



2014 Smart Grid R&D Program Peer Review

Project Summary

Project Title: Smart Grid Data Access and Customer Engagement
DE-OE-0000607/000

Organization: San Diego Gas & Electric

Presenters: Paola Rosselli

FY 2014 Funding (\$K): \$2M

Project Objectives, Significance, and Impact

Given Phase I experiences and the adoption plan approach, the project team has defined impact projections and goals for the Phase II project plan. Project impacts will fall into two general categories:

Value to the Customer: Phase II of this project will bring added value to customers by increasing satisfaction, engagement with energy usage data, and program participation.

Value to the Grid: Phase II of the project will bring added value to the SDG&E grid by delivering increased energy efficiency and the potential for peak load reduction.

During Phase II, SDG&E will sustain its partnership with the third party software provider Simple Energy to continue to utilize the threefold objectives of Phase I.

Objective	Relevance of Activities	Outcomes	Impact
1. Enable	All SDG&E residential	Increased awareness	Customers actively

<p>residential consumers to access their real-time electricity consumption</p>	<p>customers have access to their data and can upload to third parties as a result of SDG&E's successful implementation of the Green Button initiative</p> <p>SDG&E's strategy involves a pilot that targets customer energy engagement and management with the third party Simple Energy platform.</p>	<p>and utilization of electricity consumption data by residential customers.</p>	<p>engaged in managing their energy consumption data</p> <p>Access to data allows third party to create additional platforms that encourage consumers to interact with their energy use data</p>
<p>2. Empower residential customer to manage their electricity consumption more intelligently, aided by third party software.</p>	<p>The platform will be available to all customers across the service territory in Phase II.</p> <p>The platform is located where customers already spend a lot of their time- social networks, mobile, email, etc.</p>	<p>Increased understanding on how to best manage energy usage</p> <p>Increased utilization of proven methods to reduce energy</p> <p>Increased enrollment into other programs.</p>	<p>Customers' changed behavior drives peak load reductions</p> <p>Utility load management is improved and future energy generation needs are reduced</p>
<p>3. Provide and support the proliferation of third-party tools and software products that utilize the available data to deliver a value added service to the residential customer.</p>	<p>The Simple Energy platform provides a compelling experience that appeals to personal and community interests.</p> <p>Incorporates energy consumption data, home profile data, targeted energy savings tips and SDG&E programs for an integrated customer</p>	<p>Increased message targeting to create a personal experience around energy use</p> <p>Increased participation for utility programs</p> <p>Increased community energy literacy</p>	<p>Community and referral prizes lead to customers encouraging other customers to engage in energy saving behavior</p> <p>Participation in competitions leads to long-term changed energy consumption behavior</p>

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Specifically, a successful Phase II project will achieve the following goals:

- More than **400,000 “encouraged” customers** learning about their energy use
- More than **50,000 “engaged” customers** actively visiting web portal to view energy data

Impact Area	Goals	Evaluation
Energy Efficiency Savings	Average of 2%-3% gross savings for all auto-enrolled participants	Statistically valid experimental design with control and treatment groups and measurement and verification analysis
Customer Program Participation	20% higher than control group	Percent of customers in treatment group participating in programs versus percent in control group

Technical Approach

Phase II will continue to use the same data standards deployed with the Green Button, including NAESB and ESPI under the NIST framework and Smart Grid Interoperability Panel. SDG&E and Simple Energy will deliver customer value from smart grid data in a social, fun, and simple experience for customers. During Phase II, 400,000 residential customers will be automatically enrolled, however, the remaining 900,000 residential customers will have the opportunity to “opt in” to participate.

The expanded project will track program efficacy with in-depth customer and energy data analysis. It will demonstrate the ability of data-informed challenges/calls to action to drive behavior change for customers across different segments.

Using SDG&E's system-wide smart meter data and Simple Energy's customer engagement platform, the project will expand to reach a greater portion of SDG&E residential customers

Technical Progress and Results

The project ended Phase I activities with 42,400 participants receiving weekly emails about their household's energy use. During the *community segment* of the competition, 39 local San Diego middle schools competed for \$26,500 in grant funds with 4,011 SDG&E customer households competing on behalf of a school team. When Phase I demonstration activities ended, 27% of participants were "**engaged customers**" who had:

- Activated their SDG&E account on the platform through email or Facebook and/or
- Competed on a school team.

Impact on Household Energy Use

Third party analysis of the project proved the effectiveness of the platform in both encouraging daily energy savings and reducing peak demand. Customers who participated in the San Diego Energy Challenge achieved energy savings:

- **Energy Efficiency** - overall energy savings of 6% during summer and 2% during winter.
- **Peak Demand Reduction** – on peak demand reduction of an additional 2.2%

Project Collaborations and Technology Transfer

Project Management Plan

The project team has defined a complete list of tasks and milestones that will inform the project implementation process throughout Phase II.

Project Team Capabilities

Both San Diego Gas & Electric and Simple Energy have long been leaders in smart grid and data access. The two companies have already launched three projects together. A full project team has been selected with the qualifications knowledge, readiness, and experience to begin working on Phase II Implementation immediately.

The budget justification file details proposed costs for the implementation of the Simple Energy Customer Engagement Platform in partnership with San Diego Gas & Electric (SDG&E). Below are the Project Funding Profile, Cost Share, and Project Costing Profile.

Project Funding Profile - Federal Funding Allocation

The Federal funds would offset a portion of the license costs of the Simple Energy software. The majority of the program costs including software license cost for the project will be born by the applicant team in the form of cash and in-kind contribution toward the overall cost share.

Project Recipient	Phase II Funding
San Diego Gas & Electric	\$2,000,000

Cost-Share Contribution (by project team member)

The project team will be making substantial matching investments representing 52% of the project costs in Phase II.

Phase II		
Team Member	Source	Amount
SDG&E	Software Licenses and Postage	\$993,000
Simple Energy	In-Kind Software License and related service fees	\$1,139,500
Total Phase II Contribution		\$2,132,500

Federal Dispersements, by Quarter

Federal funding dispersements will be paid for software license costs in the quarter in which they are awarded to the recipient.

Q1 2014	Q2 2014	Q3 2014	Q4 2014	Total
\$500,000	\$500,000	\$500,000	\$500,000	\$2,000,000

Standards

The SDG&E Smart Grid Deployment Plan identifies the importance of standards across smart grid implementation efforts, including the utilization of Standards with vendors and third party software applications for data transfer. The Deployment Plan states, “SDG&E will require customer authorized third parties adhere to specific data transfer protocols (i.e., OpenADE/NAESB ESPI standards, SEP) to ensure security encryption, customer verification and device compatibility.”

Data Integrations have been completed which securely provide energy use data for SDG&E residential customers. This integration enables Simple Energy to provide program participants with accurate household comparison information. Full ESPI utilization has been completed.