Central Hudson Gas & Electric
CenHub – Your CenHub

Demonstration Project Implementation Plan

December 10, 2015

Contents

Executive Summary

The following Project Implementation Plan for Central Hudson's Central-e, Energy Exchange, Reforming the Energy Vision (REV) Demonstration Project ("CenHub") defines the Project's design, test cases, milestones, team structure, roles, responsibilities, governance, work plan, budget and reporting.

Central Hudson filed an introduction to the CenHub project on July 1, 2015 to the Department of Public Service (DPS) Staff in compliance with Ordering Clause 4 of the Commission's Order Adopting Regulatory Policy Framework and Implementation Plan, issued and effective February 26, 2015.

This document is being filed in response to the Reforming the Energy Vision Demonstration Project Assessment Report dated November 10, 2015 and incorporates Staff comments and recommendations:
- Third party participation
- Price and rate design
- Milestones and Checkpoints
- Customer access to data
- Cross company collaboration

It is Central Hudson's belief that lack of consumer engagement related to household energy use is driven by the lack of five (5) primary factors:
- Awareness
- Availability of information
- Customer effort or lack of convenience
- Understanding the value of products and services
- Trust in available solutions

Central Hudson is also aware of the growing expectations of customers based on their interactions with other industries and businesses. Looking across industries there are trends that can be leveraged to design a solution that aligns with today's customer expectations.

Figure 1: Customer Experience Industry Trends

Retail	Telecom	Airline	Banking
Increasing Insights into Customer Behavior	**Enhancing Service Reliability**	**Personalized Experience**	**Enhanced Self Service Features**
• Purchase *pattern based promotions* • *Personalized loyalty* programs • Consistent *Multi-Channel* Experience	• *Personalized Tariff suggestion* • Simplified *Plan Change* Process	• *Self service* check-ins (web/mobile/kiosks) • *Customizable experience* (food, seating etc) • *Proactive* communication related to flight itinerary	• *Self Service Web Channel* all necessary transactions and enrollments • *Mobile Banking* • Fraud *Alert Communication Mechanism*

Taking all of this into consideration, CenHub is not only Central Hudson's response to the REV Track 1 order but also a leap forward in providing excellent service, choice and empowerment to all of its residential customers. CenHub extends the existing Central Hudson digital presence to increase customer self-service, insight and inspire action. Within CenHub, customers are offered an extensive list of functionality including but not limited to:

- A customer portal with personalized electric energy usage dashboard
- Personalized messaging, energy saving tips and recommended actions
- The ability to purchase products and services through an online marketplace and automatically apply rebates at checkout
- Cross-promotion of programs that meet the specific needs of the individual customer
- A fun and engaging experience where customers are rewarded for interacting with the CenHub through points, badges, leaderboards, discounts and gift cards

For customers that want to engage further in the management of their energy portfolio, the Company is offering a value added monthly subscription so customers can receive more granular data and analytics. The offering is reasonably priced at $4.99/month and can be bundled with alternative TOU pricing or other offerings to incent additional savings and engagement.

To facilitate CenHub, Central Hudson will embark on a multi-phase roll out strategy: (1) My CenHub, CenHub Insights and CenHub Store Launch, (2) Advanced Data Services Launch, (3) Optimization and Enhancement of Offerings.

CenHub ultimately strives to deliver the following benefits:
- Creation of a home energy advisory platform providing insight into energy usage for all residential customers
- 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

Section 1: Demonstration Design

The CenHub build out has three phases: My CenHub, CenHub Insights and CenHub Store launch, Advanced Data Services Launch, and Optimization and Enhancement of Offerings as described in Table 1. The following section details the test statements, test population, test scenarios and check points that will be used to evaluate the level of success of the project as well as future opportunity to scale or continue enhancement.

CenHub will excite, inform and empower customers to control their energy usage profile. The level of engagement and the factors that drive or detract from engagement will be measured throughout the project. Central Hudson will also be testing whether or not CenHub has the potential to become a trusted e-commerce site for customers and determine what products customers are interested in buying for their homes. In addition CenHub will test whether or not customers are interested in additional subscription services that offer more information, more insight, incentivized load reduction, and increased participation in management of their energy bill.

A) Phases

In order for the Project to progress to the subsequent phase a defined scope and set of objectives must be achieved.

Table 1: Project Phases

Phase	Portal & Marketplace Launch	Advanced Data Services Launch	Optimization and 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 Integration and Enrollment:* • Successful enrollment process • Successful data transfer • Enrollments in TOU rate	*Revenue Realization:* • Acquisition of new products • Acquisition of new services • Annual sales and revenues • Customer Satisfaction
Key Elements	• Integration into existing 'My Account' portal • End-to-end testing • Admin and Support staff training • Program marketing campaign • Go-Live	• Integrate enrollment into Marketplace • Program marketing campaign • Secure meter approval and procure inventory • Establish meter change process	• Integrate TDR and DLM portal and enrollment process • Evaluate new 3rd party and ESCO relationship leads for products and services • Investigate scalability into C&I offerings • Build new offerings into enhancement release schedule (define requirements, build, test, go-live)
Product & Service	• Thermostats	• Interval data	• Commercial Lighting

Categories	• Smart plugs • LED lightbulbs • Green Button Download	• Bundled TOU rate	Store • TDR products including installation and registration services

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

1. Customers may be more engaged in their energy usage and energy management if they have:
• greater awareness of available products and services that are relevant to them
• 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…
	   o then Central Hudson will increase the number of Digitally Engaged Residential Customers[1] 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…
	   o 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…
	   o then on average Digitally Engaged Residential Customers will become more energy efficient than their digitally

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

	unengaged counterparts

2. Customers may become engaged in the purchase of energy products and services they value through:
    • an information driven, guided e-commerce experience.
    • A social online experience that inspires competition and community action
    • The availability of instant rebates and rewards programs
	• If Central Hudson provides CenHub users with energy usage information and targeted actionable savings tips linked to products and services available on CenHub …
	    o then we expect to achieve 8,000 product purchases within the first 12 months of the April 1, 2016 Phase 1 Go Live Date.

3. 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 … o 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.
4. Customers may be willing to pay for advanced data services.	• If we offer an advanced data services package featuring an intuitive and engaging user experience and utilize multi-channel and targeted marketing… o 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.

5. Advanced data services may influence customers' behavior.	• If Central Hudson directly markets to Advanced Data Services subscribers and provides insights and tips regarding management of their energy usage and cross-promotes programs such as Targeted Demand Response…
	    o then customers with Advanced Data Services 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.)
	    o 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.

C) Population

Central Hudson sees its customer base falling into various categories of digital engagement. There are those who are highly active with digital outlets, such as on-line shopping, social media or 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 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.

Table 3: Test Population

Test Population Description	Selection Method	Current Population Size
Residential PV Customers • to be analyzed within Channel and Segment Tests	Identification / Selection Method: • Net Meter installation record	3,741
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, all existing My Account users will be automatically enrolled in CenHub
Digitally Unengaged Residential Customer • to be analyzed within Test Statement #1 • to be analyzed within Channel and Segment Tests	Identification / Selection Method: • Paper bill recipient • non-My Account user	107,000
Existing customer transferring service(s) / 'Moves' • to be analyzed within Channel and Segment Tests	Identification / Selection Method: • Existing customer – transferring service	65,400
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	As Required

	or via call	
Home Energy Report Recipient • to be analyzed within Channel and Segment Tests	Treatment Group listing	103,000
Advanced Data Services Subscriber • to be analyzed within Test Statement #5 • to be analyzed within Channel and Segment Tests	Subscription listing	Population to be established after Phase 2 go-live on 9/30/16

D) Scenarios

CenHub is composed of a set of features and functionalities. The features and functionalities 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
• If Central Hudson utilizes a Multi -Channel marketing campaign, specifically inclusive of email and social media, to market CenHub to residential customers… o then Central Hudson will increase the number of Digitally Engaged Residential Customers[2] to 60% of Central Hudson's residential customer base within 12 months of the April 1, 2016 Go Live Date.	Central Hudson will be composing a detailed multi-faceted marketing plan to include pre-go live communications to customers, post-go-live communications, on-going engagement communications and promotion of new products and service offerings throughout the timeline of the project. The plan will utilize a combination of communication channels from traditional (print ads, bill inserts, news release, etc.) to more untraditional (social media, email blast, SMS alert, etc.) The partner marketing approach includes weekly targeted emails. These emails are personalized to each customer aimed at engaging them to visit the portal and marketplace, take advantage of offerings that would benefit their energy profile, and contribute to a virtual community through gamification and social networks like online product reviews. The Central Hudson team is also modeling the communication plan from a holistic portfolio perspective to understand the communication needs of the conversion to Monthly Billing and the programs involved in the ETIP filing to coordinate an overall strategy to inform customers effectively while not creating information overload.
• If Central Hudson utilizes gamification, reminders and relevant savings opportunities to encourage and prompt customers to complete	The partner's product aligns customer behavior with intrinsic and extrinsic motivation techniques. From their research and experience with other utilities, customer participation can be incented through gamification. Therefore the project team will design a points and rewards system specific to Central Hudson's customers and to the portfolio of Energy Efficiency programs Central Hudson offers.

