

**SOUTHERN CALIFORNIA GAS COMPANY
ADVANCED METER
SEMI-ANNUAL REPORT**

August 31, 2015

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Southern California Gas Company Advanced Meter Semi-Annual Report

Introduction

This is the fifth Semi-Annual Report (“Report”) regarding the progress of Southern California Gas Company’s (“SoCalGas”) Advanced Meter project. In Decision (“D.”) 10-04-027, the California Public Utilities Commission (“CPUC” or “Commission”) authorized the project. Ordering Paragraph 5 required the following reporting requirements for SoCalGas:

“Southern California Gas Company shall establish a system to track and attribute program costs and projected savings from conservation. Based on this tracking system, Southern California Gas Company shall submit a report to the Director of the Commission’s Energy Division semi-annually, tracking the gas conservation impacts of the advanced metering infrastructure project to date. These reports shall serve as a forum to adjust, as necessary the elements laid out in the final outreach plan described above. We expect that customer outreach, education and communications will continue to evolve and improve as SoCalGas conducts customer research, monitors customer reaction to new AMI technology and various customer usage presentation tools, and incorporates feedback from these activities into its AMI outreach and education activities. If the report shows that the company is falling short of its projections, it shall submit revisions to its conservation plan to increase awareness, participation, and durability of conservation actions among its customers. The semi-annual reports and any revisions to the advanced metering infrastructure outreach and conservation plan shall be submitted to the director of the Commission’s Energy Division and served on the most recent service list for this proceeding. Additional costs incurred in order to improve conservation response will be funded out of contingency funds, or otherwise subject to the risk sharing mechanism authorized in Ordering Paragraph 2.”

Chapter 1 - Project Overview and Summary

In addition to the specific requirements identified in D.10-04-027, this Report provides overall status of SoCalGas’ Advanced Meter project through June 30, 2015 and builds upon previous Reports by highlighting project changes and activities that have taken place as of January 1, 2015. Previous Report filings may be accessed on SoCalGas’ website.¹

The Advanced Meter infrastructure consists of two primary components – a meter transmission unit (“MTU” or “module”) attached to SoCalGas meters, and a communications network consisting of data collection units (“DCU”) installed across the SoCalGas service territory. Data from the modules is communicated to the DCUs and then transmitted to SoCalGas’ back-office

¹ <http://www.socalgas.com/regulatory/A0809023.shtml>.

systems. Operational highlights of the infrastructure and performance of the system as of June 30, 2015 include:

- About 471 SoCalGas employees installing modules.
- Nearly 3.7 million meter modules installed representing 61% of the total meters to be upgraded.
- 3,067 data collector units (DCUs) installed and functioning On-Air representing over 70% of the estimated 4,300 DCUs required. These DCUs are fully or partially installed in 205 of the 221 cities and counties located within SoCalGas' service territory (93% of total).
- Approximately 96 percent of the installed modules have been deemed 'Billing Ready' and are now used or ready for billing customers.

SoCalGas also completed its second targeted campaign to market the conservation benefits of the Advanced Meter system. This included featuring new Advanced Meter-enabled energy information feedback options for customers, such as online tools that display hourly and daily gas usage and costs.

The conservation campaign launched in November 2014 and extended through the heating season, with most treatments concluding in March 2015. It was the second in the series of four conservation "Test and Learn" campaigns to be conducted over the course of the Advanced Meter project and incorporated the lessons learned and key findings from the initial 2013-2014 heating season campaign.

The goals of these consecutive conservation campaigns are demonstrating how to best meet the one percent energy savings goal² associated with the Advanced Meter rollout and tracking the resulting conservation savings. Four of the seven conservation treatments tested during the 2014-2015 campaign produced significant gas savings of about one percent total, showing progress towards this conservation goal. Additional fall/winter savings of approximately 1.15% were realized for four of the treatments tested during the 2013-2014 campaign due to continued effects for those treatments.

Although the Advanced Meter project is currently meeting its schedule, budget and major project milestones, SoCalGas continues to face challenges in constructing the network. SoCalGas has implemented a proactive public outreach strategy to educate and inform impacted residents, businesses, and municipalities of network installation to help mitigate potential concerns. As noted in previous Reports, despite extensive engagement, a potential obstacle to completing construction of the network in accordance with the schedules approved in D.10-04-027 continues to be select municipalities refuting the CPUC's preemptory jurisdiction over utility facilities. These municipalities assert that their local ordinances require utilities to secure conditional use permits and other discretionary permits. This discretionary permitting process (which the CPUC can exempt through the exercise of its jurisdiction over the public utilities) would effectively give a municipality the unilateral right to significantly modify

² This energy savings goal specifically refers to 1% of total *residential* gas usage.

the planned location or design of the DCUs and even preclude the installation of DCUs by the utility.

If these municipalities continue to assert their current positions, they will considerably delay or prevent the network installation timeline for approximately 300 DCUs or 7% of a total of 4,300 required DCUs. The inability to deploy the necessary infrastructure in these jurisdictions will likely result in SoCalGas having to maintain separate/redundant metering, meter reading, communications, data processing and billing systems and functions for far longer than was anticipated in D.10-04-027. These delays also result in forgone safety, operational, and conservation benefits pursuant to Sections 3.C, 3.D and 9 of this report. The network deployment delay in these jurisdictions will negatively impact expected operational benefits of approximately \$5.5 million through the end of Advanced Meter deployment in 2017.³ In addition, SoCalGas expects an incremental \$18.3 million in manual meter reading cost to be incurred during this time frame.⁴ Consequently, SoCalGas is contemplating the appropriate next steps to achieve deployment of its Advanced Meter project consistent with the Commission's decision or seek remedies to address issues beyond its control.

Chapter 2 - Module Installation and Network Construction Status

2.A Module Installation Status

SoCalGas has installed 3,688,605 modules through the end of June 2015, with its first installation dating back to October 2012. Table 1 displays the installations performed by Advanced Meter Mass Install personnel and identifies installations completed by other SoCalGas personnel.

Appendix A provides the latest timeline of planned warehouse opening and closings.

³ As authorized in D.10-04-027 and as established in Advice Letter (AL) 4110, AMI costs and benefits are recorded in the Advanced Metering Infrastructure Balancing Account (AMIBA) through the end of deployment in 2017. Benefits lost for meters in these jurisdictions are estimated via the benefits per meter mechanism established in AL 4110.

⁴ Incremental costs to read meters in these jurisdictions through the end of deployment in 2017 are estimated given the average costs incurred in 2015 loaded dollars for SoCalGas personnel to read meters in areas not fully automated; the average cost is multiplied by the number of meters in these jurisdictions and the potential number of months they will need to be manually read between planned automation periods and the end of 2017.

**Table 1
Module Installations by Personnel Group**

	Module Only	Meter Change w/Module	Total
Advanced Meter Installations	2,615,912	1,072,693	3,688,605
Other SoCalGas Personnel	0	287,228	287,228
Total Installations	2,615,912	1,359,921	3,975,833

About 93 percent of the modules are being installed by Advanced Meter personnel, with about 7 percent being installed by other SoCalGas personnel. Other SoCalGas personnel are involved when the installation requires extensive modifications to the existing meter configuration, such as installing the modules on complex industrial and commercial meters; replacing existing curb meters with new curb meters containing a pre-installed module; and when meters are changed through the normal course of business.

As Table 1 displays, about 66 percent of the modules were installed on existing meters, while 34 percent of the time, the meter was replaced with a new meter with a module already installed.

Installation teams work out of warehouses leased specifically for the Advanced Meter project. As of June 30, 2015, there were 471 installers employed. Table 2 provides an overview of the installation workforce for each of the warehouses opened through June 2015.

**Table 2
SoCalGas Installation Workforce by Warehouse**

Warehouse	Number of Employees
Northridge	64
Rancho Cucamonga	68
LAX	61
Valencia	62
South Gate	58
Los Angeles	46
Mission Viejo	57
Anaheim	55
Total	471

Throughout the project, the Advanced Meter team has experienced some injuries and incidents. Table 3 displays safety results from January through June 2015. SoCalGas aspires to have zero incidents and has taken a proactive approach in providing its Advanced Meter team with additional safety and training resources. SoCalGas continues to have an additional day

dedicated to safety in the installer training curriculum and as part of its “Safe and Sound” Safety Campaign, SoCalGas continues to create and share short safety films to promote safe behavior at the workplace and at home.

Table 3
Advanced Meter Safety Incidents
January 1, 2015 Through June 30, 2015

	Number of Incidents	Rate*
Occupational Safety & Health Administration (“OSHA”)	16	6.51
Controllable Motor Vehicle Incidents (“CMVI”)	12	7.23
Lost Time Incidents (“LTI”)	3	1.22

*OSHA Rate is the number of incidents per 200,000 hours worked

*CMVI Rate is the number of incidents per million miles driven

*LTI Rate is per 100 workers

2.B Communication Network Construction Status

The communications network of the Advanced Meter system is designed to ensure that SoCalGas customers receive their hourly consumption data. It consists of DCUs deployed across the SoCalGas service territory that receive the meter reading data from the modules installed on each meter. Most modules transmit twelve hourly meter reads four times a day with at least three DCUs. Each module communicates for less than two minutes per year. The data is encrypted and transmitted across a licensed frequency from the module to the DCU.

As of the end of 2014, SoCalGas planned to install a total of 3,862 DCUs; however, based on the latest propagation study provided by Aclara, the technology vendor, and as SoCalGas continues to refine the network to improve system performance, the project will install nearly 4,300 DCUs. The actual number of DCUs to be installed is determined by a two-step process:

1. The specific DCU locations, referred to as design points, are determined based on the propagation study which takes into account the location of the modules on the six million meters, the topography of the surrounding area, and the influence of the environment on the transmission of the radio signal. The DCUs can be placed within a 500 foot radius of the design point.
2. After these DCUs are installed, SoCalGas evaluates the performance of the network and identifies gaps in the network. SoCalGas then installs additional DCUs to remediate these deficiencies in performance.

SoCalGas' plan is to install DCUs prior to the scheduled module installation so that data can be received soon after the module is installed. Overall, SoCalGas has achieved this goal. Table 4 displays the status of the SoCalGas network as of June 30, 2015.

Table 4
Status of DCUs through June 30, 2015

DCU Status	Number of DCUs	Percent of DCUs
Installed	3,207	75%
<i>On – Air</i>	3,067	71%
Ready to Construct	27	>1%
Negotiating with Local Governments/Other Third Parties ⁵	911	21%
Not Started	155	4%
Total To Be Installed	4,300	100%

Over 75 percent of the network has been constructed or is ready to construct. By June 30, 2015, SoCalGas has installed 3,207 DCUs with an additional 27 DCUs ready for construction. Of the 3,207 installed, 3,067 DCUs have been commissioned on-air and are receiving reads from installed MTUs. SoCalGas continues to negotiate with local governments and third parties to install the remaining DCUs in the network. Table 5 displays the locations of installed DCUs to date.

⁵ Includes municipalities refuting the CPUC's preemptory jurisdiction over utility facilities.

Table 5
Location of Installed DCUs

DCU Location	Installed DCUs
SoCalGas Owned Poles in	
SoCalGas Facilities	65
Public Right of Way	2,261
Caltrans Right of Way	22
Private Easement	17
Total	2,365
Attached to Third Party Assets	
Los Angeles Bureau of Street Lighting	348
SCE Street Lights	251
PG&E Street Lights	17
SDG&E Street Lights	37
Other Cities Street Lights	191
Other Public/Private Assets	<i>4 (Indoor DCUs)</i>
Total	842
Total DCUs Installed	3,207

To date SoCalGas has installed DCUs on a SoCalGas owned pole in the public right of way under its franchise 74 percent of the time. The second most common method has been to install DCUs on local government-owned street lights.

When a DCU is attached to a third party owned asset, SoCalGas negotiates a contract with the asset owner which usually includes:

- Fees to lease the space on the asset; and,
- Energy rates for the electricity to power the DCU.

SoCalGas has executed contracts with the City of Los Angeles Bureau of Street Lights (“BSL”), Pacific Gas & Electric Company (“PG&E”), Southern California Edison Company (“SCE”), San Diego Gas & Electric Company (“SDG&E”), and has reached contract agreements with 128 cities and 4 counties.⁶

Of the 12 counties and 211 cities in the SoCalGas service territory, SoCalGas has finished installing DCUs in 4 counties and in 124 cities/communities.⁷ SoCalGas is in active negotiations with several cities and counties to continue installing the remaining DCUs. Cities and counties have been reopened due to network optimization. To ensure area coverage, the project has

⁶ Pursuant to Commission Resolution ESRB-1 dated May 10, 2013 (SCE), Resolution ESRB-2 dated June 27, 2013 (SDG&E) and Resolution ESRB-3 dated June 27, 2013 (PG&E) SoCalGas is able to permanently attach the DCUs to these electric utilities’ street lights.

⁷ Appendix B provides a list of the counties and cities with fully installed DCUs as of June 30, 2015.

reassessed cities and counties that have been completed with the original design and added DCUs where necessary.

With 3,207 DCUs constructed, SoCalGas has received 148 complaints and 35 inquiries, including concerns about the DCUs aesthetics, glare, or location. In each case, SoCalGas contacted the complaining party to resolve the complaint. As a result of customer concerns, SoCalGas has relocated 59 DCUs. Otherwise, the concerns have been resolved without relocating the DCU.

Where the DCU design point falls entirely within private property, SoCalGas negotiates easements with the private property owner(s). Installations of this type usually require a contract to secure the right to locate on the third party property.

When SoCalGas installs a DCU on its own pole, the DCU is solar-powered. When installed on a street light, the DCU is most often powered by electricity from the street light. Given the preponderance of new poles, most of the DCUs are solar powered. Table 6 shows the breakdown between solar and A/C powered DCUs.

**Table 6
Power Source for DCUs**

Installed DCUs	Solar Powered	AC Powered
3,207	2,414	793

Chapter 3 - System Performance

The areas of billing, Customer Service Field, and presentment of hourly gas consumption data to customers are key elements for measuring performance of the system. Additional improvements to SoCalGas' service delivery are also being realized as a result of enhanced data analytics capabilities enabled by the Advanced Meter system. Extended uses of the Advanced Meter system through a network sharing capability also have the potential to provide additional operational and conservation benefits to water agencies and their customers within SoCalGas' service territory.

3.A Network Performance

The most basic measure of system performance is to measure the data delivered as a percentage of the expected data to be delivered. This has direct impacts to both billing and the presentment of hourly gas consumption data to customers. In a perfect system, SoCalGas would receive data for every customer for every hour, each day of the year. To provide this data, the modules must communicate with the DCUs and the DCUs must transmit the data to SoCalGas back office systems 100 percent of the time.

Table 7 displays the breakdown of modules that have successfully communicated with SoCalGas' back office systems.

**Table 7
Module Communication Status**

Module Communication Status	Modules Installed	Percent Installed With Network
Total Modules Installed	3,688,605	
Modules Installed – Incomplete Network	38,146	1.0%
Modules Installed with Complete Network ¹	3,650,459	99.0%
Delivering 100 Percent of Expected Reads	3,302,223	90.5%
Missing 1-12 Reads	180,725	5.0%
Missing More Than 12 Reads ²	153,177	4.2%
Missing All Reads	14,334	0.4%

¹ Number of modules installed within full DCU coverage; full DCU coverage indicates that all planned DCUs for a given area are operational.

² Missing more than 12 reads but at least one read has been communicated.

About 99 percent of the modules have been installed where network has been completed and only about 1 percent of modules are installed where the network is incomplete. SoCalGas generally installs modules where the network is available; however, some exceptions to installing outside of an available network include instances when new business meters are connected and routine meter changes are being performed. Additionally, when a meter fails in the field, it is replaced with an integrated meter and module, regardless of whether the network is installed or not.

As illustrated in Table 7, over 90 percent of the installed modules within a completed network are successfully communicating all of a customer’s hourly data on a monthly basis. About 5 percent of the modules are missing 1-12 reads, which means that they have had only 1 or 2 unsuccessful communications per month. That is, one or two six-hour periods have not been successfully communicated to the SoCalGas back office systems. SoCalGas does not consider a module performing at this level to be problematic for billing as enough hourly data is being received for these purposes.

About 4 percent of the modules are missing more than 12 reads but have communicated at least one read. SoCalGas continues to examine module modifications and network enhancements to improve the performance of these modules.

3.B Billing Data Performance

The Advanced Meter modules replace the manual reads with an automated read, with the expectation that the system will produce more accurate reads (no data entry mistakes) and fewer estimated reads (meter access problems are largely eliminated).

Table 8 displays the progression of modules from installation to actual use for billing.

**Table 8
Advanced Meters Utilized for Billing**

Modules Installed as of June 30, 2015	3,688,605
Modules in 'Billing Ready' Status	3,528,864
Advanced Meter Reads Requested for Billing	2,928,814
Billing Data Provided by Advanced Meter	2,923,035
Billing Data Not Provided by Advanced Meter	5,779
Percent Provided by Advanced Meter – Actual Read	99.57%
Percent Provided by Advanced Meter – Estimated Read	0.23%
Percent Not Provided by Advanced Meter	0.20%

Approximately 96 percent of the installed modules have been deemed 'Billing Ready' and are now used or ready for billing customers. Of the remaining four percent, most are still in the process of completing one of the test elements needed to become 'Billing Ready.' Others are located in areas with incomplete DCU coverage, or are located in areas with insufficient module density to support conversion to Advanced Meter billing.

Modules in areas with network coverage which do not pass the 'Billing Ready' tests are monitored and, if necessary, replaced. They may also point to insufficient network coverage or DCU problems, which are then remediated.⁸

For the Billing Ready modules, the system provides a high percentage of accurate reads. About 99 percent of the reads requested were actual, accurate reads. The system also provided an additional 0.23 percent of reads which were 'estimated reads' based substantially on reads received earlier in the month, rather than on a particular designated day. Only about 0.20 percent of the reads could not be provided by the Advanced Meter system.

In July 2013, SoCalGas implemented software that enabled the utilization of automated reads for the initiation of new service. With Advanced Meter automation, a field visit to collect a customer's starting read was no longer necessary for turn-on orders that did not require entry into the home. SoCalGas' Customer Service Field organization has seen a reduction of over 650,000 orders since the implementation of the automated reads for the initiation of new service.

3.C Service Delivery Enhancements resulting from Enhanced Data Analytics

As the Commission articulated in the AMI decision,⁹ the Advanced Meter system "provides [a] system-wide technology platform with the ability to expand operating benefits as new applications emerge." Safety is at the heart of everything SoCalGas does and, in areas where the communications network is fully deployed, SoCalGas is leveraging Advanced Meter-enabled

⁸ As referenced in Chapter 2, additional DCUs may have to be added to improve system performance.

⁹ D. 10-04-027, page 40.

data analytics to support the continued safe and reliable delivery of natural gas to its customers. These enhanced data analytics enable identification of unusual gas consumption patterns at customer facilities. Though in the exploratory phase, this new and more granular awareness of energy data utilization is uncovering new opportunities and benefits potential.

Additional customer and safety benefits enabled by these advanced analytics include quicker detection of higher-than-usual gas usage allowing earlier investigation of possible problems, as well as improved monitoring of gas pressure throughout the gas system. Other benefits include:

- Faster identification of abnormally high gas usage enables SoCalGas to speed up its ability to identify, investigate and respond to potential safety situations, i.e., in days rather than weeks.
- Earlier discovery of abnormally high gas usage and associated customer notification can reduce the financial burden on customers, while at the same time saving energy and improving air quality.
- Identification of hot water leaks indicated by unusually high gas usage can support conservation efforts for both gas and water.

During the exploratory phase of SoCalGas’ enhanced data analytics, the following results have been achieved. Of 157 exploratory service orders fielded through June 30, 2015, 98% resulted in a benefit to the customer in safety, financial savings, conservation, environmental impact, or all of these. Table 9 summarizes the results to date.

**Table 9
Gas consumption data analytics results through June 30, 2015**

Findings from completed field visits	Number of field visits	Percent
Total field visits generated by consumption analytics awareness	157	
Hot water leaks where the hot water heater was in continuous demand	71	45.2%
Gas leak found by SoCalGas field technician	46	29.3%
Gas or hot water leaks corrected by the customer as a result of SoCalGas field visit	28	17.8%
Gas services closed by SoCalGas field technician due to excessive registration, awaiting resolution	9	5.7%
Abnormal gas usage resulting from a pool heater being used for the first time in 12 months or longer	3	1.9%

SoCalGas expects that, as it continues to build out enhanced analytics capabilities enabled by the Advanced Meter system, further customer service and safety benefits will accrue to its

customers. More rapid detection and resolution of gas and hot water leaks provides enhanced safety for customers and their communities, as well as providing energy and financial savings, reduced greenhouse gas emissions, and conservation of our increasingly scarce water supplies.

3.D Extending the Use of the Advanced Meter Network

As articulated in its AMI Application, SoCalGas recognizes the State's priority and urgency in encouraging and enabling water conservation and as such included the requirement for an AMI technology capable of reading water meters.

This network sharing capability has the potential to provide significant operational and conservation benefits to water agencies and their customers within SoCalGas' service territory. In order to operationally evaluate the feasibility of the "Shared Network" concept, SoCalGas has established a one-year pilot to be conducted by Aclara and SoCalGas with a limited number of water utilities. As of June 30, 2015, two water utilities committed to participate in the "Shared Network Pilot," which is expected to initiate in the fall of 2015, and several others have indicated interest.

Chapter 4 - Financial Status

To track expenses during the project, Ordering Paragraph 7 of the D.10-04-027, stated:

"Southern California Gas Company shall file an advice letter no later than 30 days from the effective date of this decision, establishing a balancing account and detailing the cost recovery mechanism in conformance with this decision. Southern California Gas Company is authorized to recover deployment costs up to \$1.0507 billion in this account, plus additional amounts, if any, consistent with the terms and conditions of the Risk Sharing Mechanism approved in Ordering Paragraph 2."

On August 4, 2010, the CPUC approved AL 4110, effective April 8, 2010, which established the Advanced Meter Infrastructure Balancing Account.

The CPUC approved budget of \$1,050 million for the SoCalGas Advanced Meter project was augmented by re-directing \$13.5 million of previously approved General Rate Case funding for a Remote Automated Meter Reading ("RAMR") project. SoCalGas halted the implementation of its RAMR project, a drive-by meter reading system, when its Advanced Metering Infrastructure ("AMI") application was submitted, and in the AMI application requested that this funding be re-directed to the Advanced Meter project. In D.10-04-027, the CPUC approved this request.¹⁰ The total budget for the SoCalGas Advanced Meter project is \$1,064 million, which included a contingency fund of \$68.7 million.

¹⁰ A.08-09-023, Prepared Direct Testimony of Edward Fong, page 15.

Table 10
Financial Results (in \$Thousands)
Recorded 2010 through June 2015
Forecast July 2013 – 2017

	2010	2011	2012	2013	2014	YTD 2015	Project to Date	Project Forecast
Project Management Office	2,619	6,477	6,634	4,945	4,023	1,587	26,285	32,185
Meters, Modules & Installation	120	3,718	27,957	116,004	184,236	84,664	416,699	530,025
Network	777	3,744	14,429	23,805	18,796	7,200	68,751	94,195
Information Technology	6,011	16,873	21,931	16,015	10,491	4,608	75,928	99,927
Customer Outreach	324	1,027	2,085	5,502	5,195	1,629	15,761	26,935
Employee Awareness	65	3,078	3,732	2,088	1,051	475	10,489	12,995
Other	303	-	1,162	3,576	4,517	2,114	11,673	17,651
Taxes								16,910
Overheads & AFUDC	2,382	10,828	23,663	33,812	40,499	16,767	127,950	216,049
Contingency								17,384
Total	12,601	45,745	101,594	205,746	268,807	119,043	753,537	1,064,257

The sequencing of the spending to date is typical of the pattern for many major projects. The early years of the project were spent organizing the large project team; developing new business processes; and building and implementing the information systems that support the construction of the DCUs and installation of the modules. SoCalGas' plan contemplated that the DCUs would be constructed prior to the installation of the modules so that the modules would be effective in delivering benefits to customers. As indicated in Chapter 2, SoCalGas began installing its DCUs in June 2012 and its modules in October 2012.

Table 10 displays the Advanced Meter project spending through June 30, 2015, by the major project activities, and also displays the forecast for the entire project as described in previous Reports. The purchases and installation of meters and modules continue to be the primary spending at approximately \$417 million project to date. The next large areas of spend are in information systems and the construction of the communication network with approximately \$76 and \$69 million in spend, respectively. Assuming the timely resolution of the construction of the DCU network with municipalities challenging the CPUC's preemptory jurisdiction over utility facilities as discussed in Chapter 1, SoCalGas believes the project will be delivered within the approved budget. SoCalGas' ability to deliver the project within the approved budget is

however dependent on the successful resolution of the issues with select municipalities discussed within Chapter 1, pages 5 and 6.

The contingency fund is \$17 million. This fund should be considered fluid as the amount will continue to flux as budgets are refined and adjusted.

Chapter 5 - Meter Reading Work Force Impacts

The Meter Reading work force is the most significantly impacted by the Advanced Meter project as Meter Reading positions will all but be eliminated by the project.¹¹ Both SoCalGas and the CPUC are concerned about these impacts. The Commission specifically addressed this concern. Ordering Paragraph 1 of the D.10-04-027 states:

“Southern California Gas Company shall supplement by \$1 million, its funding for workforce retention and retraining. This fund is established to better protect the employment interests of Southern California Gas Company’s meter reading workforce and should be used to extend severance, vocational training, and other transitional opportunities to employees affected by the decision to pursue advanced metering infrastructure.”

In response to this direction, SoCalGas set aside funding in its Enhanced Educational Assistance Fund specifically to support the Meter Reading personnel in place in April 2010. As of June 30, 2015, meter readers had been reimbursed approximately \$102,600 through this fund.

While meter readers have been active in seeking employment opportunities within SoCalGas the fund has not been heavily utilized, so as part of our continuing efforts to support our employees’ transition to potential job opportunities, SoCalGas has expanded the retention and retraining efforts to include skills orientation workshops. These workshops are designed to familiarize employees with the mechanical and technical skills associated with piping, tools usage, natural gas appliance and distribution system construction work. The workshops are voluntary and are offered on Saturdays.

The orientation workshops offer transitional skills that could be applied toward job opportunities within and outside of SoCalGas. The target employee group has also been expanded to include all current meter reading employees as well as AMI Field Representatives. All of these employees will be affected when Advanced Meter implementation is completed in 2017.

SoCalGas has allocated \$42,400 from the authorized funding from 4th Quarter 2014 through 2016 to provide these workshops for employees. SoCalGas will continue to offer enhanced educational assistance reimbursement to the remaining eligible meter reading employees.

¹¹ Some meter reading personnel may continue to exist in support of the CPUC authorized Opt-Out program.

Table 11 displays the current status of those Meter Reading personnel who were employed in April, 2010, when the project was approved by the CPUC.

Table 11
Status of Meter Reading Personnel Employed in April 2010

Meter Reading Personnel	Work Force in April 2010	Remain in Meter Reading June 30, 2015	Left Company	Transition Within Company
Full-time	166	73	17	693
Part-time	818	24	177	
Management	46	15	9	22
Total	1,030	112	203	715
Percent of Work Force	100%	11%	20%	69%

As Table 11 shows, 715 employees (69 percent of the Meter Reading personnel from April 2010) have transitioned to another position within SoCalGas. Twenty percent of those employed in 2010 have left SoCalGas and 112 employees (11 percent) remain in the Meter Reading organization.

SoCalGas continues to encourage Meter Reading employees to explore all opportunities outside of the Meter Reading organization.

Chapter 6 – Community Education and Outreach

SoCalGas personnel perform an array of outreach activities to inform customers about Advanced Meter project activity. SoCalGas developed a local stakeholder education and community outreach program to ensure every city and county SoCalGas serves is addressed. During the network construction process, outreach is done at the city level with initial city briefings to the city manager and staff including presentations to city councils. Outreach to the community includes, but is not limited to: one-on-one customer meetings, door knocking; and meetings with homeowner associations, community/neighborhood councils, and community groups. These efforts include briefing local elected officials, media outreach, community town hall events and local speaking engagements.

The importance of SoCalGas’ outreach efforts was illuminated at the 50th Annual Regional Conference for Southern California Association of Governments that took place in Palm Desert. At the event, someone in the audience from the City of Laguna Hills complimented the Advanced Meter Outreach team on the extraordinary efforts of outreach completed in the city and how it was helpful to gain community support for the project. The city inquired on what training the company provides for its outreach team in order to do such great work in the communities we serve.

6.A Outreach Organizations and Events

To date we have had over 2,400 events. In the time frame of January 1 through June 30, 2015, SoCalGas completed over 305 outreach efforts.

Outreach efforts are complemented by a number of local organizations who simultaneously perform outreach activities under contract to SoCalGas. SoCalGas continues to partner with GeM Communications (GeM) to manage the solicitation and implementation efforts for local organizations to perform community outreach. GeM manages the RFP process and contracts with community- and faith-based organizations (CBOs, FBOs), disability agencies, Chambers of Commerce, and business organizations that conduct outreach to sensitive communities and customers in specific Advanced Meter installation areas. As of June 2015, 133 organizations have been contracted to support outreach activities for the project with 23 active during the time period of this report. Due to the Advanced Meter project having no warehouse openings during this time period, no new organizations were contracted to support with outreach activities. Appendix C provides a list of organizations contracted through GeM.

6.B Iklan Media

Working with Iklan Media, Advanced Meter completed a six week point of purchase and outdoor media buy that placed ads in 32 supermarkets, 25 laundromats; and over 100 convenience stores, neighborhood markets, and carnicerias. The media buy included 2 digital billboards that delivered over 11.5 million impressions. See Appendix D for list of retailers and images from the campaign.

Chapter 7- Customer Awareness and Satisfaction

SoCalGas monitors the impact of its outreach activities in the areas of customer awareness and customer satisfaction as it relates to the Advanced Meter project. SoCalGas utilizes a variety of market research diagnostics to monitor the “pulse” of customers pertaining to the Advanced Meter installation process, customer communications, new programs and services, and customer attitudes and motivational drivers to behavioral change.

