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July 1, 2015

Hon. Kathleen H. Burgess  
Secretary to the Commission  
New York State Public Service Commission  
Agency Building 3  
Albany, NY 12223-1350

Re: Case 14-M-0101, *Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision*, Report From Central Hudson Gas & Electric Corporation regarding concepts for Demonstration Projects

Dear Secretary Burgess,

On April 25, 2014 the New York State Public Service Commission ("Commission") issued an Order Instituting Proceeding in Case 14-M-0101 to initiate a broad based discussion in regard to Reforming the Energy Vision ("REV"). The Commission explained that REV is meant to "to align electric utility practices and our regulatory paradigm with technological advances in information management and power generation and distribution."<sup>1</sup> In an effort to support the Commission's REV initiative Central Hudson Gas & Electric Corporation ("Central Hudson") intervened in the proceeding, participated in the many REV working groups and discussed REV issues with Department of Public Service Staff ("Staff").

On February 26, 2015, the Commission ordered the utilities, including Central Hudson to file a REV Demonstration Project Report by July 1, 2015.<sup>2</sup> Therefore, Central Hudson hereby submits its July 1, 2015 REV Demonstration Project Report to Staff seeking to develop and implement its Central-E Your Energy Exchange REV Demonstration Project.

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<sup>1</sup> CASE 14-M-0101, *Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision* (Order Instituting Proceeding at 2) (Issued and Effective April 25, 2014).

<sup>2</sup> CASE 14-M-0101, *Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision* (Order Adopting Regulatory Policy Framework and Implementation Plan at 115) (Issued and Effective February 26, 2015).

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Respectfully submitted,



Paul A. Colbert  
Associate General Counsel  
Regulatory Affairs

# REV DEMONSTRATION PROJECT:

*CENTRAL-E.  
YOUR ENERGY  
EXCHANGE*

Case Number: 14-M-0101  
July 1, 2015

*People. Power. Possibilities.*

**Central Hudson**

A FORTIS COMPANY



# REV DEMONSTRATION PROJECT

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# 1. EXECUTIVE SUMMARY



Today a consumer is purchasing an item on-line from an unfamiliar third party provider they have never done business with before. The consumer is making the purchase through Amazon, who has created the network for the consumer to find and purchase the product they want. Amazon has made the connection for the consumer, provides the consumer with the information, trust and confidence to make the purchase.

Everyday thousands of people purchase rides from unknown individuals in the cars owned by those individuals. The consumer is comfortable that this transaction will meet their needs for both value and personal safety. This is so because the individual is making this transaction through Uber, who they have confidence and trust in to provide this service. Uber has created a business model that uses a network of third party providers to benefit the consumer, the third party providers, and Uber.

These are just two examples where a trusted party has created a network to leverage products and services for the benefit of the consumer, third party provider, and the network provider. In each of these examples the consumer was able to benefit from the collaboration and partnering of others. To be successful both Amazon and Uber, in addition to creating their collaborative network, needed to establish themselves with consumers to become the trusted provider for these connections. In so doing, not only did they provide

consumer value they provided value to third parties, who, but for this service, likely would not be as successful independently.

Utilities are in a unique position to establish a similar business model. We, at Central Hudson, have already established ourselves as a trusted entity with our customers. Central Hudson will collaborate with third party partners to create an engaging, customer driven, web-based, energy exchange. The energy exchange will deliver value to our customers through information, conversations, opinions, and products and services. The exchange will also create new revenue streams for third party partners and Central Hudson. We will be utilizing our utility platform, trust and brand under the slogan of **"Central-E: Your Energy Exchange."**

Central-E will become a trusted source of information and a site to browse, compare and execute purchases of energy management products and services. Central-E will provide all customers the personalized infor-



Grace,

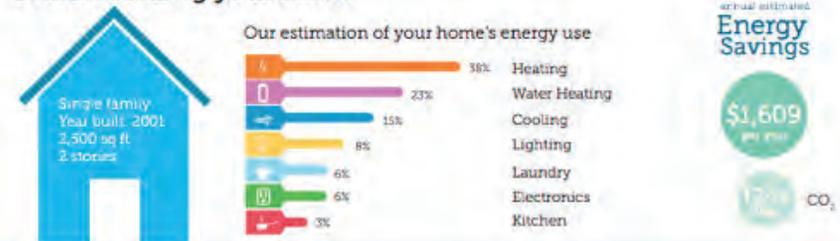
Thank you for participating in our Home Energy audit program. We've identified some really useful upgrades that should go a long way in addressing your energy efficiency concerns in your home. As always, if you have any questions, call our hotline at 888.123.4567.



Account # 12345  
Grace Fitzgerald  
123 Pine St.  
Lansing, MI 48909

Jimmie Sparks  
Energy Audit Program Manager

### Understanding your home



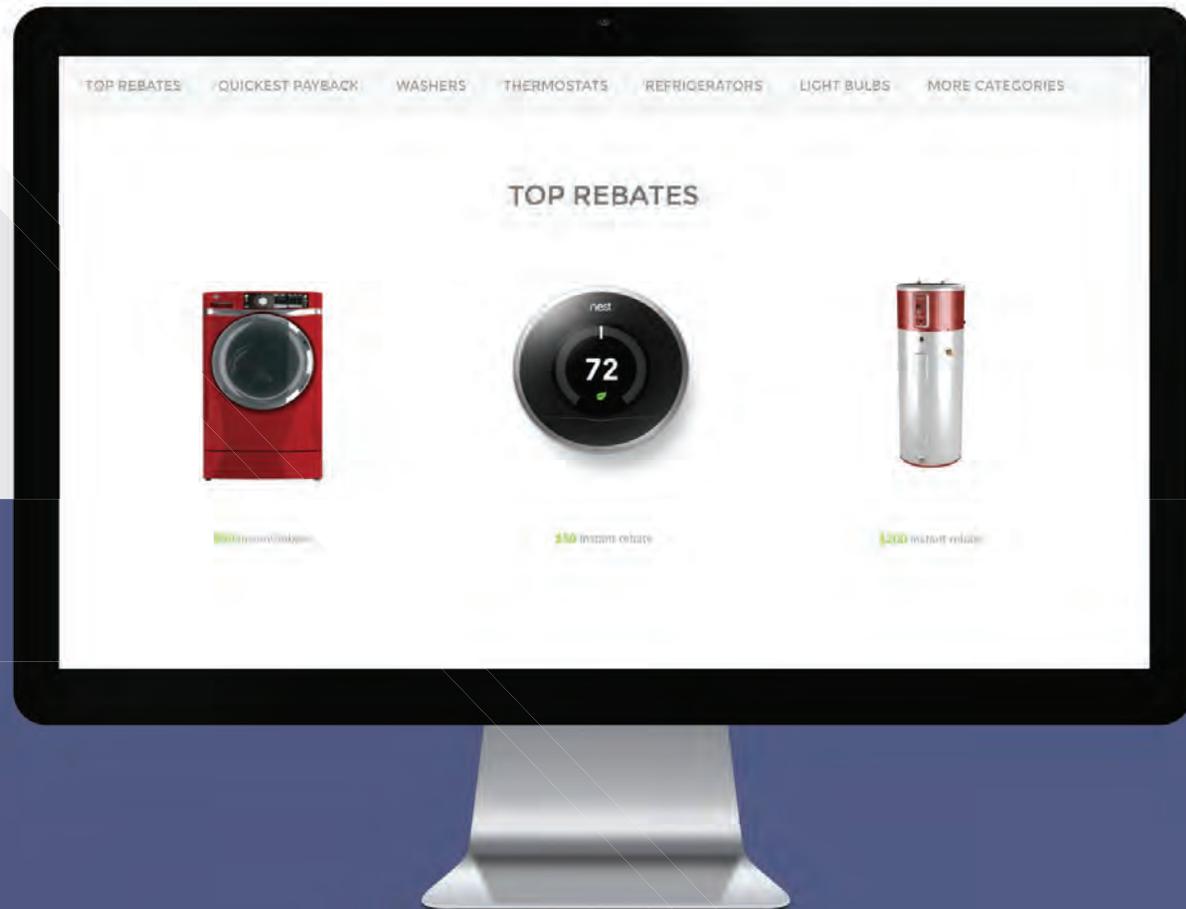
### Weather makes a difference on your energy use:



The personalized customer interface would provide all customers the information they need to better understand their energy usage and make informed decisions regarding their energy usage.

mation to better understand and make informed decisions regarding their energy usage. Currently, many customers are unaware of all the energy products and services available to them. *Central-E* will guide them to those products and services by recommending a relevant list tailored to their highly personalized, home energy profile. By creating a partnership model, Central Hudson will share revenue with the exchange providers while enabling an engaging and innovative customer experience. As the go-to source of information for energy products, Central Hudson will serve as the primary facilitator of its customers' energy-related experiences.

One product that Central Hudson will initially offer is a subscription to an enhanced data analytic package for a monthly fee.



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Central Hudson will collaborate with third party partners to create an engaging, customer driven, web-based, energy exchange. The energy exchange will deliver value to our the customers through information, conversations, opinions, and products and services.

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Cart \$249.99

Products

## 2. BUSINESS MODEL OVERVIEW

FEATURED  
NEST LEARNING  
THERMOSTAT™

Let's stop wasting energy.

LEARN MORE



## a. Problem Statement

The key problems identified that Central Hudson will address:

**1. Lack of customer engagement in the management of their energy usage.** The lack of customer engagement can be broken down into five primary factors.

- o **Lack of awareness regarding products and services.** Customers are often not engaged because they are unaware of the resources and tools available to them.
- o **Lack of information readily available to customers.** The availability of relevant information is limited and disbursed across various channels making it difficult to make informed decisions.
- o **Customer effort and lack of convenience .** While Central Hudson has the means and capacity to guide customers through program offerings and explaining their usage it most often requires a phone call and is a highly time-consuming interaction for customers. Customer expectations are

shifting toward more self-service and self-directed access to information and utilities need to keep up with that expectation.

- o **Lack of understanding the value of products and services.** Customers need a simpler way to determine if a product will benefit them in a very personal way.
- o **Lack of a trusted, integrated exchange.** Customers have a lack of confidence in the accuracy of information for their unique energy usage. Customers are looking for a solution that they can trust.