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

the digital home energy profile… o 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).	The information gained through the home profile survey is crucial to delivering targeted messages, tips and actions customers can take to more effectively manage their energy usage and potentially drive down the cost of their utility bill. Therefore it is imperative that the home profile component is marketed to customers in a way that engages them to fill in the information and is offered in a quick and easy format so that they can complete it fully. In the event customers only partially fill in the information the partner uses "progressive profiling" – a method where their algorithms learn from the partial data and then launches emails targeted at incenting the customer to fill in missing information. The team believes that through this strategy the 5% completion rate can be accomplished.
• 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… o then on average Digitally Engaged Residential Customers will become more energy efficient than their digitally unengaged counterparts	Customers can only take action to manage their energy in a way that suits their needs and preferences if they are aware of their options and the effect those options have on energy usage and management. The CenHub will provide information and insights to those that utilize the platform. The CenHub will offer usage information, weather statistics, the ability to set thresholds and targets for budgeting. Additionally, a home profile tool provides the customer with an option to provide information about the makeup of their home's appliances, structure and preferences. This level of information and the analytics behind the tool will provide customers with customized tips and recommendations to operate their home more efficiently. It will also provide customers with optional actions and the ability to act and will reward customers through points and incentives for lowering their energy usage. As a result, 5% of "Digitally Engaged" customers will fill in their home profile within the first year, by April 1, 2017. These "Digitally Engaged" customers will reduce their usage relative to 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 the CenHub… o then we expect to achieve 8,000 product purchases within the first 12 months of operation of the CenHub	The gamification component is also linked to product purchases. The team will design point allocations and map rebate offerings to product purchases in order to build a streamlined shopping cart experience for customers. Customers will be led to the marketplace through targeted messages, actionable energy saving recommendations and the points and rewards system. Points will be redeemable for discounts at the marketplace beyond the rebate savings. The implementation also will include retargeting algorithms. These will create advertisements and move up the CenHub site in search results on sites such as Google to redirect customers to CenHub. In addition, use of the marketplace is not limited to customers within Central Hudson's service territory. While Central Hudson customers will be the only ones that qualify for rebate programs the products will be available for purchase by anyone interested.

(4/1/16 - 4/1/17)	
• If Central Hudson provides CenHub users with energy usage information and actionable savings tips linked to products and services available on the CenHub… o then CenHub will generate approximately $40,000 of Platform Service Revenues (PSRs) for Central Hudson within the first 12 months of operation (4/1/16 - 4/1/17)	Central Hudson and Simple Energy are co-investing in the marketing strategy for CenHub in order to maximize customer touch points and drive product sales from the CenHub Store. Through cross-promotion of Energy Efficiency rebates, points and rewards, and awareness, customers will be incentivized to visit the Marketplace and make purchases that will increase the efficiency of their homes.
• If we offer an advanced data services package featuring an intuitive and engaging user experience and utilize multi-channel and targeted marketing… o then 1,000 customers will subscribe to the advanced data services package in the first year (9/30/16 – 9/30/17)	Through implementation of the smart meter system (including meter installation, communication network and hosted MDM with data integration into the partner customer portal), hourly interval data will be available on a day behind basis for those residential customers interested in managing their energy usage on a more detailed level.
• If Central Hudson directly markets to Advanced Data Services subscribers and provides insights and tips regarding management of their energy usage and cross-promotes programs such as Targeted Demand Response… o then customers with Advanced Data	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 firsthand 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.

Service 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	

E) Checkpoints

Checkpoints are defined in Table 5 for major project milestones and review points to determine progress and performance of the scenarios stated in Table 4 and in accordance with the project schedule. The checkpoints will ensure that the team and stakeholders are discussing results, revisiting the overall strategy and initiating any course correcting actions as needed in a timely fashion.

Each checkpoint has associated metrics and mitigation strategies that can be set into action should they be necessary. As with the hypotheses set out for this REV demonstration project, the checkpoints themselves will be evaluated throughout the reporting process, as detailed in Table 5 below:

Table 5: Checkpoints

Check Point	Description
Primary Check Point **CenHub** **Phase 1** **Go Live Date**	**Measure:** CenHub Phase 1 - Go Live **How and When:** Go Live Date of 4/1/2016 will be projected on a monthly basis **Expected Result:** CenHub available for customer use and new enrollments beginning 4/1/2016 **Solutions/Strategies:** Assess cause of timing variation, remaining work plan and scope and scale of project. Reassess vendor relationships and project team. Determine if corrective action is required.
Primary Check Point **Web/Mobile/Social** **Strategy Enhancement**	**Measure:** Migration of existing Central Hudson website to Web Content Management system **How and When:** Migration complete by July 31, 2016. **Expected Result:** Central Hudson website including CenHub, CenHub Insights and CenHub Store migrated to Web Content Management and built using Responsive Design **Solutions/Strategies:** Assess cause of budget variation, remaining work plan and scope and scale of project. Reassess vendor relationships and project team. Determine if corrective action is required.
Primary Check Point **Cumulative** **Expenditures**	**Measure:** Cumulative Expenditures – Capital Expenditures and Expense **How and When:** Cumulative Expenditures at 12 months following project start (9/1/2016) – Annual Cumulative Expenditures will be projected and reported on a quarterly basis. **Expected Result:** $1.1M Capital Expenditures and $1.1M Expense **Solutions/Strategies:** Assess cause of budget variation, remaining work plan and scope and scale of project. Reassess vendor relationships and project team. Determine if corrective action is required.
Primary Check Point **Customer Engagement** **Test Statement #1**	**Measure:** Enrollment / New Authenticated Users **How and When:** # of enrollments check point 12 months after Go Live Date (4/1/2017), will be projected on a quarterly basis **Expected Result:** Digitally Engaged Residential Customers will increase to 60% within 12 months of Go Live Date. **Solutions/Strategies:** Targeted marketing, leveraging virtual community and gamification strategies to spread word-of-mouth advertising
Primary Check Point **Customer Engagement** **(Product Purchases)** **Test Statement #2**	**Measure:** Product Purchases **How and When:** # of completed purchases check point 12 months after Go Live Date (4/1/2017) will be projected on a quarterly basis **Expected Result:** 8,000 product purchases within first 12 months of operation **Solutions/Strategies:** Diagnosis of Problem utilizing Partner's data analytic tools, Targeted marketing and cross promotion of rebate programs, targeted messaging after "shopping cart" abandonment, retargeting, leveraging virtual community and gamification strategies to entice product sales
Primary Check Point **CenHub** **Phase 2** **Go Live Date**	**Measure:** Phase 2 - Go Live **How and When:** Go Live Date of 9/15/2016 will be projected on a monthly basis **Expected Result:** Phase 2 will include the advanced data services package and greater functionality for CenHub **Solutions/Strategies:** Assess cause of timing variation, remaining work plan and scope and scale of project. Reassess vendor relationships and project team. Determine if corrective action is required.
Secondary Target **Customer Engagement**	**Measure:** Completed Digital Home Energy Profiles **How and When:** Quarterly projection and actual # of completed home energy profiles using Partner's data analytics tool, reviewed (4/1/2017) **Expected Result:** 5% of Digitally Engaged Customers will complete the