7.A Customer Insight Study (“CIS”) Results

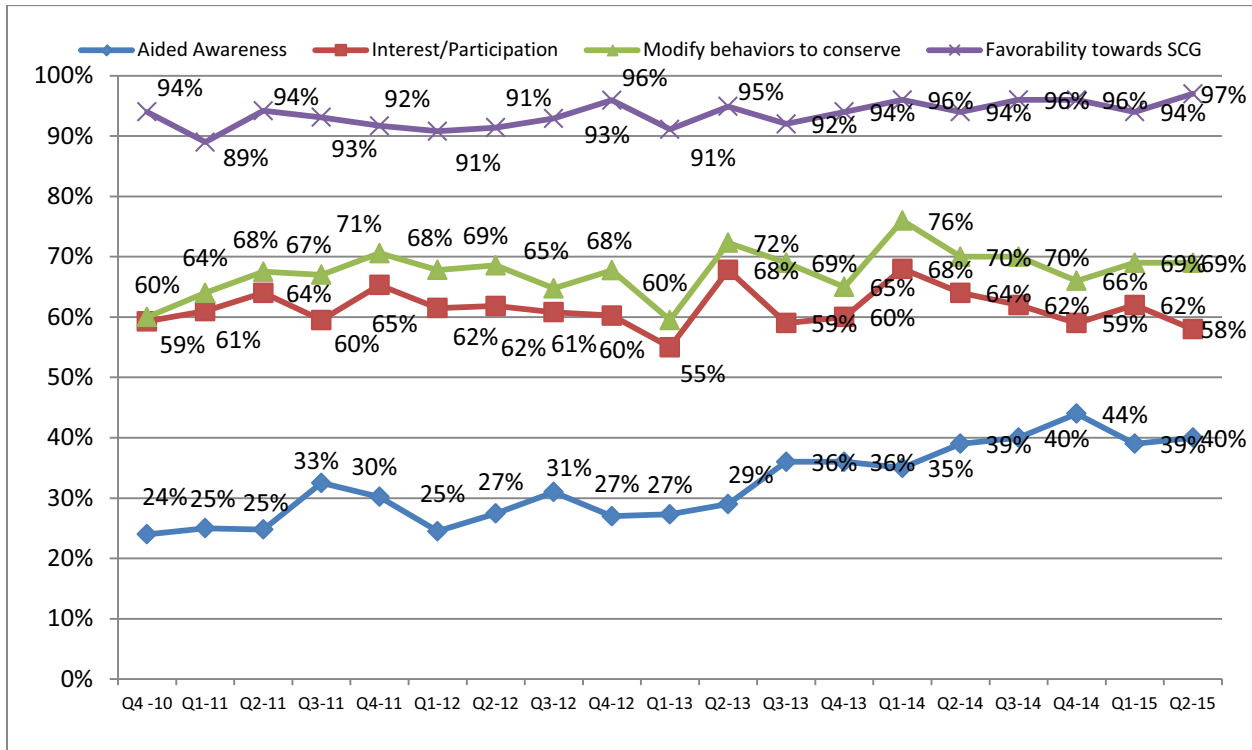
For purposes of monitoring overall customer awareness and perceptions, SoCalGas uses the Customer Insight Study (“CIS”)¹² which is administered by Davis Research. CIS is SoCalGas' public opinion tracking study. It is a quarterly phone survey measuring residential and business (semi-annually) customer opinion across several factors: favorability, price and value, safety, reliability and reputation. The survey is administered to a representative sample of SoCalGas' customer base, including customers for whom an Advanced Meter has not yet been installed.

Beginning in the fourth quarter of 2012, SoCalGas added three Advanced Meter related questions to the tracking survey. Figure 1 displays the CIS results for the general awareness

¹² Formerly called iTracker Customer Perception Study.

questions about Advanced Meter for residential customers while Figure 2 displays the results for business customers.

Figure 1
Customer Insight Study – Residential Customers



Survey Questions:

IM1. How would you rate SoCalGas overall on a scale of 1 to 7 where 1 means very unfavorable and 7 means very favorable?

AM1. Are you aware of a new gas meter that transmits natural gas usage information remotely and more frequently from the meter to SoCalGas?

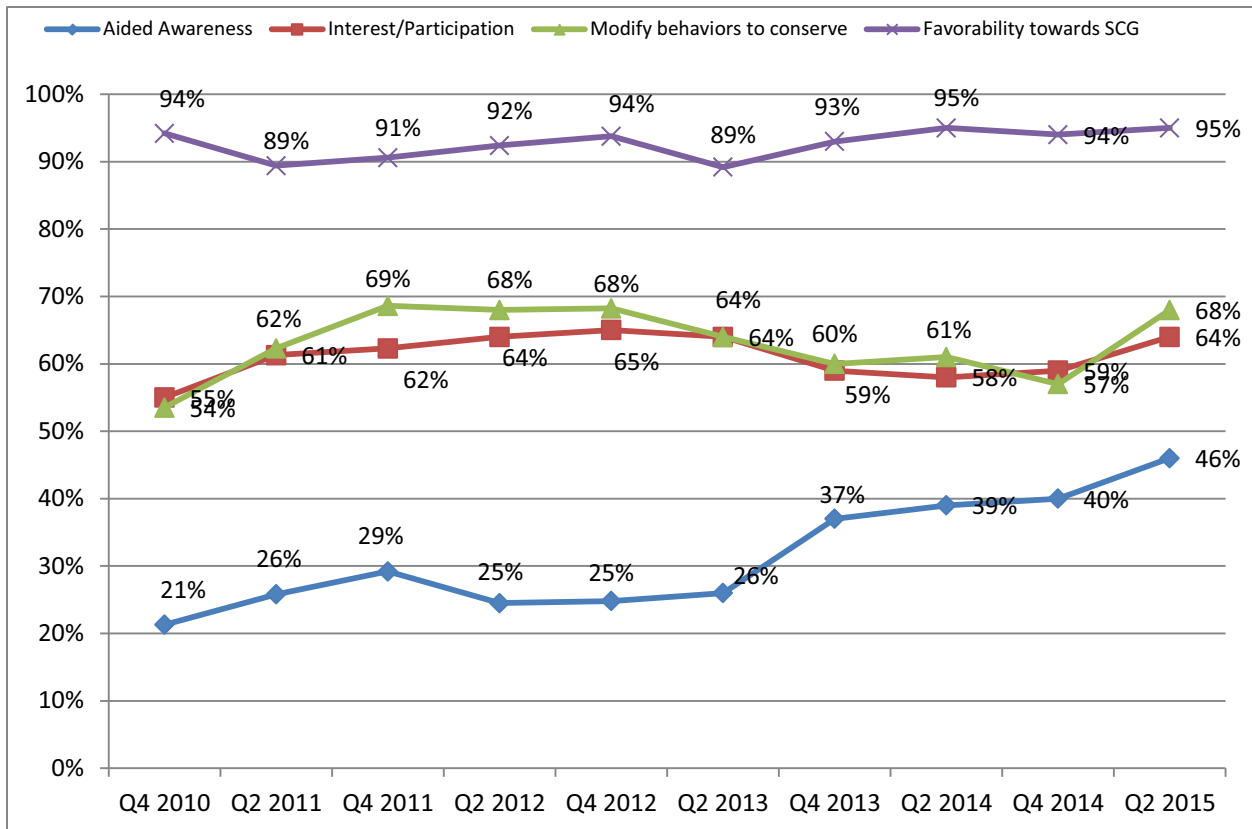
AM2a. Having access to your daily natural gas usage (therms/dollars) information would make you interested in viewing it more than once a month? (% Agree)

AM2b. Having access to your daily natural gas usage (therms/dollars) information would cause you to modify your behaviors to conserve natural gas? (% Agree)

Awareness about the Advanced Meter project among all SoCalGas residential customers decreased in Q1 2015 to 39 percent and then slightly increased to 40 percent in Q2 2015. While somewhat lower than the awareness levels of 44 percent in Q4 2014, the general trend over the course of the project has been upwards and seems to reflect the increased volume of customer communications about the project as well as an increase in installations. Of those customers who were aware of the project, 27 percent mentioned bill inserts as their source, and 28 percent mentioned that an Advanced Meter had been installed at their home.

Customers' interest in viewing hourly consumption data seems to fluctuate on a quarterly basis. In Q2 2015, interest in viewing the data decreased to 58 percent from 62 percent in Q1 2015. Additionally, the interest in conserving natural gas remained the same in Q2 2015 as it was in Q1 2015 of 69 percent interested.

Figure 2
Customer Insight Study – Business Customers



Survey Questions:

IM1. How would you rate SoCalGas overall on a scale of 1 to 7 where 1 means very unfavorable and 7 means very favorable?

AM1. Are you aware of a new gas meter that transmits natural gas usage information remotely and more frequently from the meter to SoCalGas?

AM2a. Having access to your daily natural gas usage (therms/dollars) information would make you interested in viewing it more than once a month? (% Agree)

AM2b. Having access to your daily natural gas usage (therms/dollars) information would cause you to modify your behaviors to conserve natural gas? (% Agree)

Advanced Meter awareness among business customers increased to 46 percent in the second quarter of 2015, reaching its highest level to date. Business customers' interest in viewing the hourly consumption data increased to 64 percent in Q2 2015. Intent to modify behaviors to conserve significantly increased to 68 percent in Q2 2015, which is the highest level of intent to date.

7.B Module Installation Outreach, Awareness, and Satisfaction

In addition to the general outreach described in Chapter 6, SoCalGas' customers are provided with communications covering the installation process and Advanced Meter-enabled programs and services.

The Advanced Meter customer experience consists of five phases:

- Pre-Installation
- Installation
- Failed Installation Attempt (if necessary)
- Advanced Meter Billed, and
- Conservation Campaign

To ensure that its installation process is meeting customer needs, SoCalGas conducts post-installation surveys on an ongoing basis. Customer awareness and satisfaction with the installation process has fluctuated for some aspects as described below.

Within approximately seven days after modules were installed, phone surveys were conducted with customers to assess the effectiveness of Advanced Meter communications in generating awareness and preparing customers for installation, as well as satisfaction with the installer and the installation process. Five waves of residential post-installation research have been conducted. The pilot wave consisted of 203 residential customers; the second, third and fourth waves surveyed 403, 402, and 402 customers respectively. Two waves have been conducted with business customers – the first in September 2013 with 231 customers and the second in November 2013 with 300 customers. The 2015 residential post-installation survey was conducted in May.

The May 2015 residential post-installation study showed some changes in awareness and sources of awareness. The general Advanced Meter awareness decreased to 50 percent from 60 percent the prior year. Correspondingly the installation awareness decreased to 43 percent from the 51 percent reported in the June 2014 study, which is more in line with the 42% level reported in the June 2013 study. There was also a shift in customer recall percentages pertaining to the receipt of Advanced Meter communication materials in May 2015. The percentage of customers who recalled receiving the pre-installation letter dropped to 43 percent in May 2015, the lowest level recorded in the study, and a significant decrease from June 2014 at 52 percent. The percentage of customers who recalled receiving the successful installation door hanger was 63 percent and the FAQs card was 36 percent, a significant increase from November 2013, up from 36 percent and 26 percent respectively.

The lower levels of Advanced Meter and installation awareness indicated in the May 2015 study are attributed to several potential factors. These include: 1) variations in the underlying demographics of the survey participants due to the different geographic installation locations from which the participants were selected; and, 2) increased timeframes between when pre-installation communications are sent and when Advanced Meters are installed due to necessary

installation schedule modifications, thus lowering customer recall of the original communications. To address these circumstances, SoCalGas is striving for no more than a 90-day advanced window for pre-installation communications, and also investigating options to provide pre-installation outbound dialer reminder calls a few weeks prior to installations.

Residential customer satisfaction with the installers and the actual installation process remained solid. Ninety-three percent of customers were satisfied with the installer, which is higher than the 84 percent satisfied in June 2014. Seventy-six percent of customers were satisfied with the overall installation process. About 96 percent of customers experienced a trouble-free installation in all four post-pilot waves of post-installation research.

Benefits of Advanced Meters were rated similarly by customers in May 2015 to the customers of the previous wave. All benefits, including the top rated benefits of saving money (78 percent), improved billing accuracy (76 percent) and helping the environment (72 percent) were rated within a 2 percent difference of June 2014. Additionally, the likelihood of changing behaviors due to an Advanced Meter installation was slightly lower in the current wave, with the likelihood to use information to conserve gas (40 percent) and manage energy costs (42 percent) both declining from 45 percent and 44 percent each in June 2014.

The additional gas usage information made available by Advanced Meters continues to have some impact on whether customers will sign up for My Account in order to access it. Thirty three percent of customers who are not currently enrolled in My Account indicated they would sign up in order to access the information. This represents a slight, but not statistically significant, increase from the 30 percent reported in June 2014.

Chapter 8 – Elevated Customer Inquiries and Deferral/Opt-Out Program Enrollments

SoCalGas customers may inquire about the Advanced Meter project by contacting either the SoCalGas Customer Contact Center (“CCC”) or the Advanced Meter Customer Information Center (“CIC”). The CCC addresses customer inquiries about any subject while the CIC typically makes appointment arrangements with customers to have their Advanced Meter installed. Advanced Meter “opt-out” requests are processed by the CCC.

Some customer inquiries were not routinely resolved and were escalated to Advanced Meter Customer Experience Support staff. There have been about 7,298 inquiries escalated to this specialized support staff since the project’s inception. The number of escalated customer inquiries is very low, considering the volume of Advanced Meter communications that have been distributed to SoCalGas customers. Through June 2015, 3.7 million pre-installation letters were mailed to customers. The most common cause of the escalated inquiries is requests to defer/opt-out of the installation of the Advanced Meter communications module.

Although customers can call either the CCC or the CIC to have their deferral/opt-out requests recorded, some ask to speak to the Advanced Meter Customer Experience Support staff. Their questions usually revolve around safety and privacy concerns, as well as comments on the Advanced Meter Opt-Out Program fees.

Table 12 displays a breakdown of enrollment status for the Advanced Meter Opt-Out Program as of June 30, 2015.

Table 12
Advanced Meter Opt-Out Program Enrollment

Inquiry Type	Number Received	Explanation
Active customer-requested Opt-Out Program enrollments ¹³	3,809	The number of customers actively enrolled and being billed for Opt-Out Program fees and charges. ¹⁴
Customers defaulted in to the Opt-Out Program	2,949	The number of customers that have been default enrolled ¹⁵ and are being billed for Opt-Out Program fees and charges.
Total Active Opt-Out Program enrollments	6,758 (0.12%)	
Customer Opt-Out Program requests to “opt back in” to Advanced Meter installation	8,185	The number of customers that requested to be removed from the Opt-Out Program (includes customers in both an “Active” and “Pending Enrollment” Opt-Out Program status).

On March 19, 2014, SoCalGas’ Opt-Out Program became effective and the project team initiated efforts to inform employees of the Opt-Out Program and revised any impacted company communication materials. The interim opt-out fees approved by the Commission were consistent with those previously adopted for the other California Investor-Owned Utilities (“IOUs”).¹⁶ SoCalGas’ Advanced Meter Opt-Out Program interim fees for residential customers were as follows:

- Non-CARE Customers: Initial fee of \$75.00 and \$10.00/month ongoing cost
- CARE Customers: Initial fee of \$10.00 and \$5.00/month ongoing cost

¹³ “Active” includes only those customers who are enrolled in the Opt-Out Program and are currently being billed associated Opt-Out Program fees. Many customers in a “Pending” status, once presented with final communications regarding Opt-Out Program fees, elect to terminate their prior request for enrollment in the Opt-Out Program. Similarly, customers about to be default-enrolled due to repeated installation/access attempts sometimes contact SoCalGas to schedule an installation prior to being actively enrolled.

¹⁴ SoCalGas implemented its Advanced Meter Opt-Out Program effective March 19, 2014, pursuant to D.14-02-019. These customers either requested to defer from an Advanced Meter module installation prior to March 19, 2014, or subsequent to March 19, 2014, requested to enroll in the Advanced Meter Opt-Out Program.

¹⁵ These customers were defaulted (automatically enrolled) into the Opt-Out Program due to several unsuccessful attempts by SoCalGas to contact the customers to provide access for the installation of the Advanced Meter.

¹⁶ D.12-02-014 (PG&E), D.12-04-018 (SCE), and D.12-04-019 (SDG&E).

On December 19, 2014, the Commission issued D.14-12-078 regarding the Smart Meter Opt-Out Phase 2 proceeding; this decision reiterated approval of the interim opt-out fees and charges and adopted them as permanent opt-out fees and charges for residential customers for each of the California IOUs.

Table 13 displays the number of customers who requested a deferral/opt-out in response to the pre-installation letter within the Mass Installation area footprint only. This is a good indicator of the percent of SoCalGas customers who are likely to request to opt-out of an Advanced Meter module installation.

Table 13
Number of Customers Receiving Installation Notification Letter
Requesting Deferral of Advanced Meter Module

Number of Letters Mailed	3,702,900
Number of Customers Requesting a Deferral/Opt-Out within the Mass Installation Footprint	8,218
Percentage of Deferral/Opt-Out within the Mass Installation Footprint	0.22%

As of June 2015, approximately 0.22 percent of the 3,702,900 customers who have received a pre-installation letter have requested to defer/opt-out of the installation of an Advanced Meter module.

In April 2015, pursuant to the Commission’s Phase 1 and Phase 2 Opt-Out decisions, SoCalGas implemented modifications to its billing system to begin charging opt-out fees to Opt-Out Program participants, including customers who were defaulted into the program. Additionally, information regarding key new features introduced in the Phase 2 decision was incorporated into existing customer talking points and all relevant Advanced Meter customer and external communications materials.

Given the size and diversity of the customer population included in the pre-installation letters mailed to date, SoCalGas still expects the percentage of customers who will opt-out to be within the planning assumption of 0.5 percent.

Chapter 9 - Conservation Outreach Campaign

D.10-04-027 set a goal for SoCalGas to reduce residential gas consumption by one percent and placed reporting requirements on SoCalGas which are referenced in the introduction to this report.

In November 2014, SoCalGas initiated the second campaign of a multi-year outreach campaign aimed at reaching the one percent conservation goal and marketing the conservation benefits of the Advanced Meter project. This heating season conservation outreach campaign followed a “Test and Learn” approach and generally ran through March 2015.¹⁷ The overall strategy for the 2014-2015 conservation campaign design was to incorporate lessons learned from the first heating season campaign conducted in 2013-2014, with a goal towards increasing engagement levels in order to achieve behavioral change that would drive energy conservation of one percent or more. SoCalGas will continue to incorporate the lessons learned from each consecutive heating season campaign and adjust campaigns in future years to focus on the most promising customer segments and communication channels.

SoCalGas continued to team with Nexant on several aspects of its conservation campaign implementations and post-campaign evaluations. The primary objectives were as follows:

- 1) Develop comprehensive conservation outreach plans incorporating a “Test and Learn” program development strategy with a focus on continuous assessment and improvement in the performance of feedback programs;
- 2) Perform an evaluation of the 2014-2015 conservation campaign results, as well as evaluating any continued conservation effects resulting from the prior 2013-2014 campaign; and
- 3) Provide recommendations and guidance for the proposed 2015-2016 “Test and Learn” plan, as well as associated follow-on evaluation of campaign results.

9.A Conservation Customer Engagement and Results

The major features of the 2014-2015 conservation campaign were:

- Continued and expanded Opower Home Energy Report (HER) treatments, including some refinements and testing of a year-round option (the default Bill Tracker Alert and Aclara HERs described below are also being tested on a year-round basis);
- A test of Aclara-generated HERs, which differ from the prior HERs offered by Opower in that they include different conservation messages, have more Advanced Meter-specific content and an emphasis on driving customers to the SoCalGas.com, My Account-based Ways to Save online tools and other conservation/energy efficiency programs as appropriate;
- Continued and expanded default enrollment in weekly Bill Tracker Alerts (BTAs) to residential customers, but with fewer direct mail communications, which are relatively costly (if comparable energy savings can be achieved without those costly communications, then cost-effectiveness will improve);
- Discontinued offering of the BTA on the opt-in basis, due to the high acquisition cost and relatively low enrollment rates, coupled with a lack of savings during the initial campaign period for these treatments;
- Continued tracking and measurement of energy savings from the 2013-2014 HER treatments, in order to determine whether savings persist even if SoCalGas no longer sends HERs to those customers; and

¹⁷ A few treatments tested also included year-round elements.

- Continued tracking and measurement of the energy savings for the 2013-2014 BTA treatments, in order to determine whether savings persist, even if SoCalGas no longer sends accompanying email and direct mail communications.

As summarized in Figure 3 below, four of the seven customer conservation program treatments tested during this second 2014-2015 campaign produced gas savings of about one percent, showing continued progress toward the one percent conservation goal. The three other treatments tested in the second campaign did not generate statistically significant reductions in gas usage.

Figure 3
Percent Reduction in Gas Usage
for Residential 2014-2015 Conservation Treatments

Treatment	Percentage Reduction
Opower Paper-only HER	1.48%
Opower Paper & e-mail HER	1.45%
Opower e-mail HER	0.74%
Aclara Paper-only HER	0.51%
Overall % Reduction	1.01%

Additional fall/winter savings of approximately 1.15% were realized for four of the treatments tested during the 2013-2014 campaign due to continued effects for those treatments as shown below in Figure 4.

Figure 4
Percent Reduction in Gas Usage in 2014-2015
for Residential 2013-2014 Conservation Treatments

Treatment	Percentage Reduction
Opower Email-only HER	1.33%
Default Bill Tracker Alert	1.20%
Opower Paper & e-mail HER	1.12%
Opower Paper-only HER	1.03%
Overall % Reduction	1.15%

Please refer to Appendix E, **“Evaluation of Southern California Gas Company’s 2014-2015 Conservation Campaign, August 2015”** provided by Nexant for a comprehensive evaluation of the results of this conservation campaign, as well as recommendations for SoCalGas’ 2015-2016 conservation “Test and Learn” campaign approach.

As outlined in the recommendations contained within Nexant’s report, for the 2015-16 conservation campaign, high performing program design options from the 2013-2014 and 2014-2015 campaigns will be retained and enhanced. Additionally, new program design alternatives will be tested. The goal is that, over the course of the Advanced Meter roll out, the most effective means for encouraging energy savings from information feedback will be identified and offered to customers. Underperforming customer segments have been excluded from the 2014-2015 campaign and going forward in order to allocate resources towards segments that have a higher propensity to change behavior and conserve energy.

Though some customers may be excluded from future targeted conservation campaigns, every SoCalGas customer receives a letter within 60 days of becoming Advanced Meter “Billing Ready” that outlines all the new energy information feedback options available to them enabled by an Advanced Meter. Customers who are “My Account” customer portal users also receive an email and a notification message within the My Account portal highlighting the new functionality.

For further details regarding the new Advanced Meter-enabled online energy information feedback options rolled out to customers, please refer to prior Semi-Annual Reports.

In addition to the conservation “Test and Learn” campaign treatments and outcomes described above, following is an update regarding related customer engagement metrics and indicators for the 2014-2015 customer conservation programs and associated Advanced Meter-enabled energy presentation and analysis tools.

9.B Opower Home Energy Reports

As outlined above, SoCalGas contracted with Opower to implement several Home Energy Report treatments for the 2014-2015 conservation campaign.

The Opower HER contains personalized usage information that is designed to help customers save energy and money. This report engages customers primarily through the “Neighbor Comparison” information. A customer’s current gas usage is compared to approximately 100 nearby occupied homes with similar characteristics- such as square footage and heating system. These comparisons, along with personalized energy saving tips, can help customers understand how they can conserve natural gas.

A total of 262,863 paper HERs and 135,201 e-HERs (e-mailed HERs) have been sent from November 2014 to June 30, 2015.

Table 14
2014-2015 Opower Home Energy Reports

	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Paper HER	77,224	62,998	60,758	61,883	Not Applicable			
e-HERs	Not applicable	26,095	22,197	25,319	24,373	11,984	12,573	12,660

As of June 30, 2015, 363 (.5 percent) of Opower HER program enrollees opted-out of receiving further Opower HERs. A total of 53,505 e-HERs have been opened from November 2014 through June 2015, an average of 7,063 per month. E-HERs delivered an average open rate of 39.6 percent, and 6.1 percent of all e-HERs opened have resulted in click-through activity.

Customer acceptance of the Opower treatments was strong as indicated by both the low opt-out rate for recipients of these reports, coupled with the findings of customer satisfaction research performed with a sampling of the recipients of the reports from the 2014-2015 campaign.

Customer Engagement Tracker (CET) is a telephone survey implemented by Opower.¹⁸ The CET measures customer satisfaction with the HERs. The survey was administered to 1,001 randomly selected SoCalGas customers consisting of participants in both treatment and control test cells. The CET results indicated strong customer engagement and increased customer satisfaction with SoCalGas. Two-thirds of treatment customers recalled the Opower HER, most (75%) of whom found value in the reports. One-third of customers attested that they were more satisfied with SoCalGas after receiving these reports, while the majority of the remaining customers said their opinions were unchanged. The high customer satisfaction ratings demonstrate the positive impact of these reports on not only the conservation campaign, but overall customer experience with SoCalGas.

9.C Aclara Home Energy Update Reports

SoCalGas also contracted with Aclara to test alternative Aclara-generated Home Energy Update Reports (HER) approaches for the 2014-2015 conservation campaign. The Aclara HERs included different conservation messages, more Advanced Meter-specific content and an emphasis on driving customers to the SoCalGas.com, My Account-based Ways to Save online tools and other conservation/energy efficiency programs as appropriate.

A total of 258,768 Aclara paper HERs were mailed and 153,572 e-HERs have been delivered from November 2014 to June 30, 2015.

¹⁸ Opower, SoCalGas Home Energy Reports: Customer Engagement Tracker Survey Results, 2015.

Table 15
2014-2015 Aclara Home Energy Update Reports

	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Paper HERs	79,604	64,572	57,296	57,296	No paper reports sent			
e-HERs	25,142	24,588	21,814	23,268	22,935	12,063	11,959	11,803

As of June 30, 2015, 123 (.2 percent) of program enrollees opted-out of receiving further Aclara HERs. For the e-HERs delivered in November 2014 through June 2015, on average, 34.4 percent of the Aclara e-HERs have been opened and 4.4 percent of all e-HERs opened have resulted in click-through activity.

Customer acceptance of the Aclara treatments was also strong as indicated by both the very low opt-out rate for recipients of these reports, coupled with the findings of customer satisfaction research performed with a sampling of the recipients of the reports from the 2014-2015 campaign.

Telephone and email customer surveys were prepared by Aclara in collaboration with SoCalGas and Opinion Dynamics.¹⁹ These surveys measure customer satisfaction with the Aclara HERs. The surveys were administered within the same timeframe of each other to 1,168 randomly selected SoCalGas customers consisting of participants in both treatment and control test cells. The survey results indicated strong customer engagement and increased customer satisfaction with SoCalGas. Over two-thirds of customers recalled the Aclara HER and found value in the reports. Over one-third of phone participants and about two-thirds of e-mail participants were more satisfied with SoCalGas after receiving these reports, while the majority of the remaining customers' opinions were unchanged. The high customer satisfaction ratings demonstrate the positive impact of these reports on not only the conservation campaign, but overall customer experience with SoCalGas.

For more details regarding the Opower and Aclara-facilitated HER campaigns and associated conservation results, please refer to Appendix E, **“Evaluation of Southern California Gas Company’s 2014-2015 Conservation Campaign, August 2015”** provided by Nexant.

9.D Bill Tracker Alerts Enrollment

SoCalGas Bill Tracker Alerts (BTAs) offer several key features to help customers maintain a high level of energy usage awareness and engagement with SoCalGas. They help customers maintain “top of mind” awareness of their natural gas consumption which is critical to creating the ongoing behavioral change necessary to achieve energy conservation.

¹⁹ Opinion Dynamics Corporation (ODC), SoCalGas Aclara Home Energy Reports “Phone Customer Survey Results Findings,” 2014/2015; and, Aclara, SoCalGas Aclara Home Energy Reports “Email Customer Survey Results Findings,” 2014/2015.

As of June 30, 2015, 235,038 SoCalGas customers are actively enrolled in Bill Tracker Alerts (see Table 16 below, which provides cumulative enrollments-to-date). These enrollments support the Advanced Meter project conservation savings goal as well as SoCalGas’ 2013-2015 Energy Efficiency behavior change program household participation goals.²⁰

The BTAs retention rate continues to remain high at 87 percent. Eighty-nine percent of the “unsubscribes” are due to system factors, such as customer account closures, which results in a customer-initiated unsubscribe rate of less than two percent since the program’s inception. This is a strong indicator that customers value weekly email and/or SMS text messages that keep them apprised of their bill-to-date, projected next bill, last month’s bill, last year’s same month bill, and the number of days remaining in their current billing cycle.

Table 16
SoCalGas Bill Tracker Alerts Enrollment

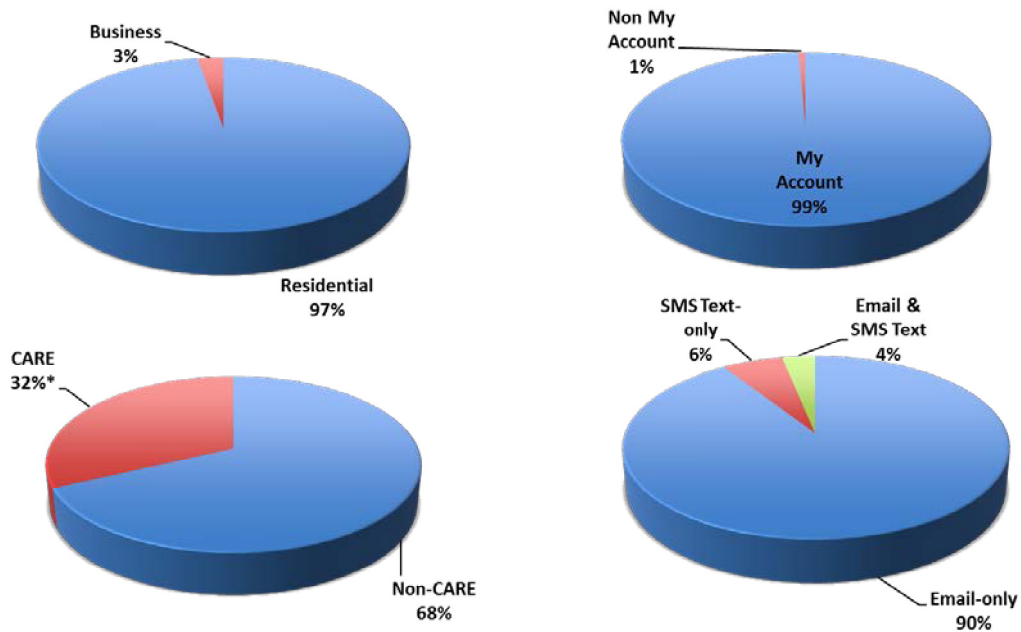
Item	Count through June 30, 2015
Total Subscriptions	272,307
Auto Enrollment	226,888
Microsite – Online @ billtracker.socalgas.com	13,516
Microsite – Business Response Cards	7,611
Microsite – Hard-to-Reach Events	724
My Account/CSR – “Manage Alerts”	23,568
Total Unsubscriptions²¹	37,269
By Customer (subscribed via Microsite/Auto Enrollment)	3,108
By Customer (subscribed via My Account)	665
By System (i.e., Account Closed)	33,496
Total Active Subscriptions	235,038

Figure 5 displays some of the customer characteristics of customers enrolled in Bill Tracker Alerts as of June 30, 2015.

²⁰ Pursuant to D.12-11-015, SoCalGas is also utilizing its Advanced Meter project to support its Energy Efficiency non-resource behavior goals, which contain a 5% behavioral target for residential households. This five percent behavioral target remains in place through the 2015 Energy Efficiency program cycle as outlined in D.14-10-046.

²¹ The majority of cancelled subscriptions are system-related (e.g., Account closures); less than 2% are due to customers unsubscribing.

