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Associate General Counsel
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January 31, 2018

Hon. Kathleen H. Burgess, Secretary
New York State Public Service Commission
Three Empire State Plaza
Albany, NY 12223-1350

Re: Central Hudson Gas & Electric Corporation's REV Demonstration Project Implementation Plan Status Update (Q4 2017) in Case 14-E-0318 – *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Central Hudson Gas & Electric Corporation for Electric Service* and Case 14-M-0101 – *Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision*

Dear Secretary Burgess:

Central Hudson Gas & Electric Corporation ("Central Hudson") submits for filing in the above-referenced cases its REV Demonstration Project Implementation Plan Status Update. A request for confidential treatment was submitted to the Records Access Officer today, along with Report Attachments 1, 2, and 5.

If there are any questions related to this filing, please do not hesitate to contact Joe Hally, Manager-Energy Transformation & Solutions at 845-486-5373 (jhally@cenhud.com) or Laura Butler, Director-Digital Customer Experience at 845-486-5431 (lbutler@cenhud.com).

Respectfully submitted,

/s/ Paul A. Colbert

Associate General Counsel
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cc: Marco Padula (DPS)

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Central Hudson Gas & Electric

CenHub

Residential Energy Exchange



**NEW YORK
STATE OF
OPPORTUNITY™**

**Reforming the
Energy Vision**

**Demonstration Project
Implementation Plan 2017 Q4
Status Update**

Regarding Case 14-M-0101, Case 14-E-0318

January 31, 2018

Contents

Executive Summary	3
Section 1: Demonstration Design Progress	5
A) Phases	5
B) Hypotheses	7
C) Population	10
D) Scenarios	12
E) Checkpoints	16
Section 2: Project Structure & Governance	17
A) Project Team	17
B) Roles and Responsibilities	19
C) Governance	20
Section 3: Work Plan & Budget	22
A) Project Plan	22
B) Financials	23
C) Risks, Opportunities and Mitigation Strategies	23

Executive Summary

This report serves as the status update for Central Hudson's Reforming the Energy Vision (REV) Demonstration Project, CenHub. This report is being filed in response to Case 14-E-0318, Joint Proposal Order Approving Rate Plan dated June 17, 2015 and the Case 14-M-0101, Reforming the Energy Vision Demonstration Project Assessment Report dated November 10, 2015. This document provides the third quarter ("Q4") of 2017 progress, next steps, roles, responsibilities, governance, work plan, budget and reporting going forward.

CenHub strives to deliver the following benefits:

- Creation of a home energy advisory platform providing insight into energy usage for all residential customers and accessibility to energy efficiency programs such as rebates.
- Introduction of new channels and cross promotion for customers to participate in energy and cost savings programs
- Increased awareness and customer choice associated with program enrollment and the purchase of products and services
- Customer convenience
- Lower 3rd party customer acquisition and transaction costs
- Evaluation of potential new revenue streams
- Educational tools to assist customers to more effectively manage their energy bills

Central Hudson believes that limited consumer engagement related to household energy use can be increased through improvement of five (5) primary factors:

A) Awareness

- CenHub employs a multi-channel marketing strategy to inform customers of options, discounts, program eligibility and educational tools.

B) Availability of information

- CenHub provides energy usage information in multiple formats to speak to all types of customers. Specific customer information and program information is paired to display more personalized information to inform the customers and inspire action.

C) Customer effort or lack of convenience

- CenHub enables instant rebates, actionable tips and multiple self-service tools to reduce effort and improve usability.

D) Understanding the value of products and services

- In each issue, the CenHub Insider includes an energy IQ question, information on a distinct featured product, information on program rebates, pictures and how-to's.

E) Trust in available solutions

- CenHub is a compilation of business processes and strong partnerships to ensure data accuracy and integrity, customer support along each step of a customer's journey, and program integration to ensure incentives and fees are accurate.

Central Hudson is working to meet the growing expectations of our customers. Based on the interactions between consumers and other industries, there are trends that can be leveraged within CenHub that align with current customer expectations.

Figure 1: Customer Experience Industry Trends



To facilitate CenHub, Central Hudson has embarked on a multi-release roll out strategy:

- A. CenHub My Account, CenHub Insights and CenHub Store Launch (Complete)
- B. Migration to Web Experience Management and Identity Management (Complete)
- C. Insights+ Service Offering (Complete)
- D. Optimization and Enhancement of Offerings (Ongoing)
 - a. Expansion of the product categories and brands
 - b. Rebates as a Service on nest.com
 - c. Correlation of billed amounts and usage through the Insights graphs
 - d. Visual tools to differentiate original TOU and new VTOU peak and off-peak hours
 - e. Visual tools to differentiate usage from net generation

Section 1: Demonstration Design Progress

A) Phases

Central Hudson completed the first Program Year of the CenHub Demonstration Project as of March 31, 2017. Q2 marked the start of Program Year 2. The highlight of Q2 was the launch of CenHub Phase 3 – enabling residential enrollment in the Insights+ subscription service. In Q3 the team turned their focus to marketing Insights+. In Q4, the team successfully implemented enhancements to “My Usage” graphs to display billed amounts and enhancements to differentiate TOU usage on the Insights+ graph. In Q4, the team also spent time planning and defining further enhancements to the CenHub customer experience for Q1 and Q2 of 2018.

Ongoing Optimization and Enhancement Offerings

- **Customer Engagement** – We are in the process of contract negotiations with multiple companies to launch real-time customer feedback and monitoring technologies on the website. These technologies allow us to assess the response time to web related customer issues and allow customers to provide feedback about our web pages. Based on the response rate and information gathered we plan to use the feedback to influence our web and program design going forward to improve the overall customer experience and drive more customer engagement. **Functionality Enhancements** – We rolled out user interface enhancements related to the newly proposed Time of Use rate in Q4 of 2017 and added billing information on the “My Usage” graph. We have been in discussions with various potential partners and existing partners on ways to provide more value to the overall customer experience on the “CenHub” platform in 2018 that drive enrollment, engagement and education.
- **Web Experience Consistency** – No improvements were made in this area in Q4.

Accomplished Tasks for Q4

1. Mass Marketing of Insights+
2. Marketing for Black Friday/Cyber Monday Sales
3. Launched improvements to our Product Rebate functionality reducing our turnaround time to launch new products on the marketplace

Planned Tasks for Q1, 2018

1. Mass Marketing of the VTOU rate
2. Launch Smart Home Rate program
3. Mass Marketing of Smart Home Rate program
4. Launch Sealed partnership for Home Energy Audits available through CenHub Store
4. Enable enrollment in a TOU/Insights+ bundle at reduced subscription pricing

Table 1 details the functionality assigned to each Phase with the green highlighted areas indicated those that have been achieved to date.

Table 1: Project Phases

Phase	1. Portal & Marketplace Launch	2. Web/Mobile/Social Strategy Enhancements	3. Insights+ Launch	4. Ongoing Optimization and Enhancement of Offerings
Milestone (Criteria Met to Move to Next Phase)	<p><i>Successful Integration and Delivery of Portal & Marketplace:</i></p> <ul style="list-style-type: none"> • Successful data transfer • Successful rebate application 	<p>Successful Migration to Web Experience Management:</p> <ul style="list-style-type: none"> • Successful content and data transfer 	<p><i>Successful Integration and Enrollment:</i></p> <ul style="list-style-type: none"> • Successful enrollment process • Successful data transfer 	<p><i>Revenue Realization & Increased Engagement:</i></p> <ul style="list-style-type: none"> • Acquisition of new products and services • Enrollments in VTOU rate
Key Elements	<ul style="list-style-type: none"> • Integration into existing 'My Account' portal • End-to-end testing • Admin and Support staff training • Program marketing campaign • Go-Live 	<ul style="list-style-type: none"> • Modernize Login, New User Registration, Forgot Password and CenHub My Account landing page • Enable segmentation capability for targeted marketing and cross promotion of programs based on customer attributes 	<ul style="list-style-type: none"> • Integrate enrollment into Peak Perks program • Integrate enrollment process into Marketplace • Program marketing campaign • Procure meter inventory • Establish meter change process 	<ul style="list-style-type: none"> • Integrate Peak Perks portal and enrollment process • Evaluate 3rd party and ESCO relationship leads for new offerings • Investigate C&I offerings
Product & Service Categories	<ul style="list-style-type: none"> • Thermostats • Smart plugs • LED lightbulbs • Green Button Download • Improved rebates design to accelerate time to market of new products and services 	<ul style="list-style-type: none"> • Improvements to account security through modernized password and username practices • Establish a framework that will allow for a more consistent and standardized website experience in the future • Introduced overlay of billing information on the "My Usage" graph 	<ul style="list-style-type: none"> • Interval data and drill down capability • Visual distinction between peak and off peak interval data for TOU customers 	<ul style="list-style-type: none"> • Commercial Programs • TDR products including installation and registration services • Program cross promotion • Bundle VTOU rate • Bundle load disaggregation methods

