

January 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 (Q4 2016) 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, along with a copy of its request for confidential treatment of Report Attachments 2 through 7, 10 and 11 which were submitted to the Records Access Officer.

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

Respectfully submitted,

Paul A. Colbert Associate General Counsel Regulatory Affairs

cc: Marco Padula (DPS)

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Central Hudson Gas & Electric



Residential Energy Exchange



Reforming the Energy Vision

Demonstration Project Implementation Plan Q4 Status Update

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

January 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 fourth quarter ("Q4") of 2016 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's 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.

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
 - b. The ability to purchase products and services through an online marketplace 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 regarding programs the individual customer is eligible to participate in based on the customer's demographics and past actions.
- C) Pattern based promotions
 - a. Cross-promotion of programs relevant to the specific needs or 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. The CenHub brand has been extended to Central Hudson's non-wires alternative program, 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 includes an extended partnership between Central Hudson, Itron and Comverge, embedding the Insights+ functionality into the Peak Perks customer offering for measurement and verification of load curtailment for customers that did not choose the thermostat option. A statistical sample of these customers will receive the Insights+ service at no additional cost.

For customers that want to increase management of their energy portfolio, the Company is offering a value added monthly subscription to Insights+. Insights+ will provide customers with more granular data and analytics through enhancement of the current Insights pages. Central Hudson will also continue to investigate opportunities to bundle alternative Time of Use (TOU) pricing or third-party offerings to incent additional customer savings and engagement.

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

- (1) CenHub My Account, CenHub Insights and CenHub Store Launch (Complete)
- (2) Migration to Web Experience Management and Identity Management (Complete)
- (3) Insights+ Service Offering (Ongoing)
- (4) Optimization and Enhancement of Offerings (Ongoing)

Section 1: Demonstration Design Progress

A) Phases

In Q1 2016, Central Hudson launched CenHub to its residential and commercial online communities. The CenHub Demonstration Project execution is broken down into distinct implementation phases and ongoing optimization and enhancement.

Phase 1 – CenHub Design and Launch

Phase 1 went live on April 3, 2016. In 2016 we sent over 3.6M Insights and Store emails, encompassing over 130 separate campaigns. Throughout the year we adjusted our campaign targeting strategies to maintained open rates above 20%. This open rate level keeps us aligned with the specialty retail industry benchmark established in the Epsilon Q1 2016 email trends and benchmarks report¹ and the Questline 2015 Energy Utility Email Benchmarks Report.² Another important statistic to point out is that we accomplished a 3.47% ecommerce conversion rate. Typical ecommerce conversion rates are between 2% and 3%. This is a very encouraging result that we hope to continue to build upon in 2017.

These results were in part due to our Q4 efforts to adjust the campaign targeting methods and utilize more re-targeting campaigns. Additionally, a comprehensive holiday sales marketing plan was developed collaboratively with Simple Energy. The plan included manufacturer discounted pricing for Black Friday weekend and a new \$1 bulb rebate offer starting on Cyber Monday. Ultimately the marketing strategy resulted in over 12,000 website hits with 48% of the traffic coming from first time visitors to the Store and over 3,800 items sold.

Phase 2 - Migration to Web Experience Management and Identity Management

Parallel to Phase 1 and in preparation for the Phase 3 Insights+ functionality, Central Hudson began planning and design activities for migrating the existing website to a web content management system as part of Phase 2. The team completed this transition on September 7, 2016 and launched the enhanced cenhud.com website and mobile website. During the requirements definition, design and the development activities the team has iteratively modified aspects of the site design. Examples of these modifications include modernization of the CenHub MyAccount registration process as well as personalization of the information and options presented to each customer when they log in. All changes were coordinated with Central Hudson's Digital Interactive Working Group to increase alignment with our overall corporate digital strategy. Collaboration with the cyber security team led to enhanced protection of our customer online accounts, specifically the password change management process. Each of these design discussions led to incremental changes to the project scope but overall will deliver a better experience to customers.

¹ From <u>www.epsilon.com</u> - Epsilon is a global leader in creating connections between people and brands. Epsilon is recognized by Ad Age as the #1 World's Largest CRM/Direct Marketing Network, #1 Largest U.S. Agency from All Disciplines and #1 Largest U.S. Mobile Marketing Agency.

² From <u>www.questline.com</u> – Questline is the leading provider of energy communications in the nation, partnering with energy utilities in all 50 states for more than 20 years.

Since launch of Phase 2, the website performance has been stabilized. And improvements have been made to the registration and pass word reset processes based on customer and CSR feedback. New educational pages were built detailing information on our energy efficiency and demand response programs as seen in Figure 3. This series of pages offers a self-service guide which allows customers to evaluate programs based on customer attributes and interests.