Figure 5
SoCalGas Bill Tracker Alert Characteristics as of June 30, 2015



* As of June 30, 2015, California Alternative Rates for Energy (“CARE”) customers accounted for approximately 32% of percent of SoCalGas’ residential customer base.

9.E My Account “Ways to Save” Tool Utilization

Another key indicator of enhanced customer engagement enabled or stimulated by Advanced Meter includes customer utilization of the SoCalGas.com, My Account-based “Ways to Save” online tools.

As described at length in prior Semi-Annual Reports, SoCalGas has implemented energy presentation and analysis tools within its My Account customer portal, as well as within the SoCalGas Mobile App. Through June 30, 2015, a cumulative total of almost 300,000 residential My Account users (both new and returning users) have engaged with the Ways to Save tool “My Savings Plan” web page from which users could view their personal energy use profile and initiate a savings plan, as well as navigate to view their hourly and daily gas usage and other energy usage and bill-related information.

Appendices

Appendix A - Mass Install Timeline

Staging Location	2015				2016				2017			
	1	2	3	4	1	2	3	4	1	2	3	4
Area A	Completed 10/2014											
Sun Valley												
Northridge												
LAX**												
Bakersfield												
Visalia												
Valencia												
Oxnard												
Santa Barbara												
Nipomo												
Area B	Completed 11/2013											
Irwindale												
Area C	Completed 7/2014											
Rancho Cucamonga												
South Gate**												
Area D	Completed 12/2014											
Los Angeles**												
Area D	Completed 5/2013											
El Centro												
Indio												
Hemet												
Perris												
Mission Viejo**												
Anaheim**												
Installation Clean Up & Closure												

**This timeline represents above ground installation work only. Warehouses assigned to perform curb meter work may require warehouse extension.

Note: Planned warehouse closure dates are subject to change. Advanced Meter deployment will continue into 2017. Warehouse closures may be modified based on project close activities including transition to regular operations and workforce availability amongst Mass Installation and other SoCalGas personnel to perform remaining installations.

Appendix B - List of Cities and Counties with Fully Installed DCUs

Adelanto	Cudahy	La Canada Flintridge	Riverside
Alhambra	Culver City	La Habra	San Bernardino
Aliso Viejo	Cypress	La Habra Heights	San Dimas
Anaheim	Delano	La Mirada	San Fernando
Arcadia	Desert Hot Springs	La Palma	San Gabriel
Arroyo Grande	Diamond Bar	La Puente	San Jacinto
Artesia	Dinuba	La Verne	Santa Monica
Azusa	Duarte	Laguna Hills	Seal Beach
Bakersfield	Eastvale	Lake Elsinore	Shafter
Baldwin Park	El Centro	Lemoore	Solvang
Banning	Fillmore	Loma Linda	Stanton
Beaumont	Fontana	Lomita	Taft
Bell	Fountain Valley	Los Alamitos	Temecula
Bell Gardens	Fresno County	Maywood	Temple City
Bellflower	Fullerton	Menifee	Tulare
Blythe	Garden Grove	Montclair	Tulare County
Bradbury	Gardena	Montebello	Tustin
Brawley	Glendora	Moorpark	Twentynine Palms
Buellton	Goleta	Murrieta	Upland
Buena Park	Grand Terrace	Norco	Vernon
Burbank	Hanford	Ontario	Villa Park
Calexico	Hawaiian Gardens	Orange	Walnut
California City	Highland	Palm Desert	Wasco
Calimesa	Holtville	Perris	West Covina
Calipatria	Imperial	Pico Rivera	Westminster
Chino	Imperial County	Placentia	Westmorland
Chino Hills	Indian Wells	Pomona	Whittier
Claremont	Indio	Porterville	Wildomar
Coachella	Industry	Rancho Cucamonga	Yucca Valley
Colton	Irwindale	Redlands	Yorba Linda
Corcoran	Jurupa Valley	Reedley	
Covina	Kings County	Rialto	

**Appendix C – Community Based Organizations, Business Organizations and Chambers
Active January 1 - June 30, 2015**

Antelope Valley African American Chamber of Commerce
Antelope Valley Board of Trade
Antelope Valley Boys and Girls Club
Antelope Valley Family YMCA
Boys and Girls Club of Fontana
Claremont Chamber of Commerce
Community Action Partnership of San Bernardino
David and Margaret Youth and Family Services
Kern Economic Development Corporation
La Verne Chamber of Commerce
Lancaster Chamber of Commerce
Little Tokyo Service Center, a Community Development Corporation
Ontario Chamber of Commerce
Placentia Chamber of Commerce
Pomona Chamber of Commerce
Positive Results Corporation
Rancho Cucamonga Chamber of Commerce
Salvadoran American Leadership and Education Fund
Santa Clarita Valley Economic Development Corporation
Santa Clarita Valley Latino Chamber of Commerce
Todec Legal Center, Perris
Venice Community Housing
YWCA of San Gabriel Valley

Appendix D – iKahan Media

POP



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WHERE THEY LIVE, SHOP, WORK & PLAY ACROSS THE U.S.



1817 STANFORD STREET, SUITE A/B • SANTA MONICA, CA 90404 • www.iKahanmedia.com **iKahan**
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MARKET: Los Angeles, CA
VENUE NETWORK: Supermarket
MEDIA-TYPE: POP Panel
CAMPAIGN TIMING: 05/04/15 – 06/14/15



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MARKET: Los Angeles, CA
VENUE NETWORK: Convenience Store
MEDIA-TYPE: One-Sheet
CAMPAIGN TIMING: 05/04/15 – 06/14/15



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MARKET: Los Angeles, CA
VENUE NETWORK: Laundromat
MEDIA-TYPE: Wall Banner
CAMPAIGN TIMING: 05/04/15 – 06/14/15



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MARKET: Los Angeles, CA
VENUE NETWORK: Laundromat
MEDIA-TYPE: Dryer Decal
CAMPAIGN TIMING: 05/04/15 – 06/14/15



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iK-LA014
Long Beach & Imperial

Proof of Performance



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Venue ID	Retailer	Store #	Address	City	State	Zip	Venue Type
260873	Big Saver Foods	5	5829 S. Compton Ave.	Los Angeles	CA	90001	POP
260875	Big Saver Foods	7	420 West 17th Street	Santa Ana	CA	92706	POP
163229	Cardenas Super Market	2	10455 Mills Ave	Montclair	CA	91763	POP
163232	Cardenas Super Market	5	720 E Holt Blvd	Ontario	CA	91761	POP
163233	Cardenas Super Market	6	2001 S Garey Ave	Pomona	CA	91766	POP
163234	Cardenas Super Market	7	16721 Valley Blvd	Fontana	CA	92335	POP
163237	Cardenas Super Market	9	250 W Foothill Blvd	Rialto	CA	92376	POP
163218	Cardenas Super Market	10	1067 N Mt Vernon Ave	Colton	CA	92324	POP
163219	Cardenas Super Market	11	6350 Van Buren Blvd	Riverside	CA	92503	POP
163221	Cardenas Super Market	14	301 S Lincoln Ave	Corona	CA	92882	POP
163222	Cardenas Super Market	15	16212 Foothill Blvd	Fontana	CA	92335	POP
163223	Cardenas Super Market	16	690 E Holt Ave	Pomona	CA	91767	POP
163235	Cardenas Super Market	81	2450 S Vineyard Ave	Ontario	CA	91761	POP
164110	El Tapatio Super Market	106	5800 Van Buren Blvd	Riverside	CA	92503	POP
314556	Gage Village	N/A	1401 E Gage Ave	Los Angeles	CA	90001	POP
182610	Guadalajara Super Market	1600	1600 W. Mission Blvd.	Pomona	CA	91766	POP
216763	La Famosa	5	390 S Vernon	San Bernardino	CA	92410	POP
182607	Reyna Super Market	N/A	902 W. McFadden	Santa Ana	CA	92707	POP
299069	Superior Grocers	144	3180 N. Garey Ave	Pomona	CA	91767	POP
163296	Superior Grocers	109	1710 S Main St	Santa Ana	CA	92707	POP
163260	Superior Grocers	121	151 W Base Line Rd	Rialto	CA	92376	POP
163261	Superior Grocers	122	16055 Foothill Blvd	Fontana	CA	92335	POP
163302	Superior Grocers	126	1130 W 6th St	Corona	CA	92882	POP
163272	Superior Grocers	130	1108 W 2nd St	San Bernardino	CA	92410	POP
163266	Superior Grocers	131	9100 Whittier Blvd	Pico Rivera	CA	90660	POP

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163268	Superior Grocers	133	1010 E Avenue J	Lancaster	CA	93535	POP
163271	Superior Grocers	137	38360 20th St E	Palmdale	CA	93550	POP
163281	Tresieras Super Market	7	133 W Pleasant Valley Rd	Oxnard	CA	93033	POP
216371	Vallarta Supermarket	4	440 E. Palmdale Blvd	Palmdale	CA	93550	POP
216355	Vallarta Supermarket	14	1801 West Ave	Lancaster	CA	93534	POP
216365	Vallarta Supermarket	27	815 E. Ave K	Lancaster	CA	93534	POP
38359	South Bay Liquor	N/A	1014 N Wilmington	Wilmington	CA	90744	C- Store
183578	Freeway Park Market	N/A	1021 N Moraga St	Anaheim	CA	92801	C- Store
38170	Brothers Market	N/A	1025 E Mission Blvd	Pomona	CA	91766	C- Store
256048	John's Liquor	N/A	1080 W. La Palma Ave.	Anaheim	CA	92801	C- Store
13328	E&M Meat Market	N/A	10826 Central Ave	Los Angeles	CA	90059	C- Store
15698	Pak-A-Bag Market	N/A	1094 W Mission Blvd	Pomona	CA	91766	C- Store
183684	Val's Mini Market	N/A	1131 E 108th St	Los Angeles	CA	90059	C- Store
320183	Kwik Serv Liquor	N/A	11319 1\2 Washington Blvd	Whittier	CA	90606	C- Store
12640	C-Food Store	N/A	11462 Slauson Ave	Whittier	CA	90606	C- Store
14911	China Market	N/A	1163 Williamington Blvd	Williamington	CA	90744	C- Store
182659	Amigo Market	N/A	1214 E L St	Wilmington	CA	90744	C- Store
258361	Clock Liquor	N/A	1217 S. Euclid St.	Anaheim	CA	92802	C- Store
297637	Whittier Farms	N/A	12221 Whittier Blvd	Whittier	CA	90602	C- Store
16230	Rockview Dairy	N/A	12402 Inglewood Ave	Hawthorne	CA	90250	C- Store
13352	Espinoza Mini Market	N/A	12733 Wardman St	Whittier	CA	90602	C- Store
258063	Party Snack Liquor	N/A	12814 Whittier Blvd.	Whittier	CA	90602	C- Store
14073	H&J Mini Market	N/A	1292 W Mills St	San Bernardino	CA	92410	C- Store
21206	Springdale Liquor Jr Market	N/A	13262 Springdale St	Westminster	CA	92683	C- Store
12143	Flor Mini Market	N/A	1400 E 41st St	Los Angeles	CA	90011	C- Store
214908	Moises Mini Market	N/A	1401 E Vernon Ave	Los Angeles	CA	90011	C- Store
255981	Mel & Leo's Liquor	N/A	14245 Hawthorne Blvd.	Hawthorne	CA	90250	C- Store

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17531	Your Market	N/A	1455 W Highland Ave	San Bernardino	CA	92411	C- Store
299606	Dong Loi Food Inc	N/A	14805 Moran St	Westminster	CA	92683	C- Store
271644	Yas Market	N/A	14823 S Vermont Ave	Gardena	CA	90247	C- Store
307828	Mercado La Paz Liquor	N/A	1530 S. Greenville St.	Santa Ana	CA	92704	C- Store
271265	Corner Market	N/A	1538 W 166th St	Gardena	CA	90247	C- Store
14578	La Chiguita Market	N/A	15812 S Vermont Ave	Gardina	CA	90247	C- Store
12070	Amigo's Market	N/A	1602 W Highland Ave	San Bernardino	CA	92411	C- Store
183535	Sancho Market	N/A	1609 S Greenville St	Santa Ana	CA	92704	C- Store
183030	Gumbo Market	N/A	1610 E Vernon Ave	Los Angeles	CA	90011	C- Store
312674	Jimmy's Food Store	N/A	1620 W Base Line St	San Bernardino	CA	92411	C- Store
14273	Jimmys Food Market	N/A	16405 Merrill Ave	Fontana	CA	92335	C- Store
14675	La Mexicana Market	N/A	16702 S Vermont Ave	Gardina	CA	90247	C- Store
12006	Allsup's Convenience Store	N/A	1703 Main St	Riverside	CA	92501	C- Store
17138	Thai & Laos Market	N/A	1721 W La Palma Ave	Anaheim	CA	92801	C- Store
183402	New Vientian Market	N/A	1749 W LA Palma Ave	Anaheim	CA	92801	C- Store
12953	Del Rancho Market	N/A	1811 La Palma	Anaheim	CA	92801	C- Store
182925	Ensenada Markets	N/A	1827 W LA Palma Ave	Anaheim	CA	92801	C- Store
15422	M T & H Food Market	N/A	196 W Highland Ave	San Bernardino	CA	92405	C- Store
183479	P S Market	N/A	220 W B St	Ontario	CA	91762	C- Store
12085	And Mini Mart	N/A	2612 W Lincoln Ave	Anaheim	CA	92801	C- Store
21030	King Tut Liquor	N/A	2627 E Highland Ave	San Bernardino	CA	92404	C- Store
312480	Carniceria LA Playita	N/A	2650 Main St	Riverside	CA	92501	C- Store
312650	Hi Mini Market	N/A	2666 W Lincoln Ave	Anaheim	CA	92801	C- Store
13574	First & Fair Market	N/A	2715 W 1st St	Santa Ana	CA	92703	C- Store
182766	Carniceria Mercado Callmex	N/A	2930 W Lincoln Ave	Anaheim	CA	92801	C- Store
13590	Flash Market	N/A	2940 W Lincoln Ave	Anaheim	CA	92801	C- Store
20929	Five Points Liquor Store	N/A	3079 W Lincoln Ave	Anaheim	CA	92801	C- Store

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16456	Seven Heaven	N/A	337 E 9th St	San Bernardino	CA	92410	C- Store
258105	Young's Liquor	N/A	3800 W. El Segundo Blvd.,#10	Hawthorne	CA	90250	C- Store
12559	Carniceria La Famosa	N/A	397 W Highland Ave	San Bernardino	CA	92405	C- Store
182969	First Nutrition	N/A	4101 S Central Ave	Los Angeles	CA	90011	C- Store
15085	Martha's Mini Market	N/A	4122 Hooper Ave	Los Angeles	CA	90011	C- Store
15252	Salo's Mini Market	N/A	4225 S Hooper	Los Angeles	CA	90011	C- Store
270959	99 Cent El Durango Store	N/A	4279 South Central Avenue	Los Angeles	CA	90011	C- Store
312446	Belen Mini Market	N/A	4314 Ascot Ave	Los Angeles	CA	90011	C- Store
272410	Ken's Liquor	N/A	4572 Durfee Ave	Pico Rivera	CA	90660	C- Store
270975	ANS Liquor	N/A	4625 Hooper Ave	Los Angeles	CA	90011	C- Store
167504	Poppys Market	N/A	4700 Durfee Ave	Pico Rivera	CA	90660	C- Store
183176	LA Guadalupe	N/A	4715 Avalon Blvd	Los Angeles	CA	90011	C- Store
14824	Lees Market	N/A	4801 S Avalon Blvd	Los Angeles	CA	90011	C- Store
15236	Nadias Mini Market	N/A	4801 S Central Ave	Los Angeles	CA	90011	C- Store
181895	Martinez Mini Market	N/A	4824 Avalon Blvd	Los Angeles	CA	90011	C- Store
317051	Sams Liquor	N/A	4832 Lankershim Blvd	North Hollywood	CA	91605	C- Store
270902	Marlene 99 Store	N/A	4912 Hooper Ave	Los Angeles	CA	90011	C- Store
183138	Jurema Nutrition	N/A	4921 Hooper Ave	Los Angeles	CA	90011	C- Store
20850	Central Liquor Market	N/A	5000 S Central Ave	Los Angeles	CA	90011	C- Store
14701	Lankershim Food Mart	N/A	5048 Lankershim Blvd	North Hollywood	CA	91601	C- Store
270995	Jose's Mini Market	N/A	5100 1/2 S Central Avenue	Los Angeles	CA	90011	C- Store
14287	J & J Mini Mart	N/A	5111 S Central Ave	Los Angeles	CA	90011	C- Store
15541	Ninu's Meat Market	N/A	5122 S Avalon Blvd	Los Angeles	CA	90011	C- Store
14952	Luchi's	N/A	5131 Avalon Blvd	Los Angeles	CA	90011	C- Store
183350	Mi Pueblo Market	N/A	5139 Avalon Blvd	Los Angeles	CA	90011	C- Store
182965	Fifty Fifth Street Market	N/A	5428 Hooper Ave	Los Angeles	CA	90011	C- Store
262852	Mission Market	N/A	5448 Mission Blvd	Riverside	CA	92509	C- Store

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16549	Shorty Mini Market	N/A	5504 S Central Ave	Los Angeles	CA	90011	C-Store
270904	San Andreas Market	N/A	5520 Avalon Boulevard	Los Angeles	CA	90011	C-Store
21159	Rancho Liquor	N/A	5712 Westminster Blvd	Westminster	CA	92683	C-Store
182627	99 Cents Market Matamoros	N/A	5859 Compton Ave	Los Angeles	CA	90001	C-Store
180121	Bernardo'S Market	N/A	5902 S. Central Ave	Los Angeles	CA	90001	C-Store
271005	Vikeys Party Supply 99 Cent Store	N/A	5908 S. Central Ave	Los Angeles	CA	90001	C-Store
183430	Oxnard Liquor Market	N/A	6007 Lankershim Blvd # 1	North Hollywood	CA	91606	C-Store
312897	Price's Market	N/A	6224 Crenshaw Blvd	Los Angeles	CA	90043	C-Store
182876	Lankershim Market	N/A	6530 Lankershim Blvd # C	North Hollywood	CA	91606	C-Store
299689	Van's Mini Market	N/A	7222 Westminster Blvd	Westminster	CA	92683	C-Store
183263	Lowrs Market	N/A	7384 Mission Blvd	Riverside	CA	92509	C-Store
38409	Rosemead Market	N/A	7828 Rosemead Blvd	Pico Rivera	CA	90660	C-Store
182713	B & B Super Market	N/A	787 E 54th St	Los Angeles	CA	90011	C-Store
271550	J & C Market	N/A	814 W Gardena Blvd	Gardena	CA	90247	C-Store
183377	Morenita Market	N/A	8215 S Central Ave	Los Angeles	CA	90001	C-Store
14048	Hiep Thanh Super Market	N/A	822 N Waterman Ave	San Bernardino	CA	92410	C-Store
14199	Janitzio Produce Market	N/A	8236 Norwalk Blvd	Whittier	CA	90606	C-Store
271008	H & K Mini Mart	N/A	829 Vernon Ave	Los Angeles	CA	90011	C-Store
16212	Rivera Liquor & Market	N/A	8320 Pico River	Pico Rivera	CA	90660	C-Store
15575	Number One Store	N/A	841 Inland Center Dr	San Bernardino	CA	92408	C-Store
271354	El Camino Real Market	N/A	855 S State College Blvd	Anaheim	CA	92806	C-Store
183489	Ramirez Market	N/A	856 E 51st St	Los Angeles	CA	90011	C-Store
182974	Fontana Market	N/A	8901 Fontana Ave # C	Fontana	CA	92335	C-Store
21198	Smitty's Liquor	N/A	924 W Highland Ave	San Bernardino	CA	92405	C-Store
317272	Mart One	N/A	9547 Telegraph Rd	Pico Rivera	CA	90660	C-Store
10457	Q Coin Laundry	N/A	110/112 S Western	Anaheim	CA	92804	Laundromat
168230	Laundromat	N/A	11438 Old River School Road	Downey	CA	90241	Laundromat

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10211	Lavar/Wash	N/A	1151 E Holt # K	Pomona	CA	91767	Laundromat
9799	Gisselle Laundrymat	N/A	1170 Wilmington Blvd	Wilmington	CA	90744	Laundromat
18954	K & G Coin Laundry	N/A	1196 W Highland Ave	San Bernardino	CA	92405	Laundromat
9286	Best Coin Laundry	N/A	1401 Warner Ave	Santa Ana	CA	92704	Laundromat
317048	La Brea Coin Laundry	N/A	1543 La Brea Ave	Los Angeles	CA	90028	Laundromat
296256	Resort Laundry	N/A	202 Katella Ave	Anaheim	CA	92802	Laundromat
10926	Wonder Wash Coin Laundry	N/A	2129 E Ball Rd	Anaheim	CA	92806	Laundromat
9568	Coin Op Laundry	N/A	2370 W Lincoln Ave	Anaheim	CA	92801	Laundromat
9437	9th St. Coin Laundry	N/A	26514 9th St	Highland	CA	92346	Laundromat
20415	Thrifty Wash	N/A	2712 Griffith Park Blvd	Los Angeles	CA	90027	Laundromat
9589	Coin Wash	N/A	4371 Melrose Ave	Los Angeles	CA	90029	Laundromat
9473	Coin Laundry	N/A	4541 Santa Monica Blvd	Los Angeles	CA	90029	Laundromat
9529	Coin Laundry	N/A	4621 Rosemead Blvd	Pico Rivera	CA	90660	Laundromat
19477	Maytag Laundry	N/A	4840 Hollywood Blvd	Los Angeles	CA	90027	Laundromat
277984	Sunset Laundry	N/A	5061 West Sunset Boulevard	Los Angeles	CA	90027	Laundromat
296259	Sun Coin Laundry	N/A	5074 Sunset Blvd	Los Angeles	CA	90027	Laundromat
9177	4 Seasons Laundromat	N/A	5173 Santa Monica Blvd	Los Angeles	CA	90029	Laundromat
10744	T & A Coin Laundry	N/A	540 Knott Ave	Anaheim	CA	92804	Laundromat
10745	T & A Coin Laundry	N/A	6920 Westminster	Westminister	CA	92683	Laundromat
10712	Superior Coin Laundry	N/A	7106 Compton Ave	Los Angeles	CA	90001	Laundromat
9944	Just For You Laundry	N/A	7551 Tunjunga Blvd	North Hollywood	CA	91605	Laundromat
10320	Mission Coin Op Laundry	N/A	808 E Mission Blvd	Pomona	CA	91766	Laundromat
10240	Los Lavaderos	N/A	954 N Virgil Ave	Los Angeles	CA	90029	Laundromat

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**Appendix E - Evaluation of Southern California Gas Company's 2014-2015 Conservation
Campaign, August 2015
Prepared by Nexant**



Evaluation of Southern California Gas Company's 2014–2015 Conservation Campaign

August 31, 2015

Prepared for
Southern California Gas Company

Prepared by
Stephen George
Senior Vice President

Michael Sullivan
Senior Vice President

Josh Schellenberg
Principal Consultant

Alana Lemarchand
Consultant

Nexant, Inc.

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1 Executive Summary

Southern California Gas Company (SoCalGas[®]) began deploying advanced meters (AM) in its service territory in late 2012, pursuant to California Public Utilities Commission (CPUC) Decision (D.)10-04-027. These meters are capable of providing enhanced information services that can help consumers better manage and control their energy costs. By rigorously evaluating these types of information services, SoCalGas can demonstrate how to meet its 1% energy savings goal that is associated with its AM rollout.¹ Each year of the AM rollout, SoCalGas is conducting a Conservation Campaign that is designed to test various enhanced information programs. This document summarizes the evaluation of the second Conservation Campaign, which primarily ran from November 2014 through March 2015.² This document also includes results on the persistence of energy savings from the first Campaign that occurred during the same time period the previous year.

As in the 2013–2014 Conservation Campaign (first Campaign), the 2014–2015 Conservation Campaign (second Campaign) tested two information feedback options—bill tracker alerts (BTAs)³ and home energy reports (HERs). These two information feedback options were chosen because they have the potential to reach large numbers of consumers and demonstrate how to meet the 1% energy savings goal in a cost-effective manner. Table 1-1 summarizes the estimated gas savings for the 2014-2015 SoCalGas Conservation Campaign. As with the first Campaign, energy savings for the second Campaign were found to be in line with the 1% savings goal. Overall, the new and continued treatments produced gas savings of over 500,000 therms, or about 1.0% during the fall / winter period (November 2014 to March 2015) for the subset of treatments tested that were successful in producing statistically significant usage reductions.⁴ Of these 500,000 therms, nearly 360,000 therms were conserved as a result of the new treatments for the 2014–2015 Conservation Campaign, representing a savings of 1%.

The remaining 142,000 therms of energy savings conserved from November 2014 to March 2015 were the result of continued effects of the treatments in the 2013–2014 Conservation Campaign. The continuation of the effects of these treatments over spring and summer 2014 (April through October) were also evaluated and found to be about 45,000 therms. In all, the effects of the new 2014–2015 treatments and the continued effects of the 2013–2014 treatments resulted in savings of almost 547,000 therms over the 12 month period from April 2014 to March 2015.

¹ This energy savings goal specifically refers to 1% of total residential gas usage.

² A few programs included a year-round email element.

³ Though several opt-in BTA designs were tested in the first Campaign, only default BTAs were tested in the second Campaign because the opt-in BTAs were not found to be cost-effective in the first Campaign.

⁴ Gas savings are only calculated for the treatments that produced statistically significant usage reductions, which includes the four default treatments from the 2013 -2014 Conservation Campaign as well as the three Opower treatments and Aclara Paper-only HER from the 2014-2015 Conservation Campaign.

Table 1-1: Estimated Gas Savings for the 2014-2015 SoCalGas Conservation Campaign

Initial Treatment Year	Treatment	Group	Number of Treatment Customers	% Reduction ⁵	Aggregate Therms Saved (Nov-Mar) ⁶
2014-2015	Opower Email HER	T-8	13,750	0.74%	22,698
	Opower Paper & Email HER	T-10	13,750	1.45%	51,541
	Opower Paper-only HER	T-13	53,500	1.48%	214,030
	Aclara Paper-only HER	T-14	53,500	0.51%	71,135
Overall for 2014-2015 treatments (fall / winter)			134,500	1.01%	359,405
2013-2014	Opower Email HER	T-3	12,500	1.33%	31,546
	Opower Paper & Email HER	T-2	12,500	1.12%	20,871
	Default BTA	T-4	25,000	1.20%	44,139
	Opower Paper-only HER	T-1	25,000	1.03%	45,346
Overall for 2013-2014 treatments (fall / winter)			75,000	1.15%	141,902
Overall for November 2014-March 2015			209,500	1.05%	501,307
2013-2014	Opower Email HER	T-3	12,500	0.87%	13,305
	Opower Paper & Email HER	T-2	12,500	1.13%	16,997
	Opower Paper only HER	T-1	12,500	0.47%	15,185
Overall for 2013-2014 treatments (spring / summer)			37,500	0.73%	45,487
Overall for April 2014-March 2015					546,794

1.1 Key Research Questions and Lessons Learned

Lessons learned from the first Campaign were incorporated into the program designs tested during the second Campaign, with the goal of answering five key research questions related to cost-effectiveness. Table 1-2 summarizes the key research questions explored in the 2014–2015 Conservation Campaign as well as the findings identified.

⁵ From Table 5 1: Estimates of Percent Reductions in Gas Energy Consumption for the 2014–2015 Conservation Campaign, November 2014 through March 2015 and Table 5 3: Estimates of Percent Reductions in Gas Energy Consumption for Residential Treatments Initiated in 2013–2014, November 2014 through March 2015

⁶ From Table 5-5: Estimated Gas Savings for the 2014–2015 SoCalGas Conservation Campaign

Table 1-2: Key Research Questions and Lessons Learned from the 2014-2015 Conservation Campaign

Key Research Question	Key Lessons Learned
<p>How do energy savings vary for HERs from two different vendors with different designs?</p>	<p>All types of Opower HERs (paper-only, paper & email, email) substantially outperformed HERs facilitated by Aclara. Potential explanations include the simple, consistent design of the Opower HERs (especially for email HERs), the focus on neighbor comparisons in the Opower HER, and a possible difference in neighbor comparison algorithms for Opower versus Aclara.⁷ However, further testing would be required to conclusively determine the extent to which any of these hypotheses actually explain the discrepancy between impacts for Opower and Aclara treatments.</p>
<p>How do HERs and BTAs perform in a geographic area with lower population density?</p>	<p>The first Campaign was rolled out primarily within urban Los Angeles County areas, while the second Campaign was rolled out to areas which included more suburban and rural areas like the San Fernando Valley and much of Riverside County (following the AM rollout schedule). <u>Default BTAs and email HERs produced much higher energy savings in the first Campaign than in the second, suggesting that populations in urban areas are more responsive to BTAs and electronically-delivered HERs.</u></p> <p>The inclusion of promotional and informational materials in the first BTA Campaign (and their exclusion in the second) may also have contributed to the difference in BTA savings. However, because of the population differences between the first and second campaign, the exclusion of promotional materials in the BTA treatment for the second Campaign does not solely explain the difference in default BTA savings between the two Campaigns.</p>
<p>How do HER savings persist in the absence of reports?</p>	<p>2013–2014 HER treatment participants showed sustained energy savings in <u>the following winter</u>, albeit somewhat lower savings than those produced in the first year. HER participants did not receive paper or email HERs in the following winter season, but still produced energy savings above 1%.</p>
<p>How do BTA savings persist in the absence of promotional materials?</p>	<p><u>In the winter following initial default enrollment in BTA, participants produced sustained and even higher energy savings.</u> These participants continued to receive bill alerts, but no longer received the promotional and informational materials which had accompanied the alerts during the fall / winter period in the first year of treatment.</p>
<p>Which segments of the population are most responsive to information feedback programs?</p>	<p><u>Participants in the top usage quartile, from areas with lower population density, with lower rates of Latino population, and not on CARE low-income rates are most responsive</u> to the HERs and BTAs tested. The lower response from areas with high rates of Latino population may be due to language barriers created by English-only information feedback materials and should be explored in the next Conservation Campaign. Both participants on the CARE rate and from areas with high rates of Latino population are more responsive to paper HERs than to other treatments.</p>

⁷ Aclara HERs were tested to evaluate different conservation messages, have more AM-specific content, and an emphasis on driving customers to the SoCalGas.com, My Account-based Ways to Save online tools and other conservation/energy efficiency programs as appropriate. For further details, refer to Exhibit E: “Evaluation of Southern California Gas Company’s 2013-14 Conservation Campaign,” Section 7, included in the “Southern California Gas Company Advanced Meter Semi-Annual Report” filed with the CPUC on August 29, 2014.

1.2 Proposed 2015–2016 Conservation “Test & Learn” Plan

Throughout the AM rollout until the end of 2017, SoCalGas is implementing a cycle of innovation in which continuous assessment and improvement in the performance of feedback programs is the primary objective. This is referred to as the “test and learn” process, which is consistent with what the CPUC envisioned in D.10-04-027. The lessons learned from each testing cycle are a direct input to this process and will inform the research design for the 2015–2016 Conservation Campaign.

