



CONnectED Homes Platform

Demonstration Project

Dated: July 1, 2015

Table of Contents

1.0	EXECUTIVE SUMMARY	1
2.0	BUSINESS MODEL OVERVIEW	4
2.1	PROBLEM	4
2.2	SOLUTION	4
2.3	LINKAGES TO DEMO PRINCIPLES.....	7
3.0	MARKET ATTRACTIVENESS.....	9
3.1	UNIQUE VALUE PROPOSITION.....	9
3.1.1	Participating Customer	9
3.1.2	Partner/Third-party	11
3.1.3	Utility	12
3.1.4	System	12
3.2	CUSTOMER SEGMENTATION.....	13
3.3	CHANNELS.....	14
3.4	ABILITY TO SCALE.....	19
4.0	DEMONSTRATION PLAN.....	21
4.1	METRICS FOR SUCCESS.....	21
4.2	TIMELINES, MILESTONES, AND DATA COLLECTION.....	24
4.2.1	Implementation Phase	24
4.2.2	Evaluation Phase.....	25
4.5	PARTICIPATION.....	26
4.5.1	Target Population, Sample Size, Control Group.....	26
4.5.2	Third-party Partner(s)—Specifics of Agreement.....	27
4.5.3	Utility Resources and Capabilities	28
4.6	CUSTOMER OUTREACH	28
4.6.1	Outreach to Targeted Communitie	28
4.6.2	Motivating Customers/Communities.....	30

4.7	CONDITIONS AND BARRIERS	31
4.7.1	Market Rules and Standards	31
4.7.2	Consumer Protections	33
4.7.3	Channel or Market Challenges	33
5.0	FINANCIALS	34
5.1	UTILITY REVENUE STREAMS	34
5.2	INVESTMENTS.....	35
5.2.1	Timing of Investments	35
5.2.2	Third-party Capital.....	36
5.3	RETURNS.....	36
5.4	COST EFFECTIVENESS.....	36
6.0	Reporting.....	40
7.0	CONCLUSION	41
7.1	POST DEMONSTRATION BENEFITS	41
7.1.1	Qualitative	41
7.1.2	Quantitative.....	41
7.2	PLANS TO SCALE	42
7.3	Advantage.....	42

1.0 EXECUTIVE SUMMARY

Consolidated Edison Company of New York, Inc. (Con Edison or the Company) is committed to supporting the Reforming the Energy Vision (REV) initiative by empowering customers with more choices regarding how they manage and consume energy. As energy technologies evolve, consumers in New York State are presented with an ever-increasing selection of distributed energy resources (DERs), including a variety of energy efficiency and demand response products and services and distributed generation, and this demonstration project will seek to increase DER adoption. Given the important benefits that these resources bring to the energy system – in the form of fuel and resource diversity, system reliability and resiliency, and carbon reduction – Con Edison is committed to leveraging its own unique position in the market to help customers overcome existing barriers to DER adoption.

To promote the adoption of these resources at scale, this demonstration project addresses two of the most important barriers to wide scale adoption of new energy management opportunities by residential customers: less than ideal levels of customer engagement with energy service providers (ESPs) and high costs of customer acquisition for ESPs. At the same time, the demonstration project addresses the important question of how Con Edison will be able to develop new revenue streams in a REV environment. Con Edison has been in the forefront of making energy efficiency and demand response programs available to its residential customer base. Through its existing programs, the Company has helped thousands of customers save on their energy bills, and reduced system demand, by offering incentives for the purchase and installation of high efficient equipment and control devices used for demand response programs. While a wide range of DER and energy efficiency products and services exist that could help customers better manage their energy use, it is challenging for customers to sift through these various options and to understand which offerings suit their unique energy usage profile.

The current high costs of customer acquisition for DER investments are, in part, a result of the fact that ESPs often take a blanket-approach to marketing that results in a mismatch of solicitations: apartment dwellers receive digital advertisements for rooftop solar, renters receive mailed promotions for home retrofits, and owners of newly built homes receive promotions for smart thermostats that they already have.

The end result is an inefficient market for energy products and services with ESPs who are unable to effectively target their prime audience. This presents an opportunity for Con Edison to help improve the market by targeting communications to connect specific ESPs with the customers who stand to benefit the most. Con Edison proposes a new form of customer engagement, the CONnectED Homes Platform, to empower residential customers

with personalized insights about their energy consumption coupled with targeted offerings for DERs.

To implement the CONnectED Homes Platform, Con Edison will partner with a software company, Opower, to deploy an analytics platform that will provide targeted customers in selected areas of its 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.

Utilities like Con Edison are in the best position to promote cost-effective energy efficiency products and services at the top of the marketing funnel (e.g., before customers know they want to purchase a product or service to reduce their energy use). Customers look to utilities for energy advice and trust them to provide reliable information about energy management decisions. Utilities, in turn, have access to rich data about their customers' energy use profiles and the expertise to pair customers with the products and services that are the best possible fit for their needs.

Through the CONnectED Homes Platform, Con Edison will reach out to customers with **personalized offers for DERs and energy products/services**, including solar, Con Edison/partner smart thermostats with an energy savings services bundle and other home energy products and services. The offers will be tailored to specific customer segments based on energy use profiles, demographic data, and other information. To help customers understand why a particular offer is relevant, the offers will be embedded within a rich communication that contains personalized energy insights designed to motivate customers to think critically about their energy use. The reports will be delivered to customers both by mail and electronically, and will be complemented with a web experience that offers customers an opportunity to seek out more information and do a "deep dive" into their energy use.

Each offer that is sent to customers will be sponsored by a **third-party ESP partner**, which will work with Con Edison to develop unique offers that are tailored to specific customer segments. Just as consumers benefit from identifying the energy services that are right for them, ESPs can also benefit from having a more targeted approach to reaching customers. Today, ESPs often spend significant amounts of money identifying and engaging prospective customers; these "soft costs" of customer acquisition drive up the market prices for DERs making customer acquisition of DERs less likely. By participating in the CONnectED Homes Platform, ESPs have the opportunity to acquire new customers and expand their markets while also experimenting with new strategies in targeted marketing that can help them drive down soft costs in the longer term.

The targeted customer population for this demonstration project will include Con Edison residential customers in the Brooklyn and Westchester neighborhoods. Customer energy and demographic data will be used to pair offers with the customers who are most likely to

take advantage of or benefit from the featured product or service, based on their energy usage, household characteristics, and other factors. Offers will be delivered with detailed and personalized insights about customer energy usage, based on the hypothesis that this will significantly improve conversion rates by capturing customers' attention, motivating them to take action, and providing context for how the featured products and services can complement customers' energy management needs.

Con Edison will also partner with a third-party contact center company, Bridgevine, to handle inquiries related to the customized energy report and promote the energy products and services offered as part of this demonstration project. In particular, Con Edison intends to promote ESP products and services to residential customers when they are moving or establishing service. At this critical moment, customers are thinking about making upgrades to their new homes and are interested in subscribing to a variety of products and services, which makes them natural candidates for compelling offers.

This demonstration project will also allow Con Edison to test alternative revenue stream opportunities. Con Edison expects to generate new revenue streams through a flat referral fee, a percentage based commission, or a margin above cost of product and service from each of three ESP partners that have been selected to participate in the program: SunPower, Nest, and HomeServe. In this way, the CONnectED Homes Platform can better align Con Edison's own financial incentives with the larger objective of animating the market for DERs in the state of New York. Con Edison also expects this project will deliver benefits to its transmission and distribution system due to increased adoption of DERs, as well as additional customer benefits due to improved customer satisfaction.

2.0 BUSINESS MODEL OVERVIEW

2.1 PROBLEM

One of the most significant barriers to wide scale adoption of DERs in the residential segment is a lack of customer understanding of which offerings are best suited to help them manage their energy usage, energy costs and comfort in their homes. In general, residential customers tend to spend relatively little time thinking about their energy usage. In general, customers may not take the time to explore available offerings and they may lack the information and insights they need to fully understand how DERs can help them manage their energy use. In addition, customers who express interest in a particular product or service (e.g., solar or a smart thermostat), may be unfamiliar with the reputation of the various vendors in the market and may not be sure which vendors to turn to for the service they are interested in.

On the partner side, leading and new market entrants in the DER space are making inroads in developing brand awareness. However, the cost of identifying, qualifying, and closing on new residential customers can be significant. This high customer acquisition cost (CAC) of DER adoption is widely considered to be a significant barrier to the expansion of DER markets.¹ Soft costs, while decreasing, will likely continue to be a barrier to wide adoption of DERs in Con Edison's service territory, but can be reduced as the uptake of DERs increases and the soft costs are spread over more DERs.

2.2 SOLUTION

Con Edison can play a valuable role in connecting energy partners with those consumers most likely to benefit from their products and services. For example, imagine targeting advertisements for rooftop solar only to owners of single-family homes with usage characteristics indicative of a strong value proposition for distributed generation. Furthermore, imagine that these targeted advertisements mentioned the value proposition within the context of that homeowner's actual energy use, and that the homeowner knew there was an existing partnership between the DER provider and Con Edison. Suddenly, signing up for a smart thermostat in conjunction with energy saving services, a rooftop solar, or an energy audit becomes a much more manageable process that is streamlined from both the consumers' and the providers' perspectives. This accelerates the rate of adoption, reduces wasted marketing spend on ineligible customers, and ultimately helps to foster a more robust and efficient market for advanced energy products and services.