B) Hypotheses

In order to measure the success of CenHub, Central Hudson has defined five (5) hypotheses to test throughout the life of the project. These hypotheses are targeted at understanding Central Hudson's residential customers. They span the elements of customer engagement, customer behavior, and customer preference. Understanding the customer ensures alignment of business offerings and introduction of business models that benefit the customer through increased choice and control.

Table 2: Test Statements

Test Statement	Hypothesis	Q4 2017 Results
<p>Customers may be more engaged in their energy usage and energy management if they have:</p> <ol style="list-style-type: none"> 1. Greater awareness of available products and services that are relevant to them 2. The opportunity to interact with applicable tools through a fun, educational and engaging online experience. 	<ul style="list-style-type: none"> • If Central Hudson utilizes a Multi -Channel marketing campaign, specifically inclusive of email and social media to market CenHub to residential customers... <ul style="list-style-type: none"> ◦ then Central Hudson will increase the number of Digitally Engaged Residential Customers¹ to 60% of the residential customer base within 12 months of the April 1, 2016 Phase 1 Go Live Date. • If Central Hudson utilizes gamification, reminders and relevant savings opportunities to encourage and prompt customers to complete the digital home energy profile... <ul style="list-style-type: none"> ◦ then 5% of the Digitally Engaged Residential Customers will complete the home energy profile within 12 months of the April 1, 2016 Phase 1 Go Live Date. • If Central Hudson develops an engaging platform that informs customers about their energy use, provides actionable energy savings tips linked to available products and services, and reinforces behaviors through gamification and social interaction... <ul style="list-style-type: none"> • then on average Digitally Engaged Residential Customers will become more energy efficient than their digitally unengaged counterparts 	<ul style="list-style-type: none"> • Current enrollment rate in CenHub My Account – 44% <p>The Action Items within Table 8 detail the steps we are taking to try to improve upon this metric and drive more enrollment activity.</p> <ul style="list-style-type: none"> • Current Home profile completion rate – 7% <p>We will continue to educate customers on the value of completing their home profile and reward customers through the points system. We are in talks with our program partner on how to enhance the Home Profile experience and usage of the self-reported data but no additional action plan is required for this objective.</p>
<p>Customers may become engaged in the purchase of energy products and services they value through:</p> <ol style="list-style-type: none"> 1. An information driven, guided e-commerce experience. 2. A social online 	<ul style="list-style-type: none"> • If Central Hudson provides CenHub users with energy usage information and targeted actionable savings tips linked to products and services available on CenHub ... <ul style="list-style-type: none"> ◦ then we expect to achieve 8,000 product purchases within the first 12 months of the April 1, 2016 Phase 1 Go Live Date. ◦ Then we expect to achieve 8,000 product purchases in year two April 1, 2017 – April 1, 2018 	<ul style="list-style-type: none"> • Product sales for Program Year 1 – 14,640 • Product sales for Program Year 2 – 5,834 • Projected product sales for year 2 – 8,327 <p>In Q4 we launched a Black Friday/Cyber Monday Sale</p>

³ Defined within Section B "Test Population" as customers that are currently My Account users and CenHub users following the Go Live Date

<p>experience that inspires competition and community action</p> <p>3. The availability of instant rebates and rewards programs</p>		<p>campaign with discounts and free shipping continuing throughout December. The free Google mini with a purchase of any Nest device along with the addition of “stocking stuffer” type products on the store boosted sales.</p>
<p>We believe Central Hudson will successfully implement a new business model leveraging our expertise and partnerships to create new revenue streams and that there are service providers willing to work with Central Hudson to deliver choice and value to our customers.</p>	<ul style="list-style-type: none"> • If Central Hudson provides CenHub customers with energy usage information and actionable savings tips linked to products and services available on CenHub ... • then CenHub will generate approximately \$40,000 of Platform Service Revenues (PSRs) for Central Hudson within the first 12 months of the April 1, 2016 Phase 1 Go Live Date. 	<ul style="list-style-type: none"> • Post-tax PSR's for Program Year 1 - \$30,273 • Post-tax PSR's for Program Year 2 - \$11,632 <p>The Action Items within Table 8 detail the steps we are taking to try to improve upon this metric and increase revenues.</p>
<p>Customers may be willing to pay for Advanced Data Services.</p>	<ul style="list-style-type: none"> • If we offer an Insights+ package featuring an intuitive and engaging user experience and utilize multi-channel and targeted marketing... • then 1,000 customers will subscribe to the Advanced Data Services package within 12 months of the September 30, 2016 Phase 2 Go Live Date. 	<p>Total Insights+ Enrollments - 137</p> <ul style="list-style-type: none"> • Peak Perks M&V enrolled population - 64 • Insights+ enrolled residential population - 73
<p>Advanced Data Services may influence customers' behavior.</p>	<ul style="list-style-type: none"> • If Central Hudson directly markets to Insights+ subscribers and provides insights and tips regarding management of their energy usage and cross-promotes programs such as Targeted Demand Response... <ul style="list-style-type: none"> ○ then customers with Insights+ subscriptions will make 10% more product purchases per customer than the 'Digitally Engaged Residential Customer' within the first 12 months of subscription enrollment (measured on a rolling 12 month avg. beginning 12 months after the September 30, 2016 Phase 2 Go Live Date.) ○ 25% of Advanced Data Services subscribers will elect a non-standard rate offering such as our existing Time of Use rate within 2 years of the September 30, 2016 Phase 2 Go Live Date. 	<p>Now that we have a larger Insights+ population we are currently working with our business intelligence team to capture data to begin reporting on these metrics.</p>

