Paul A. Colbert Associate General Counsel Regulatory Affairs



July 31, 2017

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 (Q2 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 abovereferenced 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 through 4, and 7.

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 (ihally@cenhud.com) or Laura Butler, Director-Digital Customer Experience at 845-486-5431 (lbutler@cenhud.com).

Respectfully submitted,

Paul A. Colbert

Associate General Counsel

Regulatory Affairs

cc: Marco Padula (DPS)



Central Hudson Gas & Electric



Residential Energy Exchange



Demonstration Project Implementation Plan 2017 Q2 Status Update

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

July 31, 2017

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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 second quarter ("Q2") 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

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

- A) Awareness
- B) Availability of information
- C) Customer effort or lack of convenience
- D) Understanding the value of products and services
- E) Trust in available solutions

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.

Retail

Telecom

Airline

Banking

Health & Fitness

Fitn

Figure 1: Customer Experience Industry Trends

The experiences that have been incorporated within CenHub to date include:

- A) Self Service
 - a. Access to an interactive customer engagement platform with personalized electric and gas energy usage dashboards

- i. Insights+ enables drill down into time based electric usage dashboards
- b. The ability to purchase products and services through the CenHub Store and automatically apply rebates at checkout
- c. Green Button Download ability to download usage information in an xml format per the Green Button standard
- B) Customizable experience
 - a. Personalized messaging, energy saving tips and recommended actions
 - b. Tailored messaging based on customer's program eligibility and past actions.
- C) Pattern based promotions
 - a. Cross-promotion of programs relevant to the attributes of the individual customers
- D) Personalized loyalty programs
 - a. Customers are rewarded for interacting with CenHub through points, badges, leaderboards, gift cards, promotional discounts and rebates
- E) Multi-channel experience
 - a. The website and mobile website have both been updated to include the CenHub Insights and Store experience for customers.
 - b. Call Center and other employees have been trained on the functions and benefits of CenHub to enhance the interaction between our first responders and customers
 - c. CenHub brand extends to Central Hudson's non-wires alternative, Peak Perks
 - d. The CenHub brand has been expanded into local retail stores offering instant rebates at checkout for select LED brands
- F) Enhanced offers through 3rd Party partnerships
 - a. Phase 3 launched in Q2 2017 to all residential customers leveraging the extended partnership between Central Hudson, Itron, Comverge and Simple Energy.
 - i. Insights+ functionality is embedded into the Peak Perks customer offering for measurement and verification of load curtailment for a statistical sample of customers that did not choose the thermostat option. Comverge will cover the Insights+ subscription fee on their behalf.
 - ii. Insights+ is available as a subscription service for all other residential customers through the CenHub Store.
 - iii. Insights+ is part of the service offering that will be included in the Smart Home Rate project and Central Hudson and Itron (formerly Comverge) are exploring more partnership opportunities within the Peak Perks program.
- G) Choice of Rates
 - a. Central Hudson is working with Simple Energy on creating new customer experiences for Time of Use and Smart Home Rate.

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. TOU and Billed Amount Overlay User Interface (In Progress)
- E. Optimization and Enhancement of Offerings (Ongoing)

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.

Insights+

In order to enhance the Insights experience and test whether or not customers are engaged in more granular usage data we have introduced Insights+. Insights+ builds on the user interface provided as part of CenHub Insights to allow the customer to dive deeper into the data. This service is being offered as a subscription fee and launched for residential mass market enrollment on June 6, 2017.

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. We plan to create an implementation plan in Q3 2017
- Functionality Enhancements We are in the planning and design phase for rolling out increased user interface functionality related to the newly proposed Time of Use rate and Smart Home rate. This will be launched in Q4 2017. We also have been in talks with various potential partners and existing partners on ways to provide more value to the customer experience and hope to have a confirmed plan for upgrades and design discussions in Q4 2017.
- Web Experience Consistency We upgraded the bill pay experience for customers
 with our vendor Kubra on May 15, 2017. The header navigation is now consistent with
 the rest of the CenHub headers and the user interface for managing online ebill
 payments has been modernized.