A fundamental tenant of the “test and learn” process is to continuously improve toward more cost-effective solutions. Therefore, to test ways of improving cost-effectiveness, the 2015-2016 Conservation Campaign will adjust the program offerings as follows:

- Given the cost-effectiveness of its delivery via electronic channels (email and text), test a new, enhanced version of the default weekly BTA email, featuring a more graphical data display, vs. the existing text and data-intensive version of the BTA email;
- Test default BTAs with and without associated informational materials in the same population to conclusively determine whether these costly materials are necessary for achieving significant reductions from BTAs;
- Test innovative behavioral methods that more fully leverage AM data, such as weather sensitivity reports and alerts targeted to customers identified through AM-enabled analytics as those with gas usage habits most sensitive to colder weather;
- Continue to test the Opower HER on a new treatment population with focused thermostat messaging and income-based segmentation to improve performance;
- Discontinue the Aclara HERs treatments in their current form. Alternatively, consider a minimally-sized new Aclara-facilitated HER campaign that builds on key lessons learned relative to the Aclara HER campaigns;
- Explore alternative treatment approaches for CARE customers, perhaps with a focus on direct-mail based treatments, as these appear to be more effective;
- Test the impact of providing a Spanish language paper HER and welcome materials in lieu of the English language materials to customers in areas with high rates of Latino population or to customers indicating a Spanish language preference to determine whether providing English-only materials creates a language barrier for Spanish speakers; and
- Continue to test treatments with the top two usage quartiles since they both produce measurable therm savings.

2 Introduction

SoCalGas began deploying AM in its service territory in late 2012. According to its meter deployment plan, AM will be fully deployed to SoCalGas' approximately 6 million customers by the end of 2017. These meters are capable of providing enhanced information services that can help consumers better manage and control their energy costs. By rigorously evaluating these types of information services, SoCalGas can develop cost effective information feedback programs designed to meet its 1% energy savings goal that is associated with its AM rollout.⁸ Each year of the AM rollout, SoCalGas is conducting a Conservation Campaign that is designed to test various enhanced information programs, primarily during the heating season from November through March.⁹ In approving SoCalGas' AM application in D.10-04-027, the CPUC directed SoCalGas "to establish a system to track and attribute the conservation impacts of its AM rollout;" and to report the measured savings every six months. This document is the second of the biannual reports to include impact results of the Conservation Campaign, which was implemented as outlined in prior biannual reports.

2.1 Research Objectives and Design

This report addresses the following primary objectives:

- Meet the requirements of D.10-04-027 to track and attribute the conservation impacts of the AM rollout and to report measured savings every six months; and
- Help demonstrate how SoCalGas can achieve its 1% energy savings goal in a cost-effective manner.

Meeting the first objective requires a rigorous research strategy that conclusively determines whether or not information feedback provided by SoCalGas through various programs caused changes in gas usage. Usage varies significantly across months, seasons, and years. As a result, comparing usage before and after customers receive information treatments is not a suitable approach to estimating conservation effects. Instead, impacts must be estimated by comparing usage for two groups of customers that are identical except for the fact that one group receives information feedback (the treatment group) and the other does not (the control group).

Meeting the second objective requires adherence to a "test and learn" strategy that quickly identifies the marketing strategies and service options that are most cost-effective for achieving energy savings through information services. This strategy was envisioned by D.10-04-027, which stated, "we expect that customer outreach, education and communications will continue to evolve and improve as SoCalGas conducts customer research, monitors customer reaction to new AM technology and various customer usage presentation tools, and incorporates feedback from these activities into its AM outreach and education activities."

⁸ This energy savings goal specifically refers to 1% of total *residential* gas usage.

⁹ Some treatments, such as the alert component of the default BTAs and the email HER component of the Opower and Aclara Paper & Email treatments from the second Campaign are continued into the spring and summer months.

2.2 Overview of Information Services Tested

As in the 2013–2014 SoCalGas Conservation Campaign, the 2014–2015 Campaign tested two information feedback options—bill alerts and home energy reports (HERs). These two information feedback options were chosen because they have the potential to reach large numbers of consumers and demonstrate how to cost effectively meet the 1% energy savings goal. As outlined in sections 2 and 2.1, variations to the segmentation, targeting, and messaging for each of these information feedback approaches was refined based on the findings and associated learnings from the 2013–2014 campaign.

2.2.1 Home Energy Reports

As in the 2013–2014 Campaign, the 2014–2015 Campaign also tested HERs, but introduced an Aclara-generated “Home Energy Update” report in addition to the Opower-generated HER. In the second Campaign, approximately 75,000 customers received Opower HERs and another approximately 75,000 received Aclara HERs throughout the fall/winter months. All customers receiving HERs were defaulted onto the service and received HERs either through direct mail, email, or a combination of direct mail and email. In addition to displaying comparisons of households’ gas consumption with that of neighbors, and other self-comparative information, the HERs provided tips on how to reduce gas consumption.

The Aclara-generated HERs tested in the second Campaign differ from the HERs offered by Opower in the first and second Campaigns. The key differences are that the Aclara HERs included different conservation messages, more AM-specific content, and an emphasis on driving customers to the SoCalGas.com, My Account-based *Ways to Save* online tools and other conservation/energy efficiency programs as appropriate.

Table 2-1 summarizes the features and timeline of the residential HER treatments that Opower and Aclara began implementing in November 2014. In total, approximately 150,000 customers were sampled for HER treatments, split evenly between Opower and Aclara. Of the 75,000 customers sampled for each HER provider, two-thirds (50,000) were sampled for the Paper-only HER treatment for non-My Account customers, and the remaining 25,000 were split evenly between the Email HER and the Paper & Email HER for My Account customers.¹⁰

Treatment Schedule

All treatments began around the second week of November 2014 with an initial paper HER and welcome insert. The Paper-only and Paper & Email HER for both vendors then included another three monthly paper HERs sent via direct mail between December 2014 and February 2015. In addition, the Paper & Email HER treatment included 12 monthly HERs sent via email while the Email HER treatment included 4 monthly HERs sent via email during the heating season. This treatment schedule was the same as that of Opower treatments in the first Campaign.

The Opower and Alcara treatments had similar schedules and types of materials (welcome packets, quantity of paper and email HERs). However, there were important differences in the

¹⁰ Targeted treatment cell sizes were grossed up initially during the research design phase to account for naturally occurring attrition over the campaign period due to customer account closures.

content and messaging of the HERs. The key differences between the Aclara and Opower treatments were:

- The Opower welcome materials included a door hanger and welcome insert, whereas the Aclara welcome materials only included a welcome insert;
- The first Aclara Email HERs were sent in November, whereas the first Opower Email HERs were sent in December;
- The Opower Email HERs had a consistent, simple design focused on neighborhood comparisons, whereas the design of the Aclara Email HERs varied substantially from month to month and were more complex including calls to action and cross promotion of My Account and rebates. Importantly, neighbor comparisons were not included on all Aclara email HERs;
- Aclara's HERs (email and direct mail) included messaging designed to drive customers to its *Ways to Save* website where customers could find useful information about how to lower their energy consumption; and
- The first Opower HER referenced usage from the prior winter, while the first Aclara HER (and all subsequent Aclara and Opower HERs) referenced usage from the prior period. Due to delays necessitated by transferring and processing usage data, all HERs referencing usage from a prior period in the same winter reflected a two month delay between usage and reporting. For example, the Aclara HER sent in November reflected the gas consumption (AM data) from end of August. This two month delay is needed in order to produce and mail the materials.

**Table 2-1: Features and Timeline of Residential HER Treatments
(November 2014 through November 2015)**

		Opower						Aclara					
		Nov	Dec	Jan	Feb	Mar	Apr-Nov	Nov	Dec	Jan	Feb	Mar	Apr-Oct
Paper-only	Paper HER												
	Welcome Insert												
	Door Hanger												
	Email HER												
Email	Paper HER												
	Welcome Insert												
	Door Hanger												
	Email HER												
Paper & Email	Paper HER												
	Welcome Insert												
	Door Hanger												
	Email HER												

Opower treatment overview

Figure 2-1 and Figure 2-2 provide examples of the front and back sides of the Opower paper HER sent in November (samples of all paper HERs are shown in Appendix A). These paper HERs were similar but not identical from month to month. They featured the following four sections that were for the most part consistently shown in each monthly report:

- Previous winter’s gas usage (in initial HER) or previous month’s gas usage compared with usage by similar neighbors, including an emoticon rating;
- Historical monthly gas usage compared with usage by similar neighbors (except January);
- Neighbor efficiency rank (except the initial November HER); and
- Personalized tips.

In addition, the “Warm home. Cool savings.” module with visual conservation tips (shown in Figure 2-1) was included in the introductory November HER and a prior year comparison of personal usage from the current month was included in the January HER.

Figure 2-1: Opower Paper November HER Example (Front)



Figure 2-2: Opower November Paper HER Example (Back)

❄️ Last Winter Usage Breakdown

Month	You	All Neighbors	Efficient Neighbors
DEC	~35	~50	~30
JAN	~100	~85	~55
FEB	~45	~60	~35

Key: ■ You, ■ All Neighbors, ■ Efficient Neighbors

You used **48% more natural gas** than your efficient neighbors. This cost you about **\$67 extra** last winter.

Great way to save this winter: Use heat wisely. Lower your thermostat 2° when you're home and 10° when you're away.

Personalized tips | For a complete list of energy saving investments and smart purchases, visit socialgas.com/rebates.

Quick Fix

Something you can do right now

- Reduce your water heater's temperature**
Lowering your water heater's temperature from 140°F to 120°F can reduce water heating costs by up to 10%. This temperature will also help prevent scalding.

Check the owner's manual for safety instructions before making any changes to your water heater's settings.

After lowering the temperature on the water heater, use a thermometer to check the temperature of water flowing from your faucets.

SAVE UP TO
\$20 PER YEAR

Smart Purchase

An affordable way to save more

- Install efficient showerheads**
Showering accounts for 50% of your hot water use. Efficient showerheads reduce water use while maintaining pressure, so you can cut costs without sacrificing comfort.

You can request a **free** water efficiency starter kit at socialgas.com/rebates. The kit includes an efficient showerhead and three faucet aerators. You can also purchase a ShowerStart™ showerhead with a **\$15 instant rebate**.

SAVE UP TO
\$40 PER YEAR

Great Investment

A big idea for long-term savings

- Buy ENERGY STAR® appliances**
The U.S. Department of Energy tests the efficiency of household appliances and electronics. The best earn the ENERGY STAR label. This program saves American households millions of dollars every year.

The ENERGY STAR label can be found on efficient models of many products. Qualified models often run more quietly, last longer, and are more convenient to use than conventional models.

Visit www.energystar.gov for details.

SAVE UP TO
\$30 PER YEAR, VARIES BY ITEM

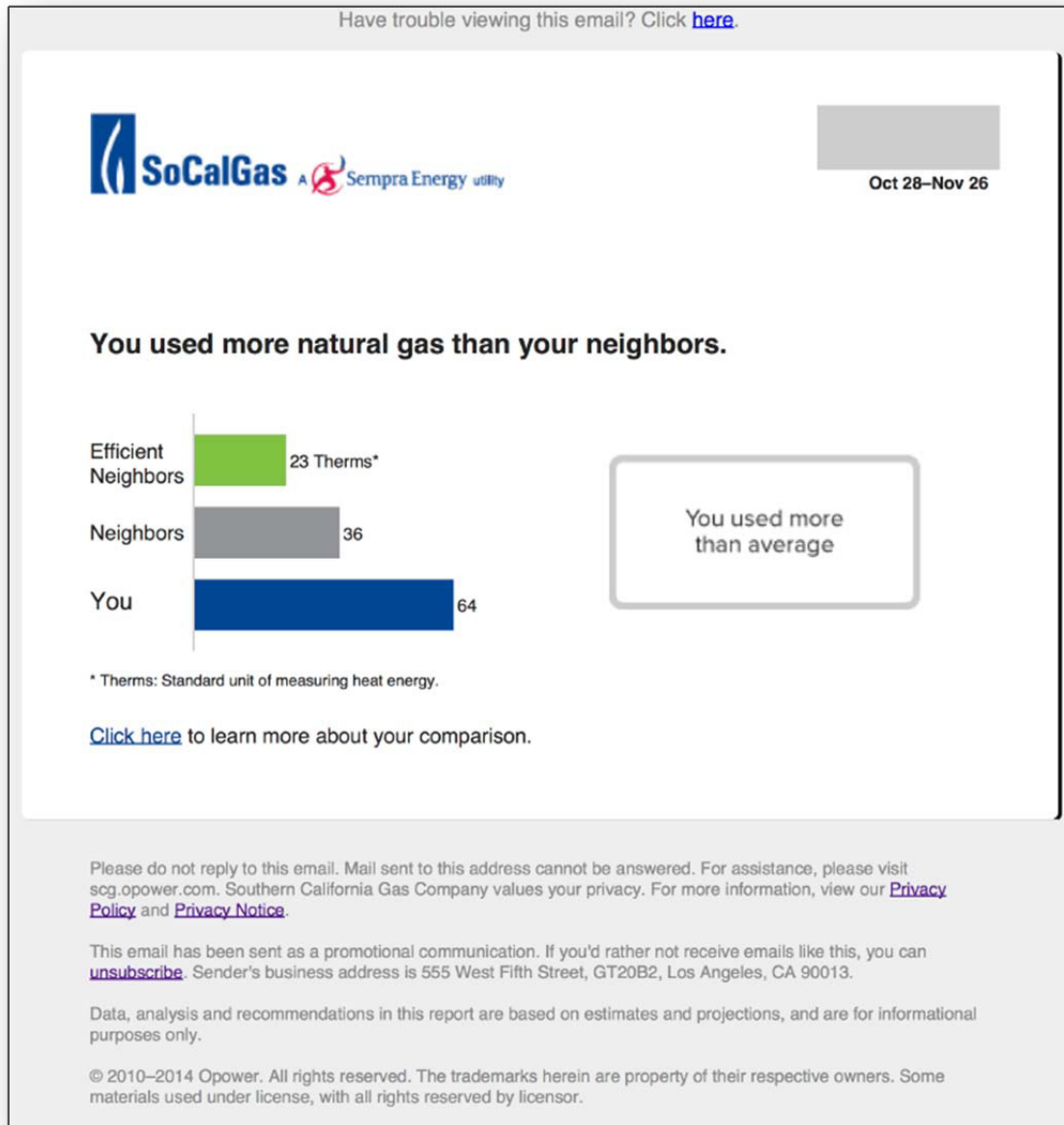
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Figure 2-3 provides an example of the Opower email HER that was sent starting in December. The email HER was simpler than the paper HER and included just one section—previous month’s/winter’s gas usage compared with similar neighbors. This section is similar to the first section of the paper HER and was consistently shown in each monthly report.¹¹ Examples of both HERs and the remaining materials that Opower sent—the welcome insert and the door hanger—are provided in Appendix A.

Figure 2-3: Opower Email HER Example, December and subsequent months



¹¹ The slight difference between the November Opower email HER and those for subsequent months is shown in Appendix A.

Aclara treatment overview

Figure 2-4 and Figure 2-5 provide examples of the front and back sides of the Aclara paper HER sent in November (all monthly reports can be found in the Appendix). The November paper HERs featured the following four sections, which were consistently shown in each monthly report:

- Previous month's gas usage compared with usage by similar neighbors;
- Comparison of this year's gas usage to previous year's usage (all but the first HER);
- "Simple steps" energy savings tips; and
- Conservation incentives / rebates available through SoCalGas.com.

Unlike the Opower paper HER, the Aclara paper HER did not provide a similar neighbor comparison for gas usage over the previous 12 months' gas. However, the Aclara paper HER did include modules that were not included in any Opower paper HERs: average usage by day of week and messaging encouraging the recipient to set a savings goal on the SoCalGas website.

Figure 2-4: Aclara November Paper HER Example (Front)

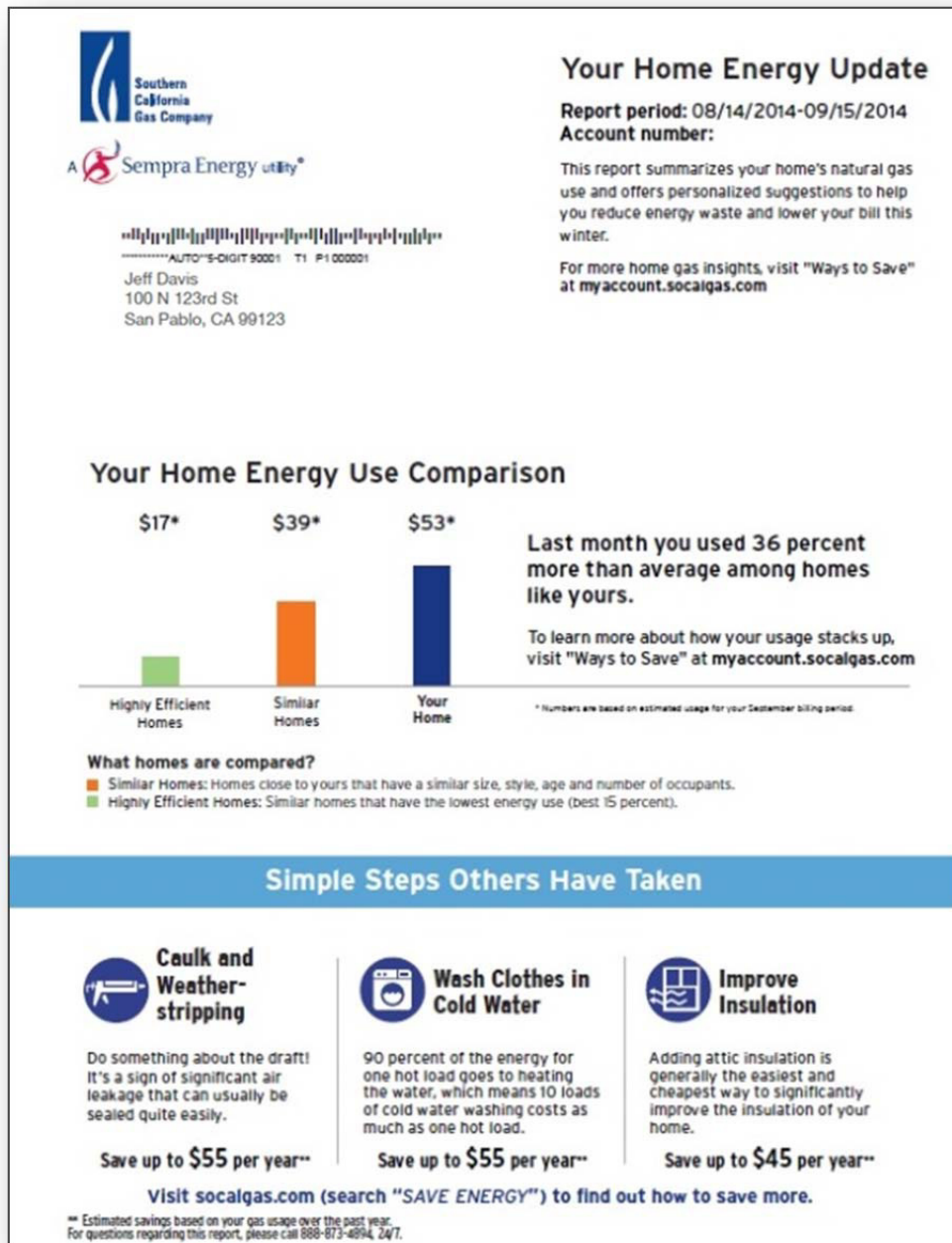


Figure 2-5: Aclara November Paper HER Example (Back)

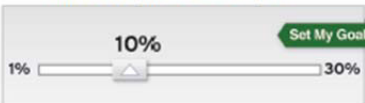
What's Your Goal?

Based on your current home energy update, you could:

<p>Cut Energy Waste by 8 percent Your natural gas usage would be similar to other homes like yours.</p>	<p>Lower Your Bill by \$8 Per Month This represents a 15 percent reduction off your average monthly energy bill.</p>	<p>Plan for a Night Out With Your Energy Savings Use the savings from the energy waste you've cut at home towards dinner or your other favorite treat.</p>
--	---	---

Set your savings goal at myaccount.socalgas.com and we will help you reach it

10 percent in savings could save you **\$61** per year



Get Ready For Winter

These incentives are currently available for you:

<p>Save water, save money and save your clothes</p> <p><i>Use half the water of your top loader and save 30 percent on your gas bills with a new ENERGY STAR® Most Efficient front-loading clothes washer. Plus get a \$75 rebate. Gentle on your wallet and gentle on your clothes.</i></p> <p>Visit socalgas.com (search "SAVE ENERGY") today to take advantage of this offer.</p>	<p>Complimentary showerhead and faucet aerators</p> <p><i>Maintain high water pressure while saving energy, water and money. Get 3 faucet aerators and a showerhead at no cost.</i></p> <p>Visit socalgas.com (search "SAVE ENERGY") today to take advantage of this offer.</p>
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Insights by **ACLARA**

Unlike the Opower email HERs (which showed only a simple neighbor comparison) and to some extent the Opower and Aclara paper HERs (which varied somewhat month to month but had a consistent focus on neighbor comparisons), the Aclara email HER had a format that varied substantially from month to month. Table 2-2 shows the primary Aclara email HER messaging elements and in which month they were included. The wide month to month variation of the elements in Table 2-2 were intended to keep the HER recipient interested in the HER by

showing new and varying data, as well as to incorporate newly available Aclara HER graphical information that highlighted each recipient’s daily usage patterns based on AM data. In addition, elements prominently highlighting the My Account website and links to SoCalGas rebate programs, and which were not included in the Opower email HER, were meant to foster awareness and usage of these programs and tools.

However, it may be that this additional content obscured the normative comparison of gas usage relative to “similar households,” diverting the recipients’ focus to a broader array of information and topics. This normative comparison is of particular importance since it is the stimulus that is intended to cause them to change their energy consumption. Including the normative comparison consistently from month to month also has the benefit of giving the participant feedback on any conservation actions that may have been taken. Further, when the Aclara HERs did include a normative comparison, the usage values were reported in dollars, while the Opower HER reported these comparisons in therms. While the dollar is likely to be better understood by customers than the therm as a unit of measure, this may not have reinforced the conservation message. This is because gas bills tend not to be very large in dollar terms and considerably lower than electric or water bills. It is therefore possible that the conservation message was weakened by associating the normative comparison with low dollar amounts.

Another potential issue with the Aclara HERs is that the messaging could have been inconsistent from month to month, or even within an individual report, the messaging could have been inconsistent for some customers. For example, if customers used more than similar homes, but less than they used during the same month in the previous year, the customer would receive conflicting messaging (e.g., “Last month you used 24 percent more than the average among homes like yours,” in the neighborhood comparison, along with, “Great news! You’re on track to use 6 percent less natural gas this year,” in the year-over-year comparison).

Table 2-2: Aclara Email HER messaging elements included each month

Messaging Element		Months element was included						
		Nov	Dec	Jan	Feb	Mar	Apr	May
Neighbor comparison	<p>Your Home Energy Use Comparison</p> <p>What homes are compared?</p> <ul style="list-style-type: none"> Similar Homes: Homes close to yours that have a similar size, style, age and number of occupants. Highly Efficient Homes: Similar homes that have the lowest energy use (best 15 percent). 	✓		✓	✓		✓	

Messaging Element		Months element was included						
		Nov	Dec	Jan	Feb	Mar	Apr	May
Average usage by day of week	<p>How does your use change day to day?</p> <p>Average Gas Usage by Day of Week*</p> <p>Sundays were your highest use days this month. For more insights, visit "Ways to Save" at myaccount.socalgas.com.</p>			✓	✓			✓
Year over year comparison	<p>How does your usage compare to last year?</p> <p>You're on track to use the same amount of natural gas this year.</p> <p>To find out how to save more visit socalgas.com (search SAVE ENERGY)</p>		✓			✓		✓
Set savings goal	<p>What's Your Goal?</p> <p>Based on your current home energy update, you could:</p> <ul style="list-style-type: none"> Cut Energy Waste by 8 percent Your natural gas usage would be similar to other homes like yours. Lower Your Bill by \$70 Per Year This represents a 15 percent reduction off your average yearly energy bill. Plan a Night Out With Your Energy Savings Use the savings from the energy waste you've cut out at home towards dinner or your other favorite treat. <p>Set your savings goal at myaccount.socalgas.com and we will help you reach it</p> <p>10% in savings could save you \$47 per year</p> <p>1% ————— 30%</p> <p>10%</p> <p>Set My Goal</p>		✓			✓		
My Account url at top of email	<p>We're pleased to provide you with this personalized snapshot of your natural gas usage and share some simple steps and rebate offers that others in similar homes have used to lower their bills, increase comfort and reduce energy waste at home.</p> <p>For more home gas insights, visit "Ways to Save" at myaccount.SocalGas.com.</p>	✓	✓					
Simple steps	<p>Simple Steps Others Have Taken</p> <ul style="list-style-type: none"> Improve Insulation Adding attic insulation is generally the easiest and cheapest way to significantly improve the insulation of your home. Save up to \$85 per year** Wash Clothes in Cold Water 90 percent of the energy for one hot load goes to heating the water, which means 10 loads of cold water washing costs as much as one hot load. Save up to \$70 per year** Lower Water Heater Temp Odds are your hot water heater is set too high. Aim for 120 degrees F, to save about 5 percent in energy costs for each 10 degrees F reduction. Save up to \$60 per year** <p>Visit socalgas.com (search "SAVE ENERGY") to find out how to save more.</p> <p>** Estimated savings based on your gas usage during the last year.</p>	✓					✓	



Messaging Element		Months element was included						
		Nov	Dec	Jan	Feb	Mar	Apr	May
Side bar messaging w/ rebate link: <i>Get ready for winter</i>		✓	✓	✓	✓			
Side bar messaging w/ rebate link: <i>Helping make it easier to save</i>						✓	✓	✓

Figure 2-6 provides an example of how the various elements in Table 2-2 were assembled into the Aclara email HER for December 2014, which contained somewhat different messaging than the Aclara paper HER and was about as complex as the Aclara paper HER. The Aclara email HER also had key differences when compared to the Opower email HER. In particular:

- The Aclara email HER contained an intro message directing the recipient to the My Account website at the top of the email (e.g., before any usage comparison was viewed);
- The Aclara email HER contained multiple messages compared to the simple Opower HER, which only included a neighbor comparison;
- Not all Aclara email HERs included a normative comparison to gas usage of similar neighbors; and
- Some Aclara HERs put a heavy emphasis on the My Account website, directing recipients to use the website to set and track a savings goal, but excluded a neighbor comparison, which would have guided the recipient in choosing a goal.

Examples of the remaining materials that Aclara sent—the welcome insert and additional paper and email HER layouts—are provided in Appendix A.

Figure 2-6: Aclara Email HER Example, December 2014 template

We're pleased to provide you with this personalized snapshot of your natural gas usage and share some simple steps and rebate offers that others in similar homes have used to lower their bills, increase comfort and reduce energy waste at home.

For more home gas insights, visit "Ways to Save" at myaccount.socalgas.com.

To view this email as a web page, [go here](#).

Report period: 10/14/2014 - 11/15/2014
Account number: *****09100

How does your usage compare to last year?

Great news. You're on track to use **31 percent less natural gas** this year.

For more about keeping your bills down, visit socalgas.com (search "SAVE ENERGY")

Year	Usage
Nov 2013	31
Nov 2014	30

What's Your Goal?

Based on your current home energy update, you could:

- Cut Energy Waste by 8 percent**
Your natural gas usage would be similar to other homes like yours.
- Lower Your Bill by \$67 Per Year**
This represents a 15 percent reduction off your average yearly energy bill.
- Plan a Night Out With Your Energy Savings**
Use the savings from the energy waste you've cut out at home towards dinner or your other favorite treat.

Set your savings goal at myaccount.socalgas.com and we will help you reach it

10% in savings could save you **\$44** per year

1% 30% [Set My Goal](#)

Get Ready for Winter

Save Water, Save Money and Save Your Clothes

Use half the water of your top loader and save 30 percent on your gas bills with a new ENERGY STAR® Most Efficient front-loading clothes washer. Plus get a \$75 rebate.

Gentle on your wallet and gentle on your clothes.

To take advantage of this offer today visit: socalgas.com/rebates

Data, analysis and recommendations in this report are based on estimates and projections, and are provided for informational purposes only.

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2.2.2 Bill Tracker Alerts (BTA)

BTAs are weekly reports developed and provided by SoCalGas to customers by email and/or text message. The reports describe the cost of the gas that customers have consumed since receiving their last bill. BTAs also provide a forecast of what a customer's gas bill will be at the end of the billing period if they continue to consume gas at the same rate. Customers are not able to set specific goals for daily or weekly gas consumption. BTAs are designed to raise customers' awareness of the amount of gas they are using and its impact on their bill.

The BTA service was tested on an opt-in and default basis for residential and small/medium business (SMB) customers in the first Campaign (2013–2014). This service was also accompanied by a welcome letter and three monthly informational letters with various supporting materials sent via direct mail¹² and email.¹³ All BTA customers from the first Campaign who did not opt out or otherwise choose to discontinue the BTA service continued to receive BTAs throughout year 2 but no longer received the additional informational materials.

In year 2 as part of the second Campaign (2014–2015), enrollment in weekly BTAs was also expanded to an additional 55,346 residential My Account customers on a default basis only.¹⁴ These default BTA customers received an initial Welcome email followed by weekly email notifications with a link to *Ways to Save* online tools through My Account. However, in 2014–2015 SoCalGas decided to forgo the direct mail and email supplemental communications that accompanied the BTAs in 2013–2014. This reduction in communications was meant to test whether comparable energy savings could be achieved without these additional communications, thereby improving cost-effectiveness.

Figure 2-7 shows the template for the SoCalGas BTA notification through email, which was identical to the notification template used in the first Campaign. The email BTAs featured the following information:

- Bill amount (\$) to date;
- Projected amount (\$) for next bill;
- Days remaining and days elapsed in the current bill cycle;
- Last month's bill amount (\$);
- Bill amount (\$) for same month in the prior year; and
- Links to the SoCalGas *Ways to Save* tool and rebate programs.

¹² A Welcome letter was sent in October; a letter with "3 Easy Ways to Save" insert in November; a letter with a "Winter Savings Checklist" in January; and a letter with links to My Account *Ways to Save* in February. These materials were sent to all BTA participants in the first Campaign, both default and opt-in.

¹³ A Welcome email was sent in October (to default customers only); an email titled "Save More This Winter" including links to My Account *Ways to Save* was sent in November; an email titled "How much more can you save" including links to My Account *Ways to Save* was sent in January; an email titled "Tools and Tips to help you save energy and money" including links to My Account *Ways to Save* was sent in February; and an email titled "Helping you save more" including links to My Account *Ways to Save* was sent in March.

¹⁴ Of these 55,346 accounts selected for default enrollment into BTAs, 1,229 were suppressed from receiving BTAs because the accounts were in a collections status due to payments significantly past due. It is SoCalGas' procedure to not send BTAs to accounts undergoing collections activity.