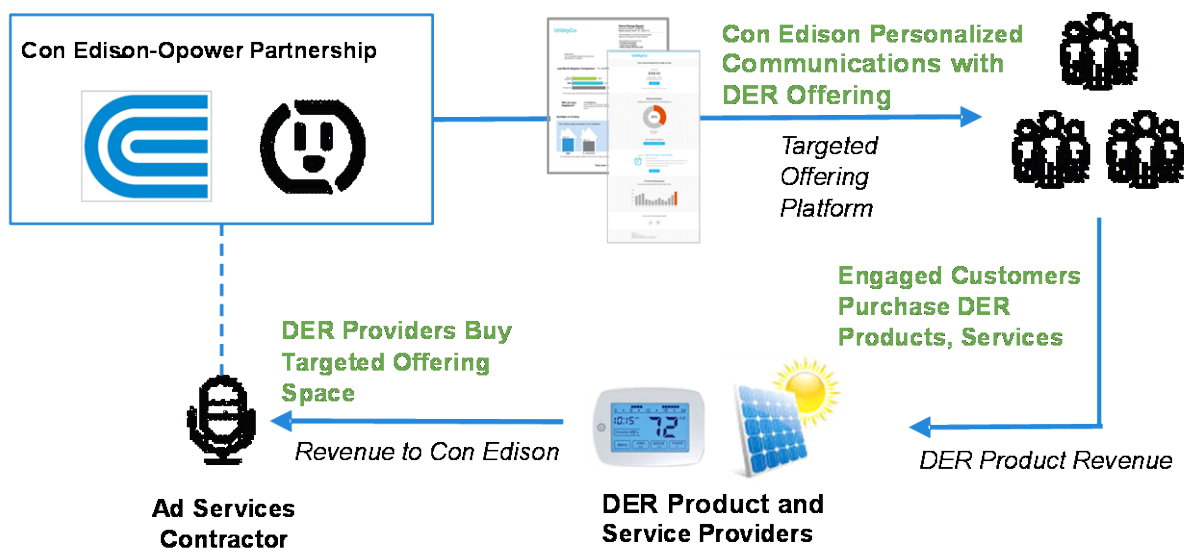
Con Edison is proposing the demonstration of the CONnectED Homes Platform to leverage customer data and analytics to develop highly targeted and tailored DER messaging to be

¹ <http://www.nrel.gov/news/press/2013/5306.html>

used in partnership with EPSs. The Company CONnectED Homes Platform is designed to assist in removing barriers to residential adoption of DERs and animate the DER market by using customer usage data and advanced analytics to match customer needs with reputable DER vendors.² In addition Con Edison will use its third-party contact center to amplify the value of the analytical platform and the DER technology at the point of customer connection.

As illustrated in Figure 2-1, the CONnectED Homes Platform operates as method of matching high quality DER vendors (refer to Table 3.6 – Initial Partner Selection) to targeted Con Edison residential customers. In Step 1 Con Edison analyzes customers for usage patterns and other customer and premise characteristics that indicate a customer benefit for DER and/or an energy efficiency product or service. The Company defines a need as an opportunity for the customer to reduce usage, bills, or otherwise benefit from the adoption of DER. In Step 2 Con Edison matches those customers with personalized communications regarding the appropriate offering, contact, and promotional information from a selected vendor. The premise of the demonstration project is that 5-10 contextually relevant touch points per year with a customer will serve to increase both understanding of what these various energy products and services can provide as well as promote third party brand awareness, both leading to increased market adoption.

Figure 2-1. CONNECTED HOMES PLATFORM



² This would expand upon Con Edison’s current segmentation of customers based upon consumption in the company’s EEPs programs.

Our third-party call center will amplify the value of the paper and web-based platform by handling inquiries and referring customers to DER providers. We will also cross sell DER when customers initiate service

The Company's contact center partner will answer inquiries from customers who have questions about their home energy reports or about offers from ESPs and will also promote DER and energy efficiency offers when customers initiate service or move.

By recruiting and creating value for third party ESPs, Con Edison will be developing partnerships that will help drive DER adoption and revenue for third parties while cultivating additional revenue streams for the utility. Introducing sustainable revenue opportunities for Con Edison will require a deep and engaged customer base that associates the Con Edison brand with customer service, convenience and a trusted energy advisor..

HYPOTHESES BEING TESTED

Via this demonstration project the Company is testing four primary hypotheses:

1. A Con Edison sponsored platform that matches specific DER solutions to eligible customers will drive greater DER adoption
2. Presenting third-party DER offers in the context of energy usage insights can drive greater DER adoption
3. Con Edison will be able to generate revenue from third-party ESPs through a combination of strategies including lead generation, customer aggregation, and acting as a partner.
4. The CONnectED Homes Platform will provide customers with a positive customer experience and improve customers' access to their energy data.

2.3 LINKAGES TO DEMO PRINCIPLES

<i>Principle</i>	<i>Proposed Measures</i>
1. Partnership between utility and third-party service provider; goal of third-party capital contribution	✓ Partnership with Opower, which will contribute significant capital to the cost of platform build; additional service providers engaged as part of platform
2. Utility identify problems and market should respond with solutions	✓ CONnectED Homes Platform facilitates an efficient match of customer needs to specific DER solutions
3. Clear delineation of how generated economic value is divided between the customer, utility, and third-party service provider; proposal for how much capital expense should go into the rate-bases versus competitive markets	<p>Con Edison expects its costs for this demonstration to be recovered through the Monthly Adjustment Clause (MAC). Revenues from third party service providers, lenders, and customers that participate in the demonstration will be credited to ratepayers. The Company may propose incentive mechanisms as the Demonstration Project develops.</p> <p>✓ Over time, if successful, ad revenue will fund the platform operation, and generated economic value will be realized by DER providers in the form of reduced acquisition costs and increased revenue. Customers will indirectly benefit through lower energy bills, greater comfort, and greater access to information about energy products and services.</p>
4. Market for grid services should be competitive	✓ No utility DER ownership is proposed. The initial stage of the demonstration project is a test, with later expansion that will provide competition (as discussed below).
5. Propose rules that will help create subsequently competitive markets; establish regulatory proposals to ensure safety, reliability and consumer protection. [Service providers can retain intellectual property that results from base data that would be available to others.	✓ Con Edison intends to open the platform to all DER providers following the demonstration stage, creating a competitive market for CONnectED Homes Platform.

CASE 14-M-0101 -2-]

6. Inform pricing and rate design modifications and include opportunities for third parties to demonstrate how various rate design can be used to benefit consumers, encourage customer participation, and achieve REV's efficiency and bill management objectives.	× Rate designs to be tested in a separate demonstration project. There will be some potential synergies for DER adoption from residential demand tariff testing as newly established rate design becomes available.
7. Utility and third-party service provider(s) should consider deploying in their demonstrations advanced distribution systems, including two way communications, real time operation of dynamic load, and other system technologies that support awareness, flexibility, efficiency and cost-effectiveness.	× Not applicable
8. Utilities should explore opportunities in their demonstrations to work with and include various residential, commercial, institutional and industrial customer participants.	✓ Initial focus will be residential, a customer segment that is often difficult to reach out to effectively through traditional utility programs.

3.0 MARKET ATTRACTIVENESS

3.1 UNIQUE VALUE PROPOSITION

3.1.1 Participating Customer

Customers derive value from the CONnectED Homes Platform through outbound communications that provide improved insights about their energy needs and access to personalized solutions and vendors that can help them address those needs. They will also have access to exclusive bundles of product and services available only from partnerships between Con Edison and third-party ESPs, such as Con Edison/Nest smart thermostat with Seasonal Savings. Ultimately, this translates into increased comfort, bill savings, and enhanced customer energy knowledge across a wide portion of the customer base.

Outbound communications are important because they can reach customers at a large scale, particularly those who might not otherwise proactively seek information. By including energy usage information and insights within each communication, the demonstration program can capture customer's attention and drive higher rates of action. For the customer, this is expected to translate into bill savings and higher levels of satisfaction navigating the DER market.

Sharing this style of energy advice with customers has produced consistent results: rates at which customers open, read, recall, and share these type of communications are significantly higher than corresponding industry average rates. Opower has extensive experience leveraging outbound communications to promote efficiency and DER-related offerings by motivating customers to take targeted energy efficiency actions. Figure 3-1 illustrates Opower's research data regarding customers opening a communication.