Planned Tasks for Q3

- 1. Mass Marketing of Insights+
- 2. Billed Usage Overlay for Insights and Insights+
- 3. Load Disaggregation Proof of Concept design
- 4. Launch Sealed partnership for Home Energy Audits available through CenHub Store
- 5. Launch web feedback and monitoring tools

Planned Tasks for Q4

- 1. Launch TOU user interface enhancements
- 2. Launch Smart Home Rate

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

Milestone (Criteria Met to Move to Next Phase)	1. Portal & Marketplace Launch Successful Integration and Delivery of Portal & Marketplace: • Successful data transfer • Successful rebate application	2. Web/Mobile/Social Strategy Enhancements Successful Migration to Web Experience Management: • Successful content and data transfer	3. Insights+ Launch Successful Integration and Enrollment: • Successful enrollment process • Successful data transfer	4.Ongoing Optimization and Enhancement of Offerings Revenue Realization & Increased Engagement. • Acquisition of new products and services • Enrollments in TOU rate
Key Elements	Integration into existing 'My Account' portal End-to-end testing Admin and Support staff training Program marketing campaign Go-Live	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	Integrate enrollment into Peak Perks program Integrate enrollment process into Marketplace Program marketing campaign Procure meter inventory Establish meter change process	Integrate Peak Perks portal and enrollment process Evaluate 3rd party and ESCO relationship leads for new offerings Investigate C&I offerings """ """ """ """ """ """ """
Product & Service Categories	ThermostatsSmart plugsLED lightbulbsGreen Button Download	Improvements to account security through modernized password and username practices Establish a framework that will allow for a more consistent and standardized	Interval data and drill down capability	 Commercial Programs TDR products including installation and registration services Program cross promotion Bundle TOU rate

website experience	Bundle load
in the future	disaggregation
	methods

B) Hypotheses

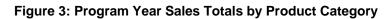
In order to measure the success of CenHub, Central Hudson has defined five (5) hypotheses to test throughout the life of the project. These hypotheses are targeted at understanding Central Hudson's residential customers. They span the elements of customer engagement, customer behavior, and customer preference.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

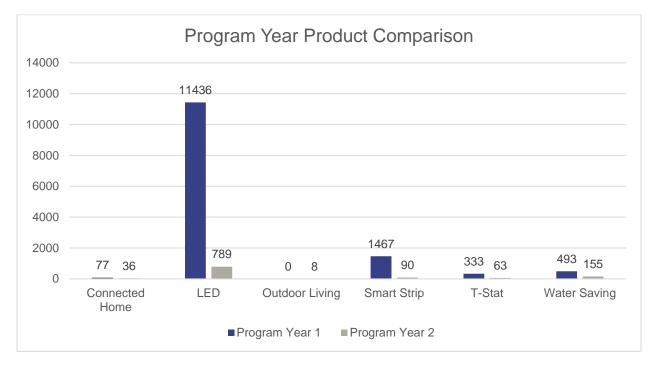
Table 2: Test Statements

Test Statement	Hypothesis	Q1 2017 Results
Customers may be more engaged in their energy	If Central Hudson utilizes a Multi -Channel	Current enrollment rate in
usage and energy	marketing campaign, specifically inclusive of	CenHub My Account – 43%
management if they have: 1. Greater awareness of available products and services that are	email and social media to market CenHub to residential customers o then Central Hudson will increase the number of Digitally Engaged Residential	The Action Items within Table 8 detail the steps we are taking to try to improve upon this metric and drive more enrollment activity.
relevant to them	Customers ¹ to 60% of the residential	Current Home profile
2. The opportunity to	customer base within 12 months of the	completion rate – 5.8%
interact with applicable tools through a fun,	April 1, 2016 Phase 1 Go Live Date. If Central Hudson utilizes gamification, reminders and relevant sovings apportunities.	We hit our home profile goal of 5% on March 30 th 2017.
educational and engaging online experience.	reminders and relevant savings opportunities to encourage and prompt customers to complete the digital home energy profile 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 then on average Digitally Engaged Residential Customers will become more energy efficient than their digitally	We will continue to educate customers on the value of completing their home profile and reward customers through the points system but no additional action plan is required for this objective.
Customers may become engaged in the purchase of energy products and services they value through: 1. An information driven, guided e-commerce experience. 2. A social online experience that inspires competition and community action 3. The availability of instant rebates and rewards programs	 unengaged counterparts If Central Hudson provides CenHub users with energy usage information and targeted actionable savings tips linked to products and services available on CenHub 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 	Product sales for Program Year 1 – 14,640 Product sales for Program Year 2 – 1,141 Projected product sales for year 2 – 8,327 The \$6 6-pack lighting options continue to be our best selling items. We plan to continue this promotion through 2017 and include it in more of our marketing campaigns to drive continued sales and reach our 2017 product sales goal.