Figure 2-7: Template for SoCalGas Email BTA Notification

SoCalGas® Bill Tracker Notification

Your Bill Tracker Update

Monitor your weekly consumption and make changes to achieve your savings goal.

Account Number:	****75303
Bill to Date:	\$22.28
Projected Next Bill:	\$56.77
Days remaining in the current billing cycle:	17
Days elapsed in the current billing cycle:	12
Previous Month's Bill:	\$122.78
Previous Year, Same Month's Bill:	

Set up your energy-savings goals by visiting ["Ways to Save"](#) – our personalized interactive tool.

Log in to My Account:

[Log In »](#)

Connect with us: [Twitter](#) [Facebook](#) [YouTube](#)

[socialgas.com](#) | [Bill Assistance](#) | [Rebate Programs](#)

To ensure continued receipt of e-mail messages from SoCalGas, please add customerservice@socialgas.com to your address book.

If you wish to cancel this Alert email, you can do so by logging into your My Account at <https://myaccount.socialgas.com> and unsubscribing in your "Manage Alerts" preference center inside the Manage My Account tab.

Southern California Gas Company values your privacy. For more information, view our [Privacy Policy](#) and [Privacy Notice](#).

Email notification code: 100

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Figure 2-8 provides an example of a text message BTA notification, which is similar to the email BTA notification. However, due to limits on the number of characters that can be included in a single text message, links to the *Ways to Save* tool and rebate programs were not provided in the text message BTAs.

Figure 2-8: Example SoCalGas Text Message BTA Notification

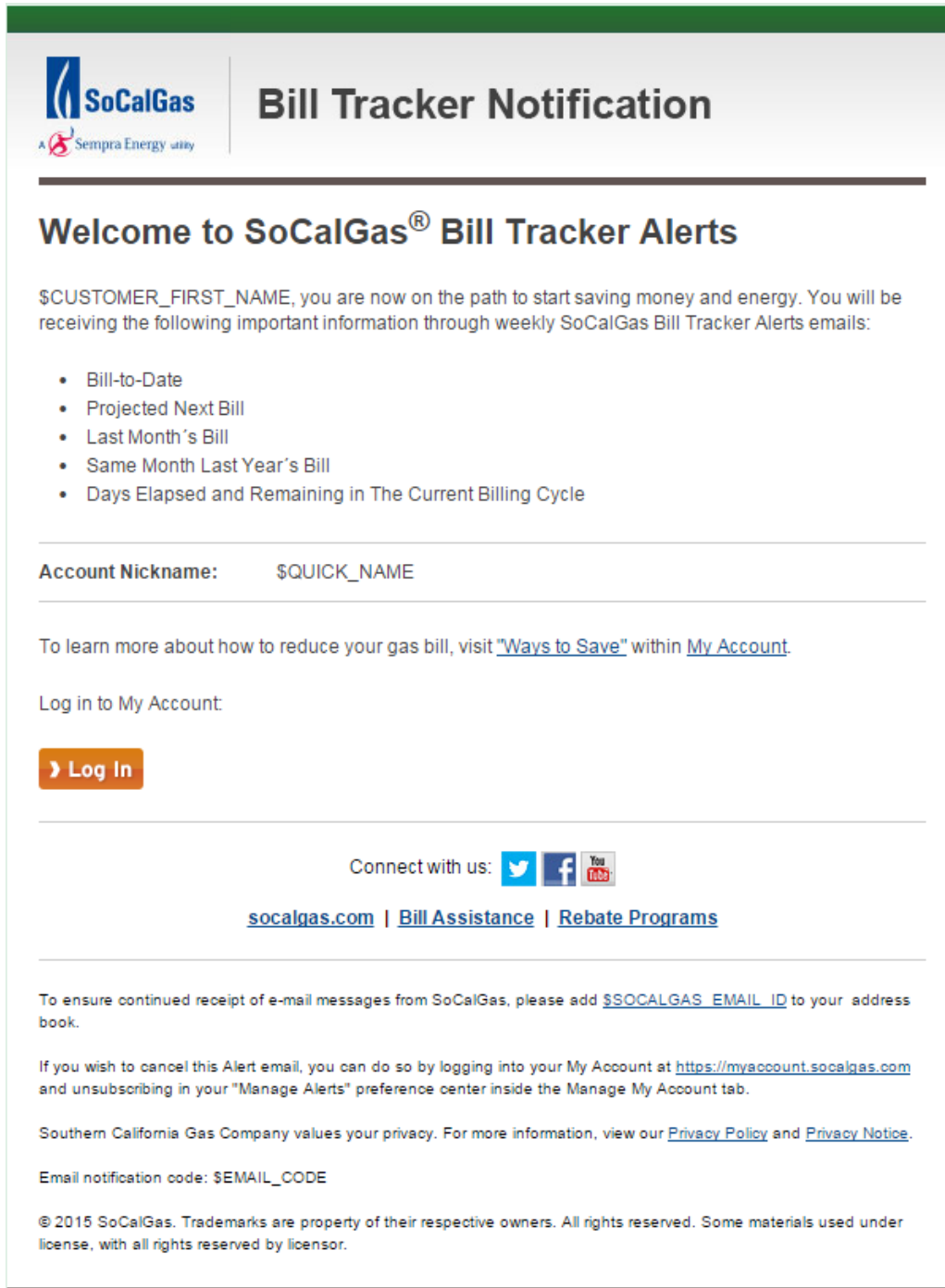


Communications Sent to Default BTA Customers

In mid-October 2014, nearly 55,346 residential customers were defaulted onto BTA¹⁵ and started automatically receiving BTAs through their primary My Account email address (non-My Account customers could not be defaulted onto BTA because SoCalGas does not have their email address). The default customers could also log into My Account and change their notification preferences to receive BTAs through text message but the vast majority remained with the BTAs through email alone. In addition to the 15 or more BTAs that these customers received throughout the 2014–2015 Conservation Campaign, SoCalGas sent a Welcome email shown in Figure 2-9.

¹⁵ Of these 55,346 accounts selected for default enrollment into BTAs, 1,229 were suppressed from receiving BTAs because the accounts were in a collections status due to payments significantly past due. It is SoCalGas' procedure to not send BTAs to accounts undergoing collections activity.

Figure 2-9: SoCalGas – November Bill Tracker Alert Welcome email



2.3 Customer Acceptance of Information Services

This report focuses primarily on the energy savings impact of the information services described above. A related aspect of these services is customer experience. Two gauges of customer acceptance are available: participant opt-out rates and customer experience surveys conducted by Opower and Aclara toward the end of the winter treatments.

All treatments in the second Campaign were administered on a default basis but participants were able to opt-out of the service. Monthly opt-out rates were extremely low for all treatments, generally no greater than one-tenth of a percent each month. For the 2014–2015 HER campaigns, as of June 30, 2015, a total of 363 (.5 percent) of Opower HER initial program enrollees opted-out of receiving further Opower HERs. For the same time period, a total of 123 (.2 percent) of Aclara HER initial program enrollees opted-out of receiving further Aclara HERs. Additionally, since the inception of the Bill Tracker Alert offering in fall 2013, less than 2% of enrollees have unsubscribed. This implies that customer acceptance rates were quite high for all treatments.

The customer experience surveys conducted by Aclara¹⁶ and Opower¹⁷ similarly reflect positive customer perception of the HER treatments, including self-reported improvements in satisfaction with SoCalGas for a third or more of participants surveyed. Other key findings included:

- A majority of treatment customers found the HER conservation tips to be useful; and
- Many respondents reported being motivated to take conservation actions or having already taken action in response to the HER.

2.4 2014-2015 Winter Weather Conditions

To fully interpret the energy savings that resulted from the 2014–2015 Conservation Campaign, it is important to consider the winter weather conditions. The winters of 2013–2014 and 2014–2015 were in turn the warmest on record in California.^{18,19} This is particularly relevant for both the 2013–2014 and 2014–2015 winters as the former is used as pretreatment data for the analysis of the second Campaign (and treatment data for the first Campaign), and the latter is used as treatment data for the second Campaign. This unseasonably warm weather was reflected in the overall gas usage for residential SoCalGas customers in both years, as shown in Figure 2-10, which provides a comparison of residential gas usage over the past four winters. From October 2013 through December 2014, residential gas usage in the 2013 heating season was similar to gas usage in the prior two years. However, in January through March 2014, residential gas usage was substantially lower in 2014 than it was in the prior two years. Further, gas usage for the 2014–2015 heating season was the lowest in four years for all months except January 2015. Overall, residential gas usage for the past two winters was 30% lower than it was the prior two years. Nonetheless, it is unclear what effect (if any) this unseasonably warm

¹⁶ Opinion Dynamics Corporation (ODC), SoCalGas Aclara Home Energy Reports “Phone Customer Survey Results Findings”, 2014/2015; and, Aclara, SoCalGas Aclara Home Energy Reports “Email Customer Survey Results Findings”, 2014/2015.

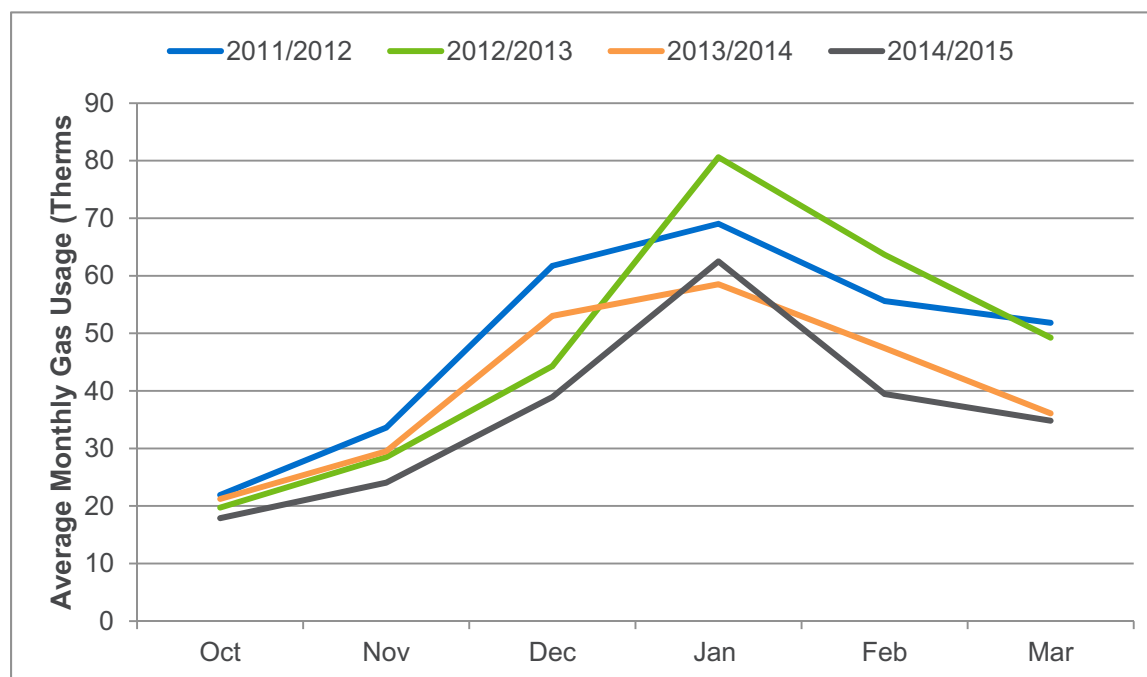
¹⁷ Opower, SoCalGas Home Energy Reports: Customer Engagement Tracker Survey Results, 2015.

¹⁸ <http://www.ncdc.noaa.gov/sotc/service/national/statewidetavgrank/201312-201402.gif>

¹⁹ <http://www.ncdc.noaa.gov/sotc/service/national/statewidetavgrank/201412-201502.gif>

weather had on the energy savings that resulted from the information feedback treatments, considering that similar treatments were not available in prior years. However, since weather for both Campaigns was unseasonably warm, it was not possible to assess how the absolute and percent energy savings vary under different weather conditions. If weather trends shift in the 2015–2016 winter, it may provide an opportunity to explore the impact of weather variation on energy savings from information feedback treatments.

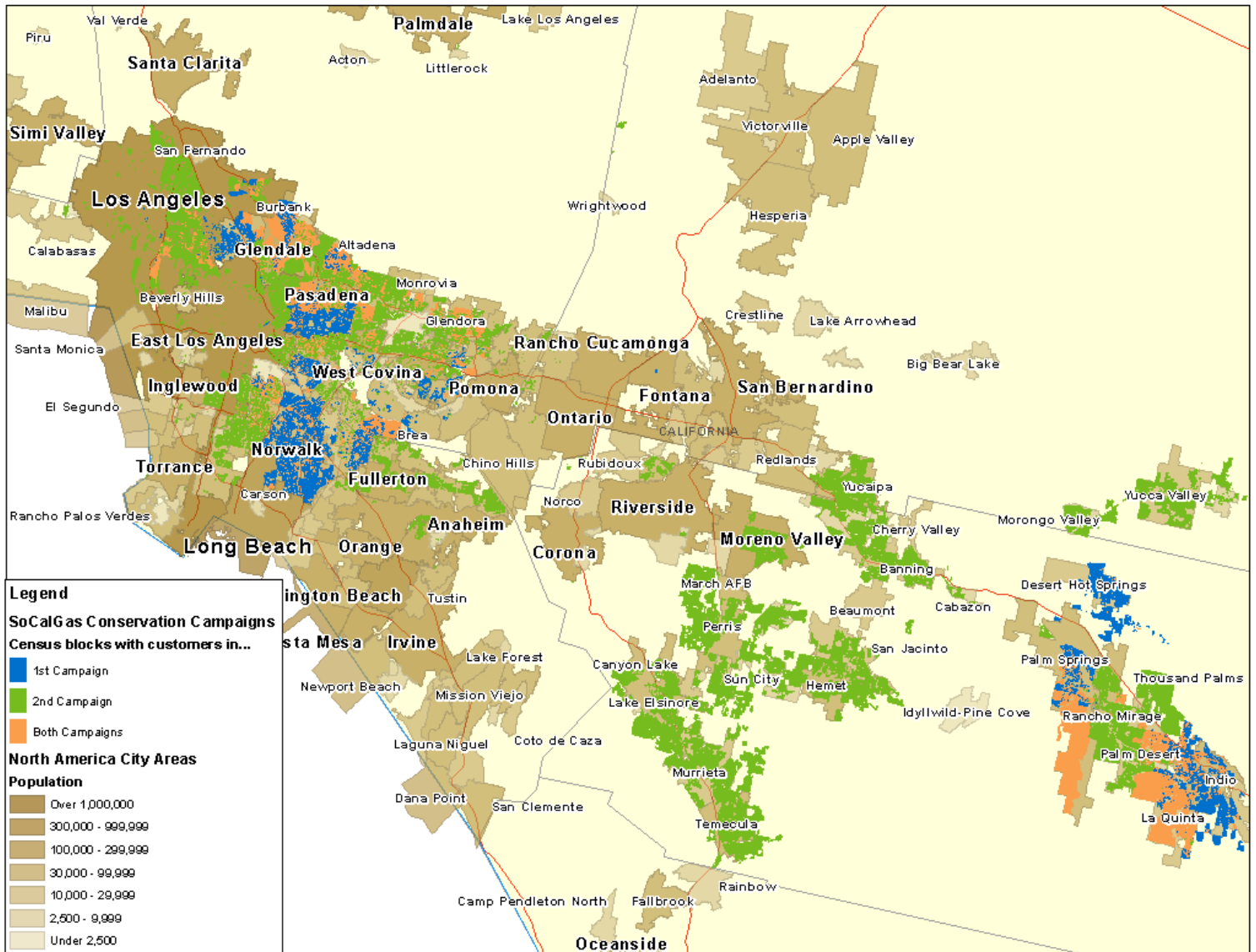
Figure 2-10: Comparison of SoCalGas Residential Gas Usage over the Past Four Winters



2.5 Geographic Distribution of 2013-2014 and 2014-2015 Conservation Campaigns

The customer populations for the first and second Campaigns were significantly influenced by the geographic distribution of the SoCalGas advanced meter rollout. Figure 2-11 shows the geographic distribution of the populations from the first and second Campaigns, highlighting the fact that the populations in the two Campaigns were geographically distinct. Census blocks which only contained customers in the first Campaign are blue, while those only containing customers from the second Campaign are green. Census blocks containing customers from both Campaigns are orange. While populations from both Campaigns were geographically diverse, the first Campaign was more concentrated in denser urban areas (Glendale, areas along the 605 corridor, central areas of Bakersfield and Palm Springs), while the second campaign was more of a mix of urban, suburban, and rural areas (the San Fernando Valley, large parts of Riverside County, towns along I-5 near the Grapevine, etc.).

Figure 2-11: SoCalGas Conservation Campaign Population Distribution by Year



In addition to mapping out the geographic distribution of the sample populations for the first and second Campaigns, census block data was also used to analyze the extent to which populations for the first and second Campaigns varied demographically. The process for obtaining the census data and combining it with SoCalGas customer data is described in more detail in section 5.5.

Table 2-3 summarizes certain customer characteristics and demographics for the populations included in the original sample for the first and second Campaigns. The most notable difference for the customers in the second Campaign as compared to the first is the lower representation from areas with:

- High concentrations of renters²⁰;
- High population density²¹; and
- High concentrations of Latino households.²²

Table 2-3: Comparison of Select Demographics for Customer Populations in the First and Second Conservation Campaigns²³

Segment	First Campaign (2013–2014)	Second Campaign (2014–2015)
% Areas with high concentrations of renters	34%	17%
% Areas with high population density	35%	23%
% Areas with high concentrations of Latino households	27%	16%

These are all characteristics that may affect both the ability and the propensity of participants to respond to conservation efforts such as the SoCalGas Conservation Campaign. As such, one should not necessarily expect to find similar overall impacts from similar treatments in the first and second Campaigns. One may expect, however, for impacts from similar treatments within each demographic group to be more similar. Sections 5.4 and 5.5 provide a closer look at impacts by CARE status and within census block demographic groups.

2.6 Report Organization

The remainder of this report proceeds as follows:

- Section 3 describes the research design, including the treatment and control group assignments for residential customers;
- Section 4 summarizes the methodology used to evaluate energy conservation;

²⁰ “High” defined as census block with rental rates above the 75th percentile among census blocks included in the first or second campaign

²¹ “High” defined as census block with densities above the 75th percentile among census blocks included in the first or second campaign

²² “High” defined as census block with Asian population above the 90th percentile or Latino populations above the 75th percentile among census blocks included in the first or second campaign

²³ Based on 2010 Census Block demographics

- Section 5 summarizes the energy conservation estimates for all of the treatments;
- Section 6 provides recommendations for the 2015–2016 SoCalGas Conservation Campaign; and
- Appendix A and Appendix B include additional example communications and informational materials for the treatments.

3 Research Design

In order to determine if the new information services made available by SoCalGas change energy use for consumers who have access to them, it is necessary to estimate what energy use would have been for those customers if they did not have access to the information. Conceptually, this can be accomplished by comparing usage before and after a group of customers receives the information, but other factors such as differences in weather or economic conditions can make such comparisons highly inaccurate. Side-by-side comparisons of customers that do (the treatment group) and don't (the control group) have access to the service of interest is the most robust approach, but only if the two groups of customers are identical except for the fact that one gets the information service and the other doesn't. Obtaining well matched treatment and control groups is the fundamental challenge to getting accurate impact estimates.

In the evaluation plan²⁴ for its 2013–2014 Conservation Campaign, SoCalGas considered the full spectrum of options before determining that a randomized control trial (RCT) design was the preferred option for these default programs. The evaluation plan provides a summary of the reasons why other options were rejected.

Finally, an important input into development of the evaluation plan was the size of the participant population and control groups required to estimate the effects of the planned information / behavioral treatments. The evaluation plan provided a detailed description of the process used for sample size determination and this will not be repeated here. However, it is relevant to note that sample sizes were adjusted upward in the second Campaign to control for the effects of anticipated customer attrition.

3.1 Residential Treatment and Control Group Assignments

Several factors were taken into consideration in assigning customers to test cells in the 2014–2015 Conservation Campaign and how the target market should be segmented.

The first important consideration is usage. Experience has shown that customers with low annual usage may not be interested in or respond to information feedback since their bills are so low that even significant percent changes in energy use would produce only very small economic benefit in the form of bill savings. Even if these customers produced above average savings relative to other customers (which, for reasons just mentioned, may be unlikely), their contribution to the target of 1% savings in aggregate for the overall population would be small and the implementation costs for these customers per therm conserved would be relatively high. In short, it is highly unlikely that low usage customers are cost-effective and almost certain that they would be less cost-effective than customers with larger usage. In fact, the 2013–2014 Campaign found that customers in the second usage quartile (the first quartile was excluded from default treatments in that testing cycle) delivered the lowest absolute and percent gas savings, relative to high users in the third and fourth usage quartiles. Therefore, considering that the 2014–2015 Conservation Campaign was able to take advantage of an expanded footprint in

²⁴ Southern California Gas Company's Evaluation Plan for Estimating Conservation Effects from Information Feedback Services. August 9, 2013. (Included as Appendix O in the "Southern California Gas Company Advanced Meter Semi-Annual Report" filed with the CPUC on August 30, 2013)

terms of AM installations, SoCalGas had a sufficient amount of customers to improve its targeting strategy for the second Campaign as follows:

- Focus on the top two usage quartiles; and
- Only include customers who have pretreatment data from October 2013 through March 2014.

Another important segmentation factor is whether customers are My Account users. My Account customers register with SoCalGas to receive a variety of online services, including receiving, viewing, and paying their bills online, accessing historical usage data, making payment arrangements, and service scheduling changes such as starting or stopping service. Given their demonstrated interest in online transactions, My Account customers may be more likely than non-My Account customers to take advantage of the new information available through BTAs or HERs. They also are a population for whom SoCalGas has email addresses and, thus, can receive email solicitations and information feedback through this inexpensive channel. For all of these reasons, the population of customers targeted for both BTAs and HERs was segmented into My Account and non-My Account customers in the first and second Campaigns.

The final segmentations of the residential AM-enabled customer base were between those that did and did not pass the Opower or Aclara screens. It was important that all customers in the research sample pass both vendor screens to ensure that the screening process did not create any underlying bias in one group versus another. This test cell design ensures that the comparison of impacts only measures the difference between the type of information feedback delivered, and not a difference in the underlying customer mix. In all, 35% of these customers from the top two quartiles did not pass the Aclara and/or the Opower screen. This is markedly higher than the 4% of medium / high (top three quartiles) customers who did not pass the Opower screen in the first Campaign.

This increase in exclusion rates was due in part to a higher exclusion from the Opower screen (10% versus 4% the previous year). However, the most substantial part of the exclusion was due to the Aclara screen, which alone excluded 30% of higher usage customers with AMs and pretreatment data. Over half of these exclusions (56%) were due to Aclara's lack of house size information (square footage)—a key input into the similar neighbor comparison statistic included in the HERs. Because such a large portion of customers (over one-third) were excluded due to the screening process, it is possible that certain types of populations were systematically excluded from the second Campaign, leading to potential biases in the comparison of conservation impacts to those of the first Campaign.

Figure 3-1 provides a summary of the population segmentation and treatment and control group assignments for residential customers in the 2014–2015 Conservation Campaign. The research sample for the second Campaign excluded customers in the lower two usage quartiles, customers who did not have 2013–2014 pretreatment data and both opt-in and default participants in the first Campaign. About 560,000 customers remained after removing customers in these three groups. As mentioned above, an additional 192,000 customers of these remaining 560,000 (35%) did not pass the Opower and/or Aclara screens.

Among the roughly 360,000 higher usage customers with pretreatment data that passed the HER screens, about 135,000 were my Account customers and about 224,000 were not. Since SoCalGas did not have email addresses for the non-My Account customers, this group was assigned to test the Opower and Aclara Paper-only HERs with 53,500 customers randomly assigned to the Opower HER, 53,500 to the Aclara HERs, and the other 117,000 assigned to the control group.

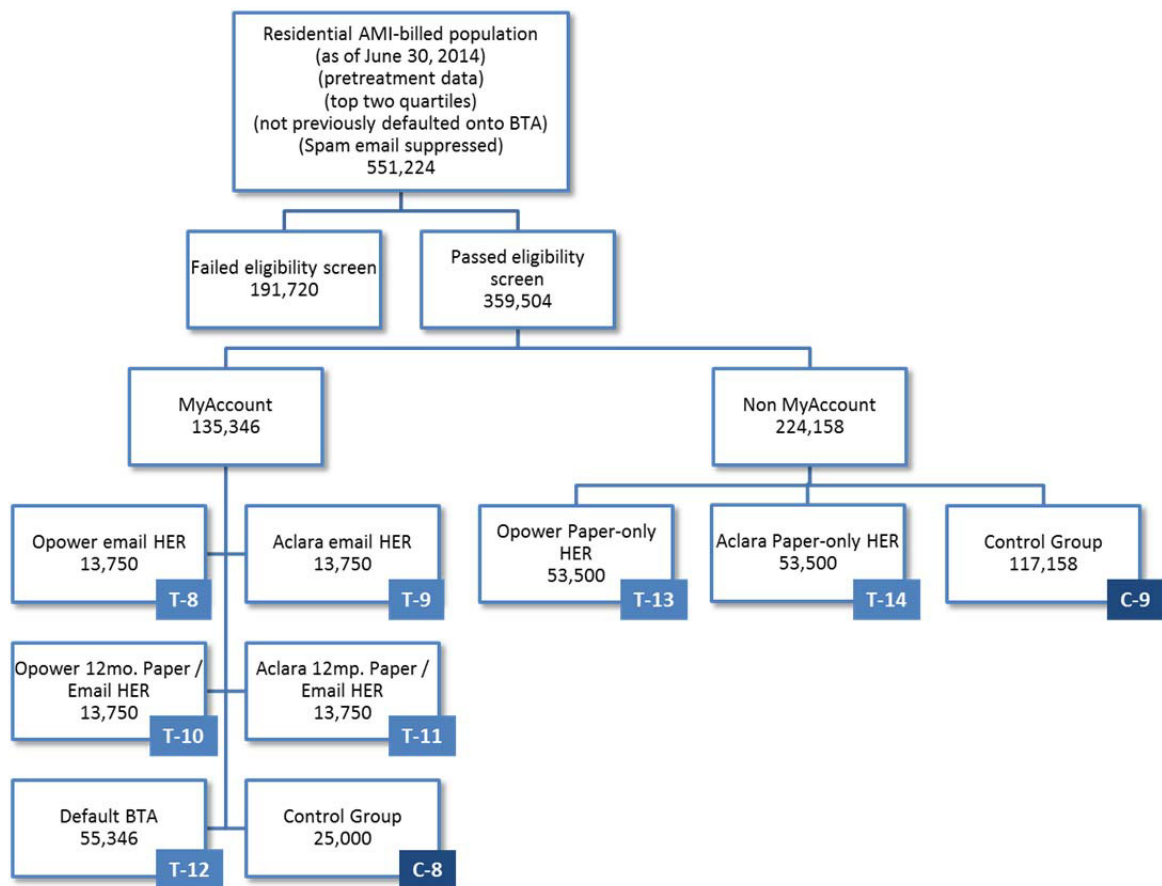
Since SoCalGas had email addresses for the roughly 135,000 My Account customers, it used this group to test default BTA as well as Email and Paper & Email HERs from Opower and Aclara. The four HER treatments were assigned to randomly selected groups of 13,750 each. In addition, SoCalGas was able to use the email address for My Account customers to test default BTA, which was randomly assigned to about 55,000 customers. The remaining 25,000 higher usage, My Account customers that passed the HER eligibility screens were designated as the control used to estimate impacts for all five My Account treatments.

In summary, the 359,504 residential customers in the eligible AM population were allocated as follows:

1. **Default BTA:** 55,346 customers²⁵;
2. **Paper-only HERs:** 107,000 customers (50% Opower, 50% Aclara);
3. **Email HERs:** 55,000 customers (25% Opower email, 25% Opower paper & email, 25% Aclara email, 25% Aclara paper & email); and
4. **Control Group:** 142,158 customers.

²⁵ Of these 55,346 accounts selected for default enrollment into BTAs, 1,229 were suppressed from receiving BTAs because the accounts were in a collections status due to payments significantly past due. It is SoCalGas' procedure to not send BTAs to accounts undergoing collections activity.

Figure 3-1: Residential Treatment and Control Group Assignments for the 2014–2015 Conservation Campaign



3.2 Residential Data Sources

In the analysis, Nexant used daily gas usage data in therms for the post-treatment period from November 1, 2014 through March 31, 2015. Monthly billing data from the same months a year prior was used as the pretreatment data because daily AM data was largely not available for customers in the sample.²⁶ These data sources yielded 10 months of gas usage data for the study period of interest, spanning from November 1, 2013 through March 31, 2015, with the 2014 non-heating months (April through October) omitted. For estimation purposes, October was dropped from the pre- and post-treatment period both because usage is quite low in that month relative to the other “winter” months and also because treatments began in early November.²⁷ Thus, the impact estimates discussed in Section 5 span the 5-month period from November 1, 2014 through March 31, 2015.

²⁶ As previously stated, only customers with pretreatment data were included, but this simply means that the sample was limited to customers who had active SoCalGas accounts in the pretreatment period, not explicitly limited to customers with pretreatment AMI data.

²⁷ In the first Campaign some customers began treatment in October but October was likewise excluded from the analysis for similar reasons.

In an RCT design that uses difference-in-differences to estimate the energy savings, customers must have a full panel of pre- and post-treatment usage data in order to be included in the analysis that assesses impacts and statistical significance across all months. Basically, customers that were not active SoCalGas accounts from November 1, 2013 through March 31, 2015 were excluded from the analysis of the overall impacts of the second Campaign. As long as the percentage of customers dropped is consistent between each treatment group and associated control group, this exclusion of customers from the analysis does not produce bias in the conservation estimates. To verify that the percentage of customers dropped is consistent within each segment, Table 3-1 shows the number of customers that were included in the analysis by treatment/control group, compared to the original number of customers that was sampled. All treatment and control groups retained around 95% of the customers that were originally sampled. Most importantly, the percentage of customers retained is highly consistent within each statistically equivalent group, which ensures that the integrity of the original sample design is held intact even though some customers had to be dropped from the analysis that assesses impacts and statistical significance across all months.²⁸

Table 3-1: Residential Customers Included in Analysis by Treatment/Control Group

Customer Type	Group	Number of Customers in Original Sample	Number of Customers in Analysis	% of Original Sample in Analysis
My Account	C-8	25,000	23,799	95.20%
	T-8	13,750	13,050	94.91%
	T-9	13,750	13,081	95.13%
	T-10	13,750	13,106	95.32%
	T-11	13,750	13,074	95.08%
	T-12	55,346 ²⁹	52,701	95.22%
Non-My Account	C-9	117,158	111,670	95.32%
	T-13	53,500	50,979	95.29%
	T-14	53,500	51,018	95.36%
All	Total	359,504	342,478	95.26%

²⁸ For the purposes of estimating whether the treatments produced a statistically significant reduction in overall gas usage throughout the 2014-2015 Conservation Campaign, these customers were dropped. However, once Nexant identifies a statistically significant usage reduction within a given test cell, the analysis can be done at the monthly level, which allows for the re-inclusion of some customers that may not have had usage data for every month, but do have data for some pre- and post-treatment months. Basically, when the analysis is conducted at the monthly level, as long as a customer has data for an individual pre- and post-treatment month, that customer can be included in the analysis for that month.