Figure 3: Program Year Sales Totals by Product Category

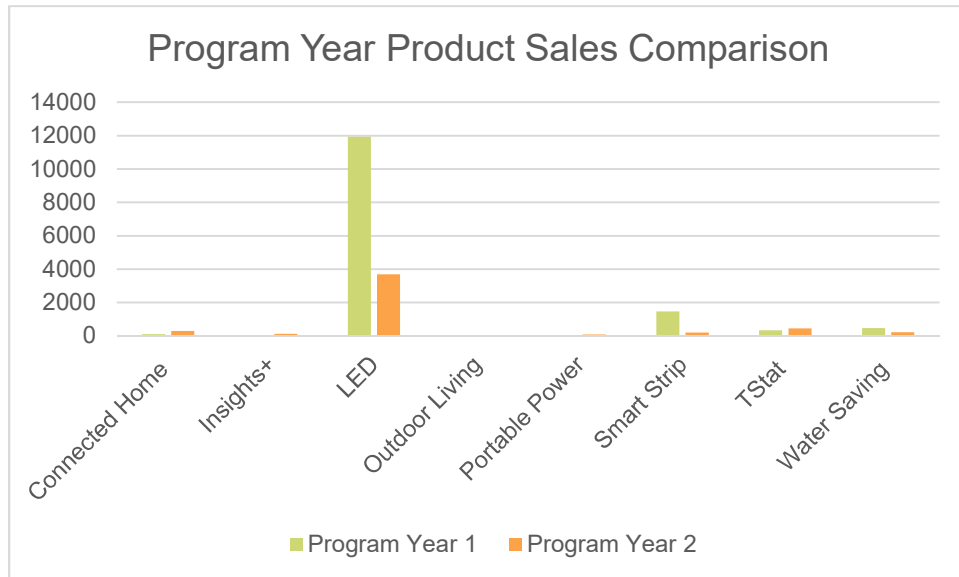
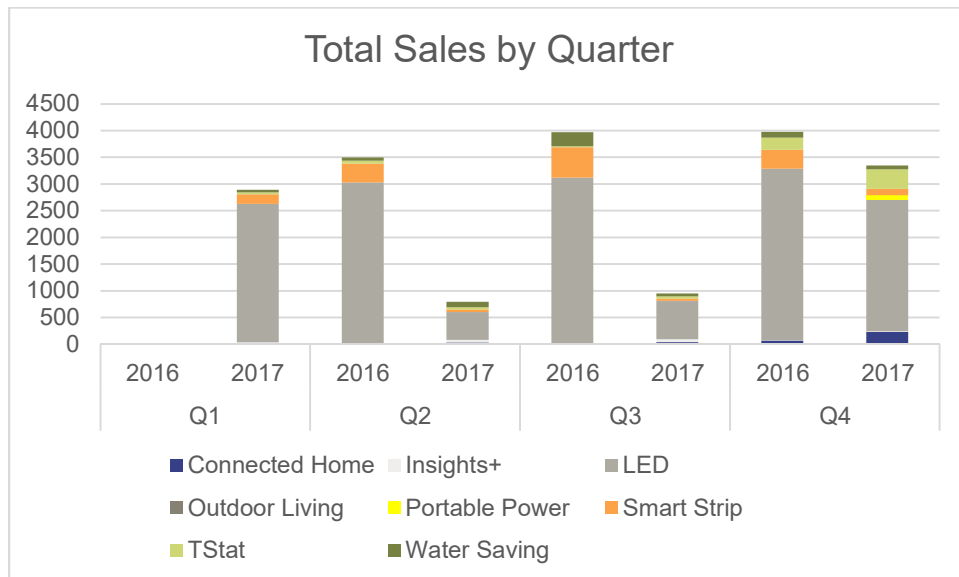


Figure 4: Quarterly Sales Results Comparison



Program Year 2 sales continue to mimic the shape of 2016 sales, however the quantities are significantly lower in Program Year 2 despite our marketing and outreach efforts. Central Hudson customers continue to purchase convenient, low priced products. Higher priced items such as Smart thermostats and connected home products are engaging a small subset of Central Hudson customers. In Q4 2017 we introduced a new product category called “Portable Power”. These products were added to introduce more variety, lower sale prices and lifestyle/convenience options. Central Hudson will continue to work with Simple Energy in

closely monitoring sales volumes in order to continuously introduce products of interest and varied price points in order to increase conversion rates.

C) Population

Central Hudson's customer base is very diverse and falls into various categories of digital engagement. A segment of Central Hudson's customers are highly active with digital outlets, such as on-line shopping, social media, and banking. Central Hudson saw a significant increase in downloads when it first launched its mobile app and outage map. The Company is actively communicating with its customers via Facebook and Twitter and there is the potential to delight our customers through more digital channels. Therefore the Company aims to increase the number of digitally engaged customers through the evolution of CenHub and better understand the drivers behind their engagement.

Central Hudson is analyzing the residential customer population in an attempt to understand what online behaviors are prevalent among varying customer segments. Through preliminary analysis, customers can be defined according to the Test Populations defined in Table 3 and can be further categorized according to Figure 4. Figure 4 includes a "snap shot" illustration of customer account longevity and CenHub penetration. This information is valuable because it highlights the importance of engaging new customers sooner and the need to use different methods to engage long standing account holders. The team continues to dive deeper into this data to enhance our overall marketing strategy.

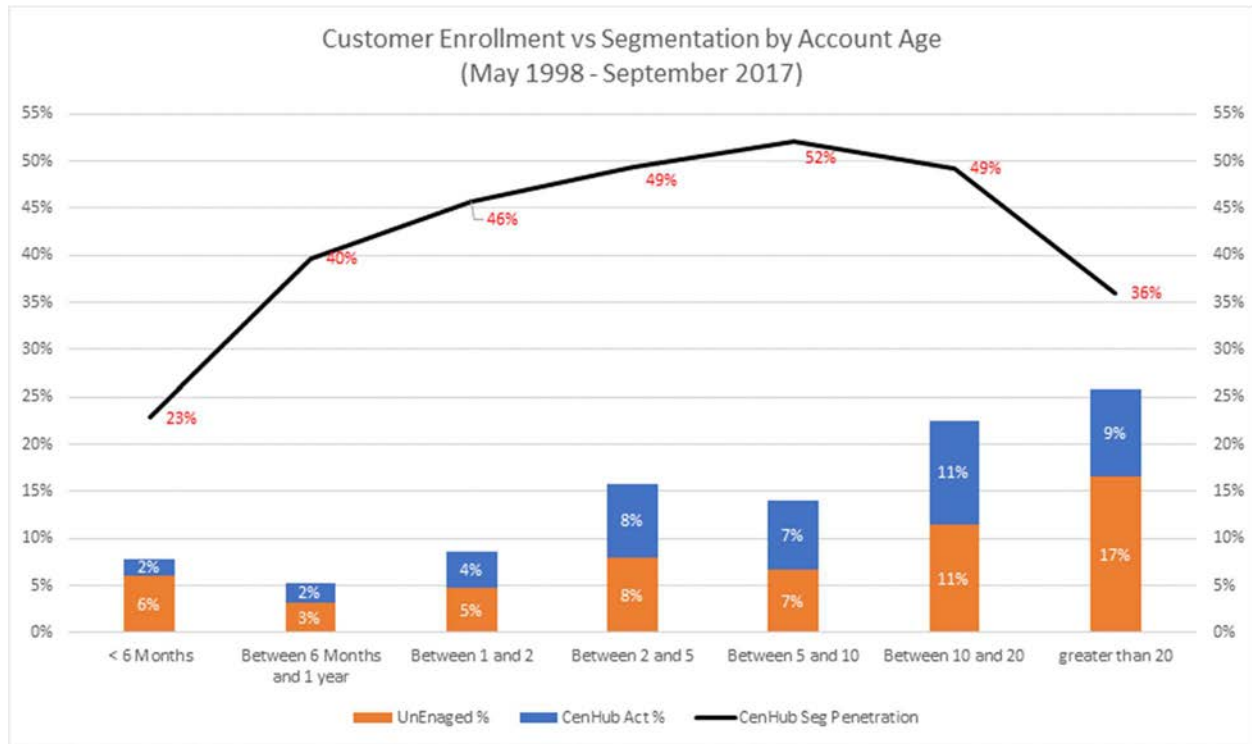
Table 3: Test Population

Test Population Description	Selection Method	Population Size (as Reported on Dec 10, 2015)	Q4 2017 Population Size
Residential PV Customers <ul style="list-style-type: none"> to be analyzed within Channel and Segment Tests 	Identification / Selection Method: <ul style="list-style-type: none"> Net Meter installation record 	3,741	7,307
Digitally Engaged Residential Customers <ul style="list-style-type: none"> to be analyzed within Test Statement #1 to be analyzed within Test Statement #5 to be analyzed within Channel and Segment Tests 	Identification / Selection Method: <ul style="list-style-type: none"> Current My Account users Opt-in to enrollment in CenHub following project go live 	136,000 ² , all existing My Account users will be automatically enrolled in CenHub	116,995
Digitally Unengaged Residential Customer <ul style="list-style-type: none"> to be analyzed within Test Statement #1 to be analyzed within Channel 	Identification / Selection Method: <ol style="list-style-type: none"> Paper bill recipient non-My Account user 	107,000 ⁴	146,027

² Upon detailed review and implementation of Phase 1 Central Hudson identified that inactive accounts were being counted in the initial enrollment totals

and Segment Tests			
Existing customer transferring service(s) / 'Moves' <ul style="list-style-type: none"> to be analyzed within Channel and Segment Tests 	Identification / Selection Method: <ul style="list-style-type: none"> Existing customer – transferring service 	65,400	56,959
New Residential Customer requesting service <ul style="list-style-type: none"> to be analyzed within Channel and Segment Tests 	Identification / Selection Method: <ul style="list-style-type: none"> New Service Application submitted 	As Required	20,073
Home Energy Report Recipient <ul style="list-style-type: none"> to be analyzed within Channel and Segment Tests 	Treatment Group listing	103,000	103,000
Insights+ Subscriber <ul style="list-style-type: none"> to be analyzed within Test Statement #5 to be analyzed within Channel and Segment Tests 	Identification / Selection Method: <ul style="list-style-type: none"> Voluntarily Subscribes Pays the Associate Subscription fee 	N/A	72
Comverge Target <ul style="list-style-type: none"> Peak Perks M&V 	Identification / Selection Method: <ul style="list-style-type: none"> Peak Perks customer 	62	64

Figure 4: Customer Longevity and CenHub Penetration



D) Scenarios

CenHub is composed of a set of features and functionalities that align directly with the hypothesis to be tested. This alignment ensures clarity and prioritization of scope and program design. Table 4 describes the solutions that will deliver on each hypothesis.