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

		We have added more connected items to the Store but have modest conversion rates on the higher priced items despite special promotions during Earth Day and Father's Day.
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. Customers may be willing to pay for Advanced Data Services.	 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. 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. 	Post-tax PSR's for Program Year 1 - \$30,273 Post-tax PSR's for Program Year 2 - \$2,209 The Action Items within Table 8 detail the steps we are taking to try to improve upon this metric and drive more product sales. Total Insights+ Enrollments - 68 Peak Perks M&V enrolled population - 65 Insights+ enrolled residential population - 3
Advanced Data Services may influence customers' behavior.	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 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.	Not yet measured





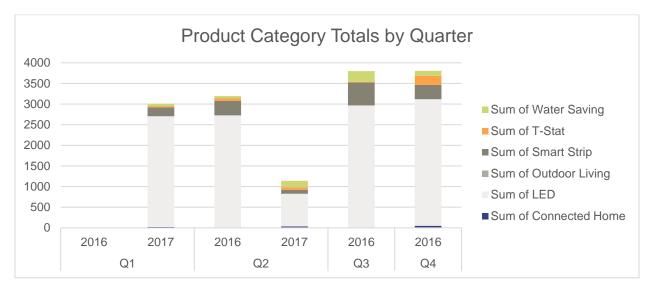


Figure 4: Quarterly Sales Results Comparison

Program Year 2 sales continue to mimic the shape of 2016 sales, however the quantities are lower in Program Year 2 despite our marketing 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. 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. Through Q1 2017 the team will be diving 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)	Q2 2017 Population Size
Residential PV Customers to be analyzed within Channel and Segment Tests	Identification / Selection Method: • Net Meter installation record	3,741	6,820
Digitally Engaged Residential Customers • 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:	136,000 ² , all existing My Account users will be automatically enrolled in CenHub	112,359
Digitally Unengaged Residential Customer • to be analyzed within Test Statement #1 • to be analyzed within Channel and Segment Tests	Identification / Selection Method: 1. Paper bill recipient 2. non-My Account user	107,0004	150,523
Existing customer transferring service(s) / 'Moves' to be analyzed within Channel and Segment Tests	Identification / Selection Method: Existing customer – transferring service	65,400	56,517
New Residential Customer requesting service to be analyzed within Channel and Segment Tests	Identification / Selection Method: Non-My Account / CenHub user New Service request online or via call	As Required	7,752
Home Energy Report Recipient to be analyzed within Channel and Segment Tests	Treatment Group listing	103,000	103,000
Insights+ Subscriber • to be analyzed within Test Statement #5 • to be analyzed within Channel and Segment Tests	Identification / Selection Method: Voluntarily Subscribes Pays the Associate Subscription fee	N/A	3
Comverge Target • Peak Perks M&V	Identification / Selection Method: Peak Perks customer	62	65

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

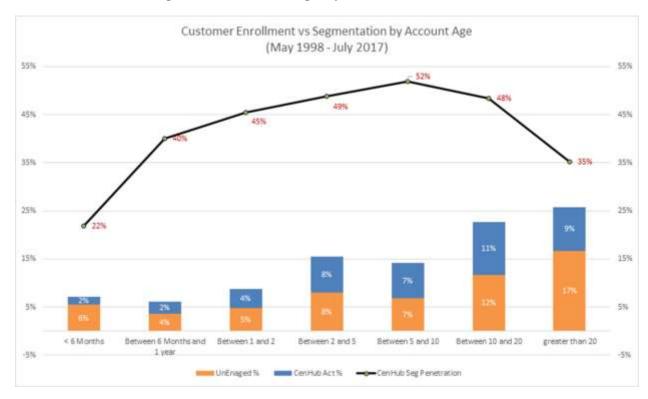


Figure 4: Customer Longevity and CenHub Penetration

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
If Central Hudson utilizes a Multi - Channel marketing campaign, specifically inclusive of email and social media, to market CenHub to residential customers	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.	Residential Customer My Account Enrollment Rate: 43% In Q2 we acted on the following marketing campaign topics: • Father's Day Sale
a. then Central Hudson will increase the number of Digitally Engaged Residential	All customer communications are reviewed by the internal Central Hudson team composed of representatives from Corporate Communications, Marketing, Energy Efficiency and the demo project team.	Water Conservation We expect customer enrollment will continue to increase as the CenHub features evolve and