Test Statement #1	home energy profile by (4/1/2017) **Solutions/Strategies:** leveraging virtual community and gamification strategies to entice home energy profile completion
Secondary Target **Customer Engagement** **Test Statement #1**	**Measure:** Usage profile/trend of Digitally Engaged Residential Customers **How and When:** periodic review of usage of Digitally Engaged Residential Customers vs. non-enrolled customers (Digitally Unengaged Residential Customers) **Expected Result:** Reduction in usage from previous year **Solutions/Strategies:** Evaluation utilizing Partner's data analytic tools, Targeted marketing and cross promotion of rebate programs, leveraging virtual community and gamification strategies to entice energy efficient behaviors
Secondary Target **Platform Service Revenues (PSR)** **Test Statement #3**	**Measure:** PSRs generated by leveraging the CenHub **How and When:** Quarterly projection of PSRs generated through product sales, billing revenues, advertising revenues with 12 month checkpoint on (4/1/2017) **Expected Result:** CenHub will generate approximately $40,000 of PSRs within the first 12 months of operation **Solutions/Strategies:** Evaluation utilizing Partner's data analytic tools, Targeted marketing and cross promotion of rebate programs, targeted messaging after "shopping cart" abandonment, retargeting, leveraging virtual community and gamification strategies to entice product sales and advanced data services subscriptions
Secondary Target **Advanced Data Services Subscriptions** **Test Statement #4**	**Measure:** Advanced Data Services Subscriptions **How and When:** Quarterly projection of # of advanced data services subscriptions with 12 month checkpoint on (9/15/2017) **Expected Result:** 1,000 advanced data services subscriptions sold during first year of operations **Solutions/Strategies:** Evaluation utilizing Partner's data analytic tools, Targeted marketing and cross promotion of rebate programs, leveraging virtual community and gamification strategies to entice advanced data services subscriptions. Additionally working with other potential 3rd parties to increase the value of the advanced data services subscription
Secondary Target **Advanced Data Services – Customer Engagement** **Test Statement #5**	**Measure:** Advanced Data Services – Customer Engagement **How and When:** Quarterly projection of # of completed purchases, using Partner's data analytics tools with 12 month checkpoint on (3/15/2017) **Expected Result:** Customers with Advanced Data Services subscriptions will make 10% more product purchases per customer within first 12 months of subscription enrollment **Solutions/Strategies:** Evaluation utilizing Partner's data analytic tools, Targeted marketing and cross promotion of rebate programs, targeted messaging after "shopping cart" abandonment, retargeting, leveraging virtual community and gamification strategies to entice product sales

Section 2: Project Structure & Governance

The following section details the makeup of the project team, with associated roles and responsibilities, and program governance. Central Hudson has created a new division, Energy Transformation and Solutions, which includes a team solely dedicated to CenHub as well as the Energy Efficiency team in order to more closely collaborate and deliver energy saving tools and programs to customers. In addition, Central Hudson is partnering with solution providers, Simple Energy and Itron, to deliver CenHub.

A) Project Team

Each team member and their associated organization bring a specific skillset to the project as detailed in Table 6.

Table 6: Skillset Matrix

Central Hudson	Cognizant & Wipro	Simple Energy	OpenText	Itron
• Program Administration • Project Management • Customer Relationship Maintenance and Outreach • Regulatory Accounting • Financial Planning, Management and Discipline • Rate Making • Design • System Integration • Meter Lifecycle Management • T&D Operations & Maintenance • Digital User Experience • Training • IT Infrastructure • Energy Efficiency Programs • Business Development	• Project Management • Requirements Definition • Testing • Software Development & Integration	• Project Management • Behavior & Data Analysis • E-commerce • Marketing • Web Development • Customer Segmentation • Analytics • Campaign Management	• Project Management • Software Development & Integration • Testing • Data Conversion & Migration Strategies	• Project Management • Smart Meter Implementation • Network Design • Data Management • Meter Lifecycle • Analytics • Project Management

In light of the skillset requirements, the project will be staffed as follows; points of contact are denoted in blue text:

Figure 2: Team Members

Project Sponsor
Joe Hally
jhally@cenhud.com
(845)486-5373

CenHubProgram Manager Laura Butler
lbutler@cenhud.com
(845)486-5431

Energy Efficiency Lead
Amanda Sucato
asucato@cenhud.com
(845)-486-5565

Internal Central Hudson CenHubTeam - matrixed reporting of cross functional team from IT, Corporate Communication, Energy Efficiency, Customer Services and Engineering

Internal Central Hudson Energy Efficiency Team

Simple Energy

ETIP Vendors

Itron

Targeted Demand Response Partner - Comverge

OpenText

Commercial Customer Product Sales - Green Leaf

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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 in the form of a RACI chart, Appendix A. The chart indicates who is Responsible (R), Accountable (A), Consulted (C), or Informed (I) for each task and those responsible for Signature (S) and Verification (V). Table 7 provides high level descriptions of the project roles and responsibilities that are broken down into further detail in Appendix A.

Table 7: Roles & Responsibility Matrix

Central Hudson Gas & Electric	Description
Project Management	Central Hudson will own overall project delivery and success criteria
Integration with Central Hudson website and Internal Systems	Central Hudson will integrate the customer portal and marketplace into its existing website. Central Hudson will develop interfaces to the Central Hudson Website and other internal systems as required and agreed upon in the design phase in coordination with Simple Energy and Itron
Testing Across Platforms	Central Hudson will develop test plans and own the execution of testing
Access to Customer Data	Central Hudson will provide customer usage information in the agreed upon file format with partner vendors
Customer Outreach and Marketing Strategy	Central Hudson will inform 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	Central Hudson will identify programs and rebates that will be cross-promoted on CenHub and participate in mapping & design exercises to align reward points, shopping cart rebate application, and web presentment
Advanced Data Analytics - Smart Meter Installation	Central Hudson will schedule and perform meter changes for subscribing customers

Partner	Description
Integration with Internal Systems (Simple Energy)	Simple Energy will provide requirements and assistance that supports Central Hudson's development of interfaces to the Central Hudson Website as required and agreed upon in the design phase
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.

C) Governance

Central Hudson will track progress, alignment to project objectives and performance in comparison to original hypotheses throughout the life of the project according to table 8.

Table 8: Governance Approach

Format	Frequency	Participants
Standups	Daily	Project team and partner SMEs
Status report	Weekly and Monthly	Project and program managers with project sponsor
Product and sales reviews	Monthly	Project team, Simple Energy and Energy Efficiency SMEs

Section 3: Work Plan & Budget

Central Hudson's CenHub project manager will be responsible for managing and tracking the program's budget and schedule. Central Hudson will provide a quarterly report to the Commission with updates to actuals spent versus budget and milestones achieved. All program partners will provide updates to the project manager for inclusion in the quarterly reports and any other ad hoc reporting requirements.

The steps detailed in Table 9 conform to Central Hudson's internal IT project plan templates, which are itemized within the Appendices and will be updated on a regular basis.

A) Project Plan

a) Pre Go-Live Strategy

Within the first 12 months, October 2015 – October 2016, the project team will establish the foundational elements of CenHub. This is inclusive of:

- Integrating Simple Energy's solution (CenHub Insights) into the Central Hudson website – (4/1/16)
- Setting up the Marketplace (CenHub Store) – (4/1/16)
- Advancing the Web/Mobile/Social experience through migration to responsive design – (7/31/16)
- and Offering the Advanced Data Services package to residential customers and marketing CenHub through various channels – (9/30/16)

Figure 3: Project Schedule

Description	Ownership	2015		2016			
		Q3	Q4	Q1	Q2	Q3	Q4
Phase0 : Program Development							
Activity1: Demo Project Approval	CHGE						
Business Case Approval	CHGE						
Implementation Plan	CHGE						
Milestone: Gain Regulatory Approval	CHGE						
Activity2: Partner Negotiations							
MSA completion (Simple Energy)	CHGE/SimpleEnergy						
Contract Negotiations(Simple Energy)	CHGE/SimpleEnergy						
SOW Approval (SimpleEnergry)	CHGE/SimpleEnergy						
Contract Negotiations & SOW Approval(Itron)	CHGE/Itron						
Contract Negotiations & SOW Approval(Open Text)	CHGE/Opentext						
Milestone: Contract Negotiation completed							
Phase1: CenHub Launch							
Activity1: Define Scope of Phase1 & 2							
Requirement capture Meetings/workshops	CHGE/SimpleEnergy						
Document requirements	CHGE/SimpleEnergy						
Activity2: Data Sharing							
Historical data transfer	CHGE						
Historical data load	Simple Energy						
Customer selection/Program design	Simple Energy						
Activity3: Energy Insight Reports (EIR)							
Report Creation, Review and Approval	CHGE/SimpleEnergy						
Configure paper report / mailing	Simple Energy						
Milestone: Phase 1 EIR - Go-Live (Jan 20, 2016)	Simple Energy						
Activity4: Platform Configuration							
Deploy Marketplace structure	Simple Energy						
Deploy Engagement Portal Structure	Simple Energy						
Configure Marketplace	Simple Energy						
Configure Engagement Portal	Simple Energy						
Activity 5: Energy Exchange Marketing Content Creation							
Messaging creation & review	CHGE/SimpleEnergy						
Final Marketing Content Review/Approval	CHGE/SimpleEnergy						
Activity 6:Single Sign ON (SSO)							
SSO Configuration	Opentext						
SSO validations	CHGE/Opentext						
Activity 7:Customer Community Outreach							
PR Push to customers	CHGE/SimpleEnergy						
Marketing & advertisement	CHGE/SimpleEnergy						
Activity 8:Testing							
Functional Testing	Simple Energy						
Performance Testing	Simple Energy						
User Acceptance Testing	CHGE/SimpleEnergy						
Milestone: Phase 1 Go-Live (April 01,2016)							