Figure 3-1. Customer Open Rates

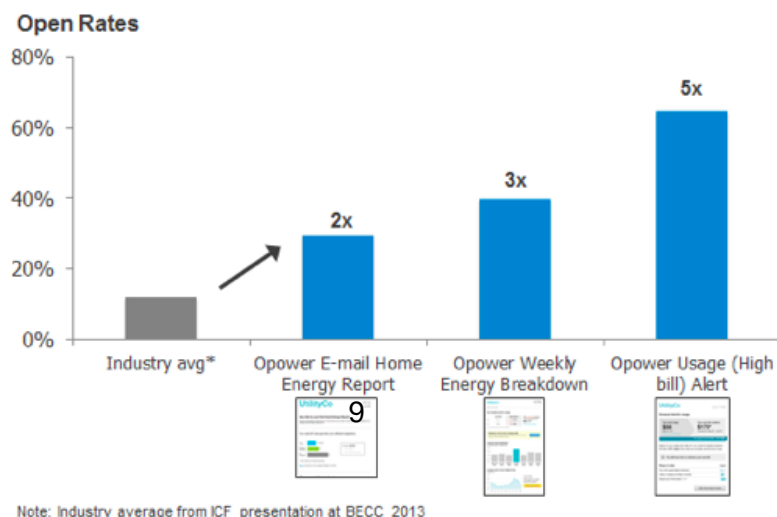


Figure 3-2 Sample Home Energy Report with Targeted Offering



4 Irving Place
10th Fl
New York, NY 10003

BOB SMITH
555 MAIN STREET
ANYTOWN, ST 12345

Home Energy Report

Account number: 1234567890
Report period: 08/09/15 – 09/09/15

This report gives you context on your energy use to help you make smart energy saving decisions.

For a full list of energy saving products and services for purchase, including rebates from Con Edison, visit:

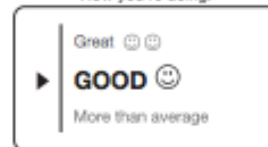
 www.coned.com/energyreports

Last Month Neighbor Comparison | You used **14% MORE** electricity than your efficient neighbors.



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

How you're doing:



Who are your Neighbors?

■ **All Neighbors**
Approximately 100 occupied, nearby homes that are similar in size to yours (avg 2,856 sq ft) and have electricity

■ **Efficient Neighbors**
The most efficient 20 percent from the "All Neighbors" group

You're suited for solar

Based on when and how the sun hits your home, you're the perfect candidate for a rooftop solar system from Brilliant Solar. Solar is the ideal energy choice for the amount of energy your family uses, and for homes like yours that use the most energy in the afternoon.

Your home at 13 Cherry St could save up to \$80 a month.



Turn sunshine into savings at BrilliantSolar.com or call 1-800-555-SOLAR.

While outbound communication is a central tenet of the Company's plan to leverage customer data to generate targeted offerings, the Company has also added a customer web portal to provide customers with an insightful "deep dive" into their energy use and reinforce the messages that customers receive in other communications. The web portal will feature a variety of energy usage data and insights with trend analyses available and tips that are customized to the households demographic profile, and energy use history. Customers will also have the opportunity to take a "home energy assessment," a brief audit that encourages customers to provide more information about their households' characteristics and energy use. The data collected through the web portal will be automatically included in the set of criteria used to pair customers with the most relevant DER products and services.

In addition, Con Edison will also use its third-party contact center channel to amplify the results for the customer. If customers have questions about DER offers or energy reports, they will likely call the utility. The contact center representatives will be prepared to handle the incoming calls and forward qualified leads on to the participating DER vendors or handle transactions for the Con Edison bundled products and services.

In addition to managing inbound inquiries the contact center will proactively promote the DER offerings to customers calling in to establish service or transfer service to a new address.

In later phases of this project, participating customers may also have the opportunity to try out alternative rate structures, such as time-variant, demand-based, and peak savings programs, that may help them better manage their energy bill while at the same time contributing to greater overall system efficiency.

3.1.2 Partner/Third-party

Third-party providers will benefit from direct access to Con Edison customers via a Con Ed endorsed platform, a targeted channel and targeting based on energy data analytics. The Company's hypothesis is that this platform will reduce customer acquisition cost dramatically.

As illustrated in Figure 3.3, the CONnectED Homes Platform will address market barriers to DER adoption via highly targeted messaging for each product, delivering a minimum of 5 impressions per customer per year. The CONnectED Homes Platform should significantly improve results over the status quo. First, the Company's ability to analyze customer usage and bills to fine tune targeting (right messages to the right customers) will generate higher conversion rates for the subscribing DER vendors by placing promotions in the context of personalized energy usage insights, customers will be more likely to take action, further improving conversion rates and reducing acquisition costs.

3.1.3 Utility

Direct benefits to Con Edison from the CONnectED Homes Platform include:

- Access to new revenue streams (discussed in Section 5);
- Increased customer engagement via consistent and relevant messaging to customers; and
- Improved system efficiency (at scale) if DER adoption aligns to network needs.

There are also significant synergies with Con Edison's existing energy efficiency programs that yield energy efficiency and demand benefits. For example, the home energy reports have been shown to increase participation across utility energy efficiency programs through targeted tips and marketing content. Con Edison will use the CONnectED Homes Platform to support energy efficiency program goals and create a coherent experience with established demand side management programs. In addition, customers may benefit from existing energy efficiency and demand response incentives associated with DER offers via the platform.

3.1.4 System

The CONnectED Homes Platform has the potential to generate significant benefits for the energy system. A core objective of the REV process is to grow customer adoption of distributed energy resources. This program leverages Con Edison's position as a trusted source of energy information and source of rich data about customer's energy usage to foster the market for distributed energy products and services in Con Edison's territory. Customers who respond to the offerings by investing in DERs contribute to penetration of these products and services in Con Edison's territory, which can bring a variety of system benefits, environmental benefits, and the potential for targeted load reduction and demand reduction.

To the extent that it is able to increase the uptake of DERs in Con Edison's territory, the Targeted Offerings program can create new market opportunities for providers and foster competition for the most attractive customers. Research that comes out of the program on the most effective channels and messages for engaging customers about DERs can also help lower the cost to these partners for identifying new customers.

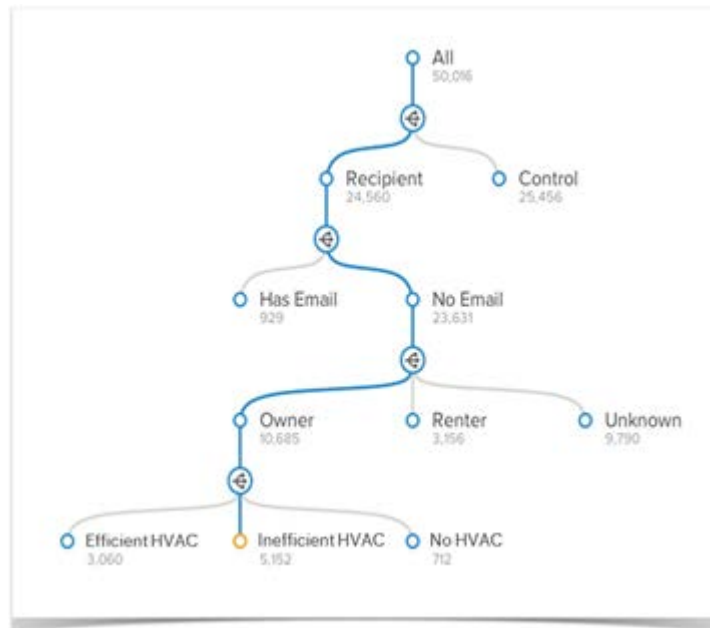
The demonstration project has the potential to generate important environmental benefits, by promoting the adoption of distributed generation and energy efficiency. The primary channel for accomplishing this will be through the targeted offerings, but the energy-use insights in the outbound communications will also have the potential to motivate targeted customers to reduce their energy usage through behavioral change. Con Edison estimates that the demonstration project could generate 24,000 MWh in savings, worth \$3.2 million in cumulative energy efficiency benefits from behavioral change in 2016 and 2017.

Finally, in the long-run, the demonstration project could be deployed to identify customers who offer the most potential benefits to the system from adopting DERs (e.g., customers with high peak load, customers in areas with specific transmission and distribution (T&D) resource needs). Based on project learnings, Con Edison can reach these customers with targeted messaging to promote the resources that are best tailored to solve particular system needs in those customers' area. In this way, the CONnectED Homes Platform provides Con Edison with a set of tools for developing and implementing a proactive strategy for integrating DER into the larger energy system.

3.2 CUSTOMER SEGMENTATION

Identifying customers with similar attributes who will respond to unique messaging is the cornerstone of a strong outbound communication strategy. Figure 3-8 illustrates an example of customer segmentation methodology utilized to best target customers for certain products and services.

Figure 3-3. SEGMENTATION METHODOLOGY



The demonstration project will have the ability to combine a wide variety of attributes, including demographic, psychographic, and behavioral data into a single customer segmentation profile. It combines utility data about customers with additional demographic and behavioral data from a variety of external sources. This data will come both from data that Con Edison collects for its customers as well as third-party sources.

The demonstration project will use customer segmentation to pair households with the right DER products and services, using criteria such as energy usage rankings, housing stock type,

and home ownership data. Con Edison can also take advantage of these capabilities to design unique experiences for specific subgroups, such as creating Targeted Offerings that automatically update based on actions that the customer takes on Con Edison's website.

Using the results of this segmentation, promotions for energy products and services can be carefully targeted and paired with timely advice to create a seamless customer experience that is designed to motivate customers to take action and follow up on the featured promotions. Each communication will feature energy insights tailored to that particular moment and promotions will appear when they are most relevant.