new marketing strategies are Customers³ to 60% of Central implemented. In coordination with the Simple Energy Hudson's residential customer marketing channels Central Hudson has utilized its social media and web base within 12 months of the platforms to advertise all of the features April 1, 2016 Go Live Date. and benefits of CenHub. 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. New tips are developed weekly on Gamified Experience CenHub Insights to keep the content Engagement Levels: fresh and drive continuous customer Program Year 2 Statistics: engagement. We are currently in the testing phase of adding points programs a. Tip Completions: 13,662 for registering for My Account and a. Badges Earned: 6,559 enrolling in eBills and automatic If Central Hudson utilizes b. Home Profile Completions: payments. These programs will offer gamification, reminders and higher points values and determine how 698 effective the gamification component is relevant savings opportunities to d. Logins: 24,377 at incenting customers to act. encourage and prompt customers Central Hudson and Simple Energy are Program Year 1 Statistics: to complete the digital home revisiting the points system to identify a. Tip Completions: 41,331 ways to increase engagement in the energy profile... rewards program while not exceeding the c. Badges Earned: 42,278 rewards budget. d. Home Profile Completions: a. then 5% of the Digitally 5.791 In coordination with Simple Energy **Engaged Residential** Marketing channels, Central Hudson d. Logins: 106,281 Customers will complete the launched a test case for points redemption. To better understand if home energy profile within 12 Central Hudson will continue to customers are susceptible to loss months of operations (4/1/16 work with Simple Energy to aversion, a series of emails were sent redefine how customers can 4/1/17). out to customers prompting them to earn points in order to allocate redeem their points by March 31st or else points towards engagement and they would expire. This campaign action. resulted in an over 30% conversion rate which is far above the cross industry benchmark of 20% for loyalty program expiration campaigns. The ET&S team has worked with The Energy Insights pages offer multiple If Central Hudson develops an avenues to receive energy saving tips IT in Q1 to build cross-linkage engaging platform that informs on high traffic pages by creating such as the "Virtual Home" on the tips action buttons to related content. tab and on the "Overview" screen. customers about their energy use, The ET&S team will continue to provides actionable energy savings The "Overview" screen also provides a analyze all of the web pages tips linked to available products usage graph for the most recent usage under the CenHub umbrella to period compared to similar households identify opportunities to create and services, and reinforces and efficient households. The "My lead in links to the Insights behaviors through gamification and pages and calls to action to Usage" screen allows overlay of the social interaction... current usage trend with the previous increase awareness and visibility year's history, the usage pattern of like or of the Insights features.

efficient households and the weather.

a. then on average Digitally

Engaged Residential Customers

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

will become more energy efficient than their digitally unengaged counterparts		
If Central Hudson provides CenHub users with energy usage information and targeted actionable savings tips linked to products and services available on CenHub 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)	The CenHub Store is available for anyone interested in purchasing energy efficient products. Only Central Hudson CenHub My Account holders will be able to access the instant rebates at checkout.	In comparison to Q2 2016 when we launched the CenHub Store, Q2 2017 sales totals, number of transactions, revenues, and average quantity per transaction are lower. We have added a new product category called "Outdoor Living" to the store and more connected home products in an attempt to drive more sales in Q2 and Q3 2017.
If Central Hudson provides CenHub users with energy usage information and actionable savings tips linked to products and services available on CenHub 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)	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. Fully embedding the Simple Energy sites into the CenHub My Account experience also makes shopping simple and seamless for the customer.	For Program Year 2 Q2 we have generated \$2,209 as compared to \$7,842 in Program Year 1 Q2. Customers continue to be most engaged with the lowest cost products that have minimal profit margins.
If we offer an Insights+ package featuring an intuitive and engaging user experience and utilize multichannel and targeted marketing a. then 1,000 customers will subscribe to the Insights+ package in the first year (2/28/17 – 2/28/18)	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. 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.	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. All meters have been installed to satisfy the M&V population requirement for Comverge.

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...

 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 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.

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.

Not yet implemented.

Insights+ tutorials will highlight the new functionality available to subscribing customers.

Central Hudson is in talks with existing program partners and alternative providers on an effective way to merge the Insights+ package with other offerings as an additional enrollment option for customers or new product offer on the Store.

Central Hudson invited the Comverge Target population to an in person focus group event in June to talk about their experience with Insights+ and Peak Perks. Despite the offer for free dinner the offer did not drive enough interest to hold the event. Instead we performed phone surveys for the customers that had expressed an interest in attending and rewarded them with gift cards. From the response rate to the event and the conversations during the phone survey we learned that customer engagement in energy management is still a hurdle we have to continue to work to overcome.