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Description	Ownership	2015		2016				2017				2018			
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Phase2: Advanced Data Services															
Standup Managed Services Environment	ITRON														
Configuration of OIW / IEE	ITRON														
Data Integration with Genhub 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(September 30,2016)															
Activity XX:Test Additional Hypothesis															
Smart Meter config in energy exchange	CHGE/SimpleEnergy														
Product/Service Enhancement on EE	CHGE/SimpleEnergy														
Enhanced targeted marketing (SEO, Social, PA)	CHGE/SimpleEnergy														
MileStone:Phase2 Enhanced Energy Exchange (September 30,2016)															
Activity XX:Converge															
Converge Marketplace Integration	Simple Energy/Converge														
Addition of energy efficient products on marketplace															
Addition of more Energy Efficient products															
Responsive Design & Web/Mobile Social Strategy Enhancements															
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 advertising space															
Bill Calculator Integration															
Bill 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															

Project Milestone

Evaluation & Prioritization Period for scope and schedule refinement

b) Post Go-Live Strategy

In parallel to the Pre Go-Live Strategy Central Hudson will be evaluating features and functionality that can be added to the user experience through CenHub. This is inclusive of new products and services, dynamic rates, new partnerships and new ways to deliver information and insight to customers. Central Hudson will be defining "user stories" and analyzing the customer's journey through interactions with the site to identify potential opportunities for enhancement of the overall customer Digital (Web/Mobile/Social) experience across all channels and prioritize the enhancements into a release schedule throughout the life of the project, through 2018. Defined release schedules to send out "updates" are typical of software development projects and current day technology items and have become an everyday expectation of customers. By taking this approach Central Hudson will build a reputation with customers of delivering solutions and choice on a schedule that is atypical of the utility industry. This will ensure that information is always fresh, customers can rely on Central Hudson as a trusted source and provider and prove that we understand our customers and are putting forth the effort to deliver on their needs and wants.

Feature enhancements will be evaluated according to:

- Alignment with July 1, 2015 filing and Staff's Assessment Recommendations
- Alignment with Central Hudson's Digital Strategy
- Alignment with Industry Trends and Customer Expectation
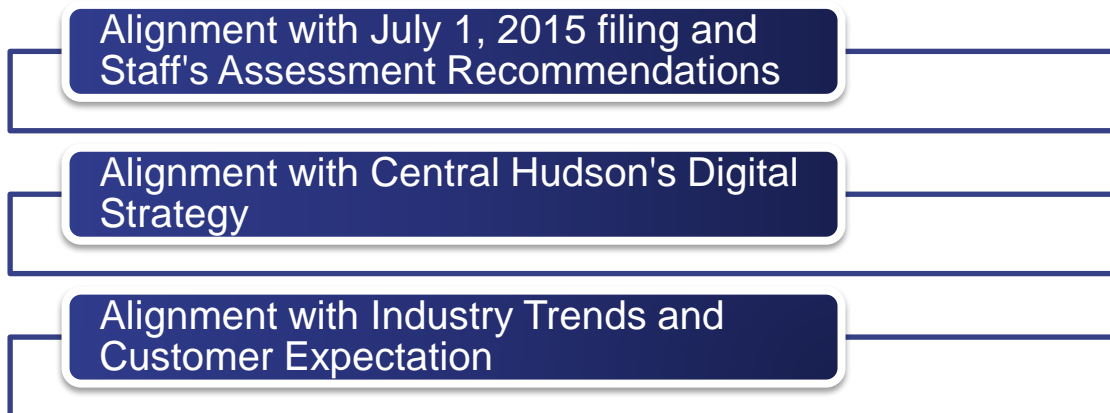
The release schedule will be defined as the team establishes a baseline of performance on the development lifecycle during the first year of the project. This first year will identify the speed at which the team can deliver feature development within the website and the ability to investigate, vet and secure new partnerships. The team is already in talks with Comverge to determine the roadmap for integrating their solution for the Targeted Demand Response program into the Exchange and with GreenLeaf to discuss the integration of their self-serve commercial lighting store. Offerings like these will be built into one of the feature releases in the 2016-2018 timeline.

B) Financials

The budget represents estimates for Phases 1-3 of the program. The quarterly reports submitted to the Commission will reflect any changes to these projections and the overall budget.

Revenues from the program will come from product sales and subscriptions to the Advanced Data Services package. Central Hudson will explore additional possibilities to introduce new revenue streams throughout the life of the program in the following areas:
- Offering billing services
- Sales of advertising space
- Partner data subscriptions
- Exploring partnership leads and advanced opportunities

Table 9 – Revenue Requirement Calculation[3]

Year	Rate Base	Cost of Capital	One-Time Expense	Ongoing Labor Exp	Ongoing Non - Labor Exp	Depreciation	Annual Revenue Requirement
1	516,465	48,662	60,000.00	414,777	565,000	120,000	1,208,439
2	908,223	85,574	-	427,220	576,300	240,000	1,329,095
3	693,641	65,356	-	440,037	587,826	240,000	1,333,219
4	501,840	47,284	-	453,238	599,583	240,000	1,340,105
5	279,915	26,374	-	466,835	611,574	240,000	1,344,783
6	89,937	8,474	-	480,840	623,806	120,000	1,233,120
7	9,979	940	-	495,265	636,282	-	1,132,487
8	-	-	-	510,123	649,007	-	1,159,131

Table 10 – CenHub Spending Details

	Year	Amount
Single Sign On (Capital Expenditure)	Year - 1	520,000
Web Content Management & Analytics (Capital Expenditure)	Year - 1	650,000
Customer Interface (Capital Expenditure)	Year - 1	30,000
Program Setup and Administration (one-time expense)	Year - 1	60,000
1st Year Ongoing Maintenance	Ongoing	979,777

	Year	Amount
Advanced Meter Platform Data Interface (Capital Expenditure)	Year - 1	71,000
Smart Meters: 4,000 at a cost of $209/meter (net)	Year (1-4)	833,800
1st Year Ongoing Maintenance	Ongoing	141,277
Communications Expense: 4,000 at a cost of $27/meter	Ongoing	108,480

Table 11 – CenHub Cost per Residential Customer

Year	CenHub Costs	CenHub Store Revenue	After-tax Revenues	Net Costs	Monthly Cost per
1	1,208,439	$66,693	$40,016	1,168,423	$0.38
2	1,329,095	$97,732	$58,639	1,270,455	$0.42
3	1,333,219	$426,644	$255,986	1,077,233	$0.35
4	1,340,105	$441,356	$264,813	1,075,292	$0.35
5	1,344,783	$456,067	$273,640	1,071,143	$0.35
6	1,233,120	$472,094	$283,256	949,863	$0.31
7	1,132,487	$488,684	$293,210	839,277	$0.27
8	1,159,131	$505,857	$303,514	855,617	$0.28

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[3] Ongoing Non-Labor Expense column does not reflect an approximately $500,000 (pre-tax) annual increase in customer value. The increase in customer value is due to the reduction of costs associated with the behavioral energy efficiency program relative to the original ETIP filing. The reduction in cost has been reallocated to other programs within the 2016 ETIP in order to provide greater value to Central Hudson's customers.

Table 12 – Advanced Data Services Subscription Revenues

Year	Subscribers	Revenue Requirement	Platform Service Revenue	PSR as % of Rev Requirement	Monthly PSR / Subscriber
1	400	$43,443	$23,952	55%	$4.99
2	1,200	$130,330	$71,856	55%	$4.99
3	2,400	$260,660	$143,712	55%	$4.99
4	4,000	$434,433	$239,520	55%	$4.99
5	4,000	$434,433	$239,520	55%	$4.99
6	4,000	$434,433	$239,520	55%	$4.99
7	4,000	$434,433	$239,520	55%	$4.99
8	4,000	$434,433	$239,520	55%	$4.99

Table 13 – Revenues from Product Sales[4]

Year	# of Transactions	Average Revenue per Transaction	CenHub Revenues
1	8,030	$ 8.31	$ 66,693
2	8,327	$ 11.74	$ 97,732
3	8,624	$ 49.47	$ 426,644
4	8,922	$ 49.47	$ 441,356
5	9,219	$ 49.47	$ 456,067
6	9,543	$ 49.47	$ 472,094
7	9,878	$ 49.47	$ 488,684
8	10,226	$ 49.47	$ 505,857

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[4] CenHub Revenues reflect Central Hudson's 50% share of the gross margin resulting from products sold within the CenHub Store.