Figure 2: Screenshot of new Website Navigation for Energy Efficiency and Demand Response Educational Pages

Energy Efficiency & Conservation • Central Hudson • Energy Efficiency • Energy Efficiency				
What Program is Right for Me? Are you interested in saving money and lowering your energy usage? You or your business may be eligible for one (or n				
many programs offered by Cer	Residential	programs below to find th	a one that's right for you.	
Demand Response Participating customers receive financial incentives and free or reduced-cost equipment to help manage their energy use.	—	-		
Lighting Interested in new LED technology that can save you money day after day? What if Central Hudson will provide incentives towards the purchase of them? Come look at all of the opportunities there are to save money today.	•			
Heating and Cooling (HVAC) Inefficient boilers and furnaces can shrink your bank account! There are many options to upgrade your HVAC system at your home and/or business and save money for many years to come.				
Appliance Recycling Would you like to free up some space in your residence? How about lower your utility bill? And get a \$50 incentive?	—	•	0	



Phase	1. Portal &	2. Web/Mobile/Social	3. Insights+	4.Ongoing
	Marketplace	Strategy	Launch	Optimization and
	Launch	Enhancements		Enhancement of
				Offerings
Milestone (Criteria Met to Move to Next Phase)	Successful Integration and Delivery of Portal & Marketplace: • Successful data transfer • Successful rebate application	Successful Migration to Web Experience Management: • Successful content and data transfer	Successful Integration and Enrollment. • Successful enrollment process • Successful data transfer • Enrollments in TOU rate	 <i>Revenue Realization</i>: Acquisition of new products and services Annual sales Customer Satisfaction
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 Secure meter approval and procure 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 Build new offerings into enhancement release schedule (define requirements, build, test, go-live)
Product & Service Categories	 Thermostats Smart plugs LED lightbulbs Green Button Download 	 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 	 Interval data Bundle TOU rate Bundle load disaggregation methods 	 Commercial Programs TDR products including installation and registration services Program cross promotion

Phase 2 Enhancements

As of Q4 all Phase 2 elements are complete. Processes for bug fixes, and enhancement request management have been put into place to streamline the improvement request process and improve response time. These processes include notifications, escalation procedures and reporting requirements.

Phase 3 Progress

As of Q4 we have met the following project milestones:

- standing up of the hosted meter data management system with Itron
- tested and approved the first round of first article meters with Itron
- tested data transfer with Comverge for M&V
- successfully installed one Peak Perks participant production meter and confirmed data communications received by the meter data management system
- shared prototype designs for the Insights+ user interface with Simple Energy
- trained meter shop administrative staff and core team on the new meter types and meter data management system

In Q1 of 2017 we will begin to replace meters for a sample set of Peak Perks customers, create the Insights+ marketing plan, launch the Insights+ user interface for the Peak Perks sample set and finalize design requirements for additional Insights+ enhancements such as load disaggregation.

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 Results
Customers may be more engaged in their energy usage and energy management if they have: 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.	 If Central Hudson utilizes a Multi -Channel marketing campaign, specifically inclusive of email and social media to market CenHub to residential customers then Central Hudson will increase the number of Digitally Engaged Residential Customers³ to 60% of Central Hudson's 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 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 unengaged counterparts 	 Current enrollment rate in CenHub My Account – 41.4% Projected enrollment rate by end of year 1 – 43% The Action Items within Table 8 detail the steps we are taking to try to improve upon this metric and drive more enrollment activity. Current Home profile completion rate – 4.3% Projected completion rate by end of year 1 – 5.6% 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	 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. 	 Current product sales – 10,798 items Projected product sales for year 1 – 14,000 In Q4 we devised a very successful marketing plan that combined manufacturer discounts, increased lighting rebates, shipping discounts, one time coupon promotions, retargeting emails and website and social media advertising.

