly	● ○ ○
Demonstrate System Control through SCADA Link	Phase 2 Quarterly	● ○ ○
Market Participation	Phase 3 Midpoint / End	● ○ ○

4.1.6 Planned Activities

4.1.6.1 Contact finalization and signing.

Status: Orange

Solutions/strategies in case of results below expectations: The finalization of the contracts between Con Edison and SunPower are nearly complete and are required to continue to the next phase of this project. If an agreeable deal takes longer to work out than a few weeks, critical timelines will be pushed out.

4.1.6.2 Marketing Plan will be finalized.

Status: Green

Expected Target by Phase 2 Midpoint: The Marketing Plan, including the marketing materials that SunPower Dealers will use to sell resiliency services to host customers, as well as advertisement materials and preliminary press releases, will be finalized within 30 days after the contracts are signed. Preliminary materials have already been produced, and a marketing plan is already under review by both teams.

Solutions/strategies in case of results below expectations: A marketing plan, and all materials, must be approved by both parties for the project to continue. Failure to meet the 30 day timeline may result in less customer acquisition time before a Marketing Event of Default. This default event occurs if two thirds of the first block of customers

has not signed up for resiliency services within six months of the contract signing. This is designed so that the program to only continues into construction if customers are willing to pay for resiliency services (a core hypothesis of this demonstration). This limits Con Edison's total liability for this program, which is beneficial to all Con Edison customers.

4.1.6.3 FDNY and DOB Approvals required before installation can proceed.

Status: Green

Expected Target by Phase 2 Midpoint: FDNY to have the preliminary findings of a third party laboratory test on safety information for various battery chemistries to aid in the approval process. Con Ed's R&D department has been working with the FDNY in a parallel effort to increase the availability of battery storage projects in our service territory. An outside laboratory has been hired to conduct various safety tests and the FDNY's direction. Con Edison believes this will help get this technology approved in the New York City area.

Solutions/strategies in case of results below expectations: FDNY approvals are required for these systems to be installed at host customers' homes. As such, if the approval process takes too long there is another provision in the contract language that will cancel the project at very little cost to Con Edison; all but a program fee will be returned. This limits Con Edison's customers liability to pay for systems before they have been approved for installation.

4.1.6.4 Various Price Points will be tested and the average monthly resiliency fee that customers sign up for will be reported.

Status: Green

Expected Target by Phase 2 End: The resiliency pricing will be offered at various price points based on contract length. The Q2 2016 report will identify what the average price point for resiliency was, and how many customers signed up for the program.

Solutions/strategies in case of results below expectations: See the Guaranteed Marketing Deadline described above.

4.2 CHANGES TO THE PROJECT DESIGN

There are no significant expected changes to the program design at this time.

4.3 WORK PLAN & BUDGET REVIEW

4.3.1 Phase Review

4.3.1.1 Phase 0 Progress

It was anticipated that Phase 0 would have concluded by the end of Q1. However, a few open items remain related to contract negotiations. Con Edison anticipates finalizing these contracts and beginning Phase 1 shortly.

4.3.2 Work Plan

4.3.2.1 Updated Work Plan

Activity No.	Activity Description	Lead	2015		2016	
			Q3	Q4	Q1	Q2
1.0	**Phase 0 - Demonstration Planning**					
1.1	**Project Management**	**Con Edison/Sunpower**				
1.1.1	Obtain Commission Approval	Con Edison				
1.1.2	Finalize Contracts	Con Edison/SunPower				
1.1.2.1	Refine Scope of Work	ConEdison/SunPower				
1.1.2.2	Draft Partnership Contract – Access Agreements	Con Edison/SunPower				
1.1.2.3	Draft Homeowner Contract – Energy Storage Agreements	Sunpower				
1.1.2.4	Maintenance Service Agreements	Con Edison/SunPower				
2.0	**Phase1 - Installation of Solar plus Battery Storage**					
2.1	**Project Management**	**Con Edison**				
2.2	**Customer Engagement**	Sunpower				
2.2.1	Marketing	Sunpower				
2.2.2	Sales	Sunpower				
2.2.3	Customer Acquisition	Sunpower				
2.2	**Financing**	**Sunpower**				
2.2.1	Arrangement for coupling storage to solar financings	Sunpower				
2.2.1.1	**Supply Chain**	Sunpower				
2.2.1.2	Supply chain planning	Sunpower				
2.2.1.3	**Design and Installation**	Sunpower				
2.3	**VPP Capacity Demonstration**	**Sunpower**				
2.4	**Solar PV and Storage Operations and Maintenance (O&M)**	**Sunpower**				
3.0	**Phase 2 - Demonstrate system control through Con Edison's control center applications**					
4.0	**Phase 3 - Market Participation and Rate Design**					

In Progress | Completed | Delayed | Scheduled

4.3.3 Updated Budget

Budget information is being filed confidentially with the Commission.