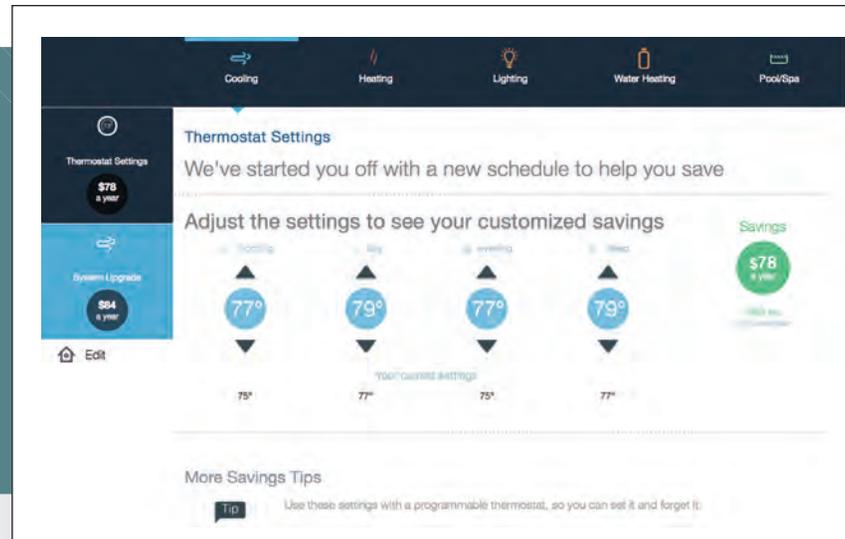
## b. Solution

Central Hudson is addressing the problem statements above by eliminating the barriers that exist today and leveraging tools available in the market to turn disparate data into personalized, actionable information for decision making including the purchase of

Central Hudson is leveraging tools available in the exchange to turn disparate data into personalized, actionable information for decision making including the purchase of products and services.



Tools such as energy calculators provide further insight into how energy consumption is affected by changes in behavior with certain devices in the home.



products and services. Central Hudson believes in empowering all of our customers and therefore will be offering *Central-E* to every customer within the Central Hudson service territory with an option for customer subscriptions to a data analytics package for those customers who value greater access to information and data.

### Availability and Access to Information

Customers currently lack the information to make informed decisions regarding the management of their energy consumption. *Central-E* will provide the customer with data, and guided, advice driven insights. The customer experience starts with a

unified one stop shop experience that customers can access from any connected device. Customers can access *Central-E* by logging into the Central Hudson website, mobile website, or mobile application. Once logged in, customers are presented with a personalized home page displaying their energy consumption for the latest billing period, estimated energy use for future months, a breakdown of how energy is used within their home, and a comparison of their current energy consumption to efficient homes of similar size. This landing page gives the customer a brief overview of their energy use providing them with the necessary information enabling them to make more informed

decisions in the management of their energy consumption and purchases of product and services. By updating their home energy profile, the data presented becomes even more accurate and personalized.

In addition to being able to access *Central-E*, customers will also receive targeted messaging delivering consumption alerts, tips and advice specific to their wants and needs via email, text messaging or another communication channel of their choosing. Central Hudson will reach out on a regular basis to inform each individual of the latest program offerings and associated products and services that they may be interested in based on

their recent usage, or updates to their profile along with links to easily access these options through *Central-E*.

### Value for Customers

*Central-E* provides customers with energy saving tips and tools along with the impact each has on their energy consumption and savings plan. Customers can then easily create a savings plan and track their progress. Tools such as energy calculators provide further insight into how energy consumption is affected by changes in behavior with certain devices in the home. For example, customers could see how shortening shower time, installing LED light bulbs, or lowering the temperature on their water heater has an effect on energy consumption or carbon footprint. These available tools easily allow the customer to see the value of being engaged in the management of their energy consumption.

To keep customers further engaged in the management of their energy consumption, a gamification element in the form of a points and rewards system will be implemented. Customers may earn points and badges by completing energy saving tips, participating in energy saving challenges, and by being an active user of *Central-E*.

The gamification of *Central-E* introduces fun and engaging competition through points, leader boards, and energy saving challenges to drive more energy conscious behavior. Once enough points have been accumulated, they may be used in exchange for gift cards to retail stores or the *Central-E* exchange where customers may purchase energy efficient products and services.

### Customer Effort and Awareness

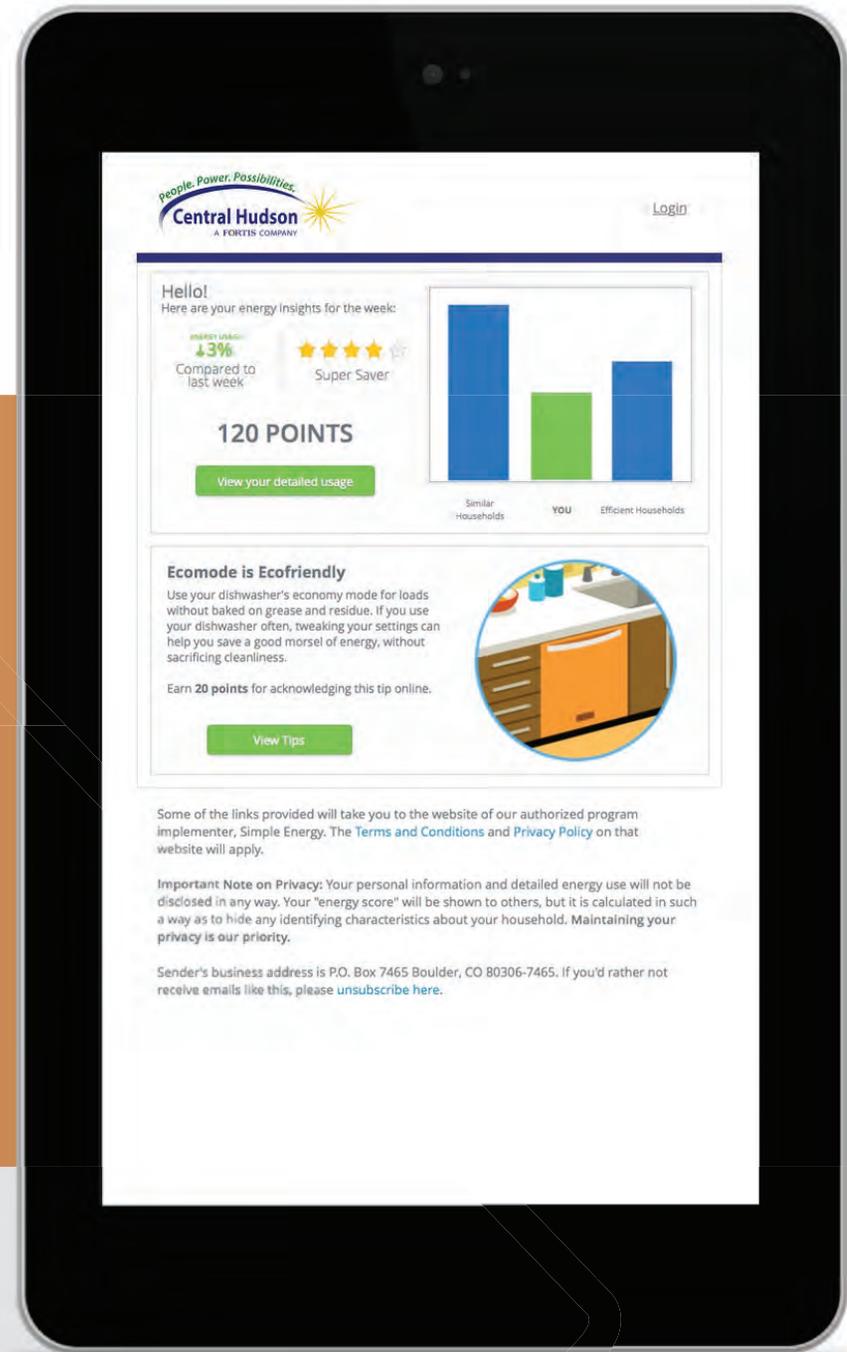
As customers navigate through the customer interface and interact with the available tools and information available, customers will be presented with the option to view and purchase applicable products and services through the *Central-E*, minimizing the effort required to locate relevant products and services. *Central-E* will serve as a central location where customers can easily find, enroll in, or purchase all energy efficient related programs, products, and services which are available to them such as LED light bulbs, smart thermostats, and energy efficiency programs. Based off their demographic or home energy profile, customers will be directed to a relevant list of products and services.

### Central-E. The Trusted Energy Exchange

The *Central-E* energy exchange serves as a trusted and integrated platform for third parties to offer products and services while providing a central location for customers to confidently purchase products and services. Customers have trust and confidence in the Central Hudson brand. By purchasing products and services from the *Central-E* customers are provided an additional level of confidence when making purchases from third parties. Similar to Amazon and its third party sellers, third parties enhance the product and service offerings on *Central-E* while lowering their customer acquisition costs as customers are already engaged on the utility platform.

To truly engage and empower our customers, Central Hudson will need to continually build relationships that bring additional third party partners to the exchange that offer our customers valued products and services. Central Hudson envisions accomplishing this first through our already existing network of 400-plus trade allies—elec-

Customers may earn points and badges by completing energy saving tips, participating in energy saving challenges, and by being an active user of *Central-E*.



tricians and heating, ventilation and air conditioning (HVAC) contractors. These trade allies, which already participate in Central Hudson's energy efficiency rebate programs with customers, receive levels of achievement from Central Hudson (Gold and Silver) based on quantitative and qualitative metrics. In the future, customers will be able to rank and review these trade allies for other customers' benefit. This model can be built out with other service providers such as solar installers, home back-up generator contractors and the like. Eventually, this exchange will evolve to increase participation of contractors from all trade

disciplines and grow the customers on the exchange. Third party offerings will be embedded into the *Central-E* experience so that it's seamless to customers while adding value to the customer experience.