E) Checkpoints

Table 5: Targets and Results

Target Date	Milestone	Target	Project Life Cumulative Actuals	Program Year 1	Program Year 2
4/1/2016	CenHub Phase 1 - Go Live	4/1/2016	4/3/2016	4/3/2016	Complete
7/31/2016	CenHub Phase 2 – Go Live	7/31/16	9/7/16	9/7/2016	Complete
12/31/2016	Capital Expenditures ⁴	\$1,200,000	\$1.8M	\$1.8M	Complete
7/1/2018	Annual Maintenance Expense ⁵	\$1,100,000	\$1.16 ⁸	\$0.98M	\$0.98M
4/1/2017	Enrolled CenHub Customers as % of total Residential Customer Base	60%	N/A	42.3%	43%
4/1/2017	Product Purchases	8,327	N/A	14,640	1,141
9/15/2016	CenHub Phase 3 Insights+ Enrollment - Go Live	9/15/2016	N/A	Release 1 (Comverge M&V) - 3/31/2017 Release 2 (Residential Enrollment) - 6/6/2017	68
4/1/2017	% of Enrolled CenHub Customers Completed Home Profile	5%	N/A	5%	5.8%
4/1/2017	CenHub Platform Service Revenues (pre-tax)	\$97,732	N/A	\$40,263	\$3,346
9/15/2017	Insights+ ⁶ Cumulative Deferral	\$125,000	\$92,521	\$125,886	\$6,778
9/15/2017	Insights+ Capital Expenditures	\$70,000	\$117,302	\$328,357	Complete
9/15/2017	Insights+ Subscriptions	1,000	N/A	68	N/A
9/15/2017	Insights+ PSR	\$24,000	N/A	\$1,032	N/A
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 Phase 1 of CenHub Central Hudson created a matrixed internal team composed of internal members from ET&S, Corporate Communications and Marketing, IT and the Call Center. In addition, Central Hudson has created partnerships with the following vendors:

- Simple Energy to create the CenHub Insights and CenHub Store functionality
- Wipro to provide IT support for system testing and requirements definition
- Cognizant Technology Solutions to provide project management support and expertise in single sign on architecture
- Lighthouse and Good Dog Labs to provide identity and access management and single sign on architecture expertise
- Comverge to leverage opportunities to cross promote the Targeted Demand Response (TDR) and Dynamic Load Management (DLM) programs
- OpenText to provide project management, system architecture, design and build expertise for the OpenText Web Experience Management (WEM) software.
- Atlantic Partners to provide IT support for system testing and requirements definition
- Itron to provide hosted meter data management services

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

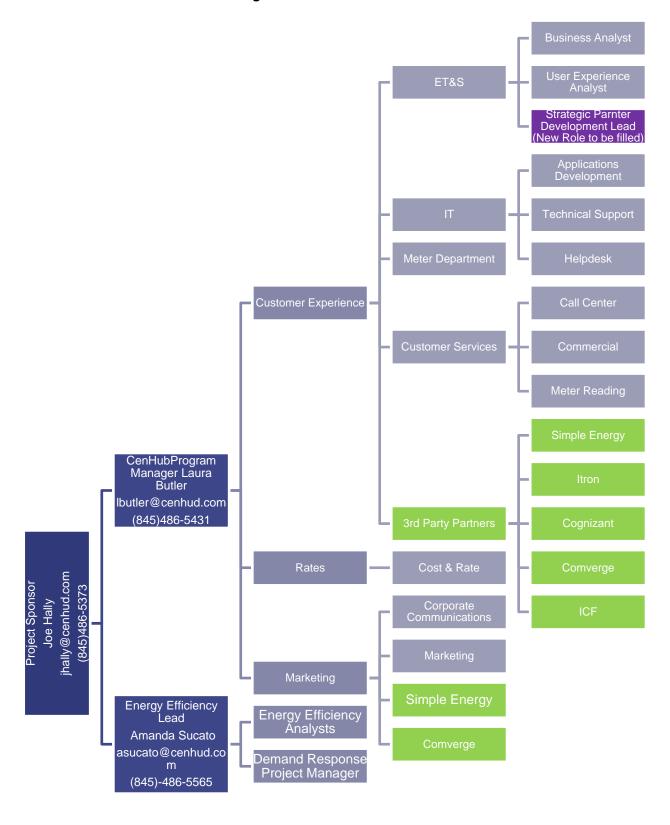
In order to ensure ongoing customer satisfaction, operation of the CenHub functionality and success of the new business processes being created by the evolution of CenHub Central Hudson has taken the following actions in Q2 2017:

- In June we launched Insights+ as a new product offering on CenHub Store.
- In Q3 of 2016, the ET&S team identified a skills gap in the sales and partnership building arena. In 2017 and the years following the PSR goals increase substantially. These goals cannot all be met by sales of the products currently on the store. We need a team member that understands the customer market, their needs and wants and has the skill set to approach other 3rd parties to prospect and create value proposition related to partnering through the platform we have built in CenHub. The existing team does not possess this skill set so Central Hudson defined a new position and posted the position but we have yet to be able to fill the role. This is an untraditional role for a utility and as such the utility pay scale is difficult to align with the market pay that individuals of this background expect. Central Hudson is continuing its search and hopes to fill the role in Q3 2017.
- Members of the ET&S team participated in Central Hudson's eBills platform project which was launched in Q2 2017. This cross project collaboration created an opportunity

- to increase focus on the customer's experience and ensure consistency across CenHub and self-service transactional channels.
- In Q1 2017 Central Hudson and Simple Energy began efforts to work together to audit data exchanges to improve quality assurance and identify efficiency improvements. This is an ongoing effort and the team is making progress.