For example, a customer may receive a home energy report in spring showing how its energy use compares to neighbors and providing tips for getting ready for the cooling season, including a targeted promotion for a smart thermostat. A few months later, after a summer month when the customer had higher than average usage, the customer may see a breakdown of how much cooling contributes to energy usage in its home, followed by a reminder about the same smart thermostat. The communications take advantage of the moments when customers are likely to be thinking most about the featured product and provide regular reminders in order to motivate customers to take action.

3.3 CHANNELS

The demonstration project will use three primary outbound channels:

- Direct-Mailed Home Energy Reports
- Email Home Energy Reports
- Email Bill-Ready Notifications

The channels offer an opportunity to reach customers during different times when they are thinking about their energy usage, with messaging that is consistent and synchronized across channels for a seamless customer experience.

Direct-Mailed Home Energy Reports (HERs)

The Home Energy Reports (HERs) will deliver easy-to-understand, personalized, and actionable energy data, insights, and recommendations to Con Edison's customers, designed to capture the attention of customers. Surveys conducted with a variety of utilities have consistently shown that more than 8 in 10 recipients read and recall the reports—a significantly better response than traditional direct-mail campaigns that typically engage less than 15% of the targeted population.

The direct-mailed HERs include:

- Normative comparisons of customers' energy use to that of neighbors living in similar households, putting energy consumption in context;

- Usage analysis that offers a look at household energy consumption and provides customer-specific insights based on usage, size of home, and demographic information; and
- Promotions that can drive customer interest in featured energy products and services.

Email Home Energy Reports (eHER)

One of the key insights from behavioral economics is the importance of reminders as a mechanism to drive action and behavioral change. E-mail HERs (eHERs) provide a cost-effective channel to remind customers about how they are using energy and to tie those reminders to relevant promotions. The eHERs include energy insights and analyses analogous to those included in the direct-mailed HERs, as well as highly-targeted, personalized promotions for products and services that include direct links to the vendor partner's landing page. Because they feature personalized energy insights, these emails are also highly effective at engaging customers, with open rates exceeding 45% and click-to-open rates exceeding 8%.

Email Bill-ready Notifications (eBill)

Bill arrival is one the most important opportunities to engage a utility customer, since bill content can have an outsized effect on how much the customer is paying attention to its energy use and the extent to which the customer looks to its utility for advice. E-bills are typically opened 90% of the time, representing a strong opportunity for utilities to achieve results by providing customers with advice.

For Con Edison customers who have signed up for electronic billing, an email bill-ready notification (eBill) provides helpful context about the main drivers of their energy use and next steps to get more information, ease future payments and avoid future high bills. The eBill also offer an opportunity to market relevant programs and services in a highly segmented fashion, taking advantage of a moment when customers are particularly motivated to explore options for lowering their bills.

Customers in the demonstration territory will be arranged into six different tracks, each of which will receive promotions for up to two energy products or services over the course of a year. The reason behind this design is three-fold: (1) giving customers access to two different offers allows Con Edison to vary the customer experience throughout the year to promote high satisfaction with the program; (2) targeting homes with offers for more than one product or service helps to maximize revenue to Con Edison from each individual home, improving the program's cost-effectiveness; (3) some households are well-suited for more than one product (e.g. single family homeowners with high energy usage, who may benefit from a variety of energy management products and services).

Customers will receive **five** separate touch-points with each product or service, but may receive up to ten targeted offers in a year if they are a multi-product track. For example, a customer participating in the first track (SunPower + HomeServe, digital/paper) would receive two paper promotions for one product, two paper promotions for the other, and three digital promotions for each product/service over the course of a year.

Within each track, there is an opportunity to conduct M&V to test a variety of different research questions. A/B testing can be conducted within tracks to determine the relative effectiveness of different channels, message types, promotional designs, and products/services.

Complementary Customer Contact Center

As stated above, the demonstration project will also inform customers of DER products and services via a customer contact center. The highlights of the customer contact center activities are as follows:

- Support general inbound inquiries related to Opower HERs reports using customized telephony solutions to support English and Spanish inbound calls as well as opt-out capture;
- Promote the offerings of this demonstration project to customers and connect them with ESP partners; and
- When applicable, develop necessary framework to enroll customer, collect funds, and facilitate appropriate financial disbursement back to Con Edison.

Figure 3-4. TARGETED OFFERING

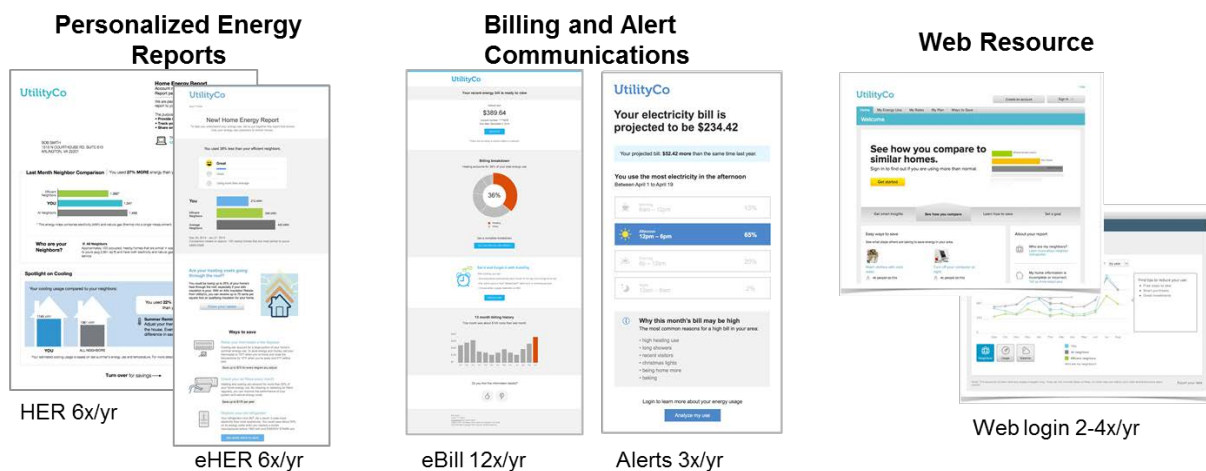


Figure 3-5. PERSONALIZED COMMUNICATIONS ACTIVATE CUSTOMERS



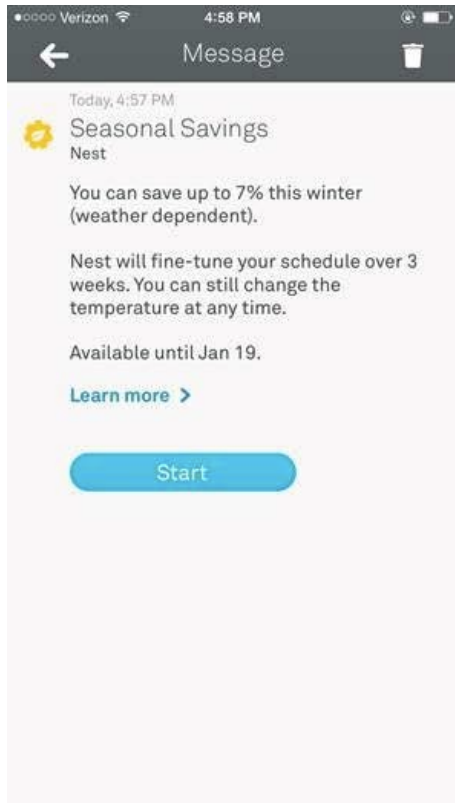
The Company expects to offer DER products via third-party partners in three categories in the first phase of the demonstration project:

- **Solar systems:** SunPower will pay conversion and referral fees for use of the analytical platform. Products will include residential PV systems and, potentially, residential solar plus storage systems.
- **Residential Energy Services:** HomeServe USA, which provides in home energy services and product installation, will pay conversion and referral fees for use of the analytical platform. Initial products and services will be energy efficiency audits/retrofits and energy appliance installations and repairs.
- **Con Edison/Nest Exclusive Bundles:** Con Edison and its partner, Nest, will promote an exclusive bundle of smart thermostat with energy savings services³ including seasonal savings, a service that helps customers save on their cooling and heating energy usage by adjusting temperature settings⁴. (See Figure 3-5).

³ Nest Labs, Inc. "Energy Savings from the Nest Learning Thermostat: Energy Bill Analysis Results" February 2015. <https://nest.com/downloads/press/documents/energy-savings-white-paper.pdf>

⁴ Nest Labs, Inc. "Seasonal Savings: Results from summer 2013" May 2014. <https://nest.com/downloads/press/documents/seasonal-savings-white-paper.pdf>

Figure 3-6. Con Edison SMART THERMOSTAT BASIC FUNCTIONALITY-POWERED BY Nest



 **Auto-Schedule**

Nest remembers what temperatures the customer likes and builds a custom schedule for the home in about a week.

Want to edit the schedule? It can be done in seconds from the Web or Mobile app.

 **Nest Leaf**

The Nest Leaf appears when the customer is using settings that save energy, relative to their typical settings.

 **Remote control**

Just connect Nest to Wi-Fi to change the temperature from an iPhone, iPad, iPod touch, Android smartphone, or tablet. Nest can also be controlled from any computer via the Web.

 **Auto-Away**

No more heating or cooling an empty home.

With Auto-Away, Nest automatically turns to an energy-saving temperature when the home is unoccupied.