Table 2: Test Statements

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

2. The evolution of		
 The availability of instant rebates and 		
rewards programs 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.	 If Central Hudson provides CenHub users 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. 	 Current amount of PSR's – \$36,800. PSR's are calculated quarterly. Projected PSR's for year 1 – \$40,000 With the uptick in sales in Q4 we are back on track to meeting our year 1 PSR target as long as we can maintain customer engagement through Q1 of 2017. The Action Items within Table 8 detail the steps we are taking to try to improve upon this metric and
Customers may be willing to pay for Advanced Data Services.	 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. 	drive more product sales. Not yet measured – Go live delayed and split into two populations: • peak perks M&V customers by February 28, 2017 • general residential customers by April 2017
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

a. Sales Results

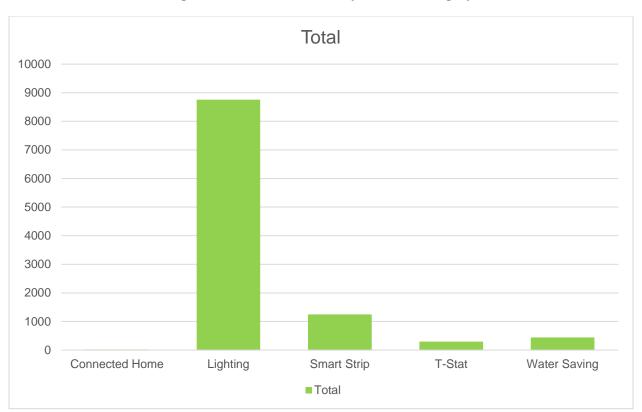


Figure 3: 2016 Sales Totals by Product Category

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 launch 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 04					
Test Population Description	Selection Method	Population Size (as Reported on December 10, 2015)	Q4 Population Size		
Residential PV Customersto be analyzed within Channel and Segment Tests	Identification / Selection Method: • Net Meter installation record	3,741	6,230		
 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: Current My Account users Opt-in to enrollment in CenHub following project go live 	136,000 ⁴ , all existing My Account users will be automatically enrolled in CenHub	108,356		
 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	107,000 ⁴	153,183		
 Existing customer transferring service(s) / 'Moves' to be analyzed within Channel and Segment Tests 	 Identification / Selection Method: Existing customer – transferring service 	65,400	56,026 ⁵		
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	21,606 ⁵		
Home Energy Report Recipientto 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 	Subscription listing	Population to be established after Phase 3 go-live	Population to be established after Phase 3 go-live		

Table 3: Test Population

 ⁴ Upon detailed review and implementation of Phase 1 Central Hudson identified that inactive accounts were being counted in the initial enrollment totals
 ⁵ Total number of new service applications submitted in 2016

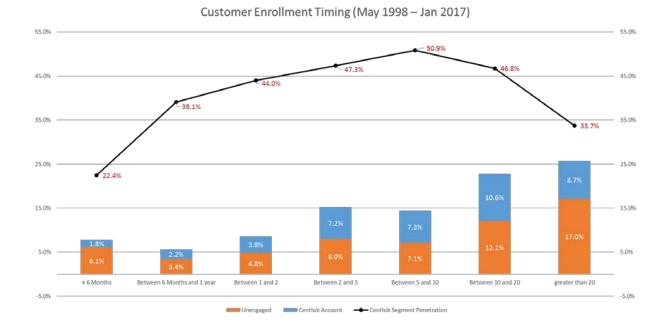


Figure 4: Customer Longevity and CenHub Penetration

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.

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	Through Q4 Simple Energy has successfully sent marketing emails and engagement emails. Through our marketing campaigns, website upgrades and integration of CenHub into the web and mobile experience we have increased enrollment rates by approximately 5 percentage points.	Residential Customer My Account Enrollment Rate : 41.4%
 a. then Central Hudson will increase the number of Digitally Engaged Residential Customers⁶ to 60% of Central Hudson's residential customer base within 12 months of the 	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.	
April 1, 2016 Go Live Date.	In coordination with the Simple Energy marketing channels Central Hudson has utilized it's social media and web platforms to advertise all of the features and benefits of CenHub.	
	As part of the Phase 2 design enhancements, video and text tutorials outlining the benefits of registering for My Account are highlighted on a newly developed welcome page for first time registrants.	
If Central Hudson utilizes gamification, reminders and relevant savings opportunities to encourage and prompt customers to complete the digital home energy profile	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 customere to get	Gamified Experience Engagement Levels: a. Tip Completions: 29,450 b. Badges Earned: 34,700 c. Home Profile Completions: 4,703 d. Logins: 74,370
 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). 	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. Under consideration is a points expiration marketing campaign to encourage customers to log in and redeem their points otherwise their points will be reset.	
If Central Hudson develops an engaging platform that informs customers about their energy use,	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.	The team is working with Simple Energy and our IT team to create a method to measure the effectiveness of the CenHub Insights web presentment