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. Central Hudson has developed and repurposed interfaces to the Central Hudson websites and other internal systems as required and agreed upon in coordination with Simple Energy.
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 Comverge 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, Comverge 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. The CenHub brand has been expanded by the Energy Efficiency team into the Point of Sale program at local large retailers offering customers more ways to

Metering Solutions Data QA/QC	shop, receive instant rebates and educate themselves on efficiency measures. Central Hudson will schedule and perform meter changes for subscribing customers Central Hudson will schedule and perform routing checks across platforms to ensure data continues to populate
Sales & Partnership Development	accurately and in accordance with service level expectations This is an existing gap – Prospecting partnerships to develop additional customer offers
Partner	Description
Integration with Internal Systems	Simple Energy has continued to provide requirements, information delivery standards, and assistance to support Central Hudson's development of interfaces as we have looked to expand upon the tips and rewards programs and introduce new items to the CenHub store. Simple Energy, Cognizant, OpenText and Lighthouse/Good Dog Labs have contributed to the overall single sign on architecture design and data flow processes, enabling this functionality to work successfully. All partners will continue to work together with the Central Hudson team for future releases and ongoing enhancements.
Marketing Strategy (Simple Energy)	Simple Energy will provide expertise, experience, and guidance in order to assist Central Hudson with the development of a Multi-channel marketing strategy. Simple Energy will deliver email marketing messages throughout the life of the project.
Advanced Data Services – Data Repository and Management (ITRON)	Itron will host 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 Simple Energy and Comverge.
Project Management	Cognizant is continuing to provide overall Project Management for the technical releases of CenHub. 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.

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

Standups – short in person discussion to identify any blockers or clarify tasks items Program short term planning – in person review of all requirements and assignment of tasks to team members Status report – combination of written documentation and in-person/conference call discussion Product and sales reviews – combination of written documentation and in-person/conference call discussion Marketing plan reviews – combination of written documentation and in-person/conference call discussion Marketing plan reviews – combination of written documentation and in-person/conference call discussion Marketing plan reviews – combination of written documentation and in-person/conference call discussion Marketing plan reviews – combination of written documentation and in-person/conference call discussion Project Update – documented newsletter of the latest progress for high level awareness Sponsor Meeting – review scope and schedule, risks, impacts and next steps 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	Format	Frequency	Participants
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Section 3: Work Plan & Budget

A) Project Plan

In Q2 the team launched the Insights+ enrollment experience on CenHub Store and the associated user interface graphical displays of the meter data as a deeper dive into CenHub Insights. In addition, the teams have been working on requirements definition and design concepts to enable functionality and unique customer experiences for the Smart Home Rate, Time of Use Rate and 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 Q1-Q2 2018 Q1 2017 Q3-Q4 2017 Q2 2017 **TOU Tariff Filing Energy Efficiency Smart Home Rate Smart Home Rate** Pilot Filing Launch Savings Calculator Marketing Content Personalization REV Demo Project -**Payment Option** CenHub Phase 3 & **TOU Rate Launch Hypothesis Statment** Calculator Insights+ Expansion Results

b. Actions in Progress

- I. Project Planning and Execution
 - One of the most crucial execution lessons learned from the previous releases has been to have more clearly defined and documented requirements specifications. The teams have embraced this concept and have made concerted efforts to document requirements in extreme detail and have implemented a more formal change order request procedure. This has assisted in clarifying deliverables for all team members and has improved cross team communication.

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

 From monitoring the site analytics and store sales performance the team has identified the need for a more robust marketing plan to increase sales, CenHub enrollments and overall engagement in CenHub.

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	Action Plan
Category	
Opportunity – Brand Recognition Completion Date:	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.
On-going	We will be promoting the value of having a CenHub account and the \$1 bulb offer on the CenHub Store in our materials available at the Central Hudson booth of the Dutchess County Fair. In addition we are sponsoring the 4H milkshake cups at the Ulster and Dutchess County Fairs in August for further brand awareness.
Risk – CenHub My Account enrollment Projected	Central Hudson launched new email marketing initiatives in Q2 through a partnership with the Poughkeepsie Journal focused on increasing My Account enrollment rates. In Q3 we will be expanding on this effort by partnering with Hudson Valley Magazine. The team will also be investigating process related
Completion Date: On-going	barriers to customer enrollment to identify opportunities for improvement.
Opportunity – Gamification utilization	We are analyzing the gamification engagement statistics and marketing campaigns to determine the future path for loyalty programs.
Projected Completion Date: Q4 2017	
Risk – Low PSRs and Slowing Sales	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.
Projected Completion Date: Q4 2017	We will be promoting the value of having a CenHub account and the \$1 bulb offer on the CenHub Store in our materials available at the Central Hudson booth of the Dutchess County Fair. In addition we are sponsoring the 4H milkshake cups at the Ulster and Dutchess County Fairs in August for further brand awareness. In Q2 we revisited our marketing plan and continue to investigate opportunities to reach broader audiences with our marketing messages.
Risk – Support organization preparedness and employee buy-in	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
Projected Completion Date: On-going	process, avoiding rework time and improving testing results.
Risk – NYS Meter Approval	The Itron Centron OpenWay residential single-phase meter with Verizon 4G cellular card in 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.