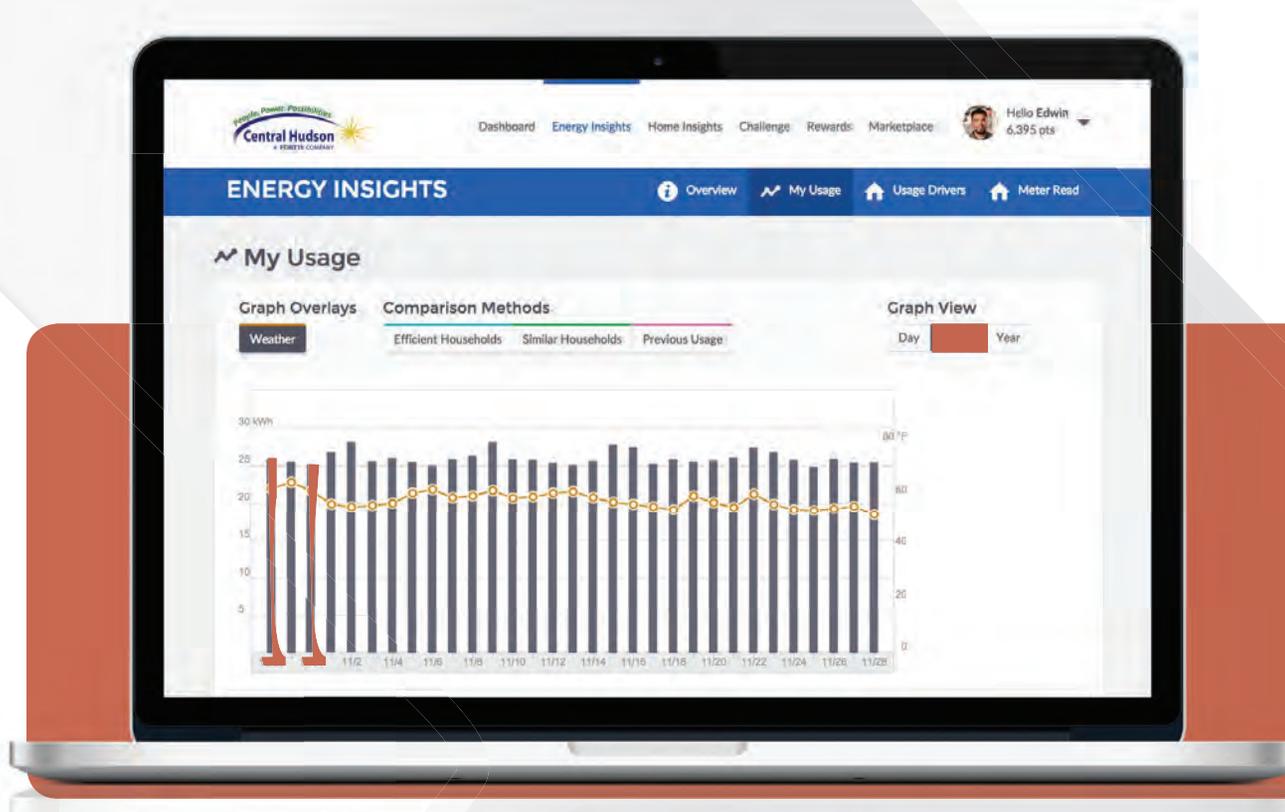
Throughout *Central-E*, customers would have the ability to exchange their thoughts and experiences on each energy savings tip or product and service with others, forming a sense of community amongst Central Hudson customers. Customers trust their friends and people with shared interests more than any product vendor.

## Data Analytics Subscriptions

Customers that want a richer and deeper analytic experience have the option to subscribe to a value added data analytic service offering with the installation of a smart meter. Customers will be offered an initial data analytics package.

**Initial Offering:** Central Hudson will offer an advanced data analytics package starting at a base price of \$4.99 per month for customers who wish to receive more timely and personalized data than what is offered through their traditional meter readings and standard *Central-E* experience. With this information, customers will have the ability to:

- o view energy consumption by day,
- o correlated energy consumption with average daily temperature,

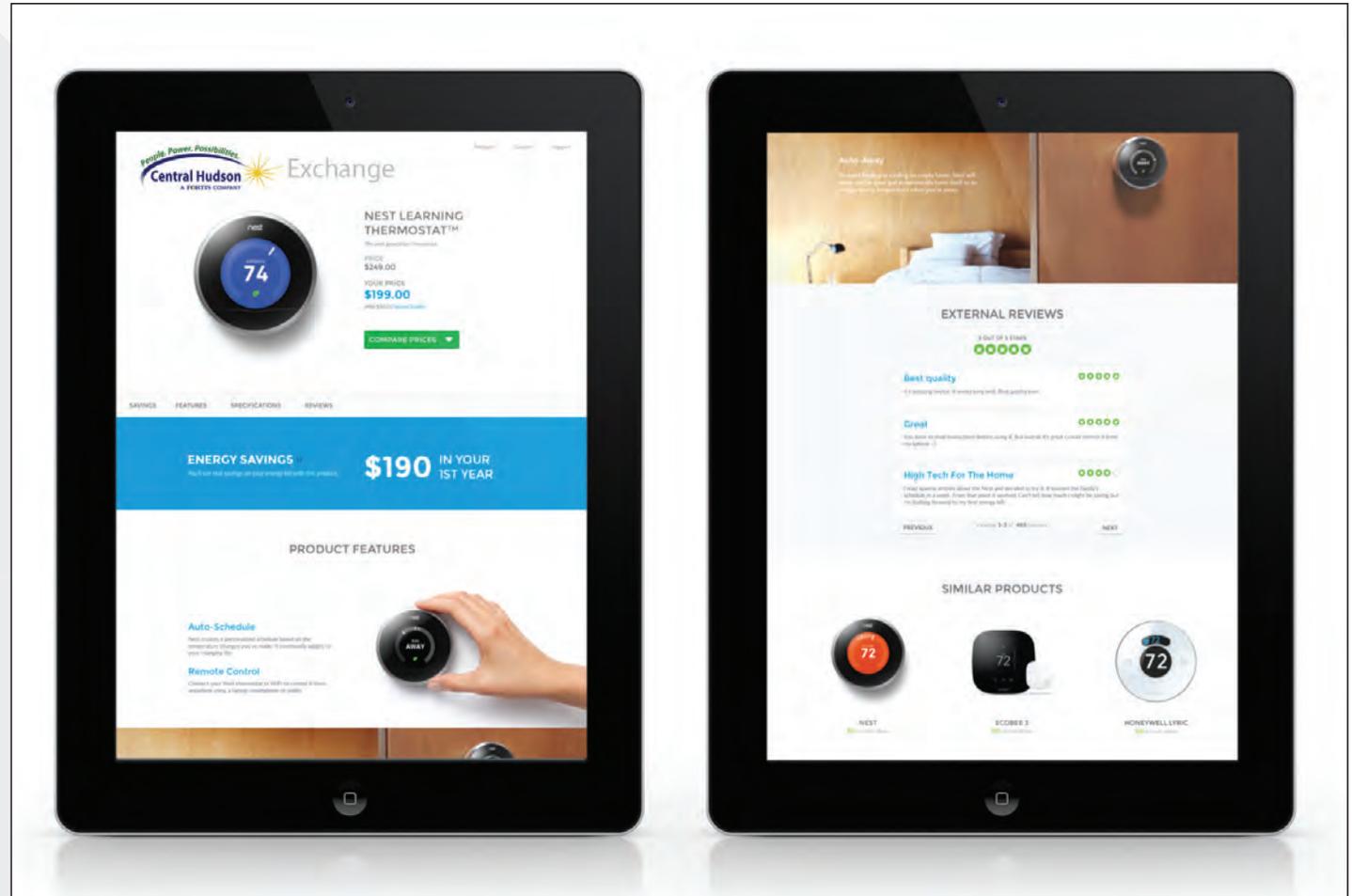


Customers will have the ability to view energy consumption by day, correlate energy consumption with average daily temperature, drill down and view energy consumption by hour and more.

- o drill down and view energy consumption by hour,
- o view detailed consumption since their last billing period,
- o set bill and usage alerts,
- o participate in differing rate structures and demand response programs.

This level of data increases the accuracy of savings estimates, energy saving tips and actions. This, in turn, leads to higher levels of customer satisfaction as the estimates are highly accurate and personalized to customers and help them achieve their budget and savings goals. This information can be collected and utilized in combination with home automation devices or various programs. This information could provide valuable services such as notifications of power outages for customers away from home or appliance failures.

Based on the responsiveness to the advanced data analytics package, the company will offer additional increased levels of data analytics services.



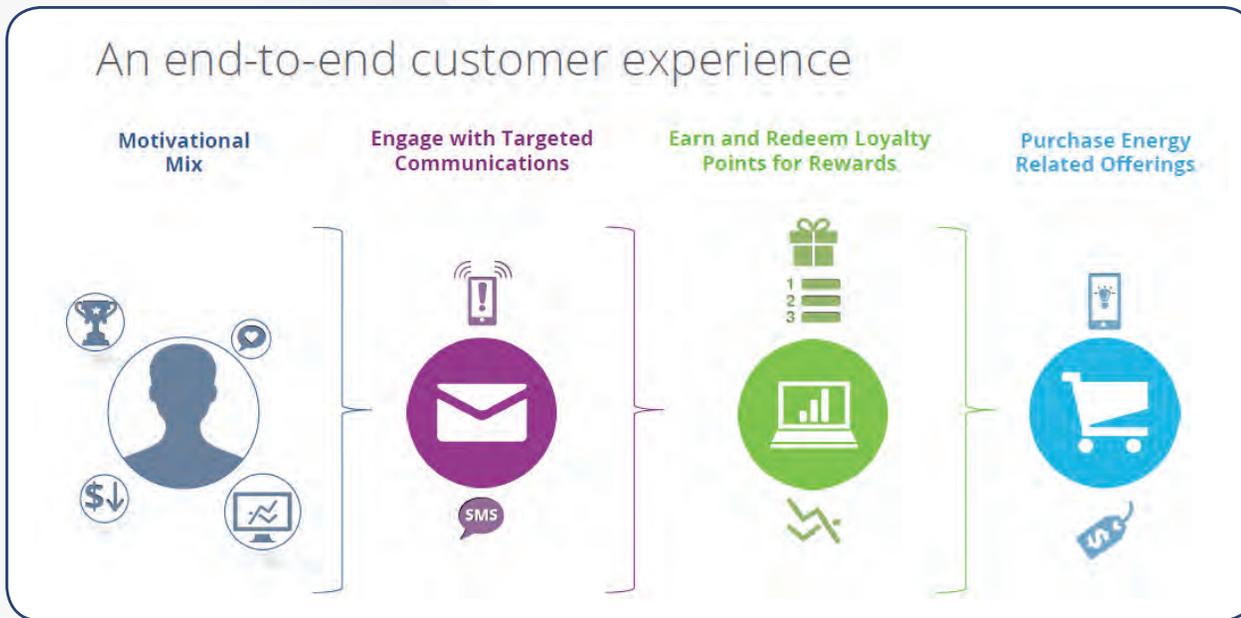
### c. Hypothesis

Through this REV demonstration project, Central Hudson is looking to test the following hypothesis:

1. Customers will be more engaged in their energy usage and energy management if they have greater awareness of available products and services that are relevant to

To truly engage and empower our customers, Central Hudson will need to build relationships that bring third party partners to the exchange that offer our customers an enhanced energy buying experience.

## An end-to-end customer experience



An end-to-end customer experience is part of the business model proposed by Central Hudson to help create an exchange to leverage products and services.

1. Customers will have the opportunity to interact with applicable tools on a web portal.
2. Customers will become engaged in the purchase of energy products and services they value through an information driven, guided e-commerce experience .
3. The *Central-E* exchange will enhance customers' ability to manage their energy for efficiency and costs.