 **Airwave**

Airwave turns off the AC a few minutes early, but keeps the fan running. Customers stay cool while the AC runs up to 30% less.

 **Compatibility & installation**

Nest works in 95% of homes with 24V systems. Compatibility checker at nest.com/works.

Most people install Nest themselves in 30 min or less. Nest can also recommend a Nest Certified Professional for installation.

Con Edison expects to develop customer engagement through Nest-compatible programs such as Seasonal Savings. In later phases of the demonstration project, the Company may

also explore offering time-variant, demand-based, and peak savings programs which enable participants to save on their utility bills if they reduce their usage on specific days and times that provide system benefits

3.4 ABILITY TO SCALE

The CONnectED Homes Platform can be cost-effectively scaled to a larger population if the initial phase is successful. The homes that were selected to participate in the initial phase represent only a subset of homes in Con Edison's territory that are eligible for investing in the DER products and services offered by the demonstration project.

The company will launch the demonstration project in two boroughs with three ESP partners in 2015; however the Company is building toward a scalable platform capable of serving the full service territory and expanding to additional DER categories and even non-energy related products and services. The Company expects demonstration status to span from launch through end of 2017. At that time the Company will determine whether the platform meets the criteria established for a viable commercial rollout.

The Company phased approach is outlined in Figure 3-7 and described below. Moving to a subsequent phase is premised on hitting key milestones:

Phase 1: Successful Platform Build. Attract vendors in key DER categories and successful data transfer to Opower

Phase 2: Platform Utilization and Participant Engagement. Customer engagement measured by click-through rates as a leading indicator and qualified leads and conversion as a lagging indicator, ability to retain third-party providers and ongoing customer satisfaction

Phase 3: Revenue Realization and Path to Sustainable Profit Opportunity. Revenue by source/channel, vendor engagement, and customer satisfaction.

The CONnectED Homes Platform uses a Software as a Service (SaaS) model, meaning that it provides full hosting, maintenance, upgrades, and servicing that is capable of scaling to accommodate a very large volume of energy usage and consumer interaction data. Opower has experience providing data analytics and outbound communications for the full customer bases of some of the world's largest utilities and processes meter reads from more than 117 million homes and businesses a year.

Figure 3-7. PHASED APPROACH TO ACHIEVE SCALE

Phase	1. Launch	2. Category Expansion	3. AMI Integration and Revenue Optimization	4. Commercial Rollout
Timing	4Q 2015 (live)	4Q 2016	4Q 2017	1Q 2018
Milestone (Stage Gate to Next Phase)	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	Sustainable Profit Opportunity
Key Elements	Develop platform; end-to-end testing, contact center training, commercial rollout	Evaluate response of specific audiences to DER combinations, channels, and messages	Learn how to leverage more granular customer data; optimize profit by refining categories and pricing	Expansion Decisions <ul style="list-style-type: none"> • Decision to open platform • Expansion to full service territory • Expand into non-energy products
DER Categories	Solar, home services, and Nest thermostat	Storage, service protection, expanded DR, additional Nest hardware and services	Optimize for profitability	Telecom, Security, Appliance Protection

4.0 DEMONSTRATION PLAN

4.1 METRICS FOR SUCCESS

As illustrated in Figure 4-1 the Company expects to institute metrics related to the building of the project, portal performance, and financial results.

The primary determinant of success will be the validation of the business model as measured by the ability to generate leads for DER services and the willingness of ESPs to contract and pay for those leads. Throughout the demo phase of the project, Con Edison will focus on proving the business model and optimizing program design (content, targeting, and channels) to maximize cost-effectiveness and revenue generation.

Con Edison has defined specific metrics of success that will be measured across four primary categories; market animation, stakeholder sentiment, new revenue, and co- benefits. A full list of metrics and associated targets, applicable through the end of the demo phase, have been included in Figure 4.1. At the end of the first year Con Edison will reevaluate these targets and revise using the best available data.

- Market animation: These metrics are designed to measure the effectiveness of communications at driving adoption of DER services
- Stakeholder sentiment: These metrics are designed to measure the impact the program has on key stakeholders and speaks to the viability of the model for broader applicability
- New revenue: These metrics are designed to measure the viability of the business model
- Co-benefits: These metrics are designed to capture the benefits that accrue from the program that are not the direct purpose of the demonstration project.

Figure 4-1. METRICS

Category	Goal	Metric	Definition	Reporting
Market Animation	Awareness	Customers aware of DERs	Response to customer survey question(s) about awareness of DER offerings in Con Edison’s territory	Annually
	Paper and Digital Engagement	Total number of impressions	Total number of paper and digital communications sent to customers	Quarterly
		Open Rates (eHERs)	Percent of customers who open eHERs	Quarterly
		Open Rates (ebills)	Percent of customers who open ebills	Quarterly
		Click-through rates (eHERS)	Percent of customers who click on link(s) included in eHERs	Quarterly
		Click-through rates (ebills)	Percent of customers who click on link(s) included in ebill	Quarterly
		Unique web visits	Number of unique customers who visit the CONnectED Homes web portal	Quarterly
		Customers who recall HERs	Percent of homes that receive HERs who recall receiving them (serves as a proxy for open rate for paper communications)	Annually
	Leads and Acquisition	Qualified solar leads generated	Number of qualified leads from the program reported by third-party ESP partner	Quarterly

		Solar installations reported	Number of installations reported by third party ESP partner	Quarterly
		Thermostats sold	Number of thermostats sold through the program	Quarterly
		HomeServe EE packages sold	Number of EE packages reported sold by third party ESP partner	Quarterly
		HomeServe appliances sold	Number of HomeServe appliances reported sold by third party ESP partner	Quarterly
Stakeholders	Partners	ESP Partners retained	Percent of ESP partners who choose to continue with the program	Annually
	Customers	Customers liking the program	Percent of customers who respond positively to survey question(s) on their satisfaction with the program	Annually
Revenue	Total Revenue	Total revenue to Con Edison	Revenue gained through the program	Annually
Co-Benefits	Energy and Demand	Energy Efficiency Savings	Energy savings generated by customers as a result of participating in the program	Annually
		Demand Savings (MW)	Demand savings generated by customers as a result of participating in the program	Annually

4.2 TIMELINES, MILESTONES, AND DATA COLLECTION

4.2.1 Implementation Phase

In cooperation with Opower the Company has developed a detailed plan for building the customer platform, signing up third-party vendors, and building the appropriate interfaces. Key elements include:

	Action	Description	Target Date*
1	Pre-Program Kick-Off	Receive Department of Public Service (DPS) approval; execute contracts with Opower and ESP partners.	Q3 2015
2	Kickoff and Program Design	Finalize marketing, customer segmentation and content targeting strategies.	
4	Content and Branding	Approve cross-channel branding elements and initial content for delivery to customers at program launch.	
	Technical Integration	Upload historical customer data, automate ongoing data exchange, and complete web integration.	Q4 2015
5	Platform Configuration	Calculate initial customer insights, segment customers, and configure content targeting rules.	
6	Quality Assurance	Perform platform integration and user acceptance testing.	
7	Go Live	Conduct customer service representative training, deploy platform to production, and deliver initial customer communications.	Q4 2015/Q1 2016

* Contingent upon DPS approval and terms execution.

Detailed implementation planning for future phases will be developed as operational experience is gained with the initial phase of the project.

4.2.2 Evaluation Phase

Con Edison will track and report on the results of the CONnectED Homes demonstration project, including the quantitative program metrics listed in Figure 4-1. Con Edison will collect information on program performance from its vendors and partners continuously throughout the project, and will compile metrics for formal reporting at regular cadences, the frequency of which is outlined in Table 4-1

Each of ConEd's partners and vendors will provide inputs into this regular reporting, including:

4.3 PARTNER	4.4 EVALUATION METRIC
Analytics platform provider (Opower)	<p>Digital Engagement: Impressions, open rates, click-through rates, web visits</p> <p>Customer Engagement Tracker (end of Demonstration Project): At the end of the Demonstration Project, Opower will conduct a survey of clients involved in the program to assess their overall satisfaction with the program</p> <p>Co-benefits: e.g. EE, DR, cost-to-serve</p>
Contact Center provider (Bridgevine)	<p>Contact Center metrics (e.g. call volume by product), leads and conversions generated by product</p>
Third Party ESP partners	<p>Leads and conversions generated by product</p>

Some of these metrics will be reported quarterly, while others will be reported annually or over the course of the entire demonstration project, depending on the nature of the data to be collected. The reporting frequency for each metric is outlined in Table 4-1.

Progress against each of these metrics will be reviewed during regularly scheduled check-ins, including:

- Weekly project planning meetings throughout the build phase

- Weekly check-ins post launch
- Quarterly planning/results meetings

The weekly meetings will be used to discuss project implementation, review program trends, and make adjustments as needed. Quarterly meetings will be used to set strategy, inform Con Edison's reporting to regulators and will include a review of the performance of the program against metrics critical to its success, including DER leads and conversions and overall revenue generated.