Table 4: Test Scenarios

Scenario	Description	Current Functionality and Impact
<p>If Central Hudson utilizes a Multi - Channel marketing campaign, specifically inclusive of email and social media, to market CenHub to residential customers...</p> <p>a. then Central Hudson will increase the number of Digitally Engaged Residential</p>	<p>Simple Energy continues to successfully send marketing emails and engagement emails. Through our marketing campaigns and website upgrades, we constantly strive to find new avenues to promote sign ups and encourage interactions with CenHub.</p> <p>All customer communications are reviewed by the internal Central Hudson team composed of representatives from Corporate Communications, Marketing,</p>	<p>Residential Customer My Account Enrollment Rate : 44%</p> <p>In Q3 we acted on the following marketing campaign topics:</p> <ul style="list-style-type: none"> • Black Friday • Cyber Monday • \$1 LED Bridge arm ads • Best of Hudson Valley

<p>Customers³ to 60% of Central Hudson's residential customer base within 12 months of the April 1, 2016 Go Live Date.</p>	<p>Energy Efficiency and the demo project team.</p> <p>In coordination with the Simple Energy marketing channels Central Hudson has utilized its social media and web platforms to advertise all of the features and benefits of CenHub.</p> <p>As part of the Phase 3 Insights+ Launch, we are working in coordination with Simple Energy, Corporate Communications and Marketing to develop material featuring tutorials of the Insights+ product.</p>	<p>Event Sponsor</p> <p>We set up a booth at the Best of the Hudson Valley event so that customers can learn more about the products and rebates available through the Store and our Energy Efficiency programs.</p> <p>We offered a free Google Home Mini with the purchase of a Nest product through Black Friday and Cyber Monday.</p> <p>CenHub Store reached an all-time high for monthly users in December 2017. The Cenhub Store had 15,613 users, which is 8.14% higher than the previous record.</p> <p>We expect customer enrollment will continue to increase as the CenHub features evolve and new marketing strategies are implemented.</p>
<p>If Central Hudson utilizes gamification, reminders and relevant savings opportunities to encourage and prompt customers to complete the digital home energy profile...</p> <p>a. then 5% of the Digitally Engaged Residential Customers will complete the home energy profile within 12 months of operations (4/1/16 – 4/1/17).</p>	<p>New tips are developed weekly on CenHub Insights to keep the content fresh and drive continuous customer engagement. We are currently in the testing phase of adding points programs for registering for My Account and enrolling in eBills and automatic payments. These programs will offer higher points values and determine how effective the gamification component is at incenting customers to act. Central Hudson and Simple Energy are revisiting the points system to identify ways to increase engagement in the rewards program while not exceeding the rewards budget.</p> <p>In coordination with Simple Energy Marketing channels, Central Hudson launched a test case for points redemption. To better understand if customers are susceptible to loss aversion, a series of emails were sent out to customers prompting them to redeem their points by March 31st or else they would expire. This campaign resulted in an over 30% conversion rate which is far above the cross industry benchmark of 20% for loyalty program expiration campaigns.</p>	<p>Gamified Experience Engagement Levels:</p> <p>Program Year 2 Statistics:</p> <ul style="list-style-type: none"> a. Tip Completions: 40,059 a. Badges Earned: 21,852 b. Home Profile Completions: 2,480 d. Logins: 84,399 <p>Program Year 1 Statistics:</p> <ul style="list-style-type: none"> a. Tip Completions: 41,331 c. Badges Earned: 42,278 d. Home Profile Completions: 5,791 d. Logins: 106,281 <p>Overall, engagement with the gamification components have grown in program Year 2.</p> <p>The Average number of tips completed per month per account has increased.</p> <p>Average number of accounts that have logged to CenHub in</p>




⁶ Defined within Section B "Test Population" as customers that are currently My Account users and CenHub users following the Go Live Date

		each month has increased
<p>If Central Hudson develops an engaging platform that informs customers about their energy use, provides actionable energy savings tips linked to available products and services, and reinforces behaviors through gamification and social interaction...</p> <p>a. then on average Digitally Engaged Residential Customers will become more energy efficient than their digitally unengaged counterparts</p>	<p>The Energy Insights pages offer multiple avenues to receive energy saving tips such as the "Virtual Home" on the tips tab and on the "Overview" screen.</p> <p>The "Overview" screen also provides a usage graph for the most recent usage period compared to similar households and efficient households. The "My Usage" screen allows overlay of the current usage trend with the previous year's history, the usage pattern of like or efficient households and the weather.</p>	<p>We have changed the default landing page of CenHub insights to the My usage page instead of the Overview page to increase traffic to this page as we have added more features to this section of the website such a billing overlay. This enhancement gives the customer billing information that directly correlates to their usage.</p>
<p>If Central Hudson provides CenHub users with energy usage information and targeted actionable savings tips linked to products and services available on CenHub...</p> <p>a. then we expect to achieve 8,000 product purchases within the first 12 months of operation of the CenHub (4/3/16 - 4/3/17)</p>	<p>The CenHub Store is available for anyone interested in purchasing energy efficient products.</p> <p>Only Central Hudson CenHub My Account holders will be able to access the instant rebates at checkout.</p>	<p>In comparison to Q4 2016, Q4 2017 number of products, and average quantity order value are higher.</p> <p>We continue to add new products quarterly and have extended the \$1bulb promotions.</p>
<p>If Central Hudson provides CenHub users with energy usage information and actionable savings tips linked to products and services available on CenHub...</p> <p>a. then CenHub will generate approximately \$40,000 of Platform Service Revenues (PSRs) for Central Hudson within the first 12 months of operation (4/3/16 - 4/3/17)</p>	<p>Central Hudson and Simple Energy have co-invested in the marketing strategy for CenHub in order to maximize customer touch points and drive product sales from the CenHub Store. Both companies also share equally in the net profit of CenHub Store sales.</p> <p>Fully embedding the Simple Energy sites into the CenHub My Account experience also makes shopping simple and seamless for the customer.</p>	<p>For Program Year 2 Q4 we have generated \$11,034 as compared to \$15,452.06 in Program Year 1 Q4.</p> <p>Customers continue to be most engaged with the lowest cost products that have minimal profit margins.</p>
<p>If we offer an Insights+ package featuring an intuitive and engaging user experience and utilize multi-channel and targeted marketing...</p> <p>a. then 1,000 customers will subscribe to the Insights+</p>	<p>Central Hudson will offer customers the ability to enroll in a voluntary, subscription based service offering that introduces enhancements to the current Insights experience. The program includes replacement of the customer's existing house meter with an Insights+ meter and the ability to view hourly usage data on a day behind basis.</p>	<p>Insights+ enrollment is available on CenHub Store for qualifying residential customers. Once enrolled, customers receive a series of onboarding emails introducing them to what is available to them with the new service at different stages of the enrollment lifecycle.</p>