²⁹ Of these 55,346 accounts selected for default enrollment into BTAs, 1,229 were suppressed from receiving BTAs because the accounts were in a collections status due to payments significantly past due. It is SoCalGas' procedure to not send BTAs to accounts undergoing collections activity.

4 Gas Savings Impact Estimation Methodology

Nexant estimated models using panel data to determine energy savings. Panel data is a data structure in which multiple observations over time are present for multiple individuals. In the evaluation³⁰ for the 2013–2014 Conservation Campaign, Nexant took the opportunity to test three different model specifications for using panel data to estimate energy savings—a fixed-effects (FE) model, a random-effects (RE) model, and a lagged dependent variable (LDV) model. All models featured time-effect variables as well as error estimates clustered at the customer level. Each of these model specifications has merit under the appropriate circumstances, but they are fundamentally different approaches to estimating treatment effects. All three model specifications were carefully considered before determining that a LDV model was the preferred evaluation model. The evaluation of the first Campaign provides a summary of the reasons why the LDV model was chosen as the appropriate model for this evaluation.

The LDV model incorporates individual heterogeneity by explicitly including past values of an individual’s energy consumption as control variables on the right-hand side of the regression equation. The LDV regression model as used in this evaluation is specified in this equation:

$$therms_{i,t} = a + b \cdot T_i + c \cdot u_t + d \cdot therms_{i,t-12} + \varepsilon_{it}$$

In this equation, t indexes months November 2014 through March 2015 and i indexes individuals. The intercept is the same for everyone and the term $therms_{i,t-12}$ represents the energy consumption for individual i in a previous period (in this case, the same month from the prior year). This is akin to saying that what makes consumers unique is captured entirely by their past levels of consumption. The model variables are defined in Table 4-1. This model can be estimated using pooled OLS, provided that there is no serial correlation in the error term and that there are no omitted variables that are correlated with the treatment. The underlying identification assumption is that average consumption without the treatment would be the same for both treatment and control customers. Given that the research design features an RCT with random assignment to large treatment and control groups, this assumption is clearly valid in this case.

Table 4-1: Definition of Lagged Dependent Variable Model Variables

Variable	Definition
$therms_{i,t}$	average daily gas consumption of participant i during month t
a	estimated intercept
b	estimated treatment effect
c	estimated monthly time effect on treatment and control group
d	estimated effect of an individual's consumption in month $t - 12$
T_i	indicator of whether or not the participant is assigned to the treatment condition

³⁰ Southern California Gas Company’s Evaluation Plan for Estimating Conservation Effects from Information Feedback Services. August 9, 2013. (Included as Appendix O in the “Southern California Gas Company Advanced Meter Semi-Annual Report” filed with the CPUC on August 30, 2013)

Variable	Definition
$therms_{i,t-12}$	average daily gas consumption of participant i during month $t - 12$
u_t	Time effects for each month that control for unobserved factors that are common to all treatment and control customers but unique to month t
$\varepsilon_{i,t}$	error for each participant and month

Nexant conducted an evaluation of impacts for the second Campaign using winter 2013–2014 as the pretreatment period ($t - 12$). Nexant also estimated the persistence of energy savings for customers from the first Campaign—the Opower HER customers who no longer received HERs and the BTA customers who continued to receive BTAs in the absence of any promotional materials. For these groups, the treatment period (t) was 2014–2015 and pretreatment period was still 2012–2013 so that energy savings in year 2 could be compared to energy savings in year 1.

This analysis also reflects the same data management protocols developed during the 2013–2014 Campaign and agreed upon during a knowledge sharing meeting with SoCalGas and other stakeholders.

5 Energy Conservation Estimates

This section begins with a summary of the results and conclusions for the 2014–2015 SoCalGas Conservation Campaign, followed by a detailed assessment of how gas savings vary by customer segment and a summary of year 2 savings results for customers from the 2013–2014 Conservation Campaign. At the end of the section, an estimate of the total 2014–2015 gas savings for both groups is provided.

5.1 Percent Reductions for 2014–2015 Conservation Campaign

Table 5-1 shows the estimated percent reductions in gas consumption for the seven new residential treatments deployed for the 2014–2015 Conservation Campaign. Percent reductions were derived using the LDV regression model. P-values for the coefficient estimates from the regression models are also displayed. The data used for model estimation covers the months of November 2014 through March 2015 as compared to the pretreatment period (the months of November 2013 through March 2014). It only includes customers who were active for the full period.

Four of the seven treatments yielded statistically significant impacts: the Opower Email HER, the Opower Paper & Email HER, the Opower Paper-only HER, and the Aclara Paper-only HER. The estimated energy savings for the two Aclara treatments for My Account customers and the default BTA treatment (also for My Account customers) were not statistically significant. The My Account Aclara treatments in particular produced impacts that were very close to 0%.

The percent reductions for the two Opower treatments that included a paper HER were similar (close to 1.5%), and both were about twice the percent reduction produced by the Opower Email HER treatment.³¹ These results suggest that, at least for the Opower treatments, the Paper HERs were more effective than the Email HER in this case.

**Table 5-1: Estimates of Percent Reductions in Gas Energy Consumption for the 2014–2015 Conservation Campaign, November 2014 through March 2015
(Statistically Insignificant Results are in Gray)**

My Account	Treatment	Group	Number of Treatment Customers	Lagged Dependent Variable Model	
				% Reduction	P-value
Yes	Opower Email HER	T-8	13,050	0.74%	0.05
	Aclara Email HER	T-9	13,081	-0.04%	0.92
	Opower Paper & Email HER	T-10	13,106	1.45%	0.00
	Aclara Paper & Email HER	T-11	13,074	0.04%	0.90
	Default BTA	T-12	52,701	0.17%	0.51
No	Opower Paper-only HER	T-13	50,979	1.48%	0.00
	Aclara Paper-only HER	T-14	51,018	0.51%	0.00

³¹ The impacts for the Opower Paper & Email HER treatment (group T-10) are marginally statistically different than the impacts for the Opower Email only treatment (group T-8), with a p-value of 0.09.

5.2 Comparison to 2013-2014 Percent Reductions

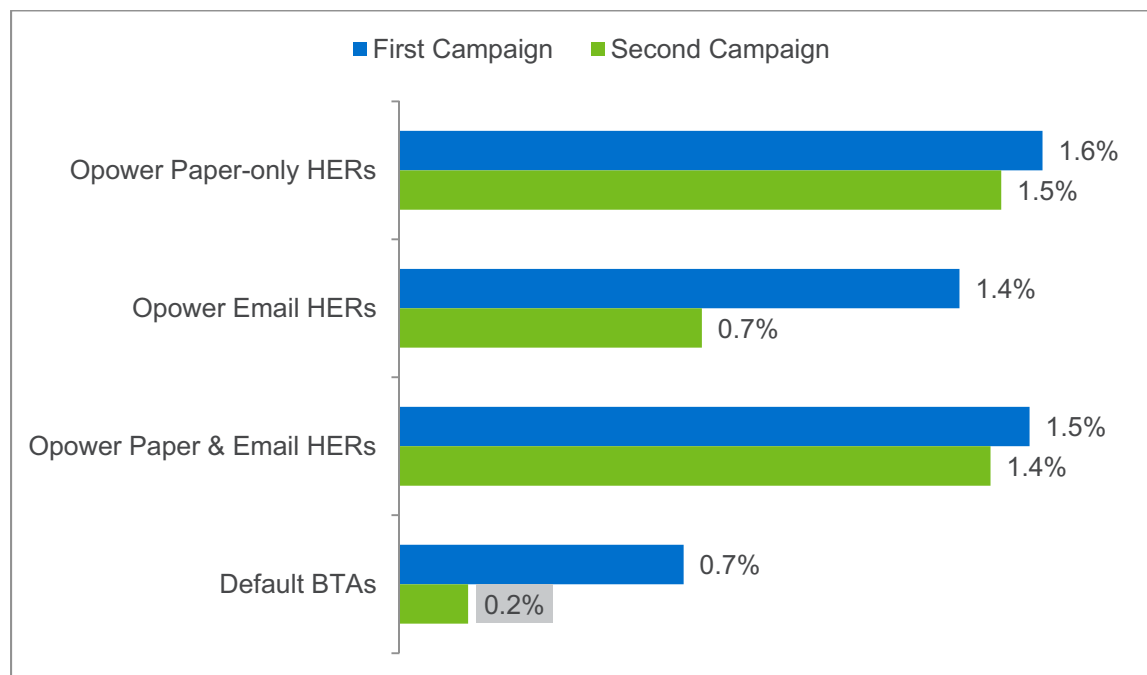
The four treatments from the first Campaign that produced statistically significant gas usage reductions were the default BTAs and three variations of the Opower HER reports (Paper-only, Email, and Paper & Email). These four treatments were also included as treatments in the second Campaign, making it possible to compare impacts for the same treatment from one year to the next.

However, to interpret this comparison it is important to note three key differences between the first and second Campaigns. First, as discussed in Section 2.5, the research sample in each year was pulled from the population that received advanced meters in the year leading up to the summer before each Campaign. These meters were rolled out to different geographic areas in the first and second year and the underlying characteristics of the two different populations could bias the results from one year to next. In particular, the second Campaign included geographic areas with lower population densities and lower rates of Latino population. Impacts vary across treatments by these characteristics, as shown in Section 5.5. Second, as explained in Section 3.1, the HERs eligibility screens applied in the second Campaign resulted in a much higher exclusion rate, with 35% of advanced meter customers being screened out in the second year versus only 4% in the first year. This large difference may have created systematic differences between the populations of the first and second Campaigns, potentially biasing the comparison of results between the two Campaigns. Third, as described in Section 2.2.2, the implementation of the default BTAs differed in that the first Campaign included several paper and email educational and promotional materials in addition to BTAs, whereas in the second Campaign, only an email welcome message was included in addition to the BTAs.

With these caveats considered, Figure 5-1 shows the comparison of results for similar treatments across the two Campaigns. The first and second Campaign impacts are quite similar for the treatments that included a substantial paper component (Paper-only and Paper & Email HERs), whereas the treatments that relied primarily on email delivery (Email HERs and Default BTAs) both produced lower impacts in the second year.³²

³² The impacts for the Opower Paper & Email HER treatment (group T-10) are marginally statistically different than the impacts for the Opower Email only treatment (group T-8), with a p-value of 0.09.

Figure 5-1: Comparison of Percent Reduction Estimates for the First and Second Campaigns (Statistically Insignificant Results are in Gray)



Initially, it may appear that the lack of promotional materials for the Default BTAs in the second Campaign may have led to far lower impacts (a statistically insignificant 0.2% as compared to a significant 0.7% the prior year). However, this difference does not explain the substantial difference between the first and second Campaign impacts for the Opower Email HER (1.4% in the first Campaign compared to 0.7% in the second, or about half). The Opower Email HER treatment was virtually identical in the first and second Campaigns, meaning that a difference in treatment design does not explain the difference in impacts. This suggests that the difference in populations from one year to the next is a more plausible explanation for the difference in impacts for both the Email HERs and the Default BTAs (both of which relied on email communication). Perhaps the different geographic area and much higher rate of exclusion from the vendor screen in the second Campaign may have created a sample population that was less responsive to email communications, leading to lower impacts for email-based treatments.

Because of this confounding underlying difference in populations, the test of the effect of BTA promotional materials in the second Campaign is inconclusive. To create an internally valid test for this impact, it would be necessary to test the impact of these promotional materials on the same population. Therefore, we recommend that SoCalGas continue to offer Default BTAs to a new population for the 2015–2016 Campaign, but with random assignment of customers to those who do and do not receive accompanying educational and promotional materials. To keep this test simple, it could be executed with just two treatments, one with and one without promotional materials, split evenly between the two groups.

5.3 HER Gas Savings by Usage Quartile

As input into planning for next year's Conservation Campaign, it is useful to examine how gas savings vary across customer segments. If some segments do not respond well to the information treatments and others do, it will be more cost-effective to focus future campaigns on segments that are more responsive to the information offerings.

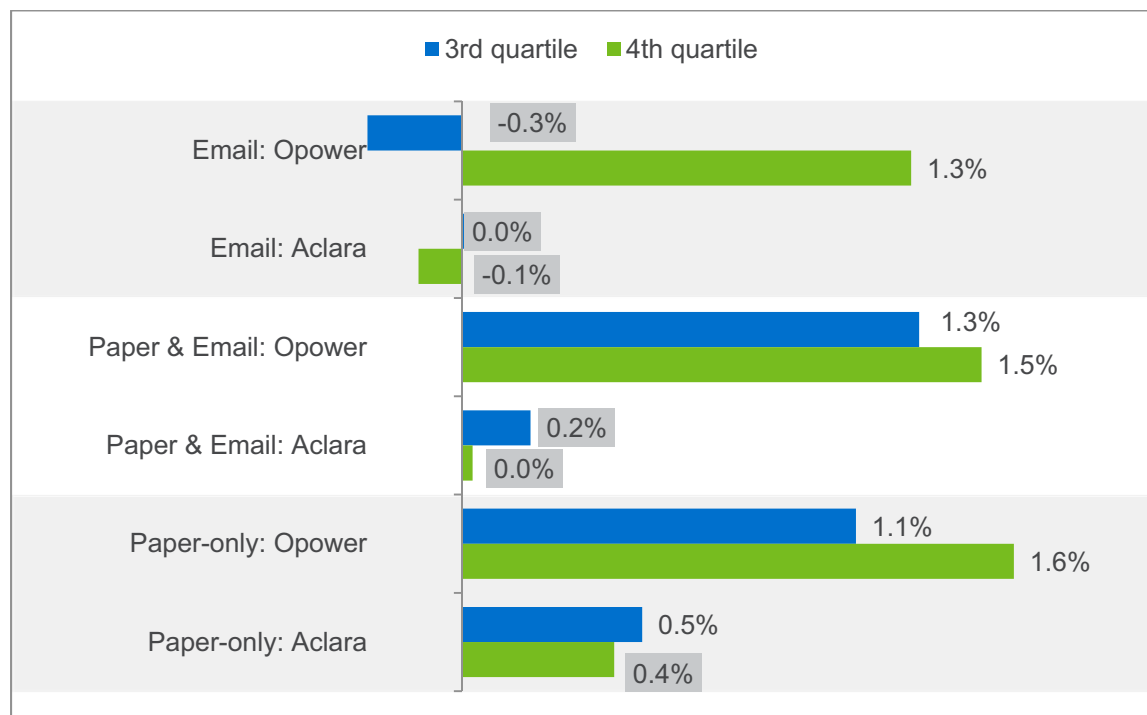
One potentially useful segmentation scheme is by usage, grouped into quartiles. To put these usage quartiles in context, it is helpful to note their likely influence on the contents of a participant's HER. A key component of HER messaging is the neighbor comparison component, which informs the participant whether their household gas usage is above, below, or in-line with usage for similar homes. Due to the nature of this comparison, top usage quartile customers are more likely to receive messages indicating that their usage is higher than usage for similar homes, thereby providing a signal to conserve. This segmentation was explored in the report for the first Campaign, leading to the conclusion that "both the magnitude of savings and percent savings consistently increase as usage increases."³³ This conclusion led to the decision to focus the second Campaign on the top two usage quartiles only.

Figure 5-2 compares percent reductions for the top two quartiles for each HER treatment in the second Campaign. As in the first Campaign, the Opower HER treatments consistently show similar or higher reductions for the fourth usage quartile as compared to the third quartile. On the other hand, the Aclara HERs do not show this trend, with third quartile impacts basically the same as the fourth quartile impacts. Though many of the Aclara impacts are not statistically significant, this comparative trend implies that the Aclara information presentment and/or algorithm underlying the neighbor comparison may not have effectively shown higher usage customers that their usage was comparatively high. This may in part explain why the impacts for the Aclara HERs were consistently and substantially lower than the Opower HER impacts, with two of three treatments not being statistically different from zero.

The second takeaway from Figure 5-2 is that the third quartile usage impacts for the Opower Email HERs were slightly negative and statistically insignificant, whereas the fourth quartile impacts were comparable to those of the Opower treatments that featured several paper communications. For this sample population, this finding implies that Opower Email HERs were not effective for the participants in the third usage quartile, leading to a substantial reduction in the overall savings as compared to the other Opower treatments.

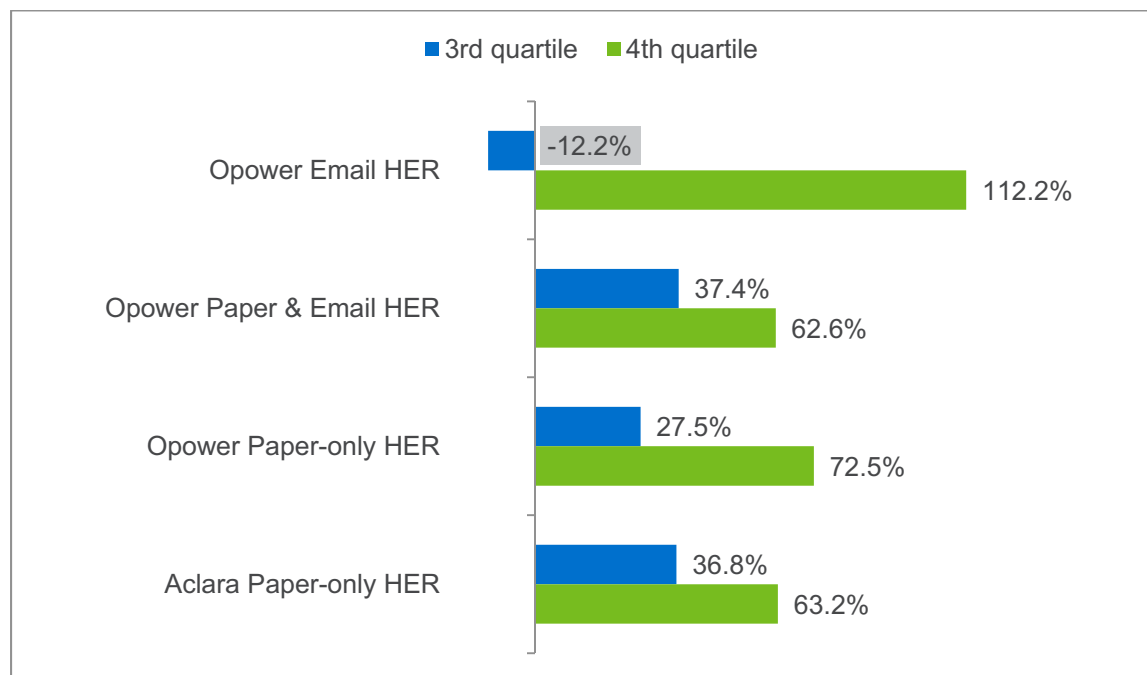
³³ For further details, refer to Exhibit E: "Evaluation of Southern California Gas Company's 2013-14 Conservation Campaign," included in the "Southern California Gas Company Advanced Meter Semi-Annual Report" filed with the CPUC on August 29, 2014.

**Figure 5-2: Comparison of HER Percent Reductions by Quartile
(Statistically Insignificant Results are in Gray)**



As discussed more in detail in Section 5.5, aggregate gas savings in therms were calculated for the four treatments in the second Campaign with statistically significant savings impacts. Figure 5-3 shows the share of these impacts attributable to the third versus the fourth usage quartile for each treatment. Even though customers in the third quartile account for one-half of each treatment group, the gas savings for those customers range from -12% to 37% of the overall savings across treatments. As in the previous Campaign, both the magnitude of savings and percent savings consistently increase as usage increases (for the treatments with statistically significant savings). For fourth usage quartile customers, high usage combined with larger impacts leads to a large percentage of the overall therm savings. Considering that customers in the top usage quartile consistently produce the largest share of therm savings, it may make sense for SoCalGas to further hone conservation efforts by focusing on customers in this group going forward.

Figure 5-3: Percent of Gas Savings Attributable to Each Usage Quartile (Statistically Insignificant Results are in Gray)

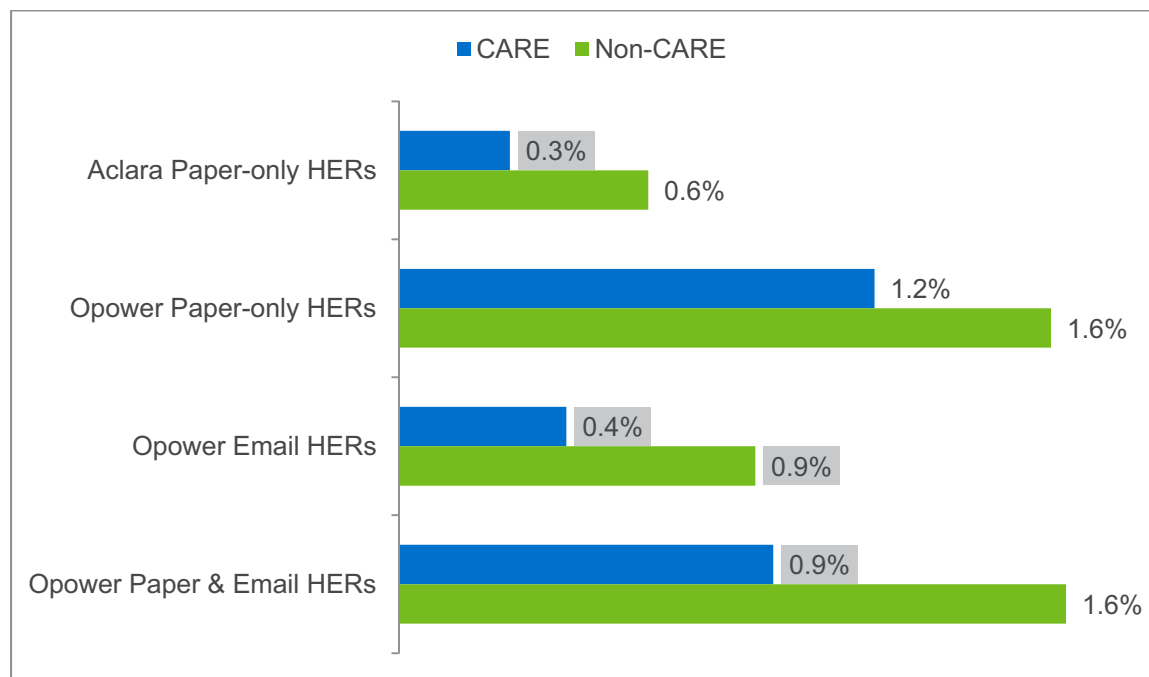


5.4 HER Gas Savings by CARE Status

Another potentially useful segmentation for future consideration is by CARE status. Among the four treatments with significant impacts, CARE customers accounted for around 25% of My Account customers and 29% of non-My Account customers, each about five percentage points lower than the population in the first Campaign. In that Campaign, only treatments with a paper component produced statistically significant impacts for CARE customers, and the CARE customer impact was 44% to 100% lower than the non-CARE impact in all cases except for the Opower Paper & Email HER.

Figure 5-4 shows the percent reduction in gas usage by CARE status for the four treatments producing significant overall reductions in the second Campaign. Among these four treatments, only the Opower Paper-only HER for non-My Account customers had a statistically significant impact on gas usage for CARE customers. This impact was lower than that of Non-CARE customers (1.2% versus 1.6%). Across the four treatments, the CARE customer impact was 25% to 56% lower than the non-CARE impact, including that of the Opower Paper & Email HER (44% lower for CARE). As in the first Campaign, it appears that CARE customers are not responsive to email-based treatments such as email HERs or BTAs and that a direct mail HER component is necessary to produce measurable impacts from this group. As such, SoCalGas may want to consider exploring alternative treatment approaches for CARE customers in future Conservation Campaigns.

Figure 5-4: HER Percent Reduction in Gas Usage by CARE Status (Statistically Insignificant Results are in Gray)



5.5 Gas Savings by Census Block Information

A census block is the smallest geographic unit for which census data is available and represents actual census results as opposed to other surveys done in intra-census years, which take a random sampling approach and are thus able to collect data on a longer list of questions, but at a less geographically granular level. The 10-question Census questionnaire³⁴ for which data is available at the block level includes population counts by ethnicity, household size, gender, age, household composition, and home rental/ownership. This information is more limited than what is available at the census block group level, which includes information on occupation, income, housing costs, etc.³⁵ However, the information available at the block level is still quite relevant to understanding factors that may influence gas consumption and conservation, and most importantly, the census block is a much smaller geographic unit than a block group. Within the SoCalGas territory analyzed, there are 10.8 census blocks per block group on average and an average of population of just 122.5 people per block. This means that a census block is small enough to allow for meaningful inference of links between population characteristics and behavior such as gas usage.

The census block data considered in this analysis consisted of population percentage by ethnicity and by housing type (rental versus ownership), average household size, and population and housing density (arrived at by combining population counts and land area, also available in the census data). Census blocks were categorized as demonstrating higher or

³⁴ https://www.census.gov/2010census/pdf/2010_Questionnaire_Info.pdf

³⁵ American Community Survey: <http://www.census.gov/acs/www/Downloads/questionnaires/2015/Quest15.pdf>

lower values for each of these statistics. In particular, census blocks with figures above the 75th percentile were considered “high.” The exception to this was the Asian population characteristic (due to the overall low rates of Asian population), for which a cutoff of 90th percentile was used. Table 5-2 shows the specific values corresponding to these percentile cutoffs.

Table 5-2: Characteristic Cutoffs used to Designate Census Blocks as High

Characteristic	Percentile cutoff	Cutoff Value	Percent of Customer population above cutoff	
			1 st Campaign	2 nd Campaign
Rate of Asian population	90 th	29%	16%	9%
Rate of Latino population	75 th	78%	27%	16%
Rate of rental population	75 th	53%	34%	17%
Average household size	75 th	3.92 per household	19%	23%
Population density	75 th	12,916 per sq. mi.	35%	23%
Household density	75 th	3,813 per sq. mi.	38%	22%

These cutoffs were used because the ethnicity demographics were of interest primarily to understand whether language barriers may exist by providing HER and BTA content only in English. The purpose of the higher cutoffs was to identify census blocks with a truly high concentration of groups with a higher propensity to speak languages other than English. Once the census blocks were categorized as above, this information was combined with the SoCalGas customer and gas usage data. To do this, the coordinates of each SoCalGas meter were mapped to a census block using a publicly-available application.³⁶ Importantly, this approach does not necessarily imply that the customer was a Latino/Asian/renter, but that the customer resides in a neighborhood with a relatively high rate of these characteristics. This underscores the importance of conducting this analysis the most granular level possible (the census block).

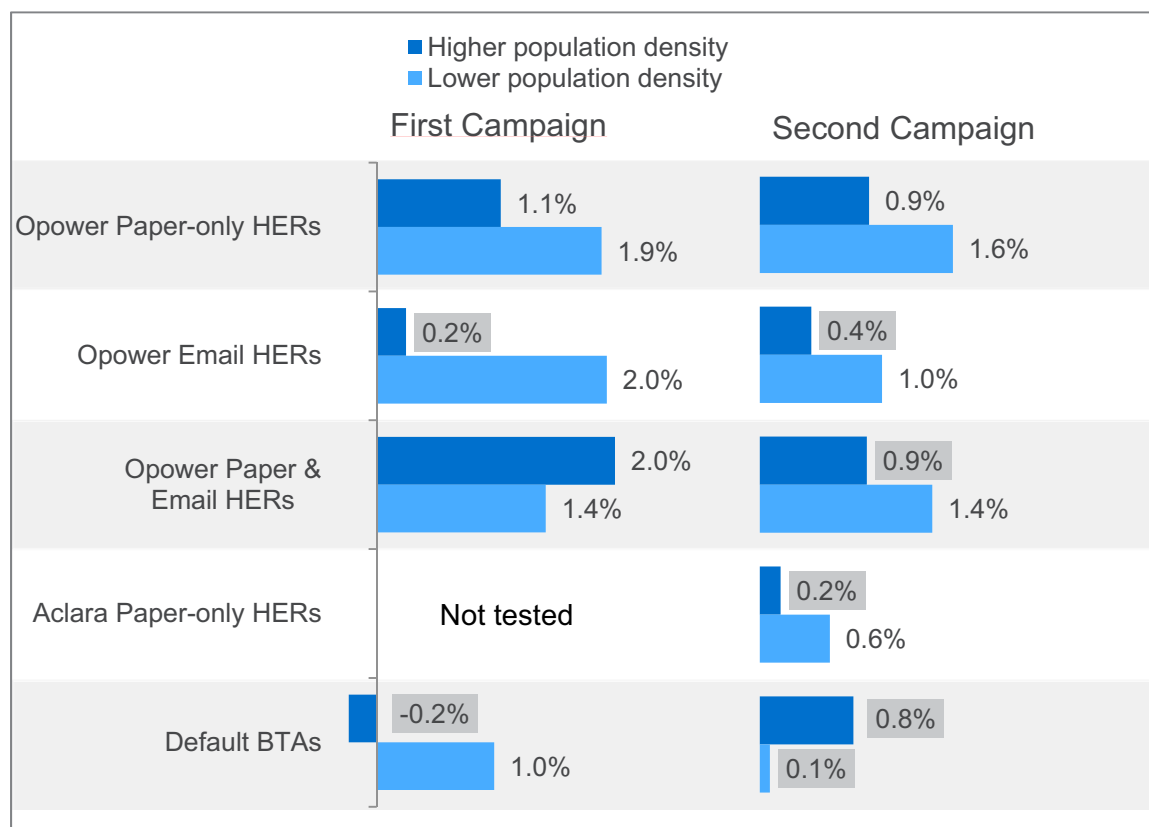
While several census block characteristics were explored, the rest of this section focuses specifically on percent reductions in gas usage by population density and by rate of Latino population because these are the two characteristics for which trends in percent reductions were most consistent across the first and second Campaigns. Results for the first Campaign are included because the 2013–2014 report did not include segmentation of percent reductions by these census block characteristics.

Figure 5-5 compares percent reductions for customers in census blocks with higher and lower population densities across the first and second Campaigns. Only treatments that have produced statistically significant overall percent reductions are shown. Recall that census blocks with a population density above the 75th percentile (12,916 people per square mile) were classified as having high population density. Customers in census blocks with higher population density consistently produce 36% to 120% lower impacts across treatments in both Campaigns,

³⁶ [http://data.fcc.gov/api/block/find?latitude=\[latitude\]&longitude=\[longitude\]&showall=False](http://data.fcc.gov/api/block/find?latitude=[latitude]&longitude=[longitude]&showall=False)

with the exception of the Opower Paper & Email HERs in the first Campaign³⁷ and the Default BTAs in the second Campaign (for which the results are statistically insignificant). Other characteristics that may be related to population density, housing type (single versus multi-family), and tenure (rental versus ownership), were also explored but population density was the characteristic that produced the most consistent trend in results, implying that it is useful as a segmentation variable.