4.5 PARTICIPATION

4.5.1 Target Population, Sample Size, Control Group

While the Company plans to initially launch the demonstration project in Brooklyn and Westchester County, it will make a decision by the first quarter of 2018 whether to broaden the project to the full service territory. In year one, the total eligible customer population is approximately 305,000 customers. Figure 4-5 illustrates the total sample size and creation of a control group

As described in Section 3.3, the purpose of arranging customers into tracks is to provide customers with a variety of experiences, while maximizing the cost effectiveness from targeting each individual home.

Figure 4-5: Year 1 Customer Tracks

Tracks	Targeted Offerings	Characteristics	Targeted Homes	Notes
1 and 2	SunPower + HomeServe	Single Family Owner Occupied High users	Track 1: 53,400 Track 2: 43,400	Homes which have registered their emails with Con Edison will receive a mixed paper and digital experience (Track 1), while homes that have not will receive a paper-only experience (Track 2)
3 and 4	Nest + HomeServe	Single Family Owner Occupied Moderate users	Track 3: 18,100 Track 4: 20,700	Homes who have registered their emails with Con Edison will receive a mixed paper and digital experience (Track 3), while homes that have not will receive a paper-only experience (Track 4)
5 and 6	Nest	Multifamily	Track 5: 30,200	Homes who have registered their emails with Con Edison will receive

		(2-4 unit) Owner Occupied Moderate and high users	Track 6: 33,300	a mixed paper and digital experience (Track 5), while homes that have not receive a paper-only experience (Track 6)
--	--	--	--------------------	--

4.5.2 Third-party Partner(s)—Specifics of Agreement

The Company has selected Opower to build the CONnectED Homes Platform.

The most important selection criterion for the initial set of ESPs is that they have a track record of quality product delivery and customer satisfaction. Figure 4-4 outlines the Company’s selection criteria for choosing 3rd party partners.

Figure 4-6. INITIAL PARTNER SELECTION

Selection Criteria	Relevance to Success
Reputable firms with established history of successful installations and quality products	Order fulfillment and product quality critical to sustained success
Willingness to pay advertising premiums and lead and conversion fees	Necessary to establish value of platform
Best in class companies with prominent market presence and signaling power	Market leaders will signal value of platform to rest of market
Willingness to collaborate on data sharing of converted customers	Necessary to track demonstration project success and to match M&V where required
Customer service capability	Ensure customer questions and inquiries can be appropriately fielded

The initial third-party partners selected to participate in Phase I of the demonstration project are Nest, SunPower, and HomeServe.

Once the proof of concept has been completed, the Company will bring additional vendors on to the platform, both within existing DER categories and in new ones. The Company

expects to do so within one year of operation, subject to hitting milestones in previous phases.

4.5.3 Utility Resources and Capabilities

Con Edison will assign one project manager with management support to the demonstration project. In addition the Company expects to require resources to support due diligence and implementation in the following areas:

- Information technology resources to support data extraction and website integration;
- Market outreach initiatives;
- Market research around expansion plans into new product categories;
- Customer satisfaction surveys;
- Legal and technical research around on bill financing; and
- Evaluation of bank risk.

4.6 CUSTOMER OUTREACH

This demonstration project will present a new and unexpected dimension of service to our customers, fortifying and enforcing the Con Edison brand. The outreach plan for the project, as outlined below, centers on leveraging this new service dimension at all levels of Company engagement with its residential customers. The Company will begin by using its online customer forums to gather feedback on the program and the messaging. Prior to and at launch, the Company will incorporate this messaging in its internal channels such as media relations, bill messaging, social media, government relations, community outreach, website, customer portal, customer events and executive presentations.

The Company anticipates that six weeks before the focused customer launch, it will begin integrating program messaging in general customer communications. After launch, the Company plans consistent ongoing messaging in all internal communication.

4.6.1 Outreach to Targeted Communities

The Company intends to provide outreach through a four-step process:

1. Create **awareness** of the program as a new idea in customer service from a utility that customers know and trust. As a broad-reaching strategy, this will serve to educate both targeted and non-targeted customers. The Company will utilize internal customer focus groups prior to launch in order to gauge reception to the program and make message strategy adjustments.
2. Generate **interest** in the program based on direct benefits to the customer.
3. Drive **desire** to participate in the program for all customers by describing success stories.
4. Facilitate **action** to participate with follow up customer service and resource information.

There are two potential, independent metrics for this outreach:

1. Program participation by customers who are directly contacted.
2. Clear and effective message management for those customers who are not part of the targeted group. The Company will need to mitigate confusion and feelings of exclusion by customers who have not yet been targeted.

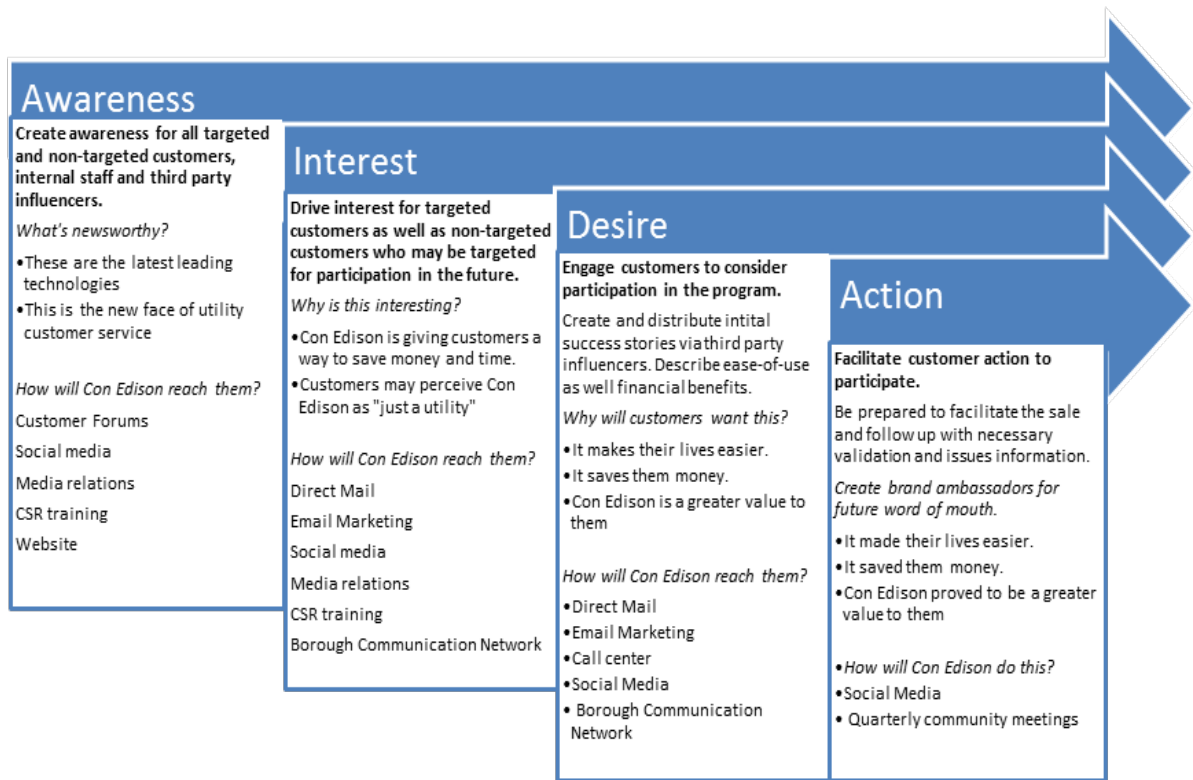
Message Strategy

This program should be positioned with the Company’s customer base as proof that Con Edison is a leader in technology and customer service. The Company needs to show and demonstrate that it knows and understands its customers’ energy use and can provide an easy, effective and tangible process for customers to manage energy and reduce costs.

The key messages for this program will include:

- This is an important Con Edison program.
- Con Edison is a leader in customer focus.
- This program combines technology with customer service to benefit the customer.

Figure 4-5. Outreach Process



4.6.2 Motivating Customers/Communities

The primary audience for this demonstration project is targeted customers as designated by the data analysis. Additional audiences to consider are noted below, including elected officials, community boards, community groups, ethnic groups and activists who will have a positive viral impact on the Company’s messages and program participation. All messages, channel tactics and communication objectives will be tailored and targeted for each group’s membership and networking capabilities.

Figure 4-6. Strategy by Target Segment

Audiences	Message	Channel Tactics	Objective/Value
Targeted Customers	Con Edison is helping you to save energy and money.	Direct Mail Email Bill Inserts	Engage customers to look for offer to use specific DERs for energy efficiency and upgrades.
Non-targeted Customers	Con Edison is on the leading edge of customer service by providing the resources that can help customer live more energy and cost-efficiently.	Website Social Media Collateral	Create and nurture interest in the DER program so that when non-targeted customers are solicited, they will be primed for the message and ready to participate.
Media	Con Edison is starting a Demonstration Project program that can help customers save money, cut energy use, and increase electricity reliability through the use of data analytics, solar energy, and other innovative solutions.	Website Social Media Media Relations	Educate the public about Con Edison’s demonstration projects involving a targeted group of customers and the greater availability of distributed energy solutions for all customers.
Elected Officials	Con Edison is providing a new service to New York City constituents. This service goes beyond keeping the lights on. The Company is now offering an	Personal Meetings Collateral	Proves the Company’s greater value to elected officials.

	in-home service model that will not only make customers' lives easier, but will also save them money.		
Community Stakeholders	Con Edison is an interested and active member of the community.	Meetings Events Social Media	Demonstrates the Company's interest in local communities, neighborhoods and customers by providing valuable services beyond delivering power.
Internal: Customer Outreach Call Center Staff	Con Edison is on the leading edge of customer service by providing the resources that can help its customers live more comfortably and cost-efficiently.	Elevator Screens Postmasters Intranet Site Training	Educate all Con Edison staff on the program so that non-targeted customers are given accurate information.