package in the first year (6/6/17 – 6/6/18)	Central Hudson is also extending an existing partnership to provide M&V capabilities via the meter data to Comverge for the Peak Perks TDM program. For randomly selected customers the Insights+ service will be provided at no cost. We view the partnership extension as a true example of the concept of REV. It fills a functionality gap that existed in the M&V of our NWA initiative, introduces new customer engagement features and introduces no additional cost to the eligible customers.	To date there are 136 customers enrolled in the Insights+ service.
<p>If Central Hudson directly markets to Insights+ subscribers and provides insights and tips regarding management of their energy usage and cross-promotes programs such as Targeted Demand Response...</p> <p>a. then customers with Insights+ subscriptions will make 10% more product purchases per customer than the 'Digitally Engaged Residential Customer' and 25% of enrollment in TOU rates within the first 12 months of subscription enrollment (measured on a rolling 12 month avg. after establishing the initial 12 months of program</p>	<p>The data available can be paired with TOU rates, demand response programs, or smart home devices to allow the customer to maximize their energy savings and automate their home to the level that they desire and see the results of their actions.</p> <p>Increased visibility of benefits will incent customers to further engage through product purchase and/or enrollment in programs offered both by Central Hudson or other third parties outside of CenHub. Overall, Central Hudson wants to provide customers with the means and ability to have a choice in their energy management, which will drive further engagement.</p>	<p>Not yet implemented.</p> <p>Central Hudson along with existing program partners and alternative providers is in the process of building an effective way to merge the Insights+ package with other offerings as an additional enrollment option for customers on the store.</p>

E) Checkpoints

Table 5: Targets and Results

Target Date	Milestone	Target	Project Life Cumulative Actuals	Program Year 1	Program Year 2
4/1/2016	<i>CenHub Phase 1 - Go Live</i>	4/1/2016	4/3/2016	4/3/2016	Complete
7/31/2016	<i>CenHub Phase 2 – Go Live</i>	7/31/16	9/7/16	9/7/2016	Complete
12/31/2016	<i>Capital Expenditures⁴</i>	\$1,200,000	\$1.8M	\$1.8M	Complete
7/1/2018	<i>Annual Maintenance Expense⁵</i>	\$1,100,000	\$1.16 ⁸	\$0.98M	● \$0.4M
4/1/2017	<i>Enrolled CenHub Customers as % of total Residential Customer Base</i>	60%	N/A	42.3%	● 44%
4/1/2017	<i>Product Purchases</i>	8,327	N/A	14,640	5,834
9/15/2016	<i>CenHub Phase 3 Insights+ Enrollment - Go Live</i>	9/15/2016	N/A	Release 1 (Comverge M&V) - 3/31/2017 Release 2 (Residential Enrollment) – 6/6/2017	N/A
4/1/2017	<i>% of Enrolled CenHub Customers Completed Home Profile</i>	5%	N/A	5%	● 7%
4/1/2017	<i>CenHub Platform Service Revenues (pre-tax)</i>	\$97,732	N/A	\$40,263	● \$17,896
9/15/2017	<i>Insights+⁶ Cumulative Deferral</i>	\$125,000	\$92,521	\$125,886	● \$55,433
9/15/2017	<i>Insights+ Capital Expenditures</i>	\$70,000	\$117,302	\$328,357	Complete
9/15/2017	<i>Insights+ Subscriptions</i>	1,000	N/A	0	● 136
9/15/2017	<i>Insights+ PSR</i>	\$24,000	N/A	\$0	● \$4,042
Status Key  On or exceeding target  Off target <=10%  Off target >10%					

⁴ Cumulative Capital Expenditures includes capital expenditures prior to April 3, 2016

⁵ Cumulative Maintenance Expense includes expenses beginning on April 1, 2017

⁶ Formerly Advanced Data Services

Section 2: Project Structure & Governance

In Q3 of 2015 Central Hudson created a new division, Energy Transformation & Solutions (ET&S), that includes a team solely dedicated to CenHub as well as teams dedicated to Energy Efficiency, Demand Response, non-wire alternatives, and other demonstration projects in order to more closely collaborate and deliver energy saving tools and programs to customers.

A) Project Team

To deliver CenHub Central Hudson created a matrixed internal team composed of members from ET&S, Corporate Communications and Marketing, IT and the Call Center. In Q4 2017, Central Hudson continued to expand its existing relationships with the following vendors:

- Simple Energy – to create the CenHub Insights and CenHub Store functionality
- Cognizant Technology Solutions – to provide project management support and system testing
- Itron – to provide hosted meter data management services and to leverage opportunities to cross promote the Targeted Demand Response (TDR) and Dynamic Load Management (DLM) programs

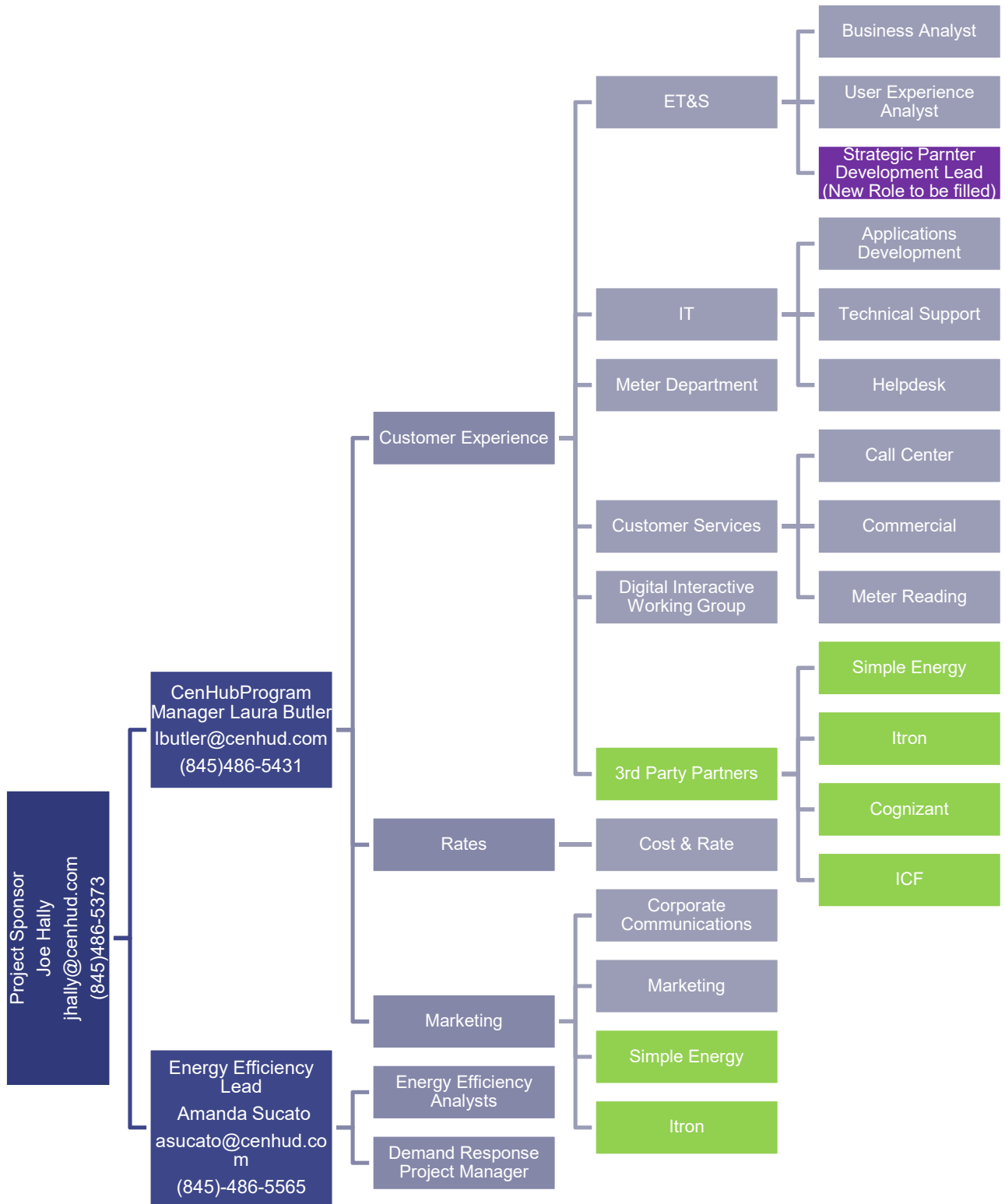
Central Hudson and our partners have truly embraced the REV initiative and continue to evolve CenHub.