Table 4: Test Scenarios

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

 provides actionable energy savings tips linked to available products and services, and reinforces behaviors through gamification and social interaction a. then on average Digitally Engaged Residential Customers will become more energy efficient than their digitally unengaged counterparts 	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.	program and results will be available after year 1 of the program. In Q1 2017 the ET&S team will be analyzing all of the web pages under the CenHub umbrella to identify opportuntities to create lead in links to the Insights pages and calls to action to increase awareness and visibility of the Insights features.
 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 Q4 sales on CenHub Store increased primarily due to increased rebates on select lighting products and the introduction of manufacturer discounts during the holidays. We have continued to add connected home products through Q4 but have seen modest sales volumes of these higher priced items that are not eligible for rebates.
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.	With the Q4 sales results we are within range of achieving our year 1 PSRs by April 1, 2017. We are currently projecting \$36,800 in PSRs.
If we offer an Insights+ package featuring an intuitive and engaging user experience and utilize multi- channel 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	Not yet implemented. Central Hudson expects that delivering a viable product to customers will require a longer timeline than originally proposed in the July 1, 2015 filing. The meter system setup is complete and first article meter testing and approval is partially complete. Data transfer testing processes are underway. User interface design is in an iterative prototyping phase. With the Smart Home Rate and Time-Of- Use rates that will be coming later in 2017 Central Hudson

E) Checkpoints

Target Date	Milestone	Target	Project Life Cumulative Actuals	2016 Actual as of Q4	Program Year 1 Projection
4/1/2016	CenHub Phase 1 - Go Live	4/1/2016	4/3/2016	4/3/2016	
7/31/2016	CenHub Phase 2 – Go Live	7/31/16	9/7/16	9/7/2016	
12/31/2016	Capital Expenditures ⁷	\$1,200,000	\$1.8M	\$1.8M	\$1.8M
7/1/2018	Annual Maintenance Expense ⁸	\$1,100,000	\$1.16 ⁸	\$0.96M	\$0.96M
4/1/2017	Enrolled CenHub Customers as % of total Residential Customer Base	60%	N/A	41.4%	43%
4/1/2017	Product Purchases	8,000	N/A	10,798	14,000
9/15/2016	CenHub Phase 3 - Go Live	9/15/2016	N/A	N/A	Release 1 – 2/28/17 Release 2 – April 2017
4/1/2017	% of Enrolled CenHub Customers Completed Home Profile	5%	N/A	4.3%	5%
4/1/2017	CenHub Platform Service Revenues	\$40,000	N/A	\$36,800 ⁹	\$40,000
9/15/2017	Insights+ ¹⁰ Cumulative Deferral	\$125,000	\$47,914	\$47,914	\$125,000
9/15/17	Insights+ Capital Expenditures	\$70,000	\$117,302	\$117,302	\$277,000
9/15/2017	Insights+ Subscriptions	1,000	N/A	N/A	1,000
9/15/2017	Insights+ PSR	\$24,000	N/A	N/A	\$24,000
Status Key On or ex	kceeding target	arget <=10%	Off targ	get >10%	1

Table 5: Targets and Results

⁷ Cumulative Captial Expenditures includes capital expenditures prior to April 3, 2016

⁸ Cumulative Maintenance Expense includes expenses beginning on April 3, 2016, one-time setup expense prior to April 3, 2016, and excludes depreciation expense.

⁹ Platform Service Revenues calculated quarterly beginning with Q2 2016

¹⁰ 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 partnered 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
- Converge 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

In Q4 Central Hudson has modified the core project team structure that was created for Phase 1 and has grown its vendor partnerships. The team composition has expanded to include more IT resources representing the data, infrastructure and tech support teams in order to develop a more robust solution and ensure proper system performance for the end customer and those maintaining the new systems internally. Beyond the technical alignment, ET&S has continued to work under the advisement of the IT Project Management Office throughout planning, requirements gathering and testing for Phase 3. This approach has improved accountability of all team members, project documentation and transparency.