Additional communications and outreach strategies may be developed for future phases of the project.

4.7 CONDITIONS AND BARRIERS

4.7.1 Market Rules and Standards

Compliance with 2010 NY DPS Order on Customer Data Disclosures

The proposed CONnectED Homes Platform demonstration project will comply with the Public Service Commission's (Commission) December 3, 2010 *Order on Rehearing Granting Petition for Rehearing*, which 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.⁵

⁵ Case 07-M-0548, *Proceeding on Motion of the Commission Regarding an Energy Efficiency Portfolio Standard*, Order on Rehearing Granting Petition for Rehearing, issued and effective December 3, 2010, p. 19.

The purpose of the demonstration project is to provide usage analysis reports – whether HER, eHER, eBill, or high bill alert etc. (all forms of a usage analysis report). Through the demonstration project structure, Con Edison will also use the reports to also communicate third-party offers to customers and to generate new revenue streams from these activities.

Furthermore, the proposed design of the demonstration project is closely aligned with the goals and objectives laid out for REV demonstration projects by the Commission in its December 2014 guidance for demonstration projects:

Customer engagement and measuring customer response to DER and data sharing will be a crucial element of these demonstrations. Demonstrations should include opportunities for third parties to demonstrate how various rate designs, information sharing, and other technologies can be used to benefit consumers, encourage customer participation, and achieve REV's system efficiency and bill management objectives. Data on customer acceptance of DER and data sharing will provide commercial and operational benefits when implementing these programs on a larger scale. Utilities should submit proposals that involve various customer groups across the state.⁶

⁶ Case 14-M-0101, *Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision*, Memorandum and Resolution on Demonstration Projects, issued and effective December 12, 2014, pp. 8-9.

4.7.2 Consumer Protections

Compliance with CAN SPAM Act of 2003⁷

Two of the three outbound channels to be utilized in the demonstration project will be sent by email -- the Email Home Energy Reports and Email Bill-Ready Notifications. While these email communications primarily provide information to existing Con Edison customers about their accounts and energy usage, to the extent they also contain advertising content they may be subject to the provisions of the CAN SPAM Act of 2003. As such, the emails will be designed to comply with CAN SPAM requirements. They will include a subject line that clearly communicates the purpose of the email use, clear and accurate header information ("To" and "From"), including the originating domain name and email address, and include a clear and conspicuous interactive unsubscribe option that will permit consumers to immediately opt-out from all future email communications.

Compliance with Section Five of the Federal Trade Commission Act - Unfair and Deceptive Acts or Practices.⁸

DER targeted offerings will be reviewed and vetted for any environmental or other claims that might be deemed false or deceptive under the FTCA.

4.7.3 Channel or Market Challenges

An ESP that is not selected to participate in the first phase of the demonstration project may raise challenges to the selection of third-party ESP partners without the use of open competitive bidding. The Company did not utilize an RFP process to select the initial ESPs because the Commission required that demonstration projects be submitted by July 1; utilizing the RFP process would have delayed the submission past the required filing date. Con Edison recognizes the importance and value of competitive bidding for promoting transparency, cost-effectiveness, and quality of service, and, should phase one of the demonstration project be successful, the Company anticipates opening participation through the CONnectED Homes Platform to various energy service providers. Because the demonstration project is a proof-of-concept program, Con Edison is partnering with highly reputable and successful ESPs that have the capacity to implement the program successfully. (See Figure 4-4 for a description of Con Edison's partner selection criteria).

⁷ CAN-SPAM (Controlling the Assault of Non-solicited Pornography and Marketing Act), Pub. L. No. 108-87, §1, 117 Stat. 2699 (Dec. 16, 2003), codified at 15 U.S.C. §7701 *et seq.* 18 U.S.C. §1037.

⁸ Section 5 of the Federal Trade Commission Act (FTC Act), Ch. 311, §5, 38 Stat. 719, codified at 15 U.S.C. §45(a).

5.0 FINANCIALS

5.1 UTILITY REVENUE STREAMS

The company anticipates three sources of revenue from the CONnectED Homes Platform:

1. **Lead and Conversion Revenue:** Participating ESPs will pay a fee for achieving pre-established metrics such as number of qualified leads and they will pay a percentage of revenues from converted sales.
2. **Retail Sales:** Con Edison will buy products and services at wholesale in order to bundle together meaningful offers marketed exclusively to its customer base.
3. **Advertising Revenue:** Participating ESPs may pay a fee for access to the targeted platform. Pricing will be based on approximate customer touchpoints per year.

Pricing and Rate Design

Early phases of the demonstration project will be tested under current volumetric residential tariffs. In later phases, perhaps as early as 2017, the Company plans to test alternative rate designs. The intent will be to understand the impact tariff structures (e.g. a residential demand rate and time-variant pricing) will have on system efficiency, DER adoption, customer acceptance, and customer bills.

Lead and Conversion Revenue

Participating third-party providers will pay a pre-determined fee for qualified leads and/or as a percentage of the revenues from a converted sale. Fees will be negotiated with individual vendors based on the expected value of the CONnectED Homes Platform and the vendor's expected cost of customer acquisition.

Retail Sales

In the case of Nest, the Company expects to pre-purchase units at discounted prices and re-sell as part of Con Edison product and service bundles. Prices will be based on reasonable retail markups consistent with industry practice.

In future phases of the demonstration project, the Company will explore on bill financing of products and services, allowing the Company to effectively collect sign up and financing fees.

Additionally, the Company expects to introduce extensions to existing products as well as new products and services over time. Examples of these extensions and new products and services include Nest-ready appliances and services and bundles such

as home services (cable, home security, and energy management). These are areas to be explored and vetted in the future.

Advertising

The Company anticipates that the CONnectED Homes Platform will attract additional third-party vendors that may be willing to pay an advertising fee to be included in the Company customer communications or to have access to the Company’s customer analytics to help target their marketing dollars. Industry benchmarks suggest that advertising payments are based on number of “impressions” or eyeballs per year.

Advertising fees to be collected from DER providers will vary depending on DER category and will be derived based on approximate value created for the DER vendor from access to qualified customers.

5.2 INVESTMENTS

5.2.1 Timing of Investments

Con Edison will make investments in the customization and application of the analytics platform to be used for the CONnectED Homes Platform; the delivery of targeted communications to Con Edison customers; and the ability of the contact center to handle incoming calls and support increased DER conversions. Total project costs and revenues are detailed in Section 5.3.

Investment timing details remain to be determined with partners, but will begin with the program setup activities immediately upon contract signatures. The Company intends to execute contracts within 30 days of regulatory approval, and is striving to launch the program for customers in 2015 or as early as possible in 2016. Investments will end no later than the conclusion of the demonstration project, currently slated for December 31, 2017.

Figure 5-1. TOTAL COSTS

	2015 (half year)	2016	2017	TOTAL
Total	\$2,870,000	\$6,405,000	\$7,275,000	\$16,550,000

Con Edison expects its costs for this demonstration to be recovered through the Monthly Adjustment Clause (MAC). Revenues from third party service providers, lenders, and customers that participate in the demonstration will be credited to ratepayers. The Company may propose incentive mechanisms as the Demonstration Project develops.

5.2.2 Third-party Capital

Opower has committed an investment for co-development towards the cost of platform development, customization and deployment; additional service providers engaged as part of platform.

5.3 RETURNS

Expected revenue generation during the demonstration period of two years is approximately \$600,000 per year. Should the Company decide to expand to additional customers and include additional DER categories, it expects to reach approximately \$5.4 million in 2022. The majority of revenue is expected to be from conversion and referral fees generated from the analytics platform; however the Company expects to generate additional value from the inbound contact center channel and in 2019 expects to introduce advertising fees for additional third-party ESPs.

Figure 5-2. ESTIMATED REVENUE OPPORTUNITY (\$ millions)

	2016	2017	2018	2019	2020	2021	2022
Estimated Revenue Opportunity	\$640,000	\$665,000	\$2,710,000	\$4,395,000	\$5,015,000	\$6,272,000	\$6,272,000

5.4 COST EFFECTIVENESS

5.4.1 Qualitative Benefits

The demonstration project will bring benefits to ratepayers by serving as an important test of new and innovative strategies for promoting the growth of DERs in the state of New York, as well as providing an opportunity for Con Edison to develop new revenue streams necessary for it to continue to provide reliable and affordable service.

In particular, the Demonstration Project will provide Con Edison with valuable data and research that can help answer the following questions:

- How effective can the CONnectED Homes Platform be as a tool for promoting the adoption of DERs in the state of New York?
- What messages and channels are most effective for engaging customers with information about energy products and services?
- Which energy products and services are best suited for which groups of customers?
- What is the revenue generation potential for Con Edison from conversion and referral fees associated with Targeted Offers?