4. Central Hudson will successfully implement a new business model leveraging our expertise and partnerships to create new revenue streams.
5. There are third party product and service providers willing to work with Central Hudson to deliver our customers more choice and value.
6. Customers are willing to pay for advanced data analytics.
7. Advanced data analytics will influence customers' and third parties' behavior.

## d. REV Principles

Central Hudson is testing the following REV demonstration principles as part of this project: a new business model, customer engagement, partnerships, and pricing/rate design.

- **New Business Model**—Central Hudson wants to test the value of a new business model that provides a revenue stream. Central Hudson is interested in testing new revenue streams from: (1) transactions on its *Central-E* site, (2) customer advanced data analytics subscriptions, (3) utility billing services for third parties, (4) advertising revenue, (5) data subscriptions for third party vendors.
- **Customer Engagement**—Central Hudson would like to better engage its customers. To that end, the demonstration project will seek to achieve measurable customer participation and interaction.
- **Partnerships**—Central Hudson wishes to leverage the use of its platform to provide a gateway for third party partners to offer products and services.
- **Pricing/Rate Design**—the company will test customers willingness to pay for value added products and services. The company would like to test various rate designs but those issues will likely be addressed in the REV track 2 order.

### 3. MARKET ATTRACTIVENESS



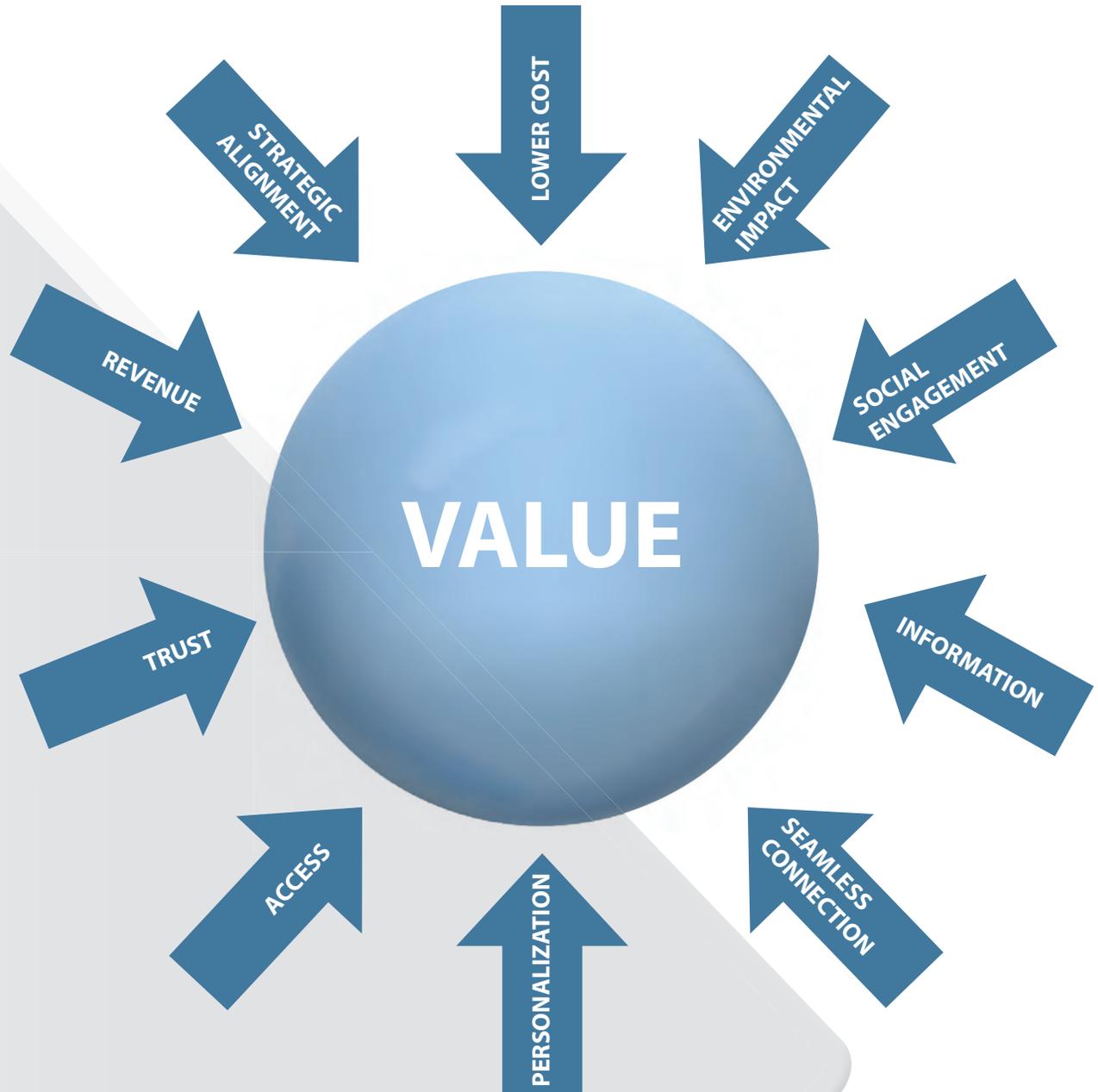
With the online exchange, customers can do comparative shopping for energy related items in a one stop shop, instead of going to various stores.

## a. Unique Value Proposition

This Central Hudson demonstration project is unique to participating customers, partners, the utility and the utility distribution system.

**i. Participating Customer.** *Central-E* will provide value to our customers in the following areas:

- 1. Personalization:** The customer will be incented to interact with the exchange that provides a personalized experience from the initial welcome to guided recommendations tailored to their usage patterns and interests.
- 2. Information, Access & Seamless Connections:** The customer experience is unique in that it offers all customers a one “stop shop” that ties usage analytics to products, services, programs and Company rebates. There is no other resource that integrates and enables customers to make informed decisions regarding these diverse resources for Central Hudson customers.
- 3. Social Engagement and Trust:** Customers trust reviews and insights from their peers. *Central-E* allows customers to post their comments in a virtual community setting. The community feel is extended through the use of gamification techniques where customers have the ability to earn points and badges. These points can build for customers to receive incentives such as gift cards and discounted purchases. Customers can track their progress, view leaderboards and participate in weekly challenges while benchmarking themselves against their peers.



**4. Environmental Impact:** Customers may be motivated to make decisions for the pure fact that it's "green." *Central-E* offers information related to the carbon impact of these decisions and can introduce products that can further enable customers to optimize energy consumption for the good of the environment.

**5. Trust:** Today customers trust the Central Hudson brand but they do not have the relationship with vendors just coming to the smart appliance or "green" market and are likely skeptical of the promise of transitioning to a smart home. *Central-E* will make sense of the various offerings by relating products and services to the customer's personal usage and home profile within a familiar and secure Central Hudson based online environment.

**6. Cost:** *Central-E* offers customers the ability to view their electric usage at a varying level of granularity depending on whether they use the basic access offering or the data analytics package. Combined with this information customers can determine budget limits and set alerts to inform them of when they approach their target set points offering customers a level of insight and control they do not currently possess.

**ii. Partner/Third Party.** The demonstration project is also unique in that it will leverage core partners to provide the core elements that compose *Central-E* such as the customer interface, ecommerce platform, the products and services offered and the meter data and analytics tools.

**1. Information, Access & Seamless Connections:** Central Hudson will be teaming with third parties that specialize in using behavioral methodologies to provide an experience to engage customers in how they manage and consume energy.

**2. Trust:** The ecommerce component will be provided by a partner that has established relationships with manufacturers and retailers to provide a platform for a shared revenue model. The exchange will also allow third party providers of products and services to bring more choice to customers.

**3. Cost:** *Central-E* will drive down customer acquisition costs for third parties by providing the back-end infrastructure and marketing activities that they would normally have to invest in themselves.

**4. Revenue:** Third parties desire to maintain and expand their business. They can do so by leveraging the flexible platform provided by *Central-E* where they can introduce new products, sell additional services related to products and program offerings and tap into customer segments that may not have existed before for them.

### iii. Utility.

**1. Information, Access & Seamless Connections:** Central Hudson would benefit from this demonstration as it could offer and cross-promote all of its programs, products and services in one location and it would be able to track customer engagement and better understand customer segmentation.

**2. Revenue:** Central Hudson will also be able to create

new revenue streams for transactions completed through *Central-E* as well as offering a platform for third party service providers whereby Central Hudson could facilitate lower customer acquisition costs by the selling of data or by billing goods and services on behalf of third party providers.

**3. Strategic Alignment:** In addition, the demonstration project is aligned with Central Hudson's Digital-interactive Strategies Initiatives. The Digital initiatives focus on three main strategies:

- Transaction
  - o Provide superior transactional experience across all digital touch points throughout the customer life cycle.
- Communication
  - o Provide unique and targeted messaging to the customers based on their behavior and lifecycle stage.
- Conversation
  - o Make use of social media as a bidirectional channel to engage all stakeholders.

The self-service nature and functionality being introduced within this demonstration project furthers our progress in advancing our digital presence and jumpstarts our ability to exceed the expectations of our customers.

### iv. System.

**1. Cost:** The Central Hudson distribution grid will become more efficient, potentially reducing overall costs, and become "greener" by targeting messages, programs, products and services, to those areas of the system that have specific needs.

## b. Customer Segmentation

The marketing of *Central-E* is essential to the overall success of the program. Customer acquisition is perhaps the most costly and important aspect of the marketing component. Central Hudson will work to understand a home's occupants and their propensity to choose different programs and services. The ability to segment customers based on their individual habits and preferences enables the delivery of highly relevant messages, insights and offers that drive higher subscription rates, increased revenue opportunities and improved customer satisfaction. Central Hudson will: engage our customers by creating personalized and highly relevant communications; segment our customers by location, demographics, home details, energy usage patterns, savings constraints, and behavioral propensities; market to our customers through channel-specific outreach strategies; and measure current and past performance to influence future offerings and program design.

The marketing will segment differing customer classes and tailor messages that resonate with each class. Central Hudson already possesses a vast amount of information about its customers and will develop initial messages and campaigns based on that information. The messaging and campaigns delivered to customers will be driven by the information captured in *Central-E* and correlate to the latest product and service offerings that match their profile. The demonstration project will split the customer segments: one initiative will be focused on overall benefits of *Central-E* while the other will be focused on the value of subscriptions of advanced data analyt-

ics. For the *Central-E* program, the customers will be segmented into several groups: (1) customers that have registered their on-line customer accounts with Central Hudson, (2) e-bill customers, (3) customers that have utilized our energy efficiency programs, and (4) those customers who receive a new service in the territory. There are approximately 138,000 customers who have registered their customer accounts. Those customers have logged onto their account through a sign-on and password and may be most likely to seek information on the new customer interface. Similarly, nearly 51,000 e-bill customers have also made a conscious decision to receive their bills electronically each month. Additionally, more than 22,000 customers have utilized our residential energy efficiency programs and those customers may be most likely to

desire additional ways to manage their energy usage. Finally, the company will have an opportunity to communicate directly with the 16,275 customers that request new electric service each year.