Section 4: Reporting Structure

Table 14: Reporting Expectations

Target Date	Milestone	Target	Actual	Variation
4/1/2016	***Primary Checkpoint*** *CenHub Phase 1 - Go Live Date* *Quarterly Projections included within reports*	*4/1/2016*		
7/31/2016	***Primary Checkpoint*** *Implementation of Web Content Management and Migration to Responsive Design*	*All www.centralhudson.com and My Account pages migrated*		
9/1/2016	***Primary Checkpoint*** *Cumulative Capital Expenditures* *Annual Maintenance Expense[5]* *Quarterly Projections included within reports*	*$1,200,000* *$1,100,000*		
4/1/2017	***Primary Checkpoint*** *Enrolled CenHub Customers as % of total Residential Customer Base* *Quarterly Projections included within reports*	*60%*		
4/1/2017	***Primary Checkpoint*** *Product Purchases* *Quarterly Projections included within reports*	*8,000*		
9/15/2016	***Primary Checkpoint*** *CenHub Phase 2 - Go Live Date* *Quarterly Projections included within reports*	*9/15/2016*		
4/1/2017	***Secondary Target & Quarterly Reporting*** *% of Enrolled CenHub Customers that Competed Digital Home Energy Profile*	*5%*		
4/1/2017	***Secondary Target & Quarterly Reporting*** *CenHub Platform Service Revenues*	*$40,000*		
9/15/2017	***Secondary Target & Quarterly Reporting*** *Advanced Data Services Cumulative Deferral*	*$125,000*		
9/15/2017	***Secondary Target & Quarterly Reporting*** *Advanced Data Services Subscriptions*	*1,000*		
9/15/2017	***Secondary Target & Quarterly Reporting*** *Advanced Data Services Subscriptions PSR*	*$24,000*		

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[5] Excludes depreciation expense.

Table 15: Prior Activities

Summary of Prior Activities	
Activities	*Establish Central Hudson Project Team*
Milestones	*Secured contract with Simple Energy, Refined pricing and revenue share percentage adjusted to 50%*
Lessons Learned	*Revisiting Central Hudson website authentication strategy based on partner recommendations and authentication standards*
Changes Made Based on Lessons Learned	*Central Hudson to utilize SAML 2.0 authentication standards to enable SSO*

Table 16: Future Activities

Summary of Future Activities	
Activities	Requirements gathering and refinement of the project schedule and associated tasks.
Milestones	• Secure branding and trademarking of CenHub, • Sign off on requirements
Risks	• Scope creep • Data and integration requirements
Actions to Mitigate Risk	• Prioritization of requirements mapped to the project schedule • Partnership with experienced vendors and strategic partners and use of recognized standards and integration methods

Section 5: Appendices

A) CenHub RACI Chart

Table A-1: Activities

R - Responsible, A - Accountable; C - Consulted, I - Informed, V - Verifies, S - Signs / Approves

Associated Workflow ID	Activity	Program Manager - ETS (ProgM)	Project Manager - CH (PM)	Engagement Manager - Simple Energy	Project Manager - Itron	Business Analyst - ETS/UX (BA)	BU SME - ETS/EE	BU SME - Call Center	Web Technical Lead - IT	Tech Support Technical Lead - IT	Web UX Analyst - ETS	Web Content Editor - Corporate Communications	WEM Competency Center - OpenText	SSO Support Resource - Cognizant	IT Cyber Security Specialist	IT Application Support	IT Tech Support	IT Director - DBA / IT Strategic Initiatives - BI	IT Director (Director Accountable for Project)	Program Governance Committee	BU Manager - ETS	Program Marketing - Corporate Communications	Program Marketing - Simple Energy	Meter Reading - CH	Meter Shop - CH	Digital Interactive Working Group	Monthly Billing Team	ITSC
PL.1.0	**Initiation Phase**																											
PM.I.310	Assign Startup Team	R																										
PM.I.315	Analyze Preliminary Project Documentation	A	R	A	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C			C	C	C	C	I	I	
PM.I.320	Prepare Work Breakdown Structure with Associated Effort for Portal, Marketplace & SSO	R	A	A	C	C	C	C	C	C			I			C	C	V										
PM.I.320	Prepare Work Breakdown Structure with Associated Effort for WEM	R	A	C		I			R	R	C	C	R	C		C		V									I	
PM.I.320	Prepare Work Breakdown Structure with Associated Effort for Program Marketing	R	A	C	C	I	C	C				I	I								I	R	R				I	I
PM.I.320	Prepare Work Breakdown Structure with Associated Effort for Advanced Analytics Package	R	A	C	R	C			C	C	C	C	C			C	C	C	V		I	I		C	C	I	I	
PM.I.325	Compile Initiation Phase Deliverables*	**Refer to Deliverables RACI**																										
PM.I.330	Review & Obtain Approval from Key Stakeholders**	**Refer to Deliverables RACI & Project Profile - Approvals Profile**																										
PM.I.340	Conduct Project Kick-off Meetings	A	R	R	C	I	I	I	I	I	I	I	I	I	I	I	I	I	I		I	I	I	I	I	I	I	I
PL.2.0	**Analysis Phase**																											
PM.A.410	Review Initiation Deliverables	A	R	A	A	R	C	C	C	C	C	C	C	C	C	C	C	C	C			C	C	C	I	I	I	
SD.A.415	Define Requirements for Portal, Marketplace & SSO	R	R	A	C	A	C	C	C	C	C	C	C	I		I	C		V		C	I	I			I		
SD.A.415	Define Requirements for WEM	R	R	C		I			R	R	C	C	A	C	C	C		V			I					I		
SD.A.415	Define Requirements Program Marketing	A	R	C	C	C	I	I				I	I								C	R	R				I	I
SD.A.415	Define Requirements Advanced Analytics Package	R	R	C	R	A			C	C	C	C	C			C	C	C	V		I	I	I	C	C	I	I	
PM.A.415	Revise Work Breakdown Structure for Portal, Marketplace & SSO	R	A	A	C	I	I	I	I	I	I	I	I	I		I	I		V		I	I	I			I		
PM.A.415	Revise Work Breakdown Structure WEM	R	A	C		I			I	I	I	I	I	I	I	I	I		V		I					I		
PM.A.415	Revise Work Breakdown Structure for Program Marketing	R	A	C	C	I	I	I				I	I								I	I	I				I	I
PM.A.415	Revise Work Breakdown Structure for Advanced Analytics Package	R	A	C	R	I			I	I	I	I	I				I	I	I	V	I	I	I	I	I	I	I	
PM.A.420	Compile Analysis Phase Deliverables	**Refer to Deliverables RACI**																										
PM.A.425	Review & Obtain Approval from Key Stakeholders	**Refer to Deliverables RACI & Project Profile - Approvals Profile**																										
PL.3.0	**Design Phase**																											
SD.D.510	Review Analysis Deliverables	A	R	A	A	R	C	C	C	C	C	C	C	C	C	C	C	C	C			C	C	C	I	I	I	
SD.D.515	Compile Design(s)	C	C	R	R	R		C	A	C	C	C	R	R	C		C	I	I	I		C	C			I		
SD.D.520	Compile Data Conversion Approach & Perform Data Mapping (if applicable)	C	C	R	R	R		C	A	C	C	C	R	R	C		C	I	I	I		C	C			I		
PM.D.515	Compile Draft Training Approach & Plan / Implementation Approach	R	R	A	A	A	C	C	C	C	C	C	C			I			I		I	I	I	I	I	I	I	I
SD.D.525	Compile Technology Architecture for Portal, Marketplace & SSO	C	C	R	R	R		C	A	C	C	C	R	R	C		C	I	I	I		C	C			I		
SD.D.525	Compile Technology Architecture WEM	C	C	C	C	R		C	R	C	C	C	A	R	C		C	I	I	I		C	C			I		
SD.D.525	Compile Technology Architecture for Program Marketing (if needed)	C	C	A	R	R		C	R	C	C	C	R	R	C		C	I	I	I		R	R			I		
SD.D.525	Compile Technology Architecture for Advanced Analytics Package	C	C	R	A	R		C	R	C	C	C	R	R	C		C	I	I	I		R	R			I		
PM.D.520	Compile Design Phase Deliverables	**Refer to Deliverables RACI**																										
PM.D.525	Revise Work Breakdown Structure*	R	A	R	R	C	I	C	C	C	C	C	R	C	C	I	C	V	I	I	I	I	I	C	C	I	I	I
PM.425	Review & Obtain Approval from Key Stakeholders	**Refer to Deliverables RACI & Project Profile - Approvals Profile**																										