Report Attachment 1: CenHub Incremental O&M Work Order Transaction Details

Report Attachment 2: Insights+ Incremental O&M Work Order Transaction Details

Report Attachment 3: CenHub Phase 3 (Insights+) Capital Work Order Transaction Details

Report Attachment 4: Insights+ Carrying Charge Work Order Transaction Details

Report Attachment 5: CenHub Insights Statistics

Report Attachment 6: Q2 2017 Traffic and Engagement

Report Attachment 7: Q2 2017 CenHub Ecommerce

Report Attachments 1 - 4

REDACTED

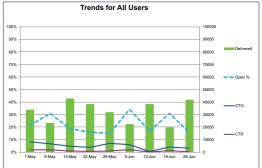


Report Attachment 5 CenHub Insights Weekly Marketing Report

LAST WEEK		Summer Vacation Checklist			
LAST WEEK	Emails Delivered	41696			
	Opened	6532			
	(open as a % of delivered)	15.7%	NA	NA	NA
<u>=</u> ≥	Clicked (unique)	200			
98 X	(as a % of delivered)	0.5%	NA	NA	NA
≥	(as a % of opened)	3.1%	NA	NA	NA
	Unsubscribes	26	0	0	0

Last week - Messages Vacation Checklist

This week - Messages No Emails Scheduled This Week



Comments:

Terminology: CTO: Click-to-open: Unique clicks / Unique opens, shows raw trend

CTR: Click through rate: Unique clicks / Emails delivered, isolates impact of a those who actually opened the email

100%	100000
90%	90000
80%	80000 Delivere
70%	70000
60%	60000 - Open %
50%	50000
40%	40000 —сто
30%	30000
20%	20000 —CTR
10%	10000
0% 1-May 8-May 15-May 22-May 29-May 5-Jun 12-Jun	n 19-Jun 26-Jun

Last Monday:	6/26/17								ı	ast Week
		5/1	5/8	5/15	5/22	5/29	6/5	6/12	6/19	6/26
Email 1	Delivered	964	2105	38559	38442	31777	1952	38276	19752	41696
	Opened	379	671	7318	6197	4780	654	6463	6142	6532
	Clicked	104	55	376	245	330	34	233	250	200
	Open %	39.3%	31.9%	19.0%	16.1%	15.0%	33.5%	16.9%	31.1%	15.7%
	CTO	27.4%	8.2%	5.1%	4.0%	6.9%	5.2%	0.5%	4.1%	3.1%
	CTR	10.8%	2.6%	1.0%	0.6%	1.0%	1.7%	0.1%	1.3%	0.5%
Email 2	Delivered	3154	21226	4126	0	0	20401	0	0	0
	Opened	572	6557	694	0	0	6997	0	0	0
	Clicked	36	425	20	0	0	437	0	0	0
	Open %	18.1%	30.9%	16.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	СТО	6.3%	6.5%	2.9%	NA	NA	6.2%	NA	NA	NA
	CTR	1.1%	2.0%	0.5%	NA	NA	2.1%	NA	NA	NA
Email 3	Delivered	29676	0	0	0	0	0	0	0	0
	Opened	6325	0	0	0	0	0	0	0	0
	Clicked	464	0	0	0	0	0	0	0	0
	Open %	21.3%	NA							
	СТО	7.3%	NA							
	CTR	1.6%	NA							
Other emails	Delivered	0	0	0	0	0	0	0	0	0
(if necessary)	Opened	0	0	0	0	0	0	0	0	0
	Clicked	0	0	0	0	0	0	0	0	0
	Open %	NA								
	СТО	NA								
	CTR	NA								
Total	Delivered	33794	23331	42685	38442	31777	22353	38276	19752	41696
	Opened	7276	7228	8012	6197	4780	7651	6463	6142	6532
	Clicked	604	480	396	245	330	471	34	250	200
	Open %	21.5%	31.0%	18.8%	16.1%	15.0%	34.2%	16.9%	31.1%	15.7%
	CTO	8.3%	6.6%	4.9%	4.0%	6.9%	6.2%	0.5%	4.1%	3.1%
	CTR	1.8%	2.1%	0.9%	0.6%	1.0%	2.1%	0.1%	1.3%	0.5%
Logins*	Total	1841	1473	2087	1993	2417	2651	2224	2180	2275
	New User Logins	215	178	339	323	400	406	344	357	312