In order to ensure ongoing customer satisfaction, operation of the CenHub functionality and success of the new business processes being created by the evolution of CenHub, Central Hudson has taken the following actions in Q4 2017:

- Central Hudson is continuing its effort to fill the Business Development role focused on increasing revenue and new demo project opportunities.
- Worked with Simple Energy to identify process improvement opportunities.
- Worked closely with Net metered customers, Customer Services, IT and Marketing in the planning and design of user interface enhancements
- Strategized with Simple Energy on extension and personalization of the Insights Home Profile experience to provide more value to customers and develop a work plan for Q1 and Q2 2018
- Met with potential partners to brainstorm ideas for enhancing Insights+ through data analytics

As of June 30, 2017 the project is being staffed as follows; points of contact are denoted in the dark blue boxes:

Figure 4: Team Members



B) Roles and Responsibilities

To ensure success and accountability for all tasks, the Program and Project management team members have outlined all project related responsibilities and identified the various levels of ownership for each task. The program objectives and tasks associated with meeting these objectives are captured in various forms starting with a Project Charter, architecture and design diagrams and prototypes, carried through to bi-weekly deliverables, detailed testing instructions, results and bug fix prioritization and ending with a step by step deployment plan for moving the changes to the live system.

Table 6: Roles & Responsibility Matrix

Central Hudson Gas & Electric	Description
Project Management	Central Hudson owns overall project delivery and success criteria.
Integration with Central Hudson website and Internal Systems	Central Hudson has integrated Simple Energy's customer engagement portal (CenHub Insights) and marketplace (CenHub Store) into its existing website and mobile site and rebranded as a family of offerings through CenHub.
Testing Across Platforms	Central Hudson creates detailed test plans and scripts for each phase of the project and has performed multiple rounds of functional and user acceptance testing. Bugs are tracked, prioritized and remedied on an agreed upon schedule with project team members and vendors. The go live activities also include a round of validation testing before officially calling the launch complete. The project team utilizes a similar approach for all phases.
Access to Customer Data	Central Hudson is providing weekly and daily data feeds in the agreed upon file format to Simple Energy and Itron to facilitate associated program administration and marketing.
Customer Outreach and Marketing Strategy	Central Hudson is informing the customer base of the upcoming availability and functions of CenHub through a multi-channel marketing strategy developed in concert with Simple Energy, Itron and ICF.
Energy Efficiency Program Information & Requirements	The ET&S team has been brought together in a collaborative work space that has facilitated frequent and effective information sharing, brainstorming, and decision making. A new support ticketing system and internal FAQs have been made easily accessible to internal teams in order to track any issues and define escalation procedures. All aspects of CenHub are designed with Energy Efficiency targets and available programs in mind.
Metering Solutions	Central Hudson will schedule and perform meter changes for subscribing customers
Data QA/QC	The ETS team works very closely with the internal Business Intelligence team to leverage all available program participation data and relevant customer insights
Sales & Partnership Development	This is an existing gap – Prospecting partnerships to develop additional customer offers

Partner	Description
Integration with Internal Systems	<p>Simple Energy and Itron continue to provide requirements, information delivery standards, and assistance to support Central Hudson's development of interfaces as we have looked to expand upon the CenHub platform.</p> <p>All partners will continue to work together with the Central Hudson team for future releases and ongoing enhancements.</p>
Marketing Strategy (Simple Energy)	Simple Energy and Itron provide expertise, experience, and guidance in order to assist Central Hudson with the development of a Multi-channel marketing strategy.
Insights+ – Data Repository and Management (ITRON)	Itron hosts the Meter Data Management Repository for the duration of the project per contract terms. Itron will provide meter usage data in the agreed upon file format and time interval to facilitate program and partner support.
Project Management	<p>Cognizant is continuing to provide overall Project Management for the technical releases of CenHub.</p> <p>Each partner has assigned an Engagement Manager for ongoing relationship support and planning of future functionality as well as a ticketing/reporting mechanism for resolution management.</p>

C) Governance

Central Hudson tracks progress, alignment to project objectives and performance in comparison to original hypotheses throughout the life of the project according to Table 7.

Table 7: Governance Approach

Format	Frequency	Participants
Standups – short in person discussion to identify any blockers or clarify tasks items	As needed based on criticality of project tasks	All project team members
Program short term planning – in person review of all requirements and assignment of tasks to team members	As needed based on criticality of project tasks	ET&S, vendor partners as appropriate
Status report – combination of written documentation and in-person/conference call discussion	Weekly and Bi-Weekly	Core Team, Project and program managers with project sponsor and key stakeholders as needed
Product and sales reviews – combination of written documentation and in-person/conference call discussion	Quarterly	Project team, Simple Energy and Energy Efficiency SMEs
Marketing plan reviews – combination of written	Weekly (Central Hudson only) Monthly – all relevant leads	Marketing director, project and program managers, SMEs as

documentation and in-person/conference call discussion		needed, project sponsor, vendor leads
Project Update – documented newsletter of the latest progress for high level awareness	Bi-Weekly	Created by the ET&S team and distributed to all relevant stakeholders across Central Hudson and partner vendors
Sponsor Meeting – review scope and schedule, risks, impacts and next steps	As needed	ET&S, Marketing, IT
Data Audit – review all data reports being exchanged between Central Hudson and Simple Energy to build out a data dictionary and identify, prioritize and resolve data discrepancies	Weekly	ET&S, BI, IT and SE

Section 3: Work Plan & Budget

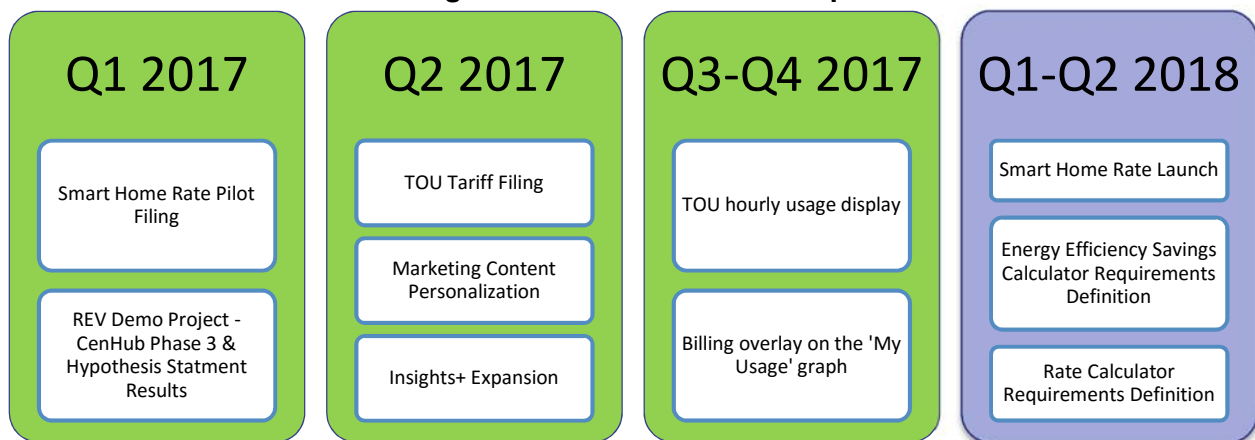
A) Project Plan

In Q4 the team solidified requirements definition and design concepts to enable functionality and unique customer experiences for the Smart Home Rate, Time of Use Rate, and in Q4 launched the ability to display billed amount information within the user interface to assist customers in correlating usage and bill amounts.

a. Schedule

- I. Figure 5 provides a high level overview of the CenHub short term delivery schedule.