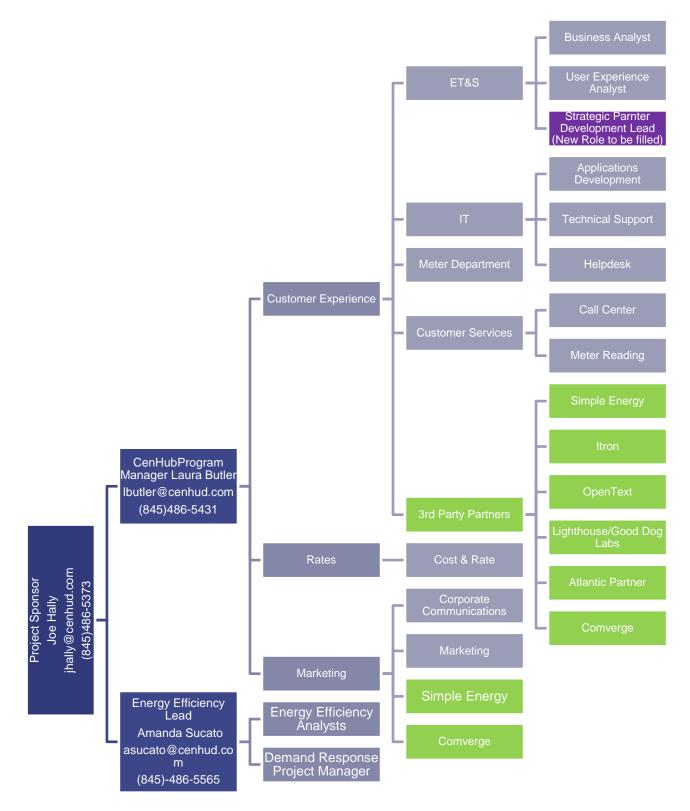
The team has been working to align more closely with the Call Center, Marketing and Corporate Communications teams. These teams are directly impacted by the changes introduced in Phase 2 and their use of these new tools is vital to the continuing success of CenHub. With feedback from the Call Center and IT Central Hudson has improved its internal reporting processes for web related issues and enhancement requests by introducing a ticketing system with clear role definition and escalation procedures.

In Q3 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 Q1 2017.

As of December 31, 2016 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.

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 the 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 the design phase in coordination with Simple Energy.
Testing Across Platforms	Central Hudson creates detailed test plans and scripts for each phase of the project and 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 will utilize a similar approach for all phases.
Access to Customer Data	Central Hudson is providing weekly customer usage information in the agreed upon file format to Simple Energy in order to populate the Overview and My Usage screens and facilitate the Energy Insights Energy Efficiency program. Phase 2 revisits the single sign on approach and lays the groundwork for a more robust identity management strategy for better utilization and protection of customer data.
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.
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. 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

Table 6: Roles & Responsibility Matrix

	large retailers offering customers more ways to shop and receive instant rebates.
Advanced Data Services - Smart Meter Installation	Central Hudson will schedule and perform meter changes for subscribing customers
Sales & Partnership Development	This is an existing gap – Prospecting partnerships to develop additional customer offers
Partner	Description
	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.
Integration with Internal Systems	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 in Phase 1 and to be expanded upon in Phase 2.
	All partners will continue to work together with the Central Hudson team for Phase 2 delivery and potentially beyond.
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.
Project Management	Cognizant provided Project Management support for Phase 1 delivery but has since rolled off the project. An experienced internal Central Hudson resource has assumed the PM role for Phase 2, she is transitioning back to her PMO role and Cognizant will once again fill the Project Manager role for Phase 3.
	Since delivery of Phase 2 the OpenText Project Manager is no longer involved in the project. Itron will be assigning a PM to ensure delivery of their milestones and deadlines.

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
Sprint planning – in person review of all requirements and assignment of tasks to team members	Weekly	ET&S
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	As needed	Project team, Simple Energy and Energy Efficiency SMEs
Marketing plan reviews – combination of written documentation and in- person/conference call discussion	Weekly (Central Hudson only) Monthly – all relevant leads	Marketing director, project and program managers, SMEs as 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	Weekly	ET&S, Marketing, IT

Section 3: Work Plan & Budget

A) Project Plan

In Q4 the team focused on stabilization of the website, planning enhancement bundles, gathering requirements for Phase 3 and first article meter approvals.

Q1 2016	Q2 2016	Q3 2016	Q4 2016
Launched with:	Analysis & Planning	Migration to Web Content Management	Subscription based Service Offerings
CenHub Insights	 Investigate new 		
CenHub Store	product offerings		
 Cross Promotion of CenHub Peak Perks Green Button Download 	 Analyze results of marketing campaigns Finalize plan for content personalization and SSO extension 	MARKETING MARKETING	

Figure 5: 2016 Roadmap

- a. Schedule
 - Following Phase 2 go live on 9/7/16 the team experienced a number of stability issues. A subsequent release of fixes was launched in October that stabilized the website infrastructure and improved the customer experience for the registration process by providing more informative instructional language. Additionally, the team mitigated a number of the issues raised in the previous quarterly report
 - Analysis & Design The core team met following Phase 2 to discuss lessons learned. These lessons are being applied to Phase 3 starting with the planning and design aspects.
 - ii. Identity Management the Tech Support team attended a week long training program on the Forgerock Tools to better familiarize themselves with the system.
 - iii. Post Production Support -
 - The Web Applications Team and Tech Support System Administrators attended week long training sessions with OpenText to better familiarize themselves with the system and troubleshoot existing challenges. OpenText and Lighthouse also provided the team with "Run Book" guides for supporting the systems.