Central Hudson will initially focus its data analytics subscription efforts on two sets of customers: one set is geographically- based within the company's targeted demand response areas as those customers may be able to derive the most value from the data analytics subscriptions. This area will focus on three primary geographic territories encompassing approximately 47,000 customers. The company will offer its advanced data analytics package to this group of customers as it already will be extensively marketing its demand response efforts to this segment of customers and

**Table 1: Customer Outreach by Segment and Channel**

Customer Segment	Channel	Number of Customers
Residential Electric Customer Base	Bill inserts; social media; IVR messaging; Central Hudson website banner ads; Community Events	255,000
Customers registered with 'My Account'	Email	138,000
e-bill Customers	Email	51,000
Residential Energy Efficiency Program Participants	Direct letter	22,000
New Electric Service	Initial phone conversation with Customer Service Representatives	16,275* *(6/2014-6/2015)
Targeted Demand Response	Door to door; Phone call campaign; Direct mail	47,000
Mobile Application Subscribers	Push notification	18,692
Text Message Subscribers	Text message	5,224

## Solution elements



### Digital Communications

Data-driven, personalized and beautiful communications.



### Challenge

Customers share tips and insights through social media to encourage action and reward engagement.



### Marketplace

E-Commerce site with integrated rebates where customers can research and purchase energy saving products and services.



### Energy Insights

Personalized email with energy insights, tips, and product recommendations.



### Rewards

Customers redeem loyalty points earned from energy saving actions for a variety of rewards.



### Home Profile

Customers engage in a fun, interactive, and rewarding way to complete an online survey of their home.

customers will begin to receive regular e-mails with their monthly bills. This should be a very targeted and low cost approach. Past energy efficiency program recipients will receive a letter describing the *Central-E* benefits while customers who request new service in the territory will be spoken to directly by a call center representative that will assist that customer in setting up a new service anyway.

For the potential subscribers to the advanced analytics package in the target demand response area, Central Hudson will use a door to door, a phone calling campaign and direct mail marketing approach to those customers. The targeted demand response area has a time-sensitive urgency to garner results so the company will use very direct tactics to achieve results. Customers that have downloaded our mobile app or received text alerts will be communicated through those methods.

will have sales representatives going door to door to subscribe demand response customers.

The second group will target mobile app and text subscribers. The 18,692 and 5,224 customers that have signed up for our mobile app and text messaging services respectively are likely to be more open to gathering and managing their energy usage through a mobile device and may be able to benefit from the many available services of an advanced data subscription.

## c. Channels

Central Hudson will use multi-channel messaging to promote and communicate with our customers about

**Central Hudson will use multi-channel messaging to promote and communicate with our customers about *Central-E*.**

*Central-E*. Central Hudson will conduct an initial “blitz” to all customers regarding the benefits of *Central-E*. In this first stage, Central Hudson will use social media, some radio and local cable advertising, its integrated voice response (IVR) system and bill inserts to make all customers in the service territory aware of the program’s benefits. After the initial waves of customer outreach, Central Hudson will take a more direct approach with the various customer segments that it has identified.

For customers that have registered accounts with Central Hudson, the company would post messages to their accounts to advise them of *Central-E*. E-bill

## d. Ability to Scale

Central Hudson’s demonstration project will be able to scale upon inception. The infrastructure is being designed and implemented so the entire service territory can participate. The exchange is scalable so that additional third party providers can be easily integrated to offer more products and services to customers. The ability to scale may also be possible for third party providers beyond traditional energy products and services, and for customers beyond the Central Hudson service territory. The exchange will evolve based on customer preferences and provider offerings.

# 4. DEMONSTRATION PLAN



In order to demonstrate success Central Hudson will be measuring customer satisfaction and engagement.

## a. Metrics for Success

Central Hudson will establish metrics and report quarterly to the Public Service Commission on the success of *Central-E*. The demonstration project will, to the extent possible, measure program success based on customer engagement and the new business model. Central Hudson will utilize data collected from customer interaction with *Central-E* to test the hypothesis previously developed and assess the success of this demonstration project.

**Hypothesis 1.** Customers will be more engaged in their energy usage and energy management if they have greater awareness of available products and services that are relevant to them and the opportunity to interact with applicable tools on a web portal

- o number of enrollees in *Central-E*
- o activity level of *Central-E*
- o number of unique participants in *Central-E*
- o number unique and repeat visits by each channel (social media, web portal, mobile app)
- o number of home energy report users that update their profile
- o number of completed self-service website transactions
- o call center calls

**Hypothesis 2.** Customers will become engaged in the purchase of energy products and services they value through an information driven, guided e-commerce experience

- o number of completed purchases (by product

or service offering purchased through *Central-E*)

- o number of product/service ratings provided by customers
- o number of product/service reviews provided by customers

**Hypothesis 3.** The *Central-E* will enhance customers' ability to manage their energy for efficiency and costs

- o number repeat visits
- o number of Home energy report views
- o electric usage trends for engaged customers
- o number of completed purchases (by product or service offering purchased through *Central-E*)

**Hypothesis 4.** Central Hudson will successfully implement a new business model leveraging our expertise and partnerships to create new revenue streams

- o number of product/services offered on *Central-E*
- o dollar amount of Platform Service Revenues from *Central-E*

Report for:  
Jennifer Smith  
1234 Pearl St  
Boulder, CO 80501



### Your Home Energy Report

#### Explore

To get full access to your energy usage visit



#### Compare your energy usage

##### Usage profile for Jennifer Smith May 2013

###### Comparison:

Whose Electricity Usage is being compared to mine?  
314 Households compared  
- In the Boulder area  
- Single family homes  
- Electric heat  
- 1200 - 1600 sq. ft.  
- Built in 1979-1989



10 more than the average home in  
to be better than average?  
efficient. Try one of the tips  
save.

#### Take action

##### Install a programmable thermostat

Save up to  
**\$131**  
per year

Install a programmable thermostat and program it to set back or set up the temperature when you're not home and while you sleep at night. This can save you significantly on your heating and cooling bills.

Make sure to choose a model that is compatible with your heating and cooling systems. Many models come pre-programmed with a typical household's user profile to make it easier to program.

#### Energy use by category

Understand how your energy is being used.  
To see how this would look in your home, visit  
[www.Metropolis.com/energy](http://www.Metropolis.com/energy)



We are interested in learning about customer response to advance data analytics and home energy reports.

- o the revenue per transaction on exchange
- o ROI on *Central-E*

**Hypothesis 5.** There are third party product and service providers willing to work with Central Hudson to deliver our customers more choice and value

- o number of unique partners offering product/services on *Central-E*

**Hypothesis 6.** Customers are willing to pay for advanced data analytics

- o Number of customers that subscribe to advanced data analytics package
- o Annual subscription turnover

**Hypothesis 7.** Advanced data analytics will influence customers' and third parties' behavior. These metrics will be measured against non-data analytic subscribers.

- o number repeat visits on *Central-E*
- o number of Home energy report views (unique & repeat)
- o usage/residential customer
- o number of completed purchases and type of products purchased through *Central-E*
- o number of product/service ratings provided by customers
- o number of product/service reviews provided by customers
- o number of product/services offered on *Central-E*

## b. Demonstration Timeline (see page 19)

The first phase of the demonstration project will go live by March 1, 2016 if approvals to move forward are readily granted. Central Hudson has already engaged various parties for the meter, the meter data management system, and the software components that make up *Central-E*—user interface, e-commerce platform and analytics tools. As such, the company is ready to begin implementation of those parts of the project almost immediately. Phase 2 of the demon-

stration project which includes advanced service offerings include integration of community solar and demand response programs will be ready by July 2016. Central Hudson suggests that this demonstration project last until June 2018 to give the initiative ample time to assess and measure the project's hypothesis and goals.

## c. Participation

The success of the demonstration project will depend on participation from customers, third party partners, and Central Hudson.

**i. Target Population.** *Central-E* will be available to all our residential customers. Value added offerings will also be available to the entire residential customer base on an opt-in monthly subscription fee basis with our data analytics package. The company will direct its marketing strategies and outreach in alignment with the customer segmentation and channels plan set forth above. Targeted customer segmentation will be important in engaging customers to be active participants. The propensity for customers engaged on *Central-E* to purchase of goods and services will also be instrumental in the project's success. If Central Hudson can create an engaging "end to end" customer experience, the company would earn brand loyalty as its customers' trusted advisor and energy solutions provider. Customers could gain value from their participation by: (1) lower their energy usage and costs, (2) reducing their carbon footprint, (3) connecting product and services that are personalized and connected to their energy bill, (4) being socially engaged on virtual communities and rating/

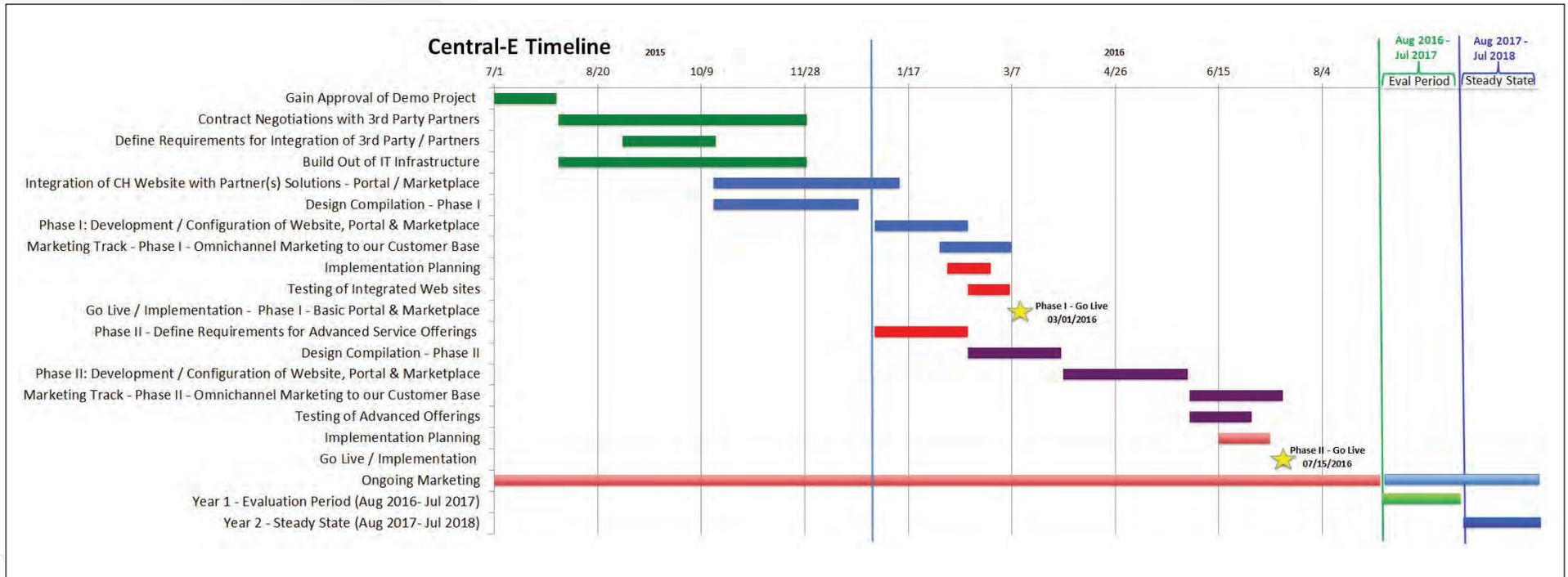
reviewing third party products and services, (5) access to information, and (6) personalization of *Central-E*.