4.4 CONCLUSION

4.4.1 Lessons Learned

Significant progress on establishing a future DSP environment for Con Edison's Regional Control Centers has been made with the approval of the first connection to a third party for monitoring and indirectly controlling assets on our distribution systems. Cybersecurity is a major concern for distributed assets and this first link will provide valuable insight into the design as we expand the DSP to incorporate increasing numbers of Distributed Energy Resources. The design basis will continue to evolve and flexibility will need to be built into the system architecture to allow for improvements in design, standards and best practices.

The unique nature of the partnership in deploying a residential virtual power plant to provide shared benefits to the customer, the utility and the markets presented unanticipated complexity in establishing contractual terms. These complexities extended the time allotted for this phase of the project but will provide a structure for the company to develop similar projects in the future.

4.4.2 Recommendations

Con Edison and SunPower will continue to negotiate the required terms needed for a successful demonstration project. The overall progress scope, schedule, and costs of the project remain unchanged.

4.5 INCLUDED APPENDIX

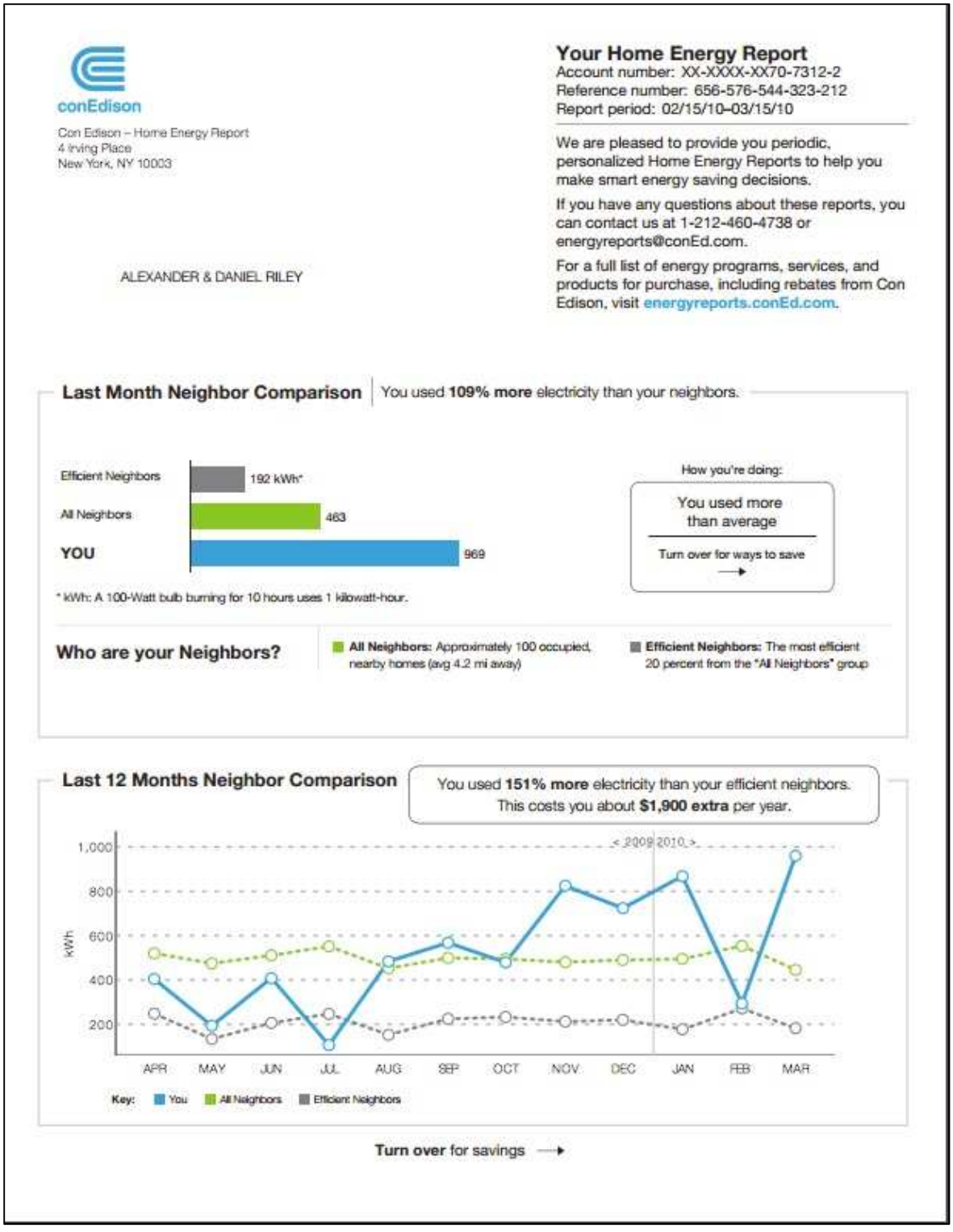
The following appendix is included at the end of this Quarterly Progress Report:

Appendix G: Clean Virtual Power Plant Description of Phases

5.0 APPENDICES

Appendix A: Connected Homes Printed Home Energy Report Mock Up (preliminary)

FRONT



BACK

Personal Comparison

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 $600 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 $2,500 PER YEAR

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.

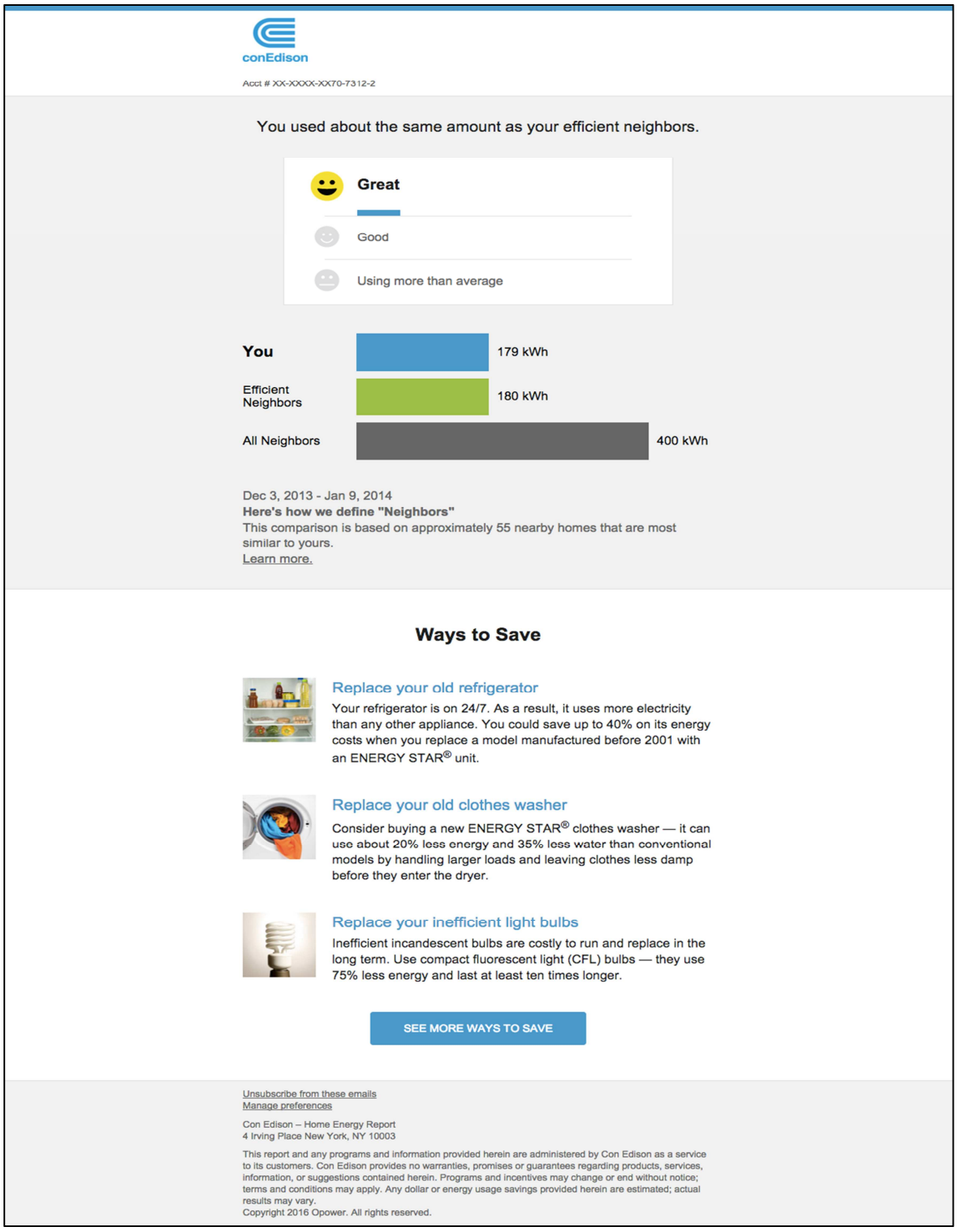
Look for a dryer with a moisture sensor and various settings for drying time and temperature. Use the yellow EnergyGuide label to compare energy use across different models and choose the most efficient one.