Figure 5: Short Term Roadmap



b. Actions in Progress

I. Project Planning and Execution

- In Q4 the team finalized the requirements and wireframes to build an online enrollment feature for an Insights+ and VTOU service bundle. At the same time we strategized on customer experience elements to build in to accommodate customers that are eligible for other company programs such as Peak Perks and the upcoming Smart Home Rate Demo Project.
- We performed implementation planning to launch CIS billing changes for the new VTOU rate and the web form that would allow customers to sign up for VTOU.

II. Usability

- The ET&S team is in talks with vendors to launch real-time customer feedback and website monitoring solutions to enhance our ability to improve response time to website issues and to influence our future designs with real customer input.

III. Alignment

- Central Hudson is incorporating the REV Track 2 Order obligations, Energy Efficiency goals and Peak Perks program objectives into the short term

roadmap and design decisions. This will ensure greater stakeholder understanding of downstream impacts, promote better upfront planning and design decisions and overall result in better digital customer experiences.

IV. Marketing

- The team has expanded beyond traditional marketing channels leveraging tools such as Google Ad Words and advertising on toll gate arms on the Newburgh-Beacon Bridge.
- The week before our Black Friday/Cyber Monday campaign began we issued a special edition of our CenHub Insider that focused on education on the features and functions of programmable thermostats. The strategy was to better prepare our customers to make an informed decision while shopping and alert them to the ability to purchase and receive incentives on the CenHub Store.

B) Financials

Redacted

C) Risks, Opportunities and Mitigation Strategies

Table 8 details how we are expanding on our successes and creating action plans to improve in the areas where we are projecting to be off target.

Table 8: Action Items

Risk / Opportunity Category	Action Plan
<p>Opportunity – Brand Recognition</p> <p>Completion Date: On-going</p>	<p>Central Hudson is continuing with the build out of the CenHub product family and incorporating the upcoming Smart Home Rate and Time-Of-Use Rate into the online experience and future marketing plans.</p> <p>In preparation for 2018 we built a comprehensive marketing plan that includes outreach and education for our customers as well as internal employees.</p>
<p>Risk – CenHub My Account enrollment</p> <p>Projected Completion Date: On-going</p>	<p>Despite expanding our marketing partnerships and featuring CenHub at the Dutchess County Fair we have not made a marked increase in MyAccount enrollments.</p> <p>An internal team has been assigned to investigate the registration and account transfer processes to identify and investigate solutions to remove customer barriers to entry and retention. The team is through the define, measure and analysis phases and is developing their final recommendation for process improvements.</p>
<p>Opportunity – Gamification utilization</p> <p>Projected Completion Date: Q4 2017</p>	<p>We are analyzing the gamification engagement statistics and marketing campaigns to determine the future path for loyalty programs.</p> <p>We have reached out to our partners at Forrester Research for guidance on building out successful and sustainable loyalty programs and will take this information into consideration as we develop a more robust program plan.</p>
<p>Risk – Low PSRs and Slowing Sales</p> <p>Projected Completion Date: Q4 2017</p>	<p>We are in talks with other potential program partners on adding additional products and services to the CenHub Store to increase PSR's and increase sales.</p> <p>In Q1 2018 we will be launching a new partnership with Sealed for their Home Advance product. We will continue to seek out additional partnerships and monitor the success of the new partnership with Sealed.</p>
<p>Risk – Support organization preparedness and employee buy-in</p> <p>Projected Completion Date: On-going</p>	<p>The team has increased the frequency and audience included in status and design session meetings to improve communication, understanding and accountability. The new structured processes around requirements gathering and change order management has vastly improved initial understanding and has resulted in identification of process gaps and data transfer needs much earlier in the design process, avoiding rework time and improving testing results. In Q1 we will continue to evaluate methods to improve requirements gathering. In addition we will be launching employee educational campaigns throughout the year to ensure that our employees are prepared to support customers on questions about CenHub.</p>
<p>Risk – NYS Meter Approval</p>	<p>The Itron Centron OpenWay residential single-phase meter with Verizon 4G cellular card is not yet approved in New York State. Approval is being sponsored by National Grid. We were under the assumption that this meter approval would be completed prior to our Phase 3 start date but this is not the case. Not having the meter approved and available for use is a risk to the project schedule and puts our decision to move forward with Itron as our meter data management system host at risk. To mitigate this risk the team has worked with Itron and they are willing to offer the polyphase OpenWay meter at the residential meter cost for Stage 1. But Central Hudson will still need to have the residential meter approved in 2017 in order to continue to utilize Itron as the meter provider.</p>

Report Attachment 1: Insights+ Incremental O&M

Report Attachment 2: CenHub Incremental O&M

Report Attachment 3: CenHub Insights Statistics

Report Attachment 4: Q4 2017 Traffic and Engagement

Report Attachment 5: Q4 2017 CenHub Ecommerce

Report Attachments 1 - 2

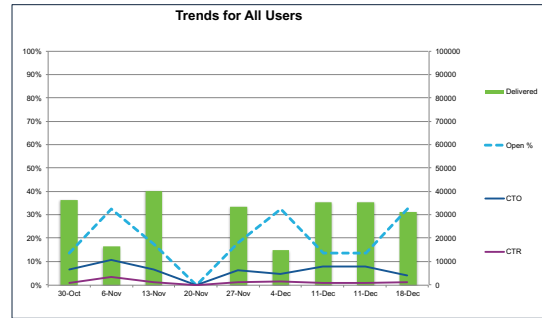
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CenHub Insights Weekly Marketing Report

LAST WEEK		Efficient Entertaining - Gas	Efficient Entertaining - Electric	Save Throughout the Night - Gas	Save Throughout the Night - Electric
Weekly Insights	Emails Delivered	1223	14421	1220	14375
	Opened	427	4505	431	4885
	(open as a % of delivered)	34.9%	31.2%	35.3%	34.0%
	Clicked (unique)	19	192	14	208
	(as a % of delivered)	1.6%	1.3%	1.1%	1.4%
	(as a % of opened)	4.4%	4.3%	3.2%	4.3%
	Unsubscribes	0	18	1	14

Last week - Messages
Efficient Entertaining
Save Throughout the Night

This week - Messages
New Years Resolutions

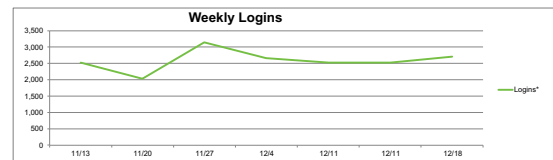


Comments:

Terminology:
CTO: Click-to-open: Unique clicks / Unique opens, shows raw trend
CTR: Click through rate: Unique clicks / Emails delivered, isolates impact of those who actually opened the email

Last Monday: 12/18/17		10/30	11/6	11/13	11/20	11/27	12/4	12/11	12/18	Last Week	
Email 1	Delivered	36305	16623	3742	0	3725	14953	35500	35500	1223	
	Opened	4984	5420	651	0	565	4866	4905	4905	427	
	Clicked	334	586	50	0	32	233	385	385	19	
	Open %	13.7%	32.6%	17.4%	NA	15.2%	32.5%	13.8%	13.8%	34.9%	
	CTO	6.7%	10.8%	7.7%	NA	5.7%	4.8%	7.8%	7.8%	4.4%	
	CTR	0.9%	3.5%	1.3%	NA	0.9%	1.6%	1.1%	1.1%	1.6%	
Email 2	Delivered	0	0	36451	0	29638	0	0	0	14421	
	Opened	0	0	6368	0	5535	0	0	0	4505	
	Clicked	0	0	415	0	353	0	0	0	192	
	Open %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
	CTO	NA	NA	6.5%	NA	6.4%	NA	NA	NA	4.3%	
	CTR	NA	NA	1.1%	NA	1.2%	NA	NA	NA	1.3%	
Email 3	Delivered	0	0	0	0	0	0	0	0	1220	
	Opened	0	0	0	0	0	0	0	0	431	
	Clicked	0	0	0	0	0	0	0	0	14	
	Open %	NA	NA	NA	NA	NA	NA	NA	NA	35.3%	
	CTO	NA	NA	NA	NA	NA	NA	NA	NA	3.2%	
	CTR	NA	NA	NA	NA	NA	NA	NA	NA	1.1%	
Other emails (if necessary)	Delivered	0	0	0	0	0	0	0	0	14375	
	Opened	0	0	0	0	0	0	0	0	4885	
	Clicked	0	0	0	0	0	0	0	0	208	
	Open %	NA	NA	NA	NA	NA	NA	NA	NA	34.0%	
	CTO	NA	NA	NA	NA	NA	NA	NA	NA	4.3%	
	CTR	NA	NA	NA	NA	NA	NA	NA	NA	1.4%	
Total	Delivered	36305	16623	40193	0	33563	14953	35500	35500	31239	
	Opened	4984	5420	7019	0	6100	4866	4905	4905	10248	
	Clicked	334	586	465	0	385	233	385	385	433	
	Open %	13.7%	32.6%	17.5%	#DIV/0!	18.2%	32.5%	13.8%	13.8%	32.8%	
	CTO	6.7%	10.8%	6.6%	N/A	6.3%	4.8%	7.8%	7.8%	4.2%	
	CTR	0.9%	3.5%	1.2%	N/A	1.1%	1.6%	1.1%	1.1%	1.4%	
Logins*	Total	2305	2431	2520	2033	3148	2658	2533	2533	2705	
	New User Logins	311	284	942	257	382	273	250	250	247	