Period: 6/26 - 7/02	PROGRAM TOTAL	COMPLETED THIS WEEK	PROGRAM TOTAL LAST WEEK	2017 YTD	2016 Program Totals
Logins	136980	2275	134705	55766	81214
New User Logins	34317	312	34005	9110	25207
Tips Completed	56236	881	55355	26090	30146
Badges Earned	50640	582	50058	14972	35668
Home Profile Completions	6656	73	6583	1871	4785
Reward Redemptions	2762	3	2759	2658	104
Unsubscribes	3241	26	3215	718	2523

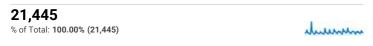


Traffic and Engagement

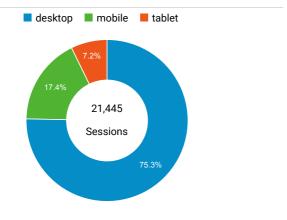
Apr 1, 2017 - Jun 30, 2017



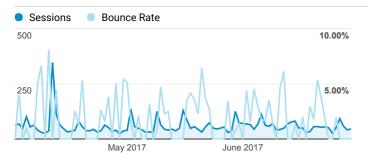
Sessions



Visits by Device



Traffic From Mobile Devices



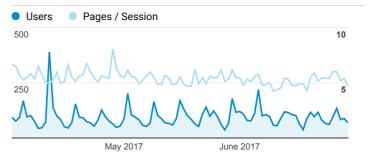
More than once per week visitors

Device Category	Users	Avg. Time on Page
desktop	3,160	00:00:25
mobile	769	00:00:22
tablet	321	00:00:27

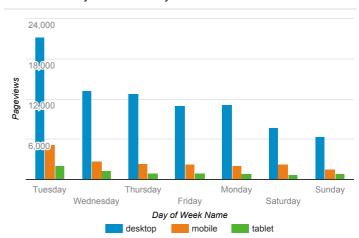
Engagement by Device

Device Category	Pages / Session	Avg. Session Duration
desktop	5.16	00:01:41
mobile	4.91	00:01:27
tablet	4.89	00:01:44

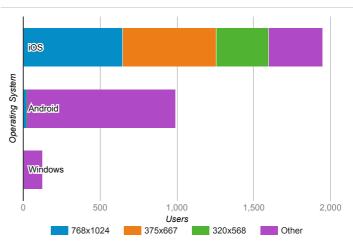
More than once per week visitors



Most Active Day of the Week by Device



Mobile Traffic Breakdown



Landing Page	Entrances	Pages / Session
/	20,205	5.09
/engager-feedback	334	4.28
/tips	316	5.19
/sso-error/	298	6.35
/#utm_source=MAS-Home-age&utm_medium=site- alert&utm_campaign=Home-Profile	65	6.85
/rewards	31	6.10
/comparisons	26	4.42
/home-insights/home-profile	23	4.78
/caulking_how-to	20	4.50
/contact_us	16	5.31

Pages People Leave From

Exit Page	Exits	% Exit
/	11,148	29.16%
/tips	5,181	16.86%
/rewards	2,277	14.97%
/home-insights/home-profile	443	13.40%
/insights/usage	434	11.63%
/profile	393	11.48%
/insights	355	11.58%
/challenge/leaderboards	155	10.91%
/challenge	148	9.00%
/challenge/badges	146	9.60%

Most Engaging Traffic Sources

Source / Medium	Sessions	Pages / Session
uauth.cenhud.com / referral	11,467	5.20
Simple Energy EP Email / email	4,451	5.49
cenhud.com / referral	2,958	4.38
cenhubstore.com / referral	1,128	6.14
(direct) / (none)	679	3.53
secure8.i-doxs.net / referral	490	3.95
google / organic	88	2.64
MAS-Home-age / site-alert	75	6.77
msn.com / referral	36	3.08
EPmarketing / paper_report	28	3.14

Report Attachment 6

Mobile Device Info	Users	Bounce Rate
Apple iPhone	1,262	1.16%
Apple iPad	679	0.93%
(not set)	84	6.73%
Samsung SM-G930V Galaxy S7	63	0.92%
Microsoft Xbox One	62	0.85%
Samsung SM-G900V Galaxy S5	41	6.74%
Samsung SM-G920V Galaxy S6	38	1.25%

Report Attachment 7

REDACTED