**ii. Third Party Participation.** Partnerships with third parties will occur in two ways.

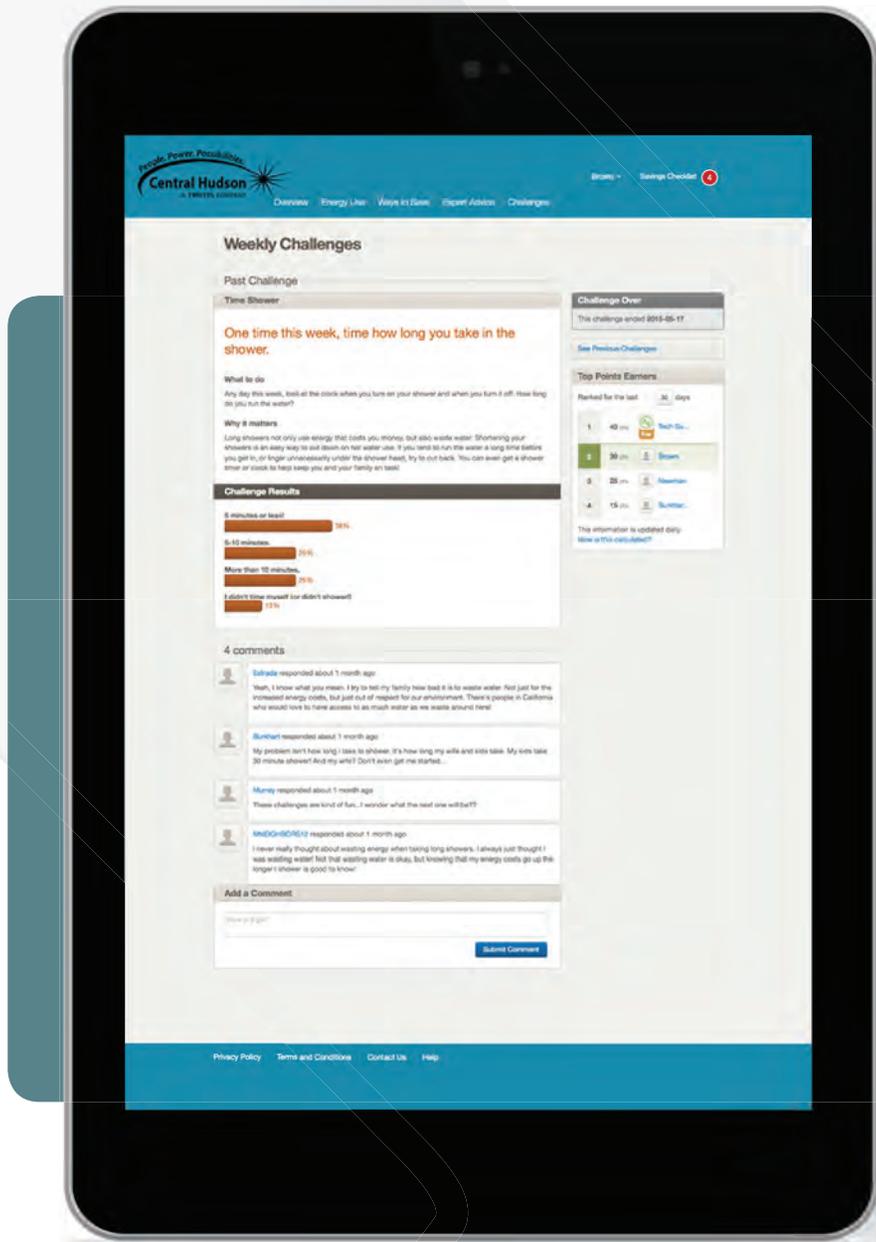
First, the company will utilize third party providers for the build out and hosting of all the *Central-E* web components, the smart meters and in home devices and its meter data management system. Secondly, the company believes that building a lasting relationship is critical to the success of the *Central-E* business model and will incent participation by third party providers to provide customers an array of product and service offerings. Central Hudson will contribute value to these third parties by: (1) providing third parties access to customers, (2) providing an informed and seamless purchasing platform to sell products and services, (3) providing marketing support and brand loyalty, and (4) lower the customer acquisition cost for third party providers.

**iii. Utility Resources and Capabilities.** In addition to facilitating third party partnerships, Central Hudson will provide other resources to assist in the success of the demonstration. Those Central Hudson resources would include overall project management, information technology resources, call center personnel, web and data analytics, communications and public relations resources and marketing support. Each of these positions plays a crucial role in driving the overall success of the demonstration project.

# Demonstration Timeline



- Phase I:** Includes the setup of all of the initial partner contracts, procurement, configuration, and implementation of all related infrastructure, initial marketing, and the release of the fully functional *Central-E* personalized customer exchange with each customer having access to usage information, social interactions, and products and services offerings.
- Phase II:** Includes the feature rich customer exchange extending the solution with additional offerings such as Advanced Data Analytics, Community Solar, Demand Response, etc., coupled with targeted marketing.
- Evaluation Period:** Post go-live of Phase II *Central-E* will officially begin the evaluation period lasting from August 2016 thru July 2017. While ongoing marketing actions continue, we will analyze and report measured results, further review lessons learned across the exchange, drive new vendors to participate, extending customer loyalty and grow overall adoption.
- Steady State:** Continuation of optimizing the exchange, tracking enrollment growth, extending marketing, driving more to cross-digital channels, exploring additional revenue opportunities.



## d. Customer Outreach/Community Engagement

**i. Outreach to Affected Communities.** The entire service territory will be able to participate in *Central-E* and therefore the company intends to communicate the benefits of *Central-E* to each customer. Consistent with its communication channels and customer segmentation plans, Central Hudson will measure community outreach and identify the most effective plans. Central Hudson will also partner with the multitude of active, and environmentally conscious community organizations in the service territory that the company already interacts with on a regular basis. Some outreach strategies will incorporate grassroots community challenges to motivate customers to become engaged in the management of their energy consumption and energy efficiency. These environment groups have great loyalty from their members and the communities in which they serve and will deliver effective messaging. Finally, Central Hudson

Gamification is a behavioral element to gain customer engagement by game playing (e.g. point scoring, competition). We will be using weekly challenges to motivate customer behavior as highlighted in the image on this page.

already works closely with its four-hundred plus trade allies (HVAC/electricians) and the company will continue to inform and educate this community about the benefits of *Central-E*.

**ii. Motivating Customers/Communities.** Central Hudson will be utilizing its vast network of trade allies, the area's extremely environmentally conscious community organizations, and the company's other service providers within its other programs (energy efficiency/demand response/gas marketing) to act as agents to motivate our customers about the benefits of *Central-E*. These groups already possess a high level of credibility with many customers within the service territory. In order to achieve sustainable residential customer engagement, the Central Hudson will team with its core partners using behavioral science as the underpinning of the program. The program sets forth several components by which people are motivated by:

- setting a challenging, but achievable goal;
- receiving personalized and actionable steps to achieve the goal;
- tracking progress toward the goal;
- receiving social support from others who have set a similar goal.

Since not all customers will be motivated by these same criteria, there will be other behavioral elements for engagement like gamification with points/rewards, normative comparison, feedback and social norms.

Ultimately, there are three key components to a successful customer engagement strategy: (1) acquire, (2) engage, and (3) activate. The first phase is needed to enroll customers through the use of channels such as direct mail and electronic marketing. Once a customer is enrolled, it is imperative to keep that customer engaged. This is where detailed insight into their energy usage occurs, and where gamification is a useful tool for continued commitment. In this stage of engagement, customers may need weekly energy challenges, bill alerts, and expert notifications about their energy usage. In the last stage of engagement, customers must be activated by selling products and services through highly personalized, customized energy savings recommendations. Customers would be alerted to cross promotions of other Central Hudson's offerings such as energy efficient rebates or demand response payments.

## e. Markets Conditions/Barriers

**i. Market Rules and Standards.** The exchange will need a set of standards and rules to ensure that customers and vendors have available, transparent information and pricing. Ultimately, consumers need to make informed choices regarding the products and services they value. The success of *Central-E* will be determined by a variety of factors including:

- the products and services offered are compelling to customers,
- the extent to which customers are engaged,
- effective marketing and messaging to customers,
- the quantity of transactions on the exchange,
- the quality of the *Central-E* experience,
- the ability for *Central-E* to command a sizeable and unique piece of the e-commerce environment.

**ii. Consumer Protections.** Consumers must feel that they are being treated fairly in any exchange if they are going to be a returning customer. Central Hudson will establish (1) customer ratings and reviews, (2) minimum customer satisfaction rankings, (3) customer resolution of vendor issues, and (4) adhering to current privacy protections. *Central-E* will offer a customer rating and review section to evaluate a third party's products and services. This is one method of giving customers comfort in selecting vendors of products and services. Central Hudson will establish minimum customer satisfaction requirements for vendors as a condition to continue to offer their products and services. Central Hudson will also be involved in mediating and/or resolving customer disputes with vendors. As the customers' trusted energy advisor and the host of the *Central-E* platform, Central Hudson is in a unique role in ensuring customer satisfaction. In addition, there are many privacy concerns about the ability to share data with third

party providers. These privacy concerns are already established and in place at Central Hudson.

**iii. Market Challenges.** There are, however, challenges to the demonstration project's potential success.

1. The size of the Central Hudson service territory is also a potential barrier for the demonstration project success for two reasons. The relatively small size of the residential customer base (255,000 electric customers) may deter third parties from aggressively entering into this engagement. Those parties may prefer to engage much larger utility companies. Without a variety of products and service offerings, customers would lack the motivation to engage in the exchange. Second, the ability of the transactions through the exchange to generate revenue to Central Hudson would need a significantly greater penetration to achieve a breakeven proposition than larger utilities as set up costs are not proportionally smaller.
2. The utility bill is, on average, about 1.5% of household income in the Central Hudson service territory. The ability to get customers interested in the active management of their energy usage when energy costs are a small portion of their overall household income is a major challenge. Therefore, engaging that customer will require the company to understand what motivate customers and tailor our outreach accordingly and with as much personalization as possible.