Period: 12/16 - 12/24	PROGRAM TOTAL	COMPLETED THIS WEEK	PROGRAM TOTAL LAST WEEK	2017 YTD	2016 Program Totals
Logins	197437	2705	194732	116223	81214
New User Logins	41596	247	41349	16389	25207
Tips Completed	82653	752	81901	52507	30146
Badges Earned	66422	537	65885	30754	35668
Home Profile Completions	8501	43	8458	3716	4785
Reward Redemptions	2916	6	2910	2812	104
Unsubscribes	3700	33	3667	1177	2523



Traffic and Engagement

Oct 1, 2017 - Dec 31, 2017

All Users
100.00% Sessions

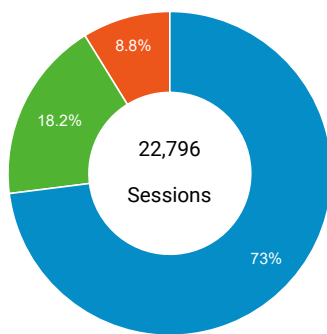
Sessions

22,796

% of Total: 100.00% (22,796)

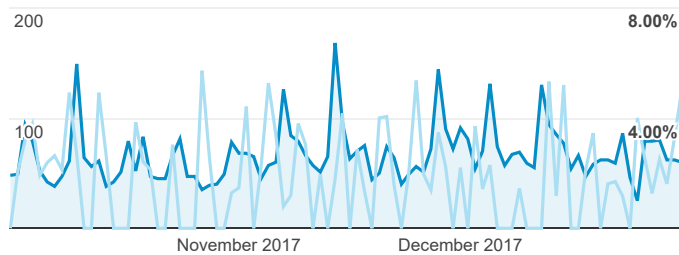
Visits by Device

desktop mobile tablet



Traffic From Mobile Devices

Sessions Bounce Rate



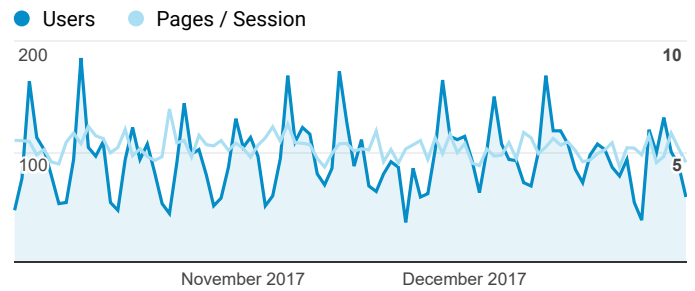
More than once per week visitors

Device Category	Users	Avg. Time on Page
desktop	3,362	00:00:27
mobile	811	00:00:23
tablet	399	00:00:29

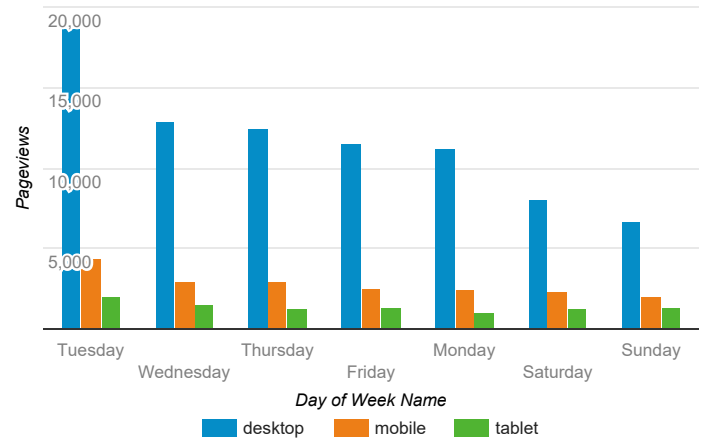
Engagement by Device

Device Category	Pages / Session	Avg. Session Duration
tablet	4.99	00:01:48
desktop	4.91	00:01:43
mobile	4.79	00:01:23

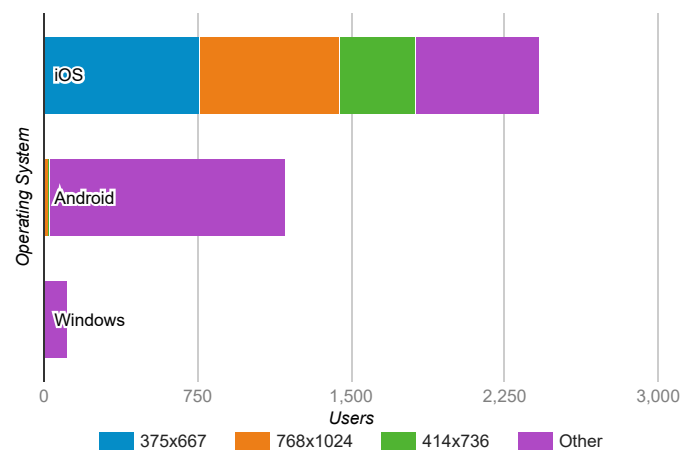
More than once per week visitors



Most Active Day of the Week by Device



Mobile Traffic Breakdown



Landing Page	Entrances	Pages / Session
/	21,854	4.90
/tips	331	5.08
/sso-error/	271	5.87
/#utm_source=MAS-Home-age&utm_medium=site-alert&utm_campaign=Home-Profile	63	6.63
/rewards	56	5.21
/comparisons	28	4.39
/wrap_pipes	20	4.15
/contact_us	17	4.35
/home-insights/home-profile	15	5.40
/insights	6	4.50

Pages People Leave From

Exit Page	Exits	% Exit
/	11,989	31.31%
/tips	5,023	16.36%
/rewards	2,679	15.56%
/insights/usage	645	12.76%
/home-insights/home-profile	512	14.61%
/profile	424	11.74%
/insights	370	12.62%
/challenge/badges	147	10.24%
/challenge	119	8.99%
/settings	111	11.54%

Most Engaging Traffic Sources

Source / Medium	Sessions	Pages / Session
uauth.cenhud.com / referral	12,888	4.98
Simple Energy EP Email / email	3,283	5.56
cenhud.com / referral	3,038	4.50
cenhubstore.com / referral	1,397	5.93
(direct) / (none)	983	2.84
secure8.i-doxs.net / referral	851	3.68
google / organic	109	4.28
EPmarketing / paper_report	90	2.39
MAS-Home-age / site-alert	76	6.13
bing / organic	17	2.47

Mobile Device Info	Users	Bounce Rate
Apple iPhone	1,653	1.13%
Apple iPad	755	0.73%
Microsoft Windows RT Tablet	92	12.96%
Samsung SM-G930V Galaxy S7	62	2.13%
Samsung SM-G955U Galaxy S8+	53	6.33%
(not set)	51	3.80%
Samsung SM-G950F Galaxy S8	45	0.00%

Report Attachment 5

REDACTED