Figure 5-5: HER Percent Reductions in Gas Usage by Population Density (Statistically Insignificant Results are in Gray)



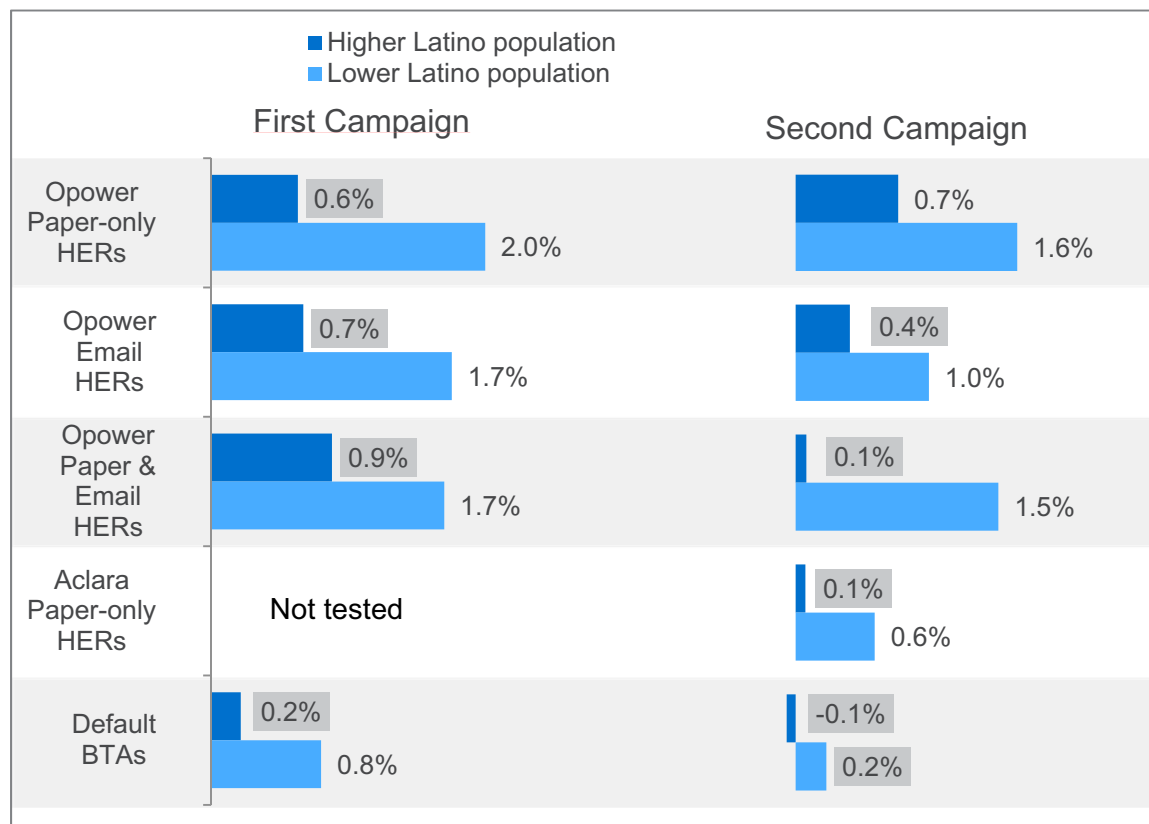
Similarly, Figure 5-6 compares percent reductions for customers in census blocks with higher and lower rates of Latino population across the first and second Campaigns. Only treatments that have produced statistically significant overall percent reductions are shown. Recall that census blocks with a Latino population comprising at least 78% of the total population (75th percentile) were considered to have a high rate of Latino population. Customers in census blocks with higher concentrations of Latino households consistently produce lower impacts across treatments in both Campaigns, without exception. For all treatments the impacts in census blocks with higher rates of Latino population are lower by at least 48%.

In areas with high rates of Latino population, there may be a need for bi-lingual materials in Spanish. This along with the consistently lower reductions among high Latino populations

³⁷ The Opower Paper & Email HERs in the first Campaign was also an anomaly with respect to the comparison of impacts between CARE and non-CARE customers, which may be related to the anomaly here.

suggests that the English-only Conservation Campaign materials may have presented a language barrier to some Spanish-speaking customers, especially those living in areas with high concentrations of Spanish speakers. In future years, SoCalGas may consider testing two paper HERs in areas with high rates of Latino population, one HER in Spanish as well as the one in English. This would be tested by randomly assigning a group with and without a Spanish language HER. If it is not practical to test this for every HER, it would be possible to perform this test on only one type of HER with a paper component.

Figure 5-6: HER Percent Reductions in Gas Usage by Rate of Latino Population (Statistically Insignificant Results are in Gray)



5.6 Persistence of Percent Reductions in Second Year for 2013–2014 Conservation Campaign

Table 5-3 provides the estimated year 2 percent reductions for treatments from the first Campaign, shown alongside the impacts from the previous year (year 1) for these same treatments. The estimates were derived by using the LDV model to compare customer usage from November 2014 through March 2015 as compared to usage in the pretreatment period (November 2012 through March 2013). These reductions were for the most part slightly lower than the savings from those estimated for the 2013–2014 Conservation Campaign, except the savings for Default BTA, which were somewhat higher (1.2% in year 2 as compared to 0.7% in the previous year). Importantly, the three HER treatments showed similar energy savings, even though the HERs were no longer sent in year 2. For the BTA treatments, SoCalGas continued to send alerts to enrolled customers in year 2.

**Table 5-3: Estimates of Percent Reductions in Gas Energy Consumption for Residential Treatments Initiated in 2013–2014, November 2014 through March 2015
(Statistically Insignificant Results are in Gray)**

My Account	Treatment	Group	Number of Treatment Customers	Year 2 results (LDV)		Year 1 results (LDV)	
				% Reduction	P-value	% Reduction	P-value
Yes	Opower Email HER	T-3	10,017	1.33%	0.00	1.37%	0.00
	Opower Paper & Email HER	T-2	9,971	1.12%	0.01	1.54%	0.00
	Default BTA	T-4	20,114	1.20%	0.00	0.70%	0.02
	Opt-in BTA	T-5A	40,228	0.29%	0.33	0.23%	0.34
No	Opower Paper-only HER	T-1	21,575	1.03%	0.00	1.58%	0.00
	Opt-in BTA	T-5B	83,434	0.09%	0.64	0.20%	0.21

Table 5-3 illustrates that savings persisted into the winter after the treatments in first Campaign. Some savings also persisted into the spring and summer months (April through October) just after the treatments ended.³⁸ While gas usage is typically much lower in these months, understanding the level of percent savings will show to what extent savings persist immediately after treatment as well as begin to inform what relative level of savings can be achieved in months with lower underlying gas usage.

Table 5-4 provides the estimated percent reductions during spring and summer of 2014 for default treatments from the first Campaign. The estimates were derived by using the LDV model to compare customer usage from April 2014 through October 2014 as compared to usage in the pretreatment period (April 2013 through October 2013). Reductions were only statistically significant for the Paper & Email HER treatment (1.13%, about one quarter less than during the treatment period) and Email HER treatment (0.87% about one third less than during the treatment period). Reductions were marginally significant for the Paper-only HER treatment (reduction of 0.47% with a p-value of 0.06).

**Table 5-4: Estimates of Percent Reductions in Gas Energy Consumption for Residential Treatments Initiated in 2013–2014, April 2014 through October 2014
(Statistically Insignificant Results are in Gray)**

My Account	Treatment	Group	Number of Active Customers	Year 1 spring / summer results (LDV)	
				% Reduction	P-value
Yes	Opower Email HER	T-3	10,737	0.87%	0.016
	Paper & Email HER	T-2	10,780	1.13%	0.002
	Default BTA	T-4	21,645	0.32%	0.290
No	Paper-only HER	T-1	22,637	0.47%	0.058

³⁸ Treatments ended in March 2014 for all groups but the BTA groups who continued to receive alerts.

5.7 Estimated Gas Savings

Once a statistically significant usage reduction within a given test cell is identified, the analysis can be done at the monthly level, which allows for the re-inclusion of some customers that may not have had usage data for every month, but do have data for some pre- and post-treatment months. Table 5-5 summarizes the estimated gas savings for the 2013–2014 SoCalGas Conservation Campaign, based on the monthly-level analysis. Gas savings are only calculated for the treatments that produced statistically significant usage reductions using the LDV model, which includes the four default treatments from the 2013–2014 Conservation Campaign as well as the three Opower treatments and Aclara Paper-only HER from the 2014–2015 Conservation Campaign. Overall, the new and continued treatments produced gas savings of over 547,000 between April 2014 and March 2015, or about 1%.

In total, nearly 360,000 therms were conserved as a result of the new treatments for the 2014–2015 Conservation Campaign, representing a savings of 1%. About 60% of these energy savings (about 214,000 therms) came from treatment group T-13 (Opower Paper-only HER), which had the highest percent savings and one of the largest treatment groups (over 50,000 customers).

Roughly 142,000 therms were conserved during the winter as a result of the treatments in the 2013–2014 Conservation Campaign. This was somewhat lower than the nearly 200,000 therms estimated for the Campaign in its first year, though this was due to a combination of factors including a discontinuation of the Opower HERs in year 2, smaller treatment group (due to an attrition of about 11%), lower reference usage (average reference therms per customer were almost 10% lower in the second year), and somewhat lower average percent savings.

Roughly 32% of the 142,000 therms conserved came from treatment group T-1 (Paper-only HER for non-My Account customers), which had the largest number of participants among the four 2013–2014 default treatments for residential customers. For the 2013–2014 Conservation Campaign treatments, this group represented roughly 63% of savings. Nearly 31% of the total energy savings were produced by the default BTA treatment (T-4).

Finally, an additional 45,000 therms were saved over the summer / spring of 2014 as a result of treatments in the 2013–2014 Conservation Campaign with statistically significant³⁹ reductions, roughly evenly distributed between the three Opower HER treatments.

³⁹ The Opower Paper-only HER treatment produced savings that were marginally significant with a p-value of 0.058. Put another way, the reductions from that treatment were significant with 94.2% confidence. Therefore the therms savings from that treatment are also counted.

Table 5-5: Estimated Gas Savings for the 2014–2015 SoCalGas Conservation Campaign

Initial Treatment Year	Treatment	Group	Number of Active Customers per Month	Average Customer Total Usage for November-March			Aggregate Usage for November-March		
				Reference Therms	Observed Therms	Therms Saved	Reference Therms	Observed Therms	Therms Saved
2014-2015	Opower Email HER	T-8	13,050	275.2	273.5	1.7	3,591,645	3,568,947	22,698
	Opower Paper & Email HER	T-10	13,106	274.8	270.9	3.9	3,601,500	3,549,958	51,541
	Opower Paper-only HER	T-13	50,979	285.1	280.9	4.2	14,532,731	14,318,701	214,030
	Aclara Paper-only HER	T-14	51,018	284.9	283.5	1.4	14,532,629	14,461,494	71,135
Overall for 2014-2015 treatments (winter)			128,153	282.9	280.1	2.8	36,258,505	35,899,100	359,405
2013-2014	Opower Email HER	T-3	10,017	200.0	196.8	3.1	2,003,014	1,971,468	31,546
	Opower Paper & Email HER	T-2	9,971	201.2	199.1	2.1	2,005,958	1,985,086	20,871
	Default BTA	T-4	20,114	200.0	197.8	2.2	4,023,634	3,979,495	44,139
	Opower Paper-only HER	T-1	21,575	197.9	195.8	2.1	4,269,346	4,224,000	45,346
Overall for 2013-2014 treatments (winter)			61,677	199.5	197.2	2.3	12,301,951	12,160,049	141,902
2013-2014	Opower Email HER	T-3	10,737	142.1	140.8	1.2	1,525,294	1,511,989	13,305
	Opower Paper & Email HER	T-2	10,780	142.1	140.5	1.6	1,531,533	1,514,536	16,997
	Opower Paper-only HER	T-1	22,637	136.4	135.7	0.7	3,086,768	3,071,583	15,185
Overall for 2013-2014 treatments (spring/summer)			44,154	139.1	138.1	1.0	6,143,596	6,098,109	45,487
Overall			233,984	233.8	231.5	2.3	54,704,052	54,157,258	546,794

6 Recommendations for 2015–2016 Conservation Campaign

Throughout the AM rollout until the end of 2017, SoCalGas is implementing a cycle of innovation in which continuous assessment and improvement in the performance of feedback programs is the primary objective. This is referred to as the “test and learn” process, which is consistent with what the CPUC envisioned in D.10-04-027. This decision approved SoCalGas’ AM application, as discussed in Section 2. As the implementation proceeds, high performing program design options will be retained and offered to an increasingly larger share of customers who receive advanced meters. At the same time, new program design alternatives will be tested based on the experiences gained from the prior round of implementation. Programs and program design features that are less effective will be abandoned or modified. In this way, over the course of the AM rollout, the most effective means for encouraging energy savings from information feedback will be identified and offered to customers.

As discussed in Section 2.3, the results in this evaluation must be understood within the context of the 2013–2014 and 2014–2015 winters because each in turn was the warmest on record in California. It is unclear what effect (if any) this unseasonably warm weather had on the energy savings that resulted from the information feedback treatments, considering that similar treatments were not available in prior years. The upcoming Conservation Campaigns will provide an opportunity to assess how the absolute and percent energy savings vary under different weather conditions. This body of evidence will allow SoCalGas to more conclusively finalize its information feedback strategy after the AM rollout is complete at the end of 2017.

Furthermore, a fundamental tenant of the “test and learn” process is to continuously improve toward more cost-effective solutions. While the 2014-2015 results for the residential default treatments are encouraging, it may be possible to produce comparable (or higher) energy savings at a lower cost. Therefore, to test ways of improving cost-effectiveness, the 2015-2016 Conservation Campaign will adjust the program offerings for residential customers as follows:

- Given the cost-effectiveness of its delivery via electronic channels (email and text), test a new, enhanced version of the default weekly BTA email, featuring a more graphical data display, vs. the existing text and data-intensive version of the BTA email;
- Test default BTAs with and without associated informational materials in the same population to conclusively determine whether these costly materials are necessary for achieving significant reductions from BTAs;
- Test innovative behavioral methods that more fully leverage AM data, such as weather sensitivity reports and alerts targeted to customers identified through AM-enabled analytics as those with gas usage habits most sensitive to colder weather;
- Continue to test the Opower HER on a new treatment population with focused thermostat messaging and income-based segmentation to improve performance;
- Discontinue the Aclara HERs treatments in their current form. Alternatively, consider a minimally-sized new Aclara-facilitated HER campaign that builds on key lessons learned relative to the Aclara HER campaigns;
- Explore alternative treatment approaches for CARE customers, perhaps with a focus on direct-mail based treatments, as these appear to be more effective;
- Test the impact of providing a Spanish language paper HER and welcome materials in lieu of the English language materials to customers in areas with high rates of Latino

population or to customers indicating a Spanish language preference to determine whether providing English-only materials creates a language barrier for Spanish speakers; and

- Continue to test treatments with the top two usage quartiles since they both produce measurable therm savings.

6.1 Conservation Programs for Non-residential Customers

The first Campaign tested BTAs with Small and Medium Business (SMB) customers on both an opt-in and default basis. However, at the time there were too few SMB customers with AM data to accommodate a randomized controlled trial. SoCalGas decided to exclude SMB customers from Conservation Campaigns until there were sufficient numbers with advanced meters. However, SoCalGas is continuing to explore behavioral conservation savings opportunities that leverage AM data within the commercial and industrial (C&I) market segments. For example, SoCalGas is reviewing potential “remote building audit” approaches utilizing gas interval data that may be piloted for larger C&I buildings and facilities in 2015 and/or 2016 (not necessarily tied to heating season).

In addition, SoCalGas is also considering testing BTAs with SMB customers again in the 2016–2017 Conservation Campaign, enabled by the larger numbers of SMB customers that will have advanced meters at that point. These SMB BTAs would target specific segments with higher interest and propensity to save, such as the restaurant / food industry. As SoCalGas explores these SMB options it will be important to factor known challenges into program design. As shown by the low BTA opt-in rates observed for the SMB segment in the 2013–2014 Campaign, it can be difficult to identify and contact the key decision makers for SMB customers. Similar behaviors have been observed in other “Business Energy Report” pilot programs.

Appendix A Opower Home Energy Report Materials

In addition to the paper and email HER examples in Section 2.2, Opower also sent a HER welcome insert and a door hanger, which are included in this appendix. There were also differences between the paper HERs sent each month as well as a slight difference between the email HERs sent in the first month (November 2014) and in subsequent months. Samples of each are included in this appendix.

Figure A - 1 shows the front of the Opower HER welcome insert, which was delivered to nearly 50,000 Opower paper-only HER customers, 12,500 Opower paper & email HER customers, and 12,500 email HER customers in November 2014. Figure A - 2 shows the back of the HER welcome insert. Figure A - 3 displays the door hanger that was delivered to all of the Opower HER customers.

Figure A - 4 through Figure A - 11 show the front and back of the paper HER sent in each month. Figure A - 12 the email HER sent in the first month (December 2014) while Figure A - 13 shows the email HER sent in subsequent months (January 2015 and after).

A.1 Opower HER Welcome materials

Figure A - 1: November Opower HER Welcome Insert (Front)

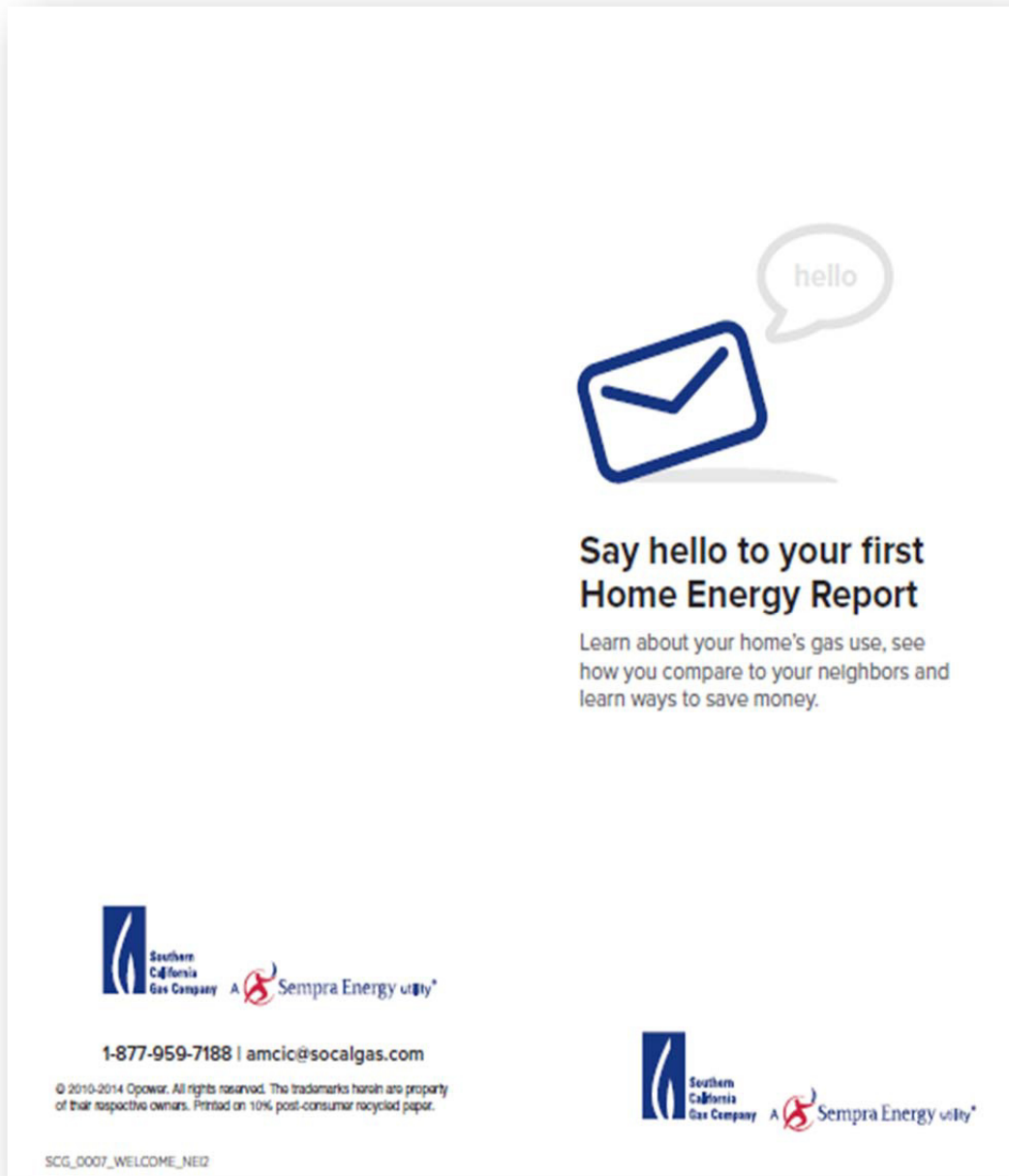



Figure A - 2: November Opower HER Welcome Insert (Back)



Introducing Your Home Energy Report

About the Program

 **Your Personalized Report**

This report and others to come are part of a program designed to help you save energy and money. Millions of households are already enrolled in similar report programs nationwide. Collectively, these programs have saved hundreds of millions of dollars. If you're ready to start saving on your gas bill, this program is for you.

 **Your Neighbor Comparison**

In your reports, you can see your current gas use compared to approximately 100 nearby, occupied homes with similar characteristics — such as square footage and heating system. These homes represent your neighbors, but do not necessarily include the homes on your block or in your immediate neighborhood. These comparisons, along with personalized energy saving tips, can help you better understand how you use gas.

 **Your Home Information**

The comparisons and tips in your reports are personalized for you by using publicly available information about your home size, home type and other characteristics. To find more information about your custom analysis and advice, visit SCG.opower.com.

 **Your Personal Information**

We only use your information to provide useful insights about your gas use. Your information is compiled anonymously and not shared with any of your neighbors. Only you can see your personal data.

Figure A - 3: Opower HER Door Hanger

Front



Back



A.1 Opower Paper HERs

Figure A - 4: Opower Paper November HER Example (Front)



Figure A - 5: Opower November Paper HER Example (Back)

❄️ Last Winter Usage Breakdown

Month	You	All Neighbors	Efficient Neighbors
DEC	~35	~50	~30
JAN	~100	~85	~55
FEB	~45	~60	~35

Key: ■ You, ■ All Neighbors, ■ Efficient Neighbors

You used **48% more natural gas** than your efficient neighbors. This cost you about **\$67 extra** last winter.

Great way to save this winter: Use heat wisely. Lower your thermostat 2° when you're home and 10° when you're away.

Personalized tips | For a complete list of energy saving investments and smart purchases, visit socialgas.com/rebates.

Quick Fix
Something you can do right now

Reduce your water heater's temperature
Lowering your water heater's temperature from 140°F to 120°F can reduce water heating costs by up to 10%. This temperature will also help prevent scalding.

Check the owner's manual for safety instructions before making any changes to your water heater's settings.

After lowering the temperature on the water heater, use a thermometer to check the temperature of water flowing from your faucets.

SAVE UP TO
\$20 PER YEAR

Smart Purchase
An affordable way to save more

Install efficient showerheads
Showering accounts for 50% of your hot water use. Efficient showerheads reduce water use while maintaining pressure, so you can cut costs without sacrificing comfort.

You can request a **free** water efficiency starter kit at socialgas.com/rebates. The kit includes an efficient showerhead and three faucet aerators. You can also purchase a ShowerStart™ showerhead with a **\$15 instant rebate**.

SAVE UP TO
\$40 PER YEAR

Great Investment
A big idea for long-term savings

Buy ENERGY STAR® appliances
The U.S. Department of Energy tests the efficiency of household appliances and electronics. The best earn the ENERGY STAR label. This program saves American households millions of dollars every year.

The ENERGY STAR label can be found on efficient models of many products. Qualified models often run more quietly, last longer, and are more convenient to use than conventional models.

Visit www.energystar.gov for details.

SAVE UP TO
\$30 PER YEAR, VARIES BY ITEM

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Figure A - 6: Opower Paper December HER Example (Front)

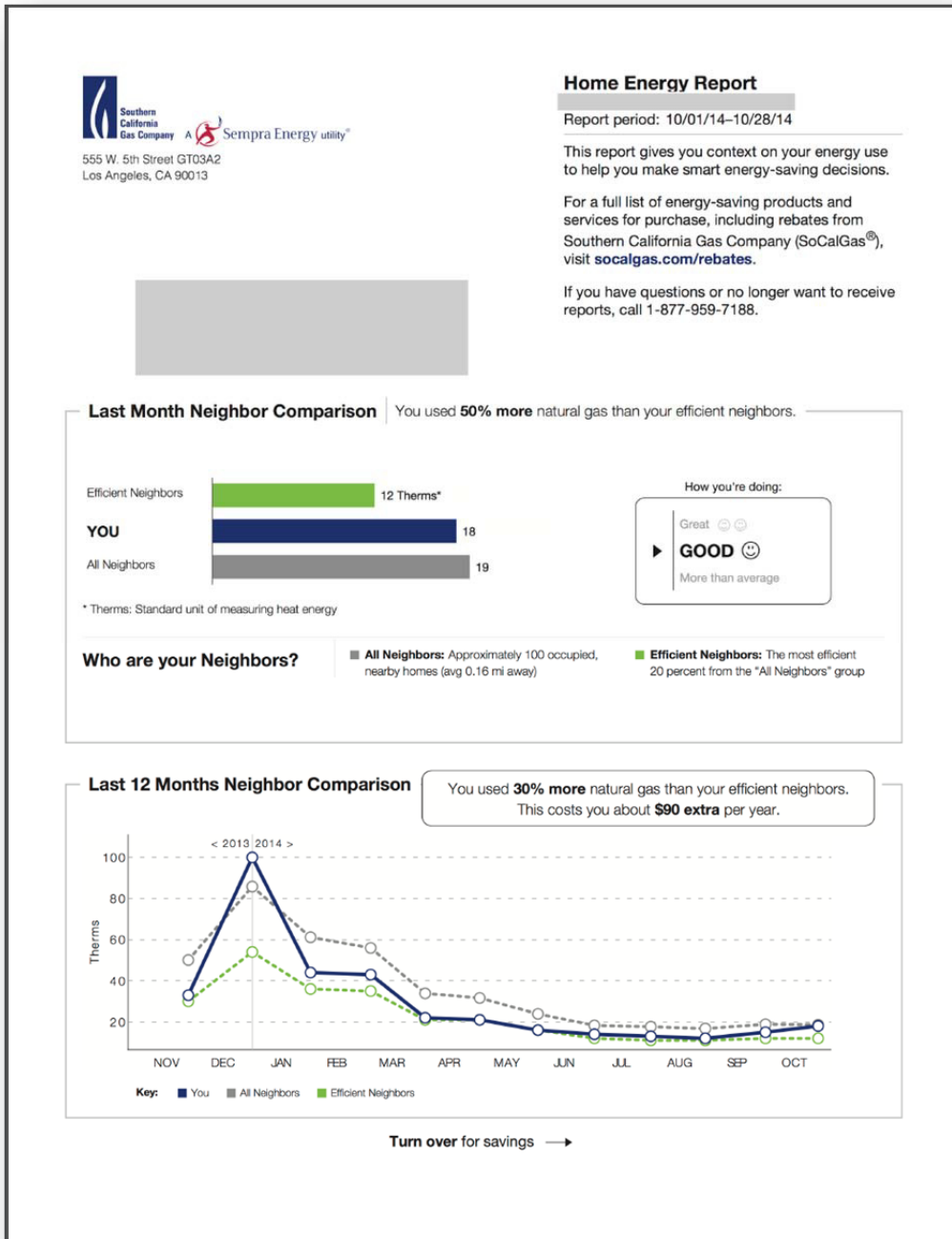


Figure A - 7: Opower December Paper HER Example (Back)

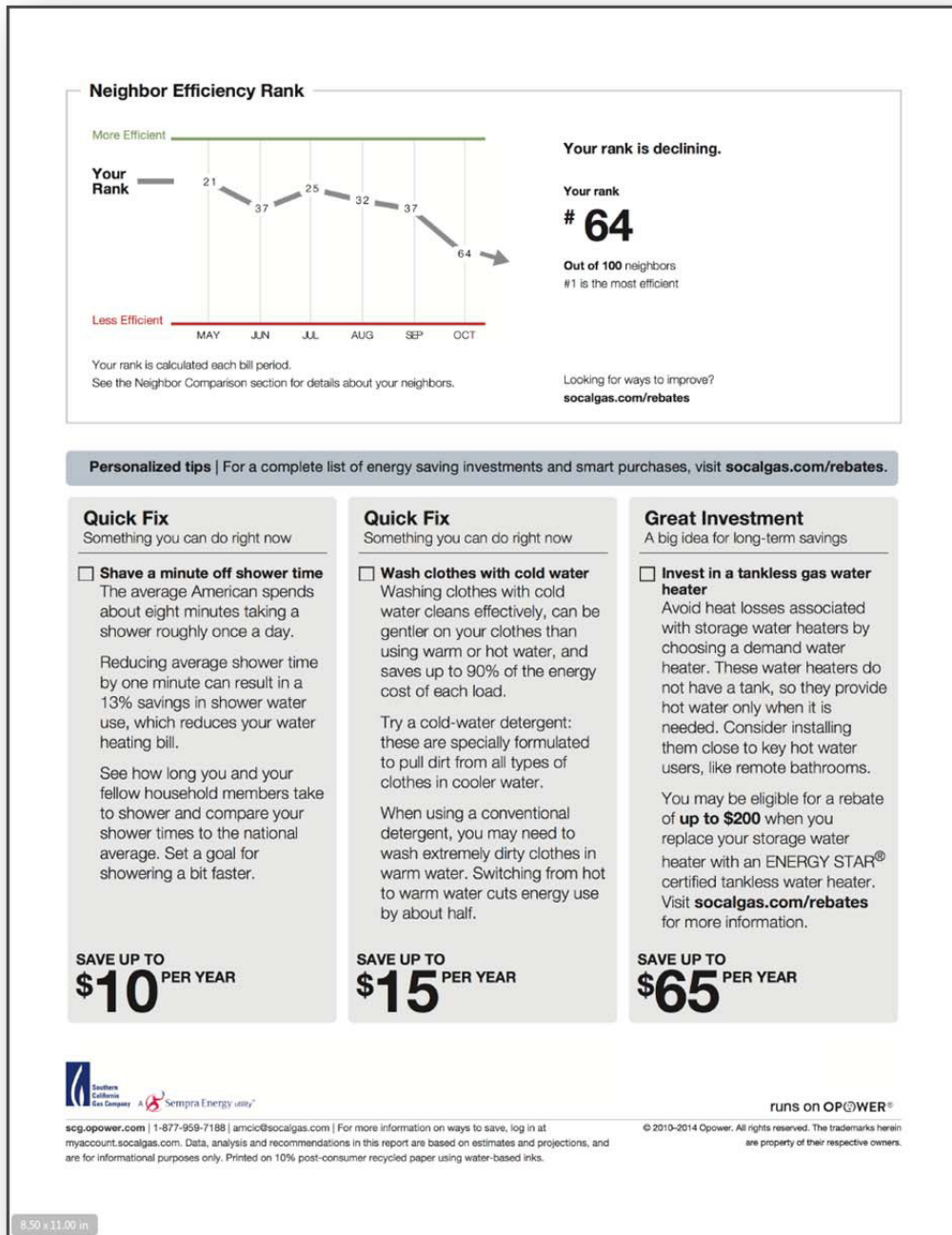


Figure A - 8: Opower Paper January HER Example (Front)