- 2. The online HelpDesk ticketing system was modified to include a new section dedicated to website issue reporting and enhancement suggestions. 4 response team levels were established after a collaborative effort between ET&S, IT and the Call Center.
- II. Figure 6 provides a high level overview of the Phase 3 delivery schedule. A detailed project work plan with a comparison to the originally proposed schedule for Phase 3 is included as Report Attachment 1. Phase 3 delivery is being broken down into two releases. The February release includes meter change outs and delivery of the Insights+ "My Usage" screen enhancements to display the interval usage data for the statistical sample of Peak Perks DCU customers. The second release planned for April will enable enrollment for all eligible residential customers in the Central Hudson territory. There will be eligibility restrictions based on Verizon's cellular network and existing meter type as some meter pans are not compatible with the new Insights+ meter (such as C-base and Abase).

	2016			2017				
Task Item	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Setup MDMS								
Data Integration with Insights								
Meters Successfully Tested and In Inventory								
Testing								
Comverge Target Customer Communications								
Training								
Comverge Target Enrollment								
Meter Installations								
TOU Rate								
Marketing								
System-wide Enrollment								

Figure 6: Project Schedule

III. Since launching Phase 1, and as part of the Phase 4 optimization and enhancement effort, the team has been monitoring the site analytics, store sales performance and customer service calls to both the Central Hudson call center and Simple Energy support center. In Q4 we shifted to creating quarterly marketing plans. This greatly improved the ability to cross promote and coordinate messaging. However we can continue to improve and in Q1 2017 intend to create a full year marketing calendar.

- b. Action Items
 - I. Usability
 - The ET&S team has evaluated the trouble tickets submitted throughout Q4 as well as enhancement ideas based on analyzing the user experience and has defined 6 enhancement bundles. In Q1 2017 the ET&S team will work with IT to prioritize, build test and launch these bundles.
 - II. Alignment
 - As part of the Phase 3 requirements Central Hudson is also bringing in the Track 2 Order obligations to the discussion. This will ensure greater stakeholder understanding of downstream impacts and promote better upfront planning and design decisions.

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	Central Hudson will continuing with the build out of the CenHub product family and incorporating the upcoming Smart Home Rate and Time-Of-Use Rate into the future marketing plans.
Completion Date: On-going	
Risk – CenHub My Account enrollment rate	Central Hudson will be developing a robust marketing strategy for 2017 focused on increasing My Account enrollment rates.
Projected Completion Date: 12/31/16	The team will also be investigating process related barriers to customer enrollment to identify opportunities for improvement.
Opportunity – Increased utilization of gamification	Similar to awarding points for My Account registration we will also be creating reward programs related to eBill, Automatic Payment, and Text Alert enrollment. This feature has been tested successfully and is awaiting scheduling for launch.
Projected Completion Date: 11/30/16	We will measure the effectiveness of gamification on driving more self-service interactions and utilize the results to determine how we can effectively use gamification going forward.
	Overall in Q1 2017 the team will be diving into the points awarding process to find opportunities to increase customer engagement and education around how points are earned.
Risk – Low PSRs	In Q4 launched a focused holiday marketing campaign and added home automation products and accessory items of current products to the store.
Projected Completion Date: On-going	In Q1 2017 the team will identify another lighting offer to promote to drive sales to exceed the year 1 target. Marketing of the Insights+ offer will be another big driver towards increasing PSRs.
Risk – Phase 3 budget and schedule impact analysis	As we have dug into the detailed requirements for Phase 3 we identified a subset of work process improvements and program implementer needs that could (1) simplify the work process for the internal employee - reducing error rates and training time and (2) improve the accuracy and speed of information flow for improved customer experience (3) leverage 3 rd party needs to deliver additional features to a subset of customers at no additional cost. We believe that making these improvements, though they increase the implementation timeline and budget, are worthwhile for both the internal employees supporting the new programs we are rolling out and to the end customer that wishes to enroll and be informed about available programs.
	 Example incremental costs are: (1) Creation of new CIS program participation screens (2) Purchase of meter warm up boards for testing and programing new inventory of meters
	 (3) Data storage and analytics for interval meter data (4) New website pages and popups to market Insights+ to potential enrollees and explain the new product features and welcome the customer to Insights+ for program enrollees.
Risk – Support organization	Phase 2 uncovered numerous gaps in backend processes and exposed how the introduction of new tools can impact the day to day routines for the employees