# 5. FINANCIAL INVESTMENTS/ BUSINESS MODEL



Central Hudson will offer subscriptions to an Advanced Data Analytics package through *Central-E*.

## a. New Utility Revenue Streams

Within *Central-E*, Central Hudson will develop five new revenue streams and produce savings associated with existing programs. The revenues streams and savings are discussed below while more detail.

- New Revenue Stream #1 “Central-E Revenues from Product Sales”— Central Hudson expects to receive a payment equal to 10% of the gross margin our partner earns for products and services sold through *Central-E*. Transaction volumes are

expected to increase at an average annual rate of 3.5% as customers gain familiarity with *Central-E*. Additionally, our partner expects a 25% average annual growth rate in gross margins from year 1 through year 5, due to the introduction and growth of higher margin products such as solar panels and battery storage technologies beginning in the 3rd Quarter of 2016. Following the fifth year gross margins stabilize at approximately \$110 per transaction.

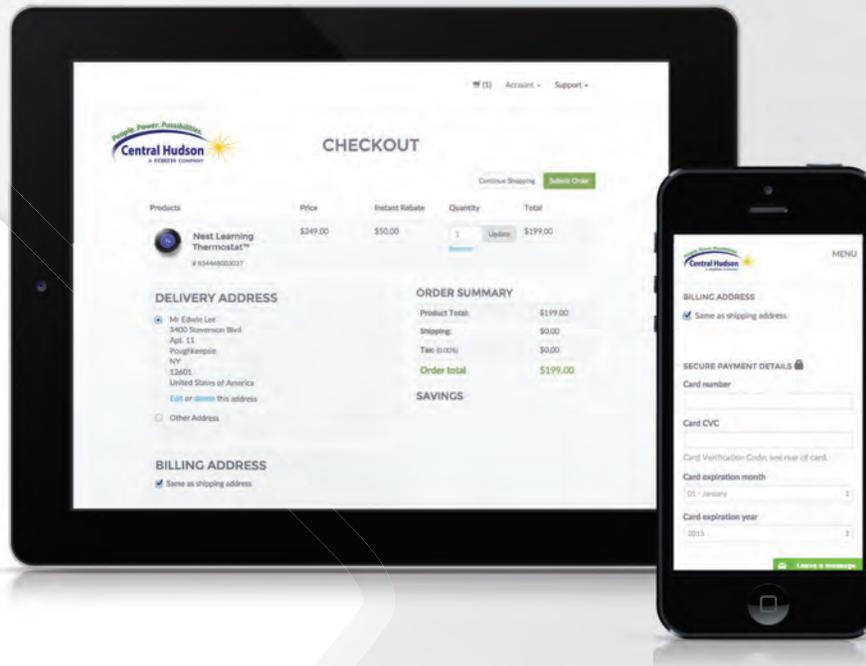
Central Hudson Revenues are 10% of gross margin.

- New Revenue Stream #2 “Billing Services”— Central Hudson is investing in its existing systems and work processes to offer billing services to third parties for any product and/or service offering they are willing to deliver to our customers. Central Hudson projects that it may provide the billing services for approximately 5% of the purchases that occur on *Central-E*.
- New Revenue Stream #3 “Advertising Revenue”—Central Hudson will sell advertising space to vendors seeking to highlight their product offerings and to assist in lowering third party’s customer acquisition costs. Central Hudson projects that it may provide the advertising for approximately 50 vendors and trade allies on *Central-E*. Additionally, the initial advertising fee of \$250 is expected to grow at approximately 2% per year.
- New Revenue Stream #4 “Data Subscription for Vendors”—Central Hudson owns a vast amount of data on both customers and the utility

Central Hudson expects to receive a payment for each transaction conducted through the exchange. This payment will be equal to a percent of each transaction amount.

system. Central Hudson could sell, for example, outage information by circuit to vendors seeking to install home generators in residential neighborhoods. At this time, a forecast of Vendor Data Subscription revenues is not available.

- Savings — Central Hudson expects to reduce current energy efficiency program costs by approximately \$200,000 within the second full year of program implementation. These savings are expected to be generated as the costs for Central Hudson’s energy efficiency programs are reduced or replaced through the use of the analytic capabilities of *Central-E*.
- Product Offering Revenue Stream #5 “Customer Advanced Data Analytics Subscription”— As previously discussed Central Hudson expects to offer subscriptions to an Advanced Data Analytics package through *Central-E*. Initially, Central Hudson expects to directly recover approximately 55% of the program costs from the subscribing customers, while the remaining costs are deferred for future recovery within base delivery rates or through future fees that may be charged to third parties as they find valuable uses for this data.



## **i. Platform Services, including Pricing Strategies**

During the immediate future, Central Hudson expects to defer the incremental revenue requirements of *Central-E* until the time that it is recovered within base delivery rates. However, the increase to base delivery rates will be partially offset by the newly identified revenue streams and the savings discussed.

- *Central-E* Revenue Streams — The size and amount of the revenues associated with the *Central-E* are dependent on the number of transactions and a projection of gross margin for each transaction. Additionally, billing and advertising services will be dependent on the availability and willingness of vendors and trade allies to participate in those programs.
- The Advanced Data Analytics Subscription is currently expected to be priced at \$4.99 per month. This price would cover approximately 55% of the program's revenue requirement while increasing the average residential subscriber's total typical electric bill by approximately 4.5%. In addition, the \$4.99 pricing strategy includes a shaping of the revenue requirement in order to produce a stable subscription fee. Central Hudson expects that this price point will allow for greater customer subscriptions and faster dissemination and collection of this more granular data. Central Hudson expects to achieve a target of 4,000 subscribers or 1.6% of residential customers by the fourth year of program implementation.

## **b. Investments**

### **i. Details and Timing of Spending**

Central Hudson expects to invest approximately \$1.1 million in information technology systems in order to support *Central-E* and Advanced Data Analytics subscriptions. These capital expenditures would occur during the first year of implementation. Additionally, for each Advanced Data Analytics subscription Central Hudson will need to invest just over \$200 in an advanced meter. If the target of 4,000 subscriptions is met by the fourth year of the program, Central Hudson will have invested approximately \$834,000 in smart meters for 1.6% of its residential customers.

In addition to capital expenditure investments Central Hudson will need to spend and recover approximately \$60,000 of one-time operating expenses and \$1.3M of annual operating expense (excluding depreciation) in order to support *Central-E* and Advanced Data Analytics subscriptions. However, as discussed previously, the annual maintenance expense is expected to be partially offset by approximately \$200,000 of expense energy efficiency program savings beginning in the second full year of implementation.

### **ii. Leveraging of Third Party Capital**

Central Hudson will develop partnerships to provide hosting services, e-commerce transaction capabilities and data analytics software to enable and enhance the customer experience inherent within *Central-E*.

## **c. Returns (ROI estimates, when self-sustaining, etc)**

Under the current assumptions, *Central-E* does not provide an income stream that would produce a self-sustaining business model. However, the monthly cost per residential customer is only \$0.40 in the first year and decreases each year thereafter. Additionally Central Hudson will assign a program manager to develop new partnerships with third-parties in order to add additional products and services, seek ways to monetize the value of the granular data provided within the Advanced Data Analytics subscriptions, and identify new and engaging partnerships to incorporate into *Central-E*. Central Hudson anticipates that *Central-E* will become self-sustaining as customer and third-party behaviors and expectations evolve.

## **d. Cost Effectiveness**

*Central-E* is a relatively inexpensive way of not only providing Central Hudson's residential customers with the ability to be more engaged in their energy usage and energy management. But in addition it offers them a personal guided experience. Customers may purchase energy products and services through the use of an exchange or more easily find the information necessary to more efficiently manage their energy costs. The implementation of *Central-E* will provide Central Hudson with the ability to better inform customers and cross-promote internal energy efficiency and demand response programs with available products and services.

# 6. REPORTING



## a. Information to be Included in Quarterly Reports

The company will report quarterly to the DPS Staff or the Commission on metrics that are most important to understand the overall success of the demonstration project. The quarterly dashboard will report on the on the following items:

- Number of enrollees in *Central-E*
- Activity level of *Central-E*
- Number of unique participants in *Central-E*
- Number unique and repeat visits by each channel (social media, web portal, mobile app)
- Number of home energy report users that update their profile
- Number of completed self-service website transactions
- Call center calls
- Customer engagement based on different channels of communication
- Number of completed purchases (by product or service offering purchased through *Central-E*)
- Number of product/service ratings provided by customers
- Number of product/service reviews provided by customers
- Number repeat visits to *Central-E*
- Number of Home energy report views
- Electric usage trends for engaged customers
- Number of product/services offered on *Central-E*
- Dollar amount of Platform Service Revenues from *Central-E*
- Revenue per transaction on *Central-E*
- ROI on *Central-E*
- Advertising revenue on *Central-E*
- Cost of programs
- Number of unique partners offering product/services on *Central-E*
- Number of customers that subscribe to advanced data analytics package
- Annual advanced data analytics subscription turnover
- Average monthly residential electric usage
- Number of completed purchases and type of products purchased through *Central-E*
- Impact on energy use for those customers who subscribe to additional data analytics packages

# 7. CONCLUSION



*Central-E will lead to greater levels of customer engagement and satisfaction for all of Central Hudson's customers.*

## a. Post Demonstration Benefits

The long term financial sustainability and commercial viability of the *Central-E* is the ultimate demonstration of project success. However, the post demonstration analysis must also include a review of customer, the company, and third party partner benefits.

Customer post demonstration benefits include the overall level of customer engagement in the project. This includes customer engagement with gamification, rebates, and rewards, improved levels of customer satisfaction, increased customer engagement in the management of energy consumption, purchases through a utility-branded exchange, participation in third party reviews and ratings and engagement in virtual communities.

Central Hudson's post demonstration benefits would include its ability to generate new revenue streams from the exchange, the ability to engage third party providers to the exchange, better understanding of customer motivations and preferences and success in shifting customers from the call center to more self-service applications.

Post demonstration benefits of third party providers would include their ability to offer products and service that customers purchased, the ability to market their products effectively, lower their customer acquisition costs and increased revenue.

## b. Plans to Scale

The customer interface and exchange are available to all customers and the program is built to scale at its inception. The ability to extend *Central-E* beyond the utility service territory or add additional third parties from other industry segments beyond energy services and products will be the next key scaling point.