Code	Task																												
PL.4.0	**Construction Phase**																												
SD.C.610	Review Design Deliverables for Portal, Marketplace & SSO	A	R	R	I	I	I	I	R	I	R	R	I	I	I	I	I		I	I	I	I	I	I	I	I	I		I
SD.C.610	Review Design Deliverables WEM	A	R	R	I	I	I	I	R	I	R	R	I	I	I	I	I		I	I	I	I	I	I	I	I	I		I
SD.C.610	Review Design Deliverables Program Marketing	A	R	R	I	I	I	I	R	I	I	I	I	I	I	I	I		I	I	I	R	R	I	I	I	I		I
SD.C.610	Review Design Deliverables Advanced Analytics Package	A	R	A	R	I	I	I	R	I	I	I	I	I	I	I	I		I	I	I	I	I	I	I	I	I		I
SD.C.615	Compile Test Plan & Test Scripts MarketPlace & Portal	I	I	R	I	A	I	I	R	I	C	C	R	C			I	I	I	I	I	I				I			
SD.C.615	Compile Test Plan & Test Scripts WEM	I	I	I	I	A	I	I	R	I	C	C	R	C			I	I	I	I	I	I				I			
SD.C.615	Compile Test Plan & Test Scripts Advanced Analytics Package	I	I	I	R	A	I	I	R	I	C	C	I	C			I	I	I	I	I	I			I	I	I		
SD.C.620	Draft Data Conversion Plan (if applicable)	I	I	R	R	I	I		C	R	I	C	R	I			I	A	I	I	I					I			
SD.C.625	Construct / Configure / Build Solution(s) & Unit Testing of Portal, Marketplace & SSO	I	I	R	I	I			A	C	R	R	R	R			I	I	I	I	I					I			
SD.C.625	Construct / Configure / Build Solution(s) & Unit Testing WEM	I	I	R	I	I			A	C	R	R	R	R			I	I	I	I	I					I			
SD.C.625	Construct / Configure / Build Solution(s) & Unit Testing Advanced Analytics Package	I	I	R	R	I			A	C	R	R	R	R			I	I	I	I	I				I	I	I		
PM.C.615	Update Training Approach & Plan	R	R	A	A	A	C	C	C	C	C	C	C			I		I	I	I	I	I	I	I	I	I	I	I	I
SD.C.630	Compile Draft Implementation Plan & Disaster Recovery Plan	R	R	R	R	R	C	C	A	R	C	C	C	C			I		I	I	I	I	I	I	I	I	I	I	I
PM.C.620	Compile Construction Phase Deliverables	**Refer to Deliverables RACI**																											
PM.C.625	Revise Work Breakdown Structure	R	A	R	R	C	I	C	C	C	C	R	C	R	C	C	I	C	C	I	I	I	I	C	C	I	I	I	
PM.425	Review & Obtain Approval from Key Stakeholders	**Refer to Deliverables RACI & Project Profile - Approvals Profile**																											
PL.5.0	**Test Phase**																												
SD.T.710	Perform Functional Integration Testing / Record Results for Portal, Marketplace & SSO	I	I	R	I	A	I	I	R	I	R	R	R	C			I	I	I	I	I	I				I			
SD.T.710	Perform Functional Integration Testing / Record Results WEM	I	I	R	I	A	I	I	R	I	R	R	R	C			I	I	I	I	I	I				I			
SD.T.710	Perform Functional Integration Testing / Record Results Advanced Analytics Package	I	I	R	I	A	I	I	R	I	R	R	R	C			I	I	I	I	I	I			I	I	I		
SD.T.715	Perform Other Tech Testing / Finalize Data Conversion Plan for Portal, Marketplace & SSO	I	I	R	R	I	I		A	R	I	I	R	I			I	A	I	I	I					I			
SD.T.715	Perform Other Tech Testing / Finalize Data Conversion Plan WEM	I	I	R	R	I	I		A	R	I	I	R	I			I	A	I	I	I					I			
SD.T.715	Perform Other Tech Testing / Finalize Data Conversion Plan Advanced Analytics Package	I	I	R	R	I	I		A	R	I	I	R	I			I	A	I	I	I					I			
SD.T.720	Resolve Defects / Errors / Defect Unit Testing for Portal, Marketplace & SSO	I	I	R	R	I	I		A	R	I	I	R	I			I	A	I	I	I					I			
SD.T.720	Perform Functional Integration Testing / Record Results WEM	I	I	R	I	A	I	I	R	I	R	R	R	C			I	I	I	I	I	I			I	I	I		
SD.T.720	Perform Functional Integration Testing / Record Results Advanced Analytics Package	I	I	R	I	A	I	I	R	I	R	R	R	C			I	I	I	I	I	I			I	I	I		
SD.T.725	Conduct Train-the-Trainer Trainings (if applicable)	I	I	A	A	R	I	R									I		I	I	I					R	R		
SD.T.730	Compile Operations Instructions & Support Transition Docs	I	I	R	R	I	I		A	R	I	I	R	I			I	R	I	I	I					I			
SD.T.735	Perform System / User Acceptance Testing / Record Results for Portal, Marketplace & SSO	I	I	R	I	I	I		A	R	I	R	R	I			I	A	I	I	I					I			
SD.T.735	Perform Functional Integration Testing / Record Results WEM	I	I	R	I	I	I		A	R	R	R	R	I			I	A	I	I	I					I			
SD.T.735	Perform Functional Integration Testing / Record Results Advanced Analytics Package	I	I	R	I	I	I		A	R	R	R	R	I			I	A	I	I	I					I			
PM.T.715	Revise Work Breakdown Structure	R	A	R	R	C	I	C	C	C	C	C	R	C	C	I	C	V	I	I	I	I	I	C	C	I	I	I	
SD.T.740	Finalize Change Tickets MarketPlace & Portal	I	I	R	R	I	I		A	R	I	I	R	I			I	R	I	I	I					I			
SD.T.740	Finalize Change Tickets WEM	I	I	R	R	I	I		A	R	I	I	R	I			I	R	I	I	I					I			
SD.T.740	Finalize Change Tickets Advanced Analytics Package	I	I	R	R	I	I		A	R	I	I	R	I			I	R	I	I	I					I			
SD.T.745	Finalize Implementation Plan	R	R	R	R	R	C	C	A	R	C	C	C	C			I		I	I	I	I	I	I	I	I	I	I	I
PM.T.720	Compile Test Phase Deliverables	**Refer to Deliverables RACI**																											
PM.425	Review & Obtain Approval from Key Stakeholders	**Refer to Deliverables RACI & Project Profile - Approvals Profile**																											
PL.6.0	**Implementation**																												
SD.I.820	Execute Implementation Plan of Portal, Marketplace & SSO	R	R	R	R	R	C	C	A	R	R	R	C	R			I		I	I	I	I	I	I	I	I	I	I	I
SD.I.820	Execute Implementation Plan WEM	R	R	R	R	R	C	C	A	R	R	R	R	I			I		I	I	I	I	I	I	I	I	I	I	I
SD.I.820	Execute Implementation Plan Advanced Analytics Package	R	R	R	R	R	C	C	A	R	R	R	C	I			I		I	I	I	I	I	I	R	R	I	I	
SD.I.825	Execute Data Conversion Plan of Portal, Marketplace & SSO	I	I	R	R	R	I		R	R	I	C	R	I			I	A	I	I	I					I			
SD.I.825	Execute Data Conversion Plan WEM	I	I	R	R	R	I		R	R	I	C	R	I			I	A	I	I	I					I			
SD.I.825	Execute Data Conversion Plan Advanced Analytics Package	I	I	R	R	R	I		R	R	I	C	R	I			I	A	I	I	I			C	C	I			
PM.I.820	Execute Training Plan	R	R	A	A	A	C	C	C	C	C	C	C			I		I	I	I	I	I	I	I	I	I	I	I	I
PM.I.825	Revise Work Breakdown Structure	R	R	R	R	R	C	C	A	R	C	C	C	C			I		I	I	I	I	I	I	I	I	I	I	I
PL.7.0	**Post Implementation**																												
SD.PI.910	Provide Warranty Coverage	I	I	A	A	A	I	I	A	R	R	R	A	R			I		I	I	I	I	I	I	I	I	I	I	I
SD.I.915	Retire Technology Website & Tokens	I	I	I	I	I		I	A	R	I	I	I				I		I	I	I	I	I	I	I	I	I	I	I
PM.PI.910	Compile Lessons Learned	A	R	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	C	C	C	C	C	C	I		I	
PM.PI.915	Compile Benefits Realization (if applicable)	A	R	C	C	C	C	C	C	C	C	C	C	C	C	C	C	I	I	C	C	C	C	C	C	I		I	
SD.PI.920	Transition to Support / Operations	I	I	R	R	R	I		R	R	I	I	I				I		I	I	I			I	I	I	I	I	
SD.PI.925	Produce App Support / Ops Checklists	I	I	R	R	R	I	I	A	R	C	C	R	C			I		I	I	I	I			I	I	I	I	I
PM.PI.920	Compile Post Implementation Deliverables	**Refer to Deliverables RACI**																											
PM.425	Review & Obtain Approval from Key Stakeholders	**Refer to Deliverables RACI & Project Profile - Approvals Profile**																											