SAVE UP TO $15 PER YEAR

conEdison

energyreports.conEd.com | 1-212-460-4738 | energyreports@conEd.com

Appendix B: Connected Homes Emailed Home Energy Report Mock Up (preliminary)



conEdison

Acct # XX-XXXX-XX70-7312-2

You used about the same amount as your efficient neighbors.

Great

Good

Using more than average

You	179 kWh
Efficient Neighbors	180 kWh
All Neighbors	400 kWh

Dec 3, 2013 - Jan 9, 2014

Here's how we define "Neighbors"

This comparison is based on approximately 55 nearby homes that are most similar to yours.

Learn more.

Ways to Save

Replace your old refrigerator

Your refrigerator is on 24/7. As a result, it uses more electricity than any other appliance. You could save up to 40% on its energy costs when you replace a model manufactured before 2001 with an ENERGY STAR® unit.

Replace your old clothes washer

Consider buying a new ENERGY STAR® clothes washer — it can use about 20% less energy and 35% less water than conventional models by handling larger loads and leaving clothes less damp before they enter the dryer.

Replace your inefficient light bulbs

Inefficient incandescent bulbs are costly to run and replace in the long term. Use compact fluorescent light (CFL) bulbs — they use 75% less energy and last at least ten times longer.

SEE MORE WAYS TO SAVE

Unsubscribe from these emails
Manage preferences

Con Edison – Home Energy Report
4 Irving Place New York, NY 10003

This report and any programs and information provided herein are administered by Con Edison as a service to its customers. Con Edison provides no warranties, promises or guarantees regarding products, services, information, or suggestions contained herein. Programs and incentives may change or end without notice; terms and conditions may apply. Any dollar or energy usage savings provided herein are estimated; actual results may vary.

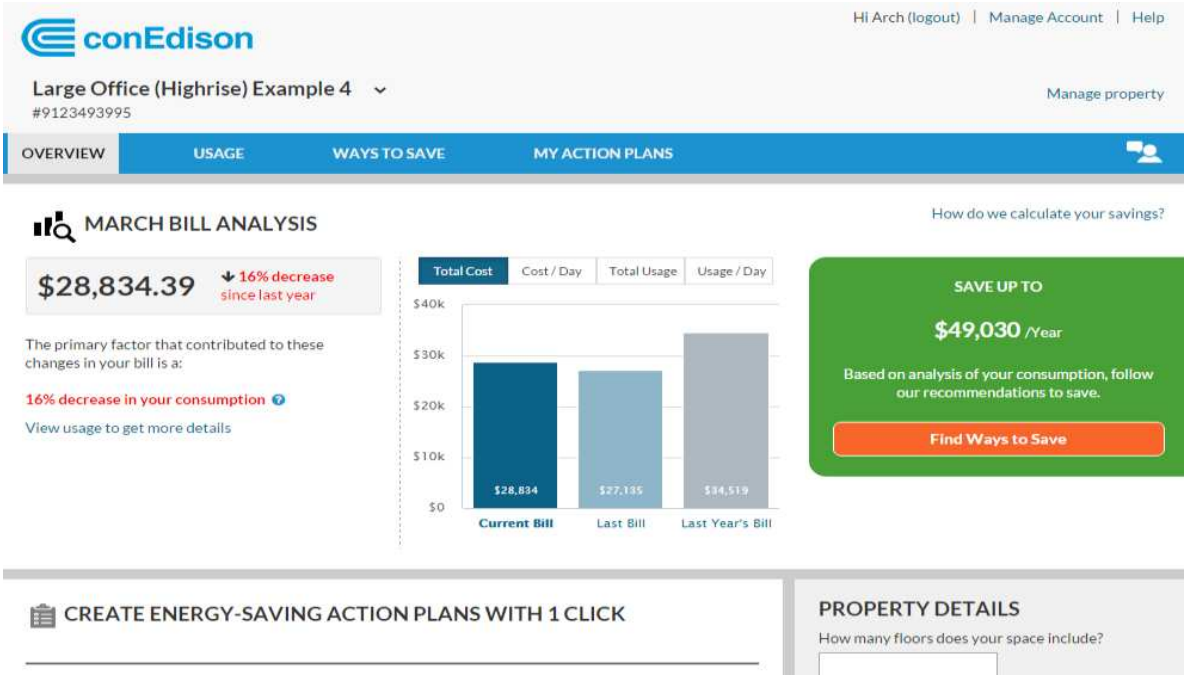
Appendix C: Connected Homes Full List of Metrics