## c. Advantages

The *Central-E* offers many advantages for the customers, third parties, the utility and REV proceeding. For customers, the demonstration project provides the following advantages:

- acts as a one stop shop for all energy products, services, and resources from their trusted energy provider,
- provides an integrated, unified experience with seamless support,
- provides personalized offers based on individual needs,
- empowers customers to make informed decisions,
- give customers savings from incentivized online interaction,
- easy access to bill, outage information, different program offerings, and different channels to subscribe to them.

For third parties, the demonstration project provides:

- lower customer acquisition costs,
- access to engaged customers,
- an integrated platform in which to sell products and services seamlessly,
- Central Hudson branding and marketing support.

For Central Hudson, the demonstration project provides:

- a new business model with new revenues streams,
- better customer engagement,
- increased customer satisfaction,
- stronger brand identity,
- better understanding of customer segmentation,
- insight into customer purchases and preferences,
- ability to transform parts of the business into self-service.

For the REV proceeding itself the demonstration project will better inform policy makers regarding customer engagement in the management of the total bill, leverage of third party participation in the customer energy markets, and overall market animation.

# 8. APPENDIX

**Central Hudson Gas & Electric  
REV DEMONSTRATION PROJECT:  
Central-E. YOUR ENERGY EXCHANGE  
APPENDIX**

**Table A – Central-E: Income from Product Sales**

	# of Transactions	Average Fee per Transaction @ 10%	Platform Service Revenues
<b>Year 1</b>	<b>8,030</b>	<b>\$5.21</b>	<b>\$41,812</b>
<b>Year 2</b>	<b>8,327</b>	<b>\$8.53</b>	<b>\$70,994</b>
<b>Year 3</b>	<b>8,624</b>	<b>\$9.31</b>	<b>\$80,288</b>
<b>Year 4</b>	<b>8,922</b>	<b>\$10.10</b>	<b>\$90,138</b>
<b>Year 5</b>	<b>9,219</b>	<b>\$11.04</b>	<b>\$101,734</b>
<b>Year 6</b>	<b>9,543</b>	<b>\$11.04</b>	<b>\$105,308</b>
<b>Year 7</b>	<b>9,878</b>	<b>\$11.04</b>	<b>\$109,004</b>
<b>Year 8</b>	<b>10,225</b>	<b>\$11.04</b>	<b>\$112,834</b>

**Table B – Central-E: Billing Revenues**

	Quantity	Billing Fee	Platform Service Revenues
<b>Year 1</b>	<b>-</b>		<b>-</b>
<b>Year 2</b>	<b>416</b>	<b>\$3.00</b>	<b>\$1,249</b>
<b>Year 3</b>	<b>431</b>	<b>\$3.00</b>	<b>\$1,294</b>
<b>Year 4</b>	<b>446</b>	<b>\$3.00</b>	<b>\$1,338</b>
<b>Year 5</b>	<b>461</b>	<b>\$3.00</b>	<b>\$1,383</b>
<b>Year 6</b>	<b>477</b>	<b>\$3.00</b>	<b>\$1,431</b>
<b>Year 7</b>	<b>494</b>	<b>\$3.00</b>	<b>\$1,481</b>
<b>Year 8</b>	<b>511</b>	<b>\$3.00</b>	<b>\$1,533</b>

**Central Hudson Gas & Electric  
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**Table C - Central-E: Advertising Revenues**

	Vendors	Advertising Fee	Platform Service Revenues
Year 1	-		-
Year 2	50	\$250	\$12,500
Year 3	50	\$255	\$12,750
Year 4	50	\$260	\$13,005
Year 5	50	\$265	\$13,265
Year 6	50	\$271	\$13,530
Year 7	50	\$276	\$13,801
Year 8	50	\$282	\$14,077

**Table D - Advanced Data Analytics Subscription Revenues**

	Subscribers	Revenue Requirement	Platform Service Revenues (PSR)	PSR as % of Rev Requirement	Monthly PSR / Subscriber
Year 1	400	\$43,278	24,047	55%	\$4.99
Year 2	1,200	\$129,833	72,141	55%	\$4.99
Year 3	2,400	\$259,666	144,282	55%	\$4.99
Year 4	4,000	\$432,776	239,208	55%	\$4.99
Year 5	4,000	\$432,776	239,208	55%	\$4.99
Year 6	4,000	\$432,776	239,208	55%	\$4.99
Year 7	4,000	\$432,776	239,208	55%	\$4.99
Year 8	4,000	\$432,776	239,208	55%	\$4.99

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**Table E – Central-E: Revenue Requirement Calculation**

Year	Rate Base	Cost of Capital	Labor Expense	Non-Labor Expense	Depreciation	Annual Revenue Requirement (Customer Costs)
1	443,299	41,768	414,777	700,000	103,000	1,259,545
2	779,558	73,451	427,220	452,800	206,000	1,159,472
3	595,375	56,097	440,037	461,856	206,000	1,163,990
4	430,746	40,586	453,238	471,093	206,000	1,170,917
5	240,261	22,638	466,835	480,515	206,000	1,175,988
6	77,196	7,274	480,840	490,125	103,000	1,081,239
7	8,565	807	495,265	499,928	-	996,000
8	-	-	510,123	509,926	-	1,020,050

**Table F – Central-E: Spending Details**

	Year	\$ Amount
Advanced Customer Information System (Capital Expenditure)	Year - 1	\$600,000
Bill Presentment Software (Capital Expenditure)	Year - 1	\$200,000
Web Content Management & Analytics (Capital Expenditure)	Year - 1	\$200,000
Customer Interface (Capital Expenditure)	Year - 1	\$30,000
Program Setup and Administration (one-time expense)	Year - 1	\$60,000
1 <sup>st</sup> Year Ongoing Maintenance	Ongoing	\$1,055,000

**Table G –Advanced Data Analytics: Spending Details**

	Year	\$ Amount
Advanced Meter Platform Data Interface (Capital Expenditure)	Year - 1	\$57,000
Smart Meters: 4,000 at a cost of \$209/meter	Year (1 - 4)	\$834,000
1 <sup>st</sup> Year Ongoing Maintenance	Ongoing	\$141,000
Communications Expense: 4,000 at a cost of \$27/meter	Ongoing	\$108,000

Central Hudson Gas & Electric  
 REV DEMONSTRATION PROJECT:  
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 APPENDIX

**Table H - *Central-E*: Monthly Cost per Residential Customer**

<b>Year</b>	<b>Central-E Costs<sup>1</sup></b>	<b>Net Revenue Stream 1, 2, and 3</b>	<b>After-tax Revenues</b>	<b>Net Costs</b>	<b>Monthly Cost per Customer</b>
<b>1</b>	<b>1,259,545</b>	<b>\$54,312</b>	<b>\$32,587</b>	<b>\$1,226,958</b>	<b>\$0.40</b>
<b>2</b>	<b>1,159,472</b>	<b>\$84,993</b>	<b>\$50,996</b>	<b>\$1,108,476</b>	<b>\$0.36</b>
<b>3</b>	<b>1,163,990</b>	<b>\$94,587</b>	<b>\$56,752</b>	<b>\$1,107,238</b>	<b>\$0.36</b>
<b>4</b>	<b>1,170,917</b>	<b>\$104,741</b>	<b>\$62,845</b>	<b>\$1,108,072</b>	<b>\$0.36</b>
<b>5</b>	<b>1,175,988</b>	<b>\$116,647</b>	<b>\$69,988</b>	<b>\$1,106,000</b>	<b>\$0.36</b>
<b>6</b>	<b>1,081,239</b>	<b>\$120,540</b>	<b>\$72,324</b>	<b>\$1,008,915</b>	<b>\$0.33</b>
<b>7</b>	<b>996,000</b>	<b>\$124,562</b>	<b>\$74,737</b>	<b>\$921,263</b>	<b>\$0.30</b>
<b>8</b>	<b>1,020,050</b>	<b>\$128,726</b>	<b>\$77,236</b>	<b>\$942,814</b>	<b>\$0.31</b>

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**Table I –Quarterly Scorecard**

<b>Customers will be more engaged in their energy usage and energy management if they have greater awareness of available products and services that are relevant to them and the opportunity to interact with applicable tools on a web portal</b>		
<b>Metric</b>	<b>Baseline</b>	<b>Target</b>
Number of enrollees in <i>Central-E</i>		
Activity level of <i>Central-E</i>		
Number of unique participants in <i>Central-E</i>		
Number unique and repeat visits by each channel:		
social media		
web portal		
mobile app		
Number of home energy report users that update their profile		
Number of completed self-service website transactions		
Call center calls		
Customer engagement based on different channels of communication		

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<b>Customers will become engaged in the purchase of energy products and services they value through an information driven, guided e-commerce experience</b>		
<b>Metric</b>	<b>Baseline</b>	<b>Target</b>
Number of completed purchases and by product or service offering purchased through <i>Central-E</i>		
Number of product/service ratings provided by customers		
Number of product/service reviews provided by customers		

<b>The Central-E will enhance customers' ability to manage their energy for efficiency and costs</b>		
<b>Metric</b>	<b>Baseline</b>	<b>Target</b>
Number repeat visits		
Number of Home energy report views		
Electric usage trends for engaged customers		
Number of completed purchases and by product or service offering purchased through <i>Central-E</i>		

<b>Central Hudson will successfully implement a new business model leveraging our expertise and partnerships to create new revenue streams</b>		
<b>Metric</b>	<b>Baseline</b>	<b>Target</b>

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Number of product/services offered on <i>Central-E</i>		
Dollar amount of Platform Service Revenues from <i>Central-E</i>		
Revenue per transaction on <i>Central-E</i>		
ROI on <i>Central-E</i>		
Advertising revenue on <i>Central-E</i>		
Cost of programs		

**There are third party product and service providers willing to work with Central Hudson to deliver our customers more choice and value**

<b>Metric</b>	<b>Baseline</b>	<b>Target</b>
Number of unique partners offering product/services on <i>Central-E</i>		

**Customers are willing to pay for advanced data analytics**

<b>Metric</b>	<b>Baseline</b>	<b>Target</b>
Number of customers that subscribe to advanced data analytics package		
Annual subscription turnover		

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<b>Advanced data analytics will influence customers' and third parties' behavior</b>		
<b>Metric</b>	<b>Baseline</b>	<b>Target</b>
Number repeat visits on <i>Central-E</i>		
Number of Home energy report views		
Average monthly residential electric usage		
Non-heating		
Heating		
Number of completed purchases and type of products purchased through Central-E		
Number of product/service ratings provided by customers		
Number of product/service reviews provided by customers		
Number of product/services offered on Central-E		
Impact on energy use for those customers who subscribe to additional data analytics packages		