5.3.2 Quantitative Benefits

The quantitative benefits from the CONnectED Homes Platform fall into four categories:

- 1) Customer Engagement: The demonstration project will engage close to 270,000 customers within the demonstration territory with personalized energy information and insights, providing increased comfort and control as well as energy savings and energy options.
- 2) Revenue from DER conversions and advertising: The program has the potential to generate up to \$660,000 per year in revenue for Con Edison from third-party partners during the demonstration project.
- 3) Cost to Serve savings: Outbound communications, like those included in this demonstration project, can help proactively answer customers' questions about their energy usage or can direct customers' to self-service digital tools available on Con Edison's website, which can - in the long run - help mitigate the number of customers who call in to the call center. Potential cost-to-serve savings during the demonstration project could be up to \$700,000 in 2016 and 2017 combined, and have the potential to scale up with the program in subsequent years.
- 4) Energy Efficiency: A variety of messages will be used in the program's communications that have also been proven to motivate customers to reduce their energy usage, when used as a part of more traditional behavioral energy efficiency programs. Con Edison estimates that the Demonstration Project program could generate 24,000 MWh in savings in 2016 and 2017, worth \$3.2 million in benefits according to the current methods of calculating the system benefits of energy efficiency investments.⁹

5.3.3 Cost Effectiveness

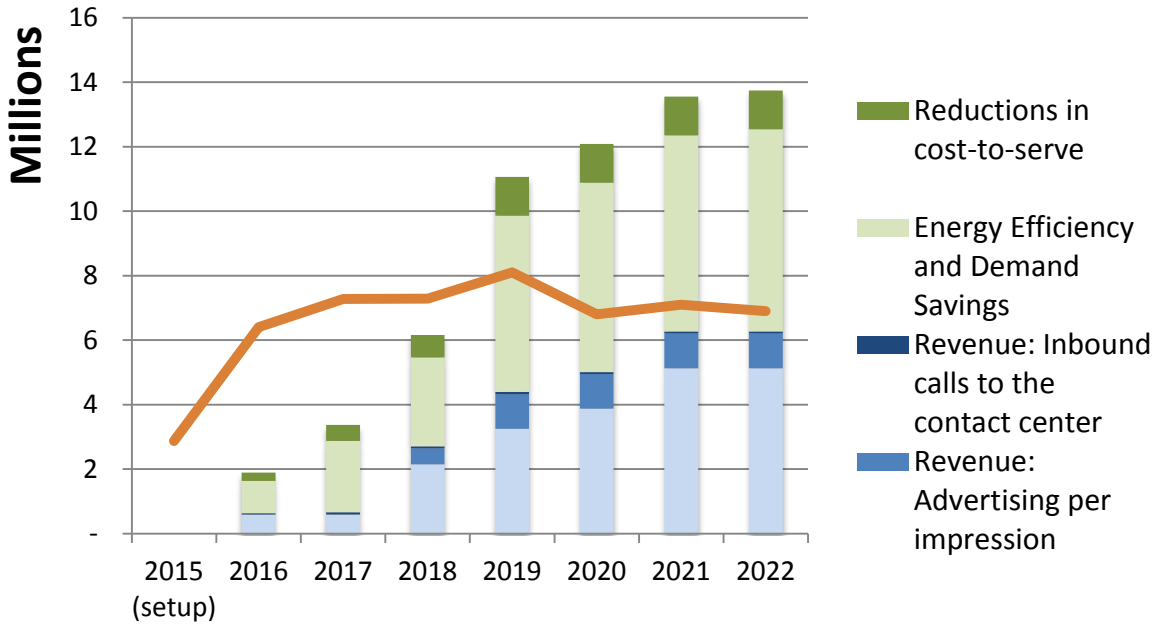
Con Edison has not developed a traditional benefit cost analysis. Doing so would have been impossible given the short timeframe available to develop the demonstration project and the uncertainties inherent in experimenting with new approaches to enhancing the penetration of DERs and generally animating the DER market. Moreover, Con Edison notes that ultimate cost-effectiveness should not be a measure of a demonstration project's success. The goal of a demonstration project is to explore new approaches to determine which work and which don't work. If an approach were to fail, or to otherwise prove to not be cost-effective, the learning experience would still provide real value to the Company, its customers, the market generally and the Commission. The following discussion, therefore, provides a general discussion of why the demonstration project is beneficial.

⁹ The equation used to calculate benefits from energy efficiency and demand savings is: $\frac{((\text{MWh savings} * \text{'Avoided Energy (NYC) \$/MWh}') + (\text{kW savings} * \text{'Avoided Capacity (NYC) \$/kW-yr'})) * (1 + \text{'Avoided Line Loss Factor'}) + (\text{MWh savings} * \text{CO2 Price per MWh}) + (\text{kW savings} * \text{Avoided Distribution Costs (\$/kW)})}{\text{Program Cost}}$.

One of the main objectives of the REV demonstration projects is to test new utility revenue generation opportunities. The program has been designed to begin generating revenue immediately upon program launch in order to offset some of the short-term program costs. These revenues and other quantitative benefits have the potential to scale up over time to meet and exceed the cost of operating the CONnectED Homes platform.

Moreover, the project will provide insights and experience that can inform the design of future utility programs and revenue generating activities. In this sense, the CONnectED Homes Platform offers a rich opportunity to collect data that can be deployed in a variety of future programs and activities at Con Edison and throughout the State of New York. As one of the central goals of the REV process is to promote the growth of DERs in the state - utilities, regulators, and ratepayers each stand to benefit from a richer understanding of the kinds of messages and channels that can most successfully promote these products.

Figure 5-4 Additional Benefits from the analytics Platform



Note: Revenues are based on robust market research and current best available information. Achieving revenue results will depend on many factors, some of which are outside of the control of Con Edison and its partners. Costs beyond Years 1 and 2 are estimates based on current assumptions, data, and program designs, and are subject to change.

6.0 REPORTING

Con Edison will provide quarterly reports providing updated build, performance, and financial metrics as outlined in section four of this report.

In addition to core metrics, the Company will provide the following:

- Status update on the build
- Lessons learned against key hypotheses
- Milestones achieved (or not)
- Explanation of variance from budget and/or target metric

7.0 CONCLUSION

7.1 POST DEMONSTRATION BENEFITS

7.1.1 Qualitative

The CONnectED Homes Platform has the potential to continue to grow and thrive, following the conclusion of the demonstration project. As outlined in section 5.4.1, the objective of the demonstration project is to collect data related to a number of key questions about the effectiveness of the CONnectED Homes Platform at catalyzing interest in DERs and demonstrating the viability of a new revenue stream for Con Edison.

The households targeted in the demonstration project represent only a subset of the customers who could be eligible to benefit from the CONnectED Homes Platform. If the program is successful, it could be scaled up to a larger portion of Con Edison's territory according to the checkpoints and milestones outlined in section 7.2 below. At this larger scale, the program could deliver a wide range of qualitative benefits to Con Edison and its customers, including:

- Closer market integration and partnerships between Con Edison and a broad network of third-party partners
- Greater alignment between Con Edison's market incentives and the energy management needs of its customer base
- Greater knowledge about strategies for acquiring customers for DER, which can help lower soft costs associated with these products and services
- Cultivation of an engaged customer base with access to personalized information about available energy services and products
- In future phases, benefits associated with alternative rate design such as greater overall system efficiency and enabling customers to better manage their bills

7.1.2 Quantitative

As in the demonstration project, the quantitative benefits from the CONnectED Homes Platform at scale fall into four distinct categories:

1. Customer Engagement: At scale, the CONnectED Homes Platform has the potential to engage more than 1,000,000 customers across Con Edison's full territory.
2. Revenue from DER conversions and advertising: At scale, the program has the potential to generate up to \$6 million in annual revenue from DER advertising and conversion fees, with additional potential revenue available from inbound referrals in the customer contact center.

3. Cost to Serve savings: Home Energy reporting and alert-based outbound communications can proactively resolve customer questions that would normally be directed to the call center, reduce complaints by encouraging customers to reduce their usage before a high bill arises, and help to optimize Con Edison's efforts to recruit customers for its energy efficiency, demand response and other demand management programs and initiatives. Potential cost-to-serve savings for Con Edison from the program could be as high as \$1 million per year at scale.
4. Energy Efficiency: At scale, the program has the potential to generate significant energy efficiency savings - up to 37,600 MWh per year, worth \$6.3 million a year in benefits. In addition, energy savings are concentrated at peak energy demand moments, so there are significant demand savings provided as a result of the reduced overall consumption.

In future phases, benefits associated with alternative rate designs may be quantifiable.

7.2 PLANS TO SCALE

The Company will launch the demonstration project in Brooklyn and Westchester County with three ESP partners in 2015; however it is building toward a scalable platform capable of serving the full service territory and expanding to additional DER categories. The Company expects demonstration status to span from launch through the end of 2017. At that point, the Company will determine whether the platform meets the criteria to be established for a viable commercial rollout.

7.3 ADVANTAGE

Con Edison is committed to pioneering new and innovative programs for the benefits of its ratepayers and is enthusiastic about the opportunity to further the objectives of the REV process through the CONnectED Homes Platform demonstration project.