Table A-2: Deliverables

PROJECT LIFECYCLE (PL) DELIVERABLES RACI-VS CHART - ALL PHASES

R - Responsible, A - Accountable; C - Consulted, I - Informed, V - Verifies, S - Signs / Approves

Associated Workflow ID	Deliverable	Program Manager - ETS (PrgmM)	Project Manager - CH (PM)	Engagement Manager - Simple Energy	Project Manager - Itron	Business Analyst - ETS/UX (BA)	BU SME - ETS/EE	BU SME - Call Center	Web Technical Lead - IT	Tech Support Technical Lead - IT	Web UX Analyst - ETS	Web Content Editor - Corporate	Communications	WEM Competency Center - OpenText	SSO Support Resource - Cognizant	IT Cyber Security Specialist	IT Application Support	IT Tech Support - DBA / IT Strategic Initiatives - BI	IT Director (Director Accountable for Project)	Program Governance Committee	BU Manager - ETS	Program Marketing - Corporate	Communications	Program Marketing - Simple Energy	Meter Reading - CH	Meter Shop - CH	Digital Interactive Working Group	Monthly Billing Team	ITSC
PL.1.0	**Initiation Phase**																												
PM.I.325	Project Charter	A,S	R	R	R	C	C	C	C	C	C	C	C	C	C	C	C		I	S	S	S	C	C	C	C	C	C	I
PM.I.325	Project Profile	A,S	R																	S	I	S							I
PM.I.325	Technology Assessment	I	I					C	A				C	C	C	C	C	S	I	I							I		I
PL.2.0	**Analysis Phase**																												
PM.A.420	Requirements Definition	R	R	R	R	A	C	C	C	C	C	C	R	C	C	C		I	S	S	C	C	C	C	I	I	I		
PM.A.420	Business Process Definition (if applicable)	R	R	R	R	A	C	C	C	C	C	C	C	C	C	C		I	S	S	C	C	C	C	I	I	I		
VM.310	IM Purchasing Process (RFP, Vendor Selection Matrix, Recommendation Report, Contract(s))	A	C			C	C	C	C	C	C	C			C	C		R	S	R				I			I		
PM.A.420	Requirements Traceability Matrix	S	I	R	R	A	C	C	R		C		C	R	C	C			I	I	I			C	C	I		I	
PL.3.0	**Design Phase**																												
PM.D.520	Functional Design	R,S	R	R	R	A	C	C	R	C	R	R	R	R	I			S	S	S		I	I	I	I		I		
PM.D.520	Technical Design	I	I	R	R	C		A	R	I	I	R	R	C	C	R	S		I			I			I		I		
PM.D.520	Infrastructure Design	I	I			I		R	A			C	C	C	C		S		I			I			I		I		
PM.D.520	Process Design	R,S	R	R	R	A	C	C	R	C	R	R	R	R	I			S	S	S		I	I	I	I		I		
PM.D.520	Data Conversion Approach	I	I	C	C	R			R	R		C	C	C	C	C	A	S		I						I		I	
PM.D.520	Draft Training Approach and Plan	C,S	R	C	C	A	C	C	C	C	C	C	R	C		I		I	I	I	I	I	I	I	I		I		
PM.D.520	Technology Architecture	I	I	C	C	I		R	A	I	I	R	R	I	I	C	S		I			I			I	I	I		
PM.D.520	Implementation Approach	C,S	I	R	R	R		I	A	R	R	R	R	C		I	I	S	S	S	I	I	I	I	I	I	I		
PM.D.520	Updated Requirements Traceability Matrix	S	I	R	R	A	I	C	R	I	C	C	R	C				I	I	I				C	C	I		I	
PL.4.0	**Construction Phase**																												
PM.C.620	Disaster Recovery Plan	S	I	C	C	C	I	I	A	R	C	C	C	C		I		S	S	S	I	I	I	I	I	I	I		
PM.C.620	Test Plan	S	R	R	R	A	C	C	R	C	R	R	R	R	I			S	S	S		I	I	I			I		
PM.C.620	Unit Test Script	I	I	R	R	I			A	I	R	R	R	R				S	I	I		I	I	I			I		
PM.C.620	Functional Test Script	S	R	R	R	A	C	C	R	C	R	R	R	R	I			S	I	I		I	I	I			I		
PM.C.620	Performance & Stress Test Script	I	I	R	R	I			A	R	C	C	R	C				S	I	I		I	I	I			I		
PM.C.620	Data Conversion Plan	I	I	C	C	R			R	R		C	C	C	C	A	S		I	I						I		I	
PM.C.620	Updated Training Approach and Plan	C,S	R	C	C	A	C	C	C	C	C	C	R	C		I		I	I	I	I	I	I	I	I		I		
PM.C.620	Draft Implementation Plan	C,S	I	R	R	R		I	A	R	R	R	R	C		I	I	S	S	S	I	I	I	I	I	I	I		
PM.C.620	Updated Requirements Traceability Matrix	S	I	R	R	A	I	C	R	I	C	C	R	C				I	I	I				C	C	I		I	

		PL.5.0	Test Phase

PM.T.720	Updated Functional Test Scripts with Test Results	S	R	R	R	A	C	C	R	C	R		R	R	R	I			S	I	I				I	I	I		I
PM.T.720	Updated UAT Test Scripts with Test Results	S	R	R	R	A	C	C	R	C	R		R	R	R	I			S	I	I				I	I	I	I	
PM.T.720	Updated Technical Test Scripts with Test Results	I	I	R	R			A	R	C		C	R	C					S	I	I				I	I	I	I	
PM.T.720	Finalized Training Approach and Plan	C,S	R	C	C	A	C	C	C	C	C	C	C	R	C		I			I	I	I	I	I	I	I	I	I	I
PM.T.720	Operations Instructions	I	I	R	R	I		A	R	C		C	R	C		I			S	I	I				I	I	I	I	
PM.T.720	Application Support Transition References	I	I	R	R	I		A	R	C		C	R	C		I			S	I	I				I	I	I	I	
PM.T.720	Updated Requirements Traceability Matrix	S	I	R	R	A	I		C	R	I	C	C	R	C				I	I	I				C	C	I	I	
		PL.6.0	Implementation																										
PM.T.720	Finalized Implementation Plan**	C,S	I	R	R	R		I	A	R	R	R	R	C		I		I	S	S	S	I		I	I	I	I	I	I
		PL.7.0	Post Implementation																										
PM.PI.920	Lessons Learned	A,S	R	C	C	C	C	C	C	C	C	C	C	C	C	C	C	S	S	S	C		C	C	C	I		I	
PM.PI.920	Benefits Realization (if applicable)	A,S	R	C	C	C	C	C	C	C	C	C	C	C	C	C	C	S	S	S	C		C	C	C	I		I	
PM.PI.920	Application Support Checklist(s)	I	I	R	R	I		A	R	C		C	R	C		I			S	I	I				I	I	I	I	
PM.PI.920	Operations Checklist(s)	I	I	R	R	I		A	R	C		C	R	C		I			S	I	I				I	I	I	I	

B) CenHub Project Profile

Associated Workflow ID	Project Lifecycle Phase	Deliverables	Deliverable Description	Required? Y/N	Reason If Exempt	Author	Group To Approve Exemption (Outside of PMO)
PM.I.325	Initiation	Project Charter	Provides an understanding of the project, the reason it is being conducted, its objectives, general scope, deliverables, milestones and cost estimates to obtain initial approval for the project to proceed.	Yes			Sponsor, PM & IT Manager
PM.I.325	Initiation	Project Profile	Scales the Project Lifecycle workflow activities and deliverables to match the project's needs and provides reasoning for and approval for any exemptions to the standard activities and deliverables.	Yes			Sponsor, PM & IT Manager
PM.I.325	Initiation	Technology Assessment	Provides a technical overview of the project, identifies any infrastructure impacts resulting from the project, and displays any existing or expected Architecture Diagram(s) related to the project.	Yes			Sponsor, PM & IT Manager
PM.A.420	Analysis	Requirements Definition	Confirms the project details, identifies the project constraints, and details all functional, data, and non-functional requirements.	Yes			Sponsor, PM, EE Manager & IT Manager
PM.A.420	Analysis	Business Process Definition (if applicable)	Identifies the 'As-is' or existing business processes impacted by the project, as required, identifies the 'To-be' or proposed business processes, and notes the gaps between the 'As-is' and 'To-be' processes.	Yes			Sponsor, PM
VM.310	Analysis	IT Purchasing Process Docs (RFP, Vendor Selection Matrix, Recommendation Report, Contract(s))	Multiple (see Purchasing Purchasing deliverables for specific descriptions)	Yes			Sponsor, PM & IT Manager, Supply Chain Manager
PM.A.420	Analysis	Requirements Traceability Matrix	Establishes a listing of all of the identified requirements for the project where all future activities related to the requirement can be traced. The matrix will list the requirement, the associated design to meet the requirement, the construction object / item associated with the design and requirement, the test script(s) and result(s) for the requirement; all tracing back to the requirement.	Yes			Sponsor, PM & IT Manager

PM.D.520	Design	Functional Design	Provides an overview of the Functional Design to include the business functionality, major features, user procedures, security considerations, and an information flow diagram; details the User Interface design including an overall logic chart, the expected menu map, and screen designs; and details the System Interface and Report designs	Yes				Sponsor, PM & IT Manager
PM.D.520	Design	Technical Design	Detail the Technical design specifications for Databases, Programs, Sessions, Files, Transactions, Forms, Middleware Components, Interfaces, and Scripts; Detail the associated Security design factors and the Operational Processes designs	Yes				Sponsor, PM & IT Manager
PM.D.520	Design	Data Conversion Approach	Describes the type of data to be converted from the existing system, files, or from hard copy; the approach desired to complete the data migration; identifies where and when the data is to be obtained and where and when it will be used in the new system; and identifies any data conversion risks and assumptions	Yes				PM & IT Manager
PM.D.520	Design	Draft Training Approach and Plan	Draft lists the high level approach to be used to complete the training associated with the project solution(s); defines the high level training requirements, goals / content, delivery methods, special requirements, and dependencies; and identifies any training risks and assumptions; describes the overall training plan to include the trainees / roles to be trained, courses / topics to be trained, the dates / duration of the courses, the training environments, and the instructors for the training.	Yes				Sponsor, PM, EE Manager, Customer Service Manager & IT Manager
PM.D.520	Design	Implementation Approach	Provides an overview of work to be completed in order to ensure the successful production cutover; provides information regarding the user population, geographic sites, and the impact on other systems or groups; compiles a high-level listing of the steps involved for the solution(s) implementation and the associated sequencing of the steps; and identifies any implementation risks and assumptions	Yes				PM Manager
PM.D.520	Design	Technology Architecture	Describes the technology environment detailing the architecture choices including the hardware platform, operating system, connections, and protocols, and software; depicts the architecture in a diagram to illustrate the hardware and software used by the application and the connections and protocols used to communicate with other systems; and identify any Technology Architecture risks and assumptions	Yes				PM & IT Manager
PM.D.520	Design	Updated Requirements Traceability Matrix	Updated with Design linkage. (See Analysis phase for definition)	Yes				PM & IT Manager
PM.C.620	Construction	Disaster Recovery Plan	Details an overview of the Disaster Recovery (DR) plan, compiles a DR Manual, lists all backup resources, defines the business continuity plans, identifies the DR teams, details the system recovery activities, and defines the maintenance and testing of the DR plans.	Yes				IT Technical Manager
PM.C.620	Construction	Test Plan	Details an overview of what is going to be tested; describes the strategy and scope of testing for the project to include the items to be tested, types of testing, descriptions for each test type, the tools, environments, equipment, and data needed for testing, and who will participate in the testing; defines the method utilized to record and report test defects, details the test plans for each test type, defines any requirements for operations & support resources and for backup & recovery; identifies any testing risks and assumptions.	Yes				PM & IT Manager
PM.C.620	Construction	Test Scripts	Details the various Test Scripts applicable (Unit, Functional, Technical) for the solutions being introduced by the test type. The Scripts defines all of the needed details describing the script including the test type & objectives, any prerequisites, and environments; and the detailed information needed to execute the script including the business process or condition being tested, the instructions, any inputs / values, and expected results. Lastly, the script table provides a location for the test executor to record the results to include the actual results, test by with the date, status (pass / fail), and any additional comments. The Test Script document is a living document that is updated with the results during testing. A different Test Script document will be compiled for each general test type (Unit, Functional, and Technical).	Yes				PM & IT Manager
PM.C.620	Construction	Data Conversion Plan	Describes the Details the data migration plan to include an overview, conversion requirements, procedures, data mapping, processing requirements, editing requirements, and overall timing for the conversion(s).	Yes				PM & IT Manager

PM.C.620	Construction	Draft Implementation Plan	The draft describes an overview of the Implementation Plan, details the Installation with the Master Implementation Checklist, provides information on Workstation upgrades, non-corporate components, Tivoli packs, Push Strategy & Plan, and Remote Access; defines the Go / No-Go Checklist, if applicable; lists any Implementation Plan risks and assumptions, and describe the Support Approach.	Yes				PM & IT Manager
PM.C.620	Construction	Updated Requirements Traceability Matrix	Updated with Construction linkage. (See Analysis phase for definition)	Yes				PM & IT Manager
PM.T.720	Test	Test Results - Functional & System	Updates the scripts with the actual System & Functional test results. See the Construction phase for a description of the Test Scripts.	Yes				PM & IT Manager
PM.T.720	Test	Test Results - UAT	Updates the scripts with the actual UAT test results. See the Construction phase for a description of the Test Scripts.	Yes				PM & IT Manager
PM.T.720	Test	Finalized Training Approach and Plan	Finalizes the training plan (described above in the Design phase)	Yes				Sponsor, PM & IT Manager
PM.T.720	Test	Finalized Implementation Plan	Finalizes the Implementation plan (described above in the Construction phase).	Yes				PM & IT Manager
PM.T.720	Test	Operations Instructions	Detail the operations instructions including checklists and procedures that will need to be utilized to support the solution(s) being implemented once transitioned to Support & Operations teams; and to detail the Support Matrix that will be set-up	Yes				PM & IT Manager
PM.T.720	Test	Application Support Transition References	These documents detail all of the specific information required by the application support team to be able to assume responsibility to effectively support the solutions being implemented to include the Application Profile, Server Specifications, Process Decomposition Table, Support RACI chart, and Warranty Period agreement. This information will be, not only distributed to the appropriate support team, but physically walked through by the project team with the assigned support team members.	Yes				PM & IT Manager
PM.T.720	Test	Updated Requirements Traceability Matrix	Updated with Test linkage. (See Analysis phase for definition)	Yes				PM & IT Manager
PM.PI.920	Post Implementation	Lessons Learned	Provides an overview of the project referencing and details associated with the successes and opportunities for improvement in each of the following Project areas: Integration Management, Scope Management, Time Management, Cost Management, Quality Management, Human Resource Management, Communication Management, Risk Management, Procurement Management, and any other areas where lessons were learned	Yes				Sponsor & PM
PM.PI.920	Post Implementation	Benefits Realization	Describes the benefits realized from the project to include items such as, faster customer response, financial savings, increased revenues, reduced # of personnel required, more user friendly system, etc.	Yes				Sponsor & PM
PM.PI.920	Post Implementation	Application Support Checklist(s)	Details how the solutions will be supported by the application support team.					IT Technical Manager
PM.PI.920	Post Implementation	Operations Checklist(s)	Details how the solutions will be supported by the operations team(s).					IT Technical Manager