Checkpoint	Category	Metric	Definition	Reporting Cadence
DER Sales: Market Animation and Customer Choice & Digital Engagement: Integrated Online Experience	Awareness and Engagement	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
		Open rates (HBAs)	Percent of customers who open HBAs with targeted offerings, cut by DER	Quarterly
		Click through rates (eHERs)	Percent of customers who click on the link/s included in eHERs with targeted offerings, cut by DER	Quarterly
		Click through rates (HBAs)	Percent of customers who click on the link/s included in HBAs with targeted offerings, cut by DER	Quarterly
		Unique web visits	Number of unique customers who visit the web portal	Quarterly
		Customers who recall HERs	Percent of homes that receive HERs who recall receiving HERs	Annually
	Leads and Acquisition	Qualified solar leads generated	Number of qualified leads from the targeted offerings	Quarterly
		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 Effectiveness: Customer Motivation	Partners	DER partners retained	Percent of DER partners who choose to continue with the targeted offerings	Annually
	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
Demand Side Management: Customer Co-Benefits	Energy / Demand / Benefits	Energy efficiency savings	Energy savings generated by customers as a result of participating in the program	Monthly
		Demand savings (MW)	Demand savings generated by customers as a result of participating in the program	Monthly
		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: Connected Homes Description of Phases

Phase	0. Product Management	1. Project Launch	2. Demonstration Implementation	3. 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 solar • Home energy efficiency audits • Smart thermostats	• Further expansion of DER products and providers • Expand to ESCOs

Appendix E: Building Efficiency Marketplace Customer Facing Portal – Overview Mock Up (preliminary)



Appendix F: Building Efficiency Marketplace Description of Phases

Phase	0. Demonstration Planning	1. Demonstration Implementation	2. Market Launch
Milestone (Stage Gate to Next Phase)	*Successful Platform Build* • Partner contracts signed • DPS approval • Launch Customer Facing Portal	*Platform Utilization* • Successful data transfer • Launch of Efficiency Project Portal (Marketplace)	*Marketplace Participation* • Expansion of Test Population
Key Elements	• Platform partner contracted • Configuration of Customer Portal • Data Integration • Building Analysis and Reporting	• Develop Marketing Plan • Customer and Market Engagement • Configure Efficiency Project Portal (Marketplace)	• Test the Customer and Market Responses to Monetization Strategies • Further Configure Efficiency Project Portal to meet the needs of the Customers and Market Partners
DER Categories	N/A	• Energy Efficiency Measures	• Energy Efficiency Measures • Demand Side Management

Appendix G: Clean Virtual Power Plant Description of Phases

Phase	0. Demonstration Planning	1. Installation of Residential Systems	2. SCADA Integration	3. Market Participation and Rate Design
Milestone (Stage Gate to Next Phase)	*Negotiations to be Completed* • Sign Development Agreement • Sign Maintenance Services Agreement • Sign related agreements	*Successfully Contract with Host Customers and build a 4.0 MWh Virtual Power Plant* • Gain required market traction before the Guaranteed Marketing Deadline.	*Build Control and Monitoring Platform for Regional Control Center Operators.* • Cyber-secure communication architecture. • HMI Functionality • Engineering analysis through PI system • Control Center Customer satisfaction	*Shadow a wholesale (NYISO) or distribution (DSP) market to demonstrate monetization of VPP assets* • Calculate % of compliance • Calculate potential penalties during operating time • Determine price that can be offered for battery dispatch-ability
Key Elements	• Vendor Approved • Cybersecurity Plan •	• Learn how much customers are willing to pay on a monthly basis for access to a battery during a grid outage. • Learn the tolerance customers have for hosting battery systems.	• Work with GE to develop initial HMI screens • Iterative Process between SCADA design engineers and Control Center operators • Key takeaways to be learned for expansion for other 3rd party connections.	• Learn how much a distributed system can make in the markets • Learn operating costs of Con Edison • Calculate total risks • Calculate acceptable price to offer 3rd parties for dispatch-ability
DER Categories	N/A	Solar Plus Storage	• Cybersecurity • DSP Functionality • Scalability	• Solar Plus Storage • Market Design • DSP Functionality • Scalability