	I
preparedness and employee buy-in	supporting various customer related activities when their processes and well- established workarounds are not fully understood. The team has established a new post production support model that involves better training, more employee touchpoints and a mechanism to capture and allocate incoming requests to bundle into future feature releases. This new process was implemented in Q4 and is aiding the support team in learning more about customer issues and where more training to the CSRs can be offered to improve their ability to assist the customer. The team is taking a different approach to requirements capture for Phase 3 to avoid the pitfalls experienced in Phase 2. The breadth of internal processes being impacted by Phase 3 is substantial, and for that reason the decision was made to do a limited release for just the statistical sample of Comverge customers. This approach allows the team to start with focused testing and training with the CSRs supporting the program, monitor the meter installations and meter data transfer performance and make adjustments if necessary before a mass rollout to all residential customers. For Phase 3 the team has engaged far more internal project team members from the initial kickoff and through discovery and requirements sessions. This has led to improved communication and understanding of the program overall. We continue to bring the entire stakeholder group together periodically to review the defined requirements to date, discuss to-be process flows and allow for any outstanding comments or questions. Though more team members have been engaged in the project not all are incremental resources so it does not directly correlate to significant budgetary impacts. The only incremental costs are for IT programming effort and data storage and analytics enhancements required by the increased volume of metered usage data.
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 Phase 3 Work Plan Schedule Report Attachment 2: CenHub Phase 1 Capital Work Order Transaction Details Report Attachment 3: CenHub Phase 2 Capital Work Order Transaction Details Report Attachment 4: CenHub Incremental O&M Work Order Transaction Details Report Attachment 5: Insights+ Incremental O&M Work Order Transaction Details Report Attachment 6: CenHub Carrying Charge Work Order Transaction Details Report Attachment 7: Insights+ Carrying Charge Work Order Transaction Details Report Attachment 8: CenHub Insights Statistics Report Attachment 9: Traffic and Engagement Report Attachment 10: CenHub Ecommerce Report Attachment 11: CenHub Phase 3 Capital Work Order Transaction Details

		2	2015		2	2016			2	017			2	018	
Description	Ownership	Q3	Q4	01	Q2	Q3	Q4	01	Q2	Q3	Q4	Q1	02	Q3	Q4
Phase2: Advanced Data Services															
Standup Managed Services Environment	ITRON														
Configuration of OW / IEE	ITRON														
Data Integration with CenHub Insights	ITRON/Simple Energy														
First Article & Production Meter	ITRON														
System Acceptance (Use Case) Testing	ITRON														
Pre Launch Communications (Adv. Analytics)	CHGE														
Training	ITRON														
Advance Analytics Enrollment	CHGE														
Meter Installation	CHGE														
Testing	CHGE/Itron														
MileStone:Phase2 Go-Live(Apr 28,2017)							•		•						
Market Participation:Test Additional Hypothesis															
Determine sample group of DCU customers for M&V	CHGE/Comverge														
Interval data ingestion for M&V analysis	Comverge														
Usage analysis on Cenhub Insights for the sample group	Simple Energy/CHGE														
Communication & enrollment	CHGE/Comverge														
Meter Installation for the sample group	CHGE														
MileStone:Phase2 Go Live for M&V Target Customers (Feb 24, 2017)							•								
Time Of Use (TOU) Offerings : (NEW!)									i i i						
Evaluation & estimation	CHGE														
Construction	CHGE/SimpleEnergy														
Testing	CHGE/SimpleEnergy														
MileStone: New TOU offering (August 31,2017)															
Activity XX:Comverge															
Comverge Marketplace Integration	Simple Energy/Comverge														
Addition of energy efficient products on marketplace															
Addition of more Energy Efficient products															
Responsive Design & Web/Mobile Social Strategy Enha	ancements														
My Account pages migration to WEM															
Addition of new features, page redesign															
Marketplace Integration with Demand Response												_			
Market place integration with Demand response program															
Offering Billing Services															
Billing services															
Sales of advertising space															
Sales of adversting space													_		
Bill Calculator Integration															
Bil calculator integration with EE & marketplace															
Partner data subscriptions															
Partner data subscriptions															
Advanced opportunities															
Exploring partnership leads and advanced opportunities		-		-											
Green Leaf Integration															
Green Leaf Integration with Commercial lighting store								_							

Evaluation & Prioritization Period for scope and schedule refinement

Project Milestone

Report Attachments 2-7

REDACTED

CenHub Insights Statistics

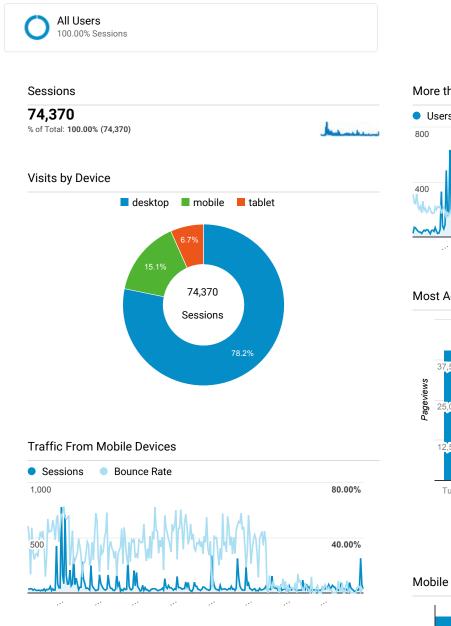
Total Length of	Program Total
Program April 3 2016 –	
Dec 31 2016	
Logins	81214
New User Logins	25207
Tips Completed	29450
Badges Earned	34700
Home Profile	4703
Completions	
Reward Redemptions	97
Unsubscribes	2523

Period: 12/26 - 1/01	PROGRAM TOTAL	COMPLETED THIS WEEK	PROGRAM TOTAL LAST WEEK
Logins	81214	1611	79603
New User Logins	25207	354	24853
Tips Completed	30146	763	29383
Badges Earned	35668	480	35188
Home Profile Completions	4785	57	4728
Reward Redemptions	104	14	90
Unsubscribes	2523	34	2489

Cen Hub Insights cenhubinsights.com

Traffic and Engagement

Apr 3, 2016 - Dec 31, 2016



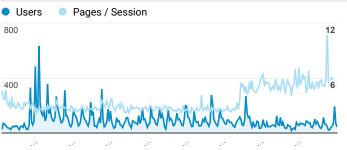
More than once per week visitors

Users	Avg. Time on Page
12,079	00:00:48
1,915	00:00:52
815	00:00:50
	12,079 1,915

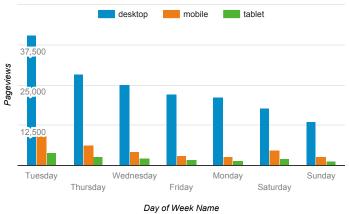
Engagement by Device

Device Category	Pages / Session	Avg. Session Duration
tablet	3.04	00:01:51
mobile	3.01	00:01:44
desktop	2.90	00:01:32

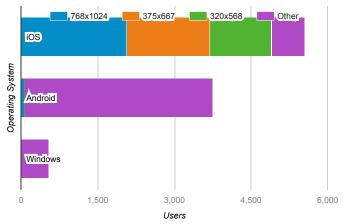
More than once per week visitors



Most Active Day of the Week by Device



Mobile Traffic Breakdown



Where do people enter your site?

Landing Page	Entrances	Pages / Session
/	71,434	2.90
/tips	598	3.86
/#utm_source=MAS-Home-age&utm_medium=sit e-alert&utm_campaign=Home-Profile	394	4.91
/unsubscribe_confirmation	354	2.32
/sso-error/	307	4.61
/tip_20_completed	240	2.20
/comparisons	149	2.92
/home-insights/home-profile	133	3.98
/wrap_pipes	119	4.36
/caulking_how-to	107	2.26

Pages People Leave From

Exit Page	Exits	% Exit
/	41,452	58.60%
/tips	11,791	23.66%
/rewards	8,438	23.70%
/home-insights/home-profile	1,905	23.55%
/insights/usage	1,593	18.90%
/profile	1,344	17.68%
/insights	1,183	18.02%
/unsubscribe_confirmation	804	42.49%
/sso-error/	786	30.69%
/challenge/badges	611	16.41%

Most Engaging Traffic Sources

Source / Medium	Sessions	Pages / Session
uauth.cenhud.com / referral	34,917	3.41
inet.cenhud.com / referral	13,099	2.01
Simple Energy EP Email / email	12,430	2.49
cenhud.com / referral	6,055	2.88
(direct) / (none)	3,533	2.25
cenhubstore.com / referral	3,060	3.93
MAS-Home-age / site-alert	436	4.67
google / organic	175	2.53
Simpe Energy MP Email / email	166	2.27
bing / organic	115	2.88

Mobile Traffic Behaviour

Mobile Device Info	Users	Bounce Rate
Apple iPhone	3,386	26.69%
Apple iPad	2,122	25.08%
(not set)	302	35.89%
Samsung SM-G900V Galaxy S5	285	41.03%
Microsoft Xbox One	267	42.03%
Samsung SM-G920V Galaxy S6	175	30.25%
Samsung SM-G930V Galaxy S7	114	26.58%

Report Attachment 9

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Report Attachments 10-11

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