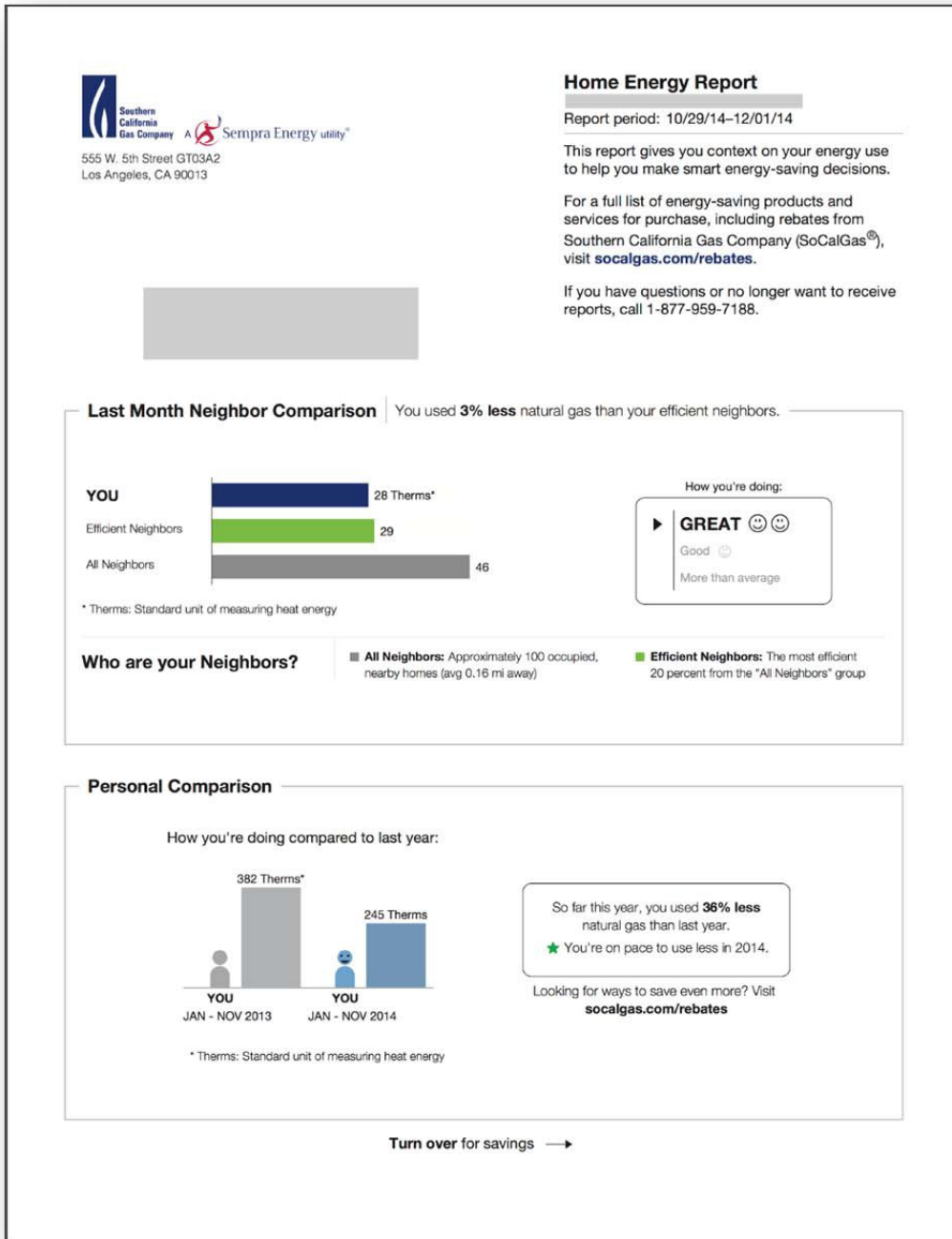


Figure A - 9: Opower January Paper HER Example (Back)

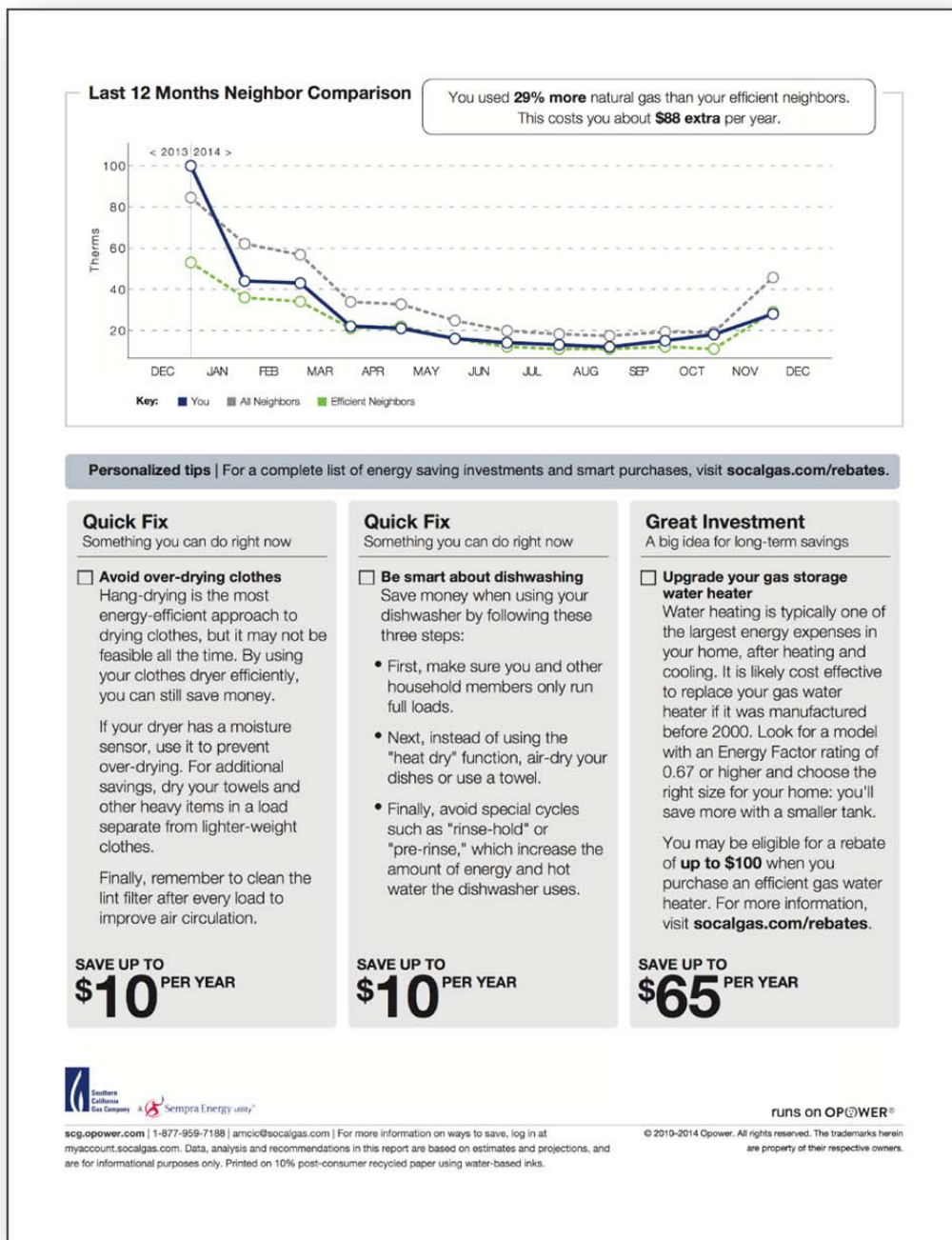


Figure A - 10: Opower Paper February HER Example (Front)

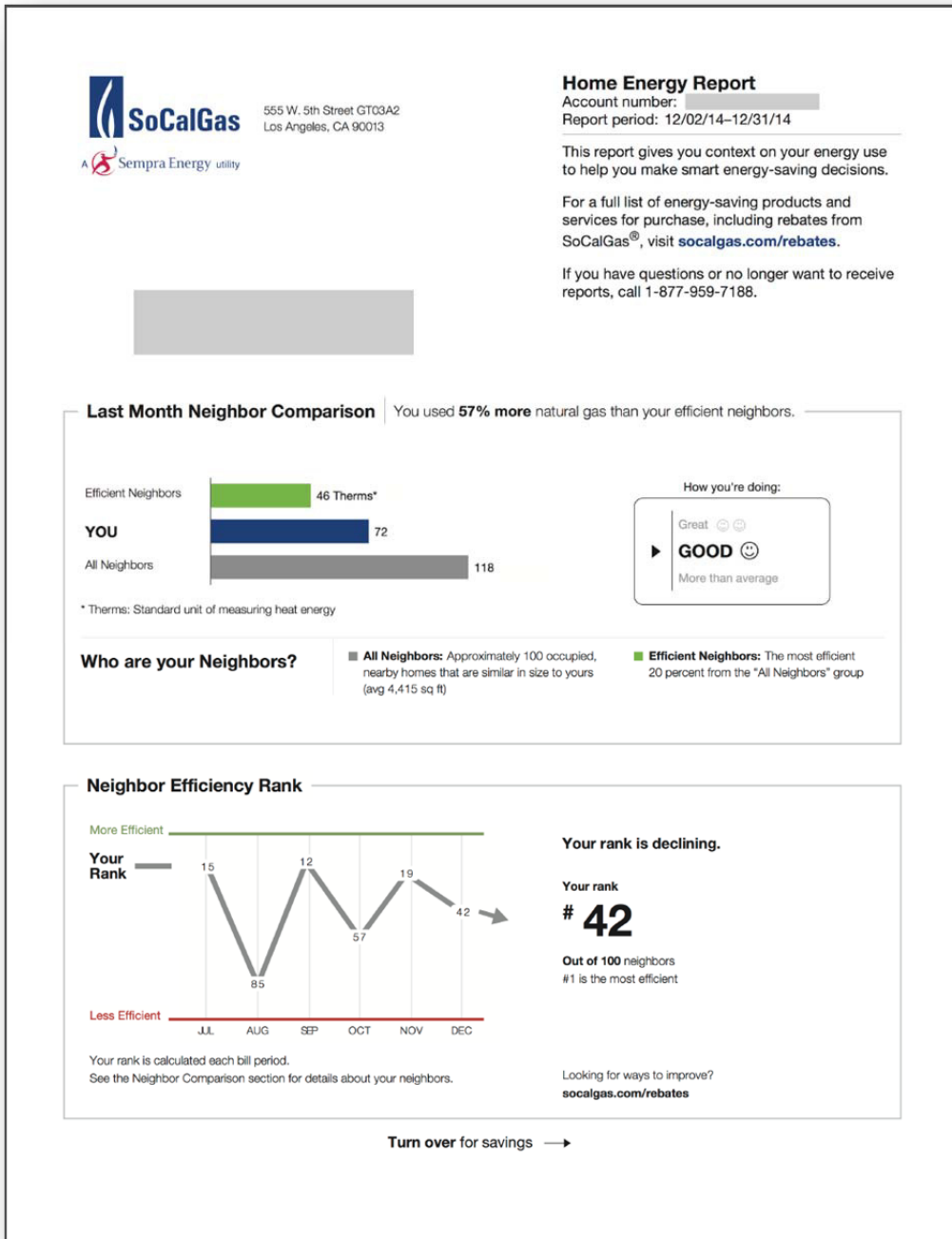
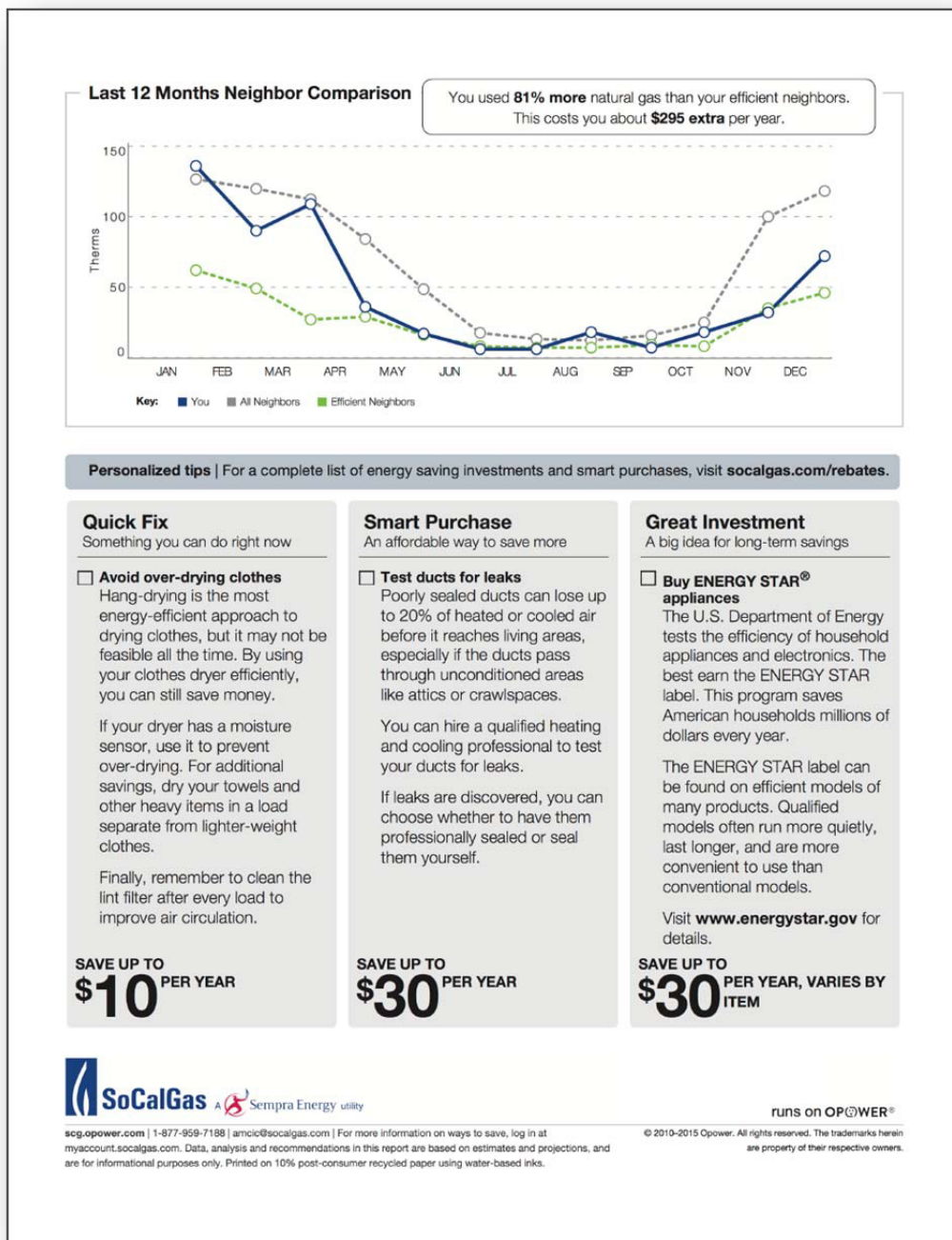


Figure A - 11: Opower February Paper HER Example (Back)



A.2 Opower Email HERs

Figure A - 12: Opower December Email HER Example

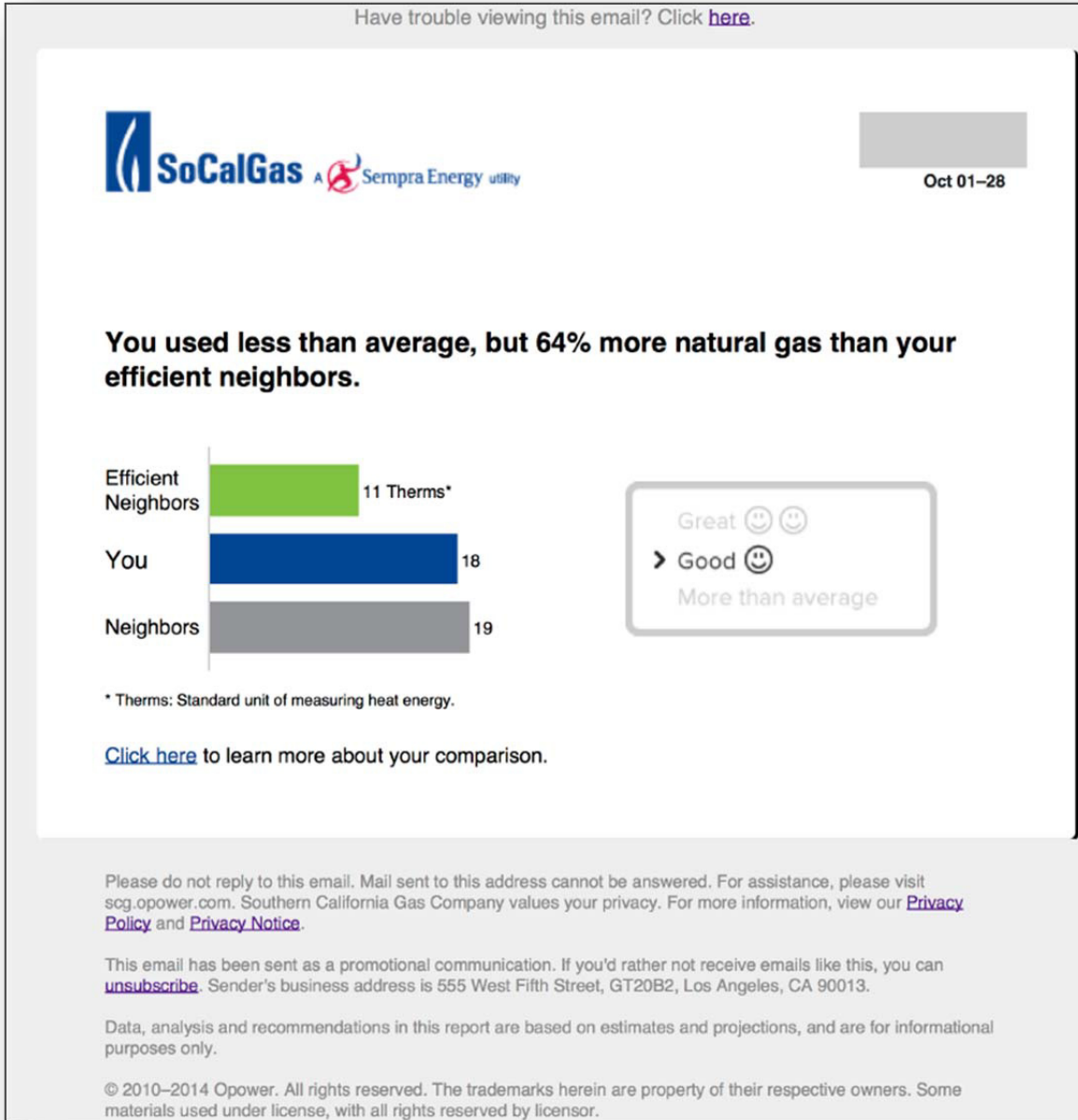
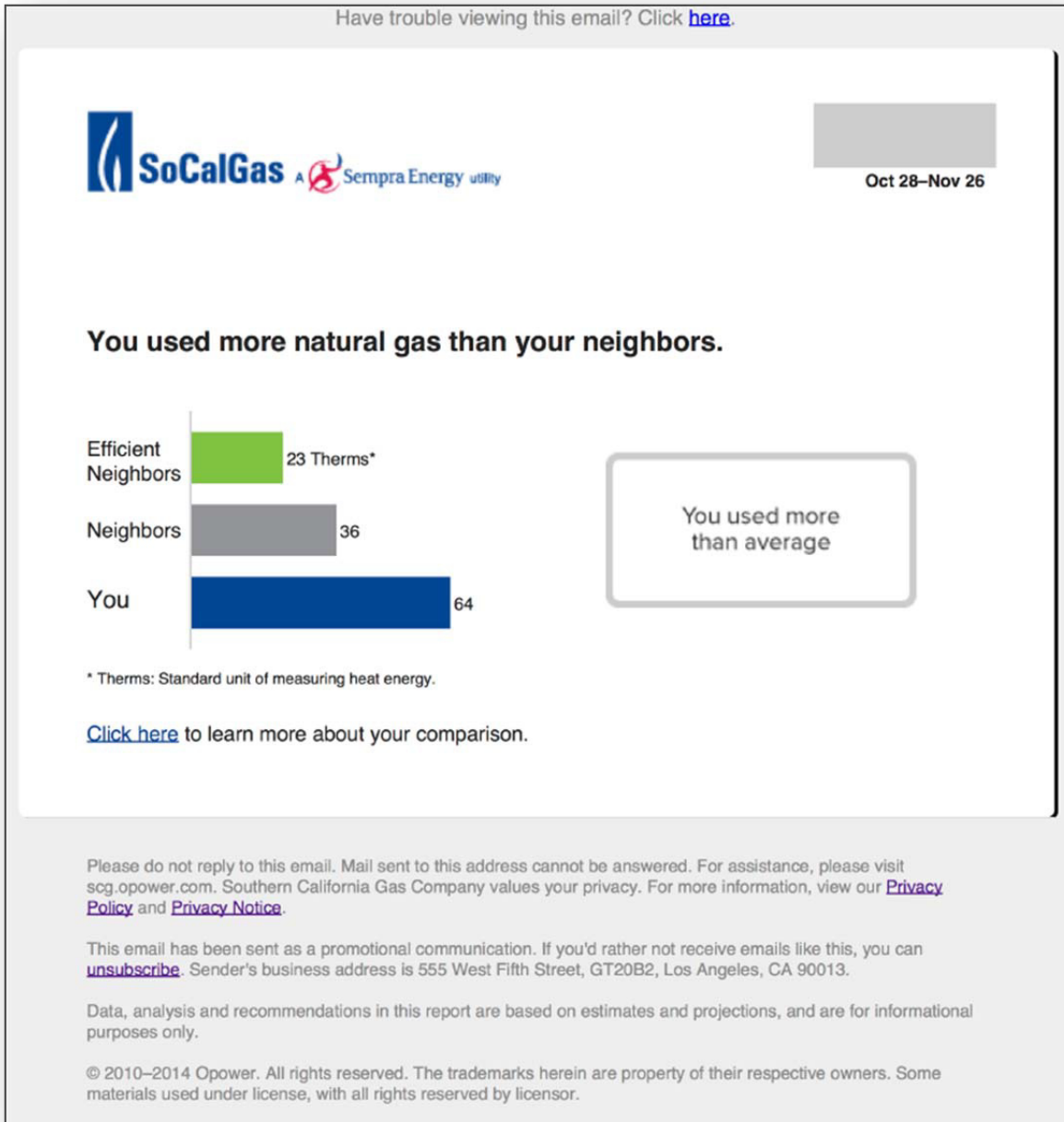


Figure A - 13: Opower Email HER Example, January and subsequent months



Appendix B Aclara Home Energy Report Materials

In addition to the paper and email HER examples in Section 2.2, Aclara sent a HER welcome insert, which are included in this appendix. The Aclara paper and email HERs also varied from month to month, so paper and email HER samples for every month are also included in this appendix.

Figure B - 1 shows the Aclara HER welcome insert materials, which were delivered to nearly 50,000 Aclara paper-only HER customers, 12,500 Aclara paper & email HER customers, and 12,500 email HER customers in November 2014. Figure B - 2 through Figure B - 9 show samples of the front and back of the paper HERs that were sent each month between November 2014 and February 2015.

The paper HERs featured the following sections⁴⁰:

- Neighborhood Comparison
- Average Usage by Day of Week
- Year over year comparison
- Set Savings Goal
- Simple Steps
- Side bar messaging with rebates, swapped between two selected by SoCalGas: *Get Ready for Winter* and *Helping Make it Easier to Save*

Figure B - 10 through Figure B - 14 show samples of the email HERs that were sent in each month from November 2014 through March 2015. The email HERs included sections that were similar those in the paper HERs⁴¹:

- Neighborhood Comparison
- Average Usage by Day of Week
- Year over year comparison
- Side bar messaging with rebates, swapped between two selected by SoCalGas: *Get Ready for Winter* and *Helping Make it Easier to Save*

⁴⁰ Based on delivery month, the below consumption analysis modules were selected:

- November 2014 – Goal Setting
- December 2014 – Self Comparison
- January 2015 and February 2015 – Self Comparison and AMI Highlights

⁴¹ Different consumption analysis modules were included in each month. See Table 2-2: Aclara Email HER messaging elements included each month.

B.1 Aclara HER Welcome materials

Figure B - 1: Aclara Welcome Insert materials included with 1st Paper Report in November



<p>Your Personalized Energy Update</p>  <p>This Home Energy Update offers personalized insights about your natural gas use. It includes customized suggestions to help you cut out energy waste to lower your natural gas bill and live more comfortably at home this winter.</p>	<p>Helpful Household Comparisons*</p> <p>Each Home Energy Update will offer you a comparison of your home's natural gas use compared to other homes in your area that use natural gas and are similar in size, style, age and number of occupants. In the months to come we'll share insights about how your energy use this year compared to last year, and help you set and meet goals that will drive meaningful results.</p>	<p>Customized Insights and Offers</p> <p>Your energy usage data and insights are provided only to you and not shared with others. Your Home Energy Updates also include offers and programs from Southern California Gas Company (SoCalGas®) that are relevant to you based on your energy use at home. To take advantage of these offers visit socialgas.com (search "Ways to Save").</p>	<p>Lower Energy Bills, Less Energy Waste</p> <p>Your Home Energy Update is part of a program designed to make home energy use more visible and most importantly help you take steps that drive real, tangible benefits you can feel in your home and see in future energy bills.</p>
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* The energy usage information for other households is compiled anonymously using a large group of other similar homes in your area. To find out more about how we use energy consumption information to generate customized insights and offers visit: <http://pages.socialgas.aclara.com/FAQ/>
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Super Simple Steps To Cut Energy Waste This Winter

 <p>Turn Down Your Thermostat When You Leave</p> <p>Dialing down the temperature from 72 to 67 can cut your bill by about 10 percent.</p>	 <p>Be Kind to Your Clothes, Wash them in Cold</p> <p>About 90 percent of the energy used by your washing machine goes to heat water and hot water washing adds wear and tear to your favorite cotton clothes.</p>	 <p>Check for a Breeze Around Doors and Windows</p> <p>Defeat drafts. Use caulk and weatherstrip to plug gaps, stay toasty and save money this winter. Caulking and sealing are often the lowest cost, do-it-yourself actions you can take.</p>
---	--	---

Visit socialgas.com (search "Save Energy") for more simple steps to cut energy waste, lower your bill and be more comfortable this winter.

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B.2 Aclara Paper HERs

Figure B - 2: Aclara November Paper HER Example (Front)

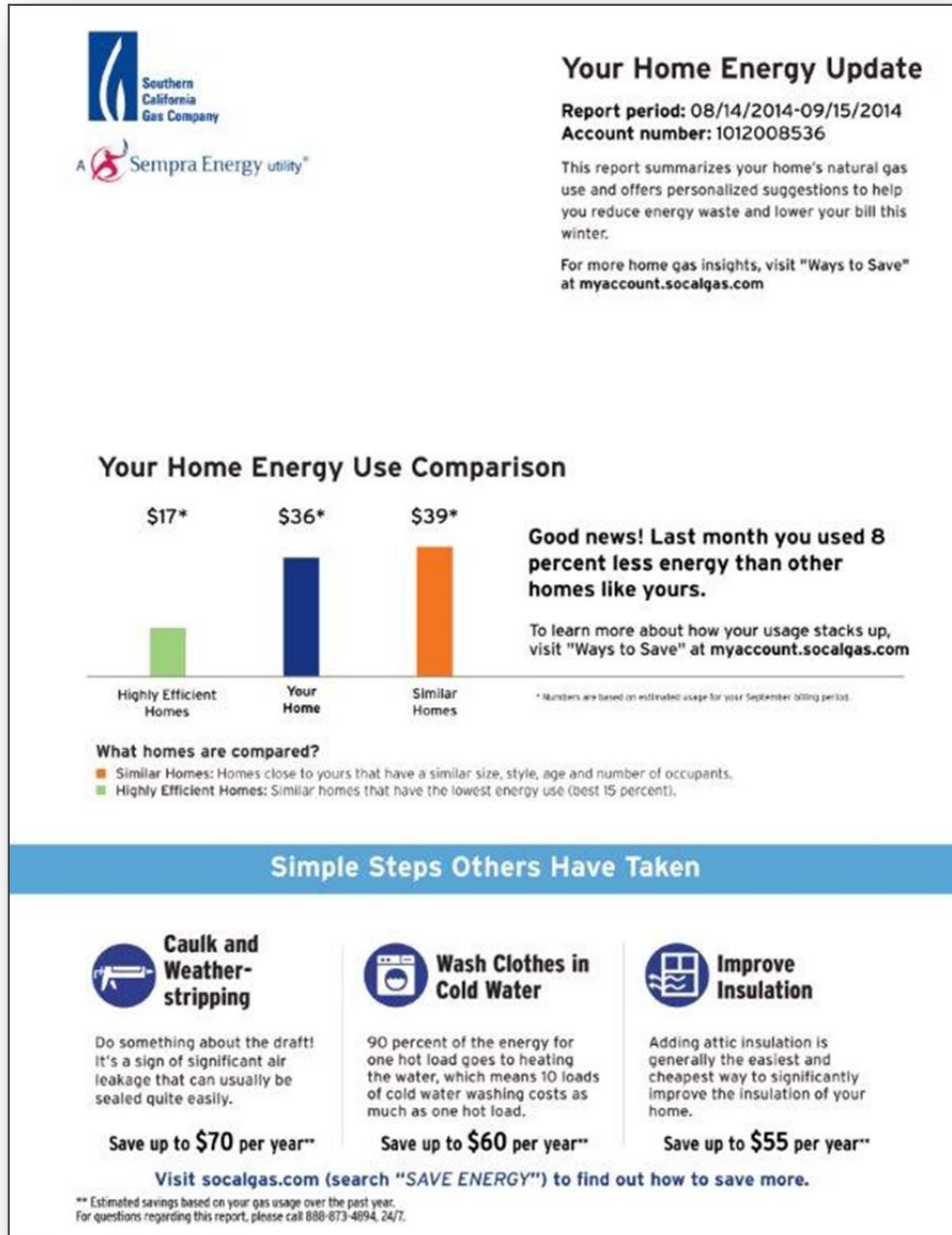


Figure B - 3: Aclara November Paper HER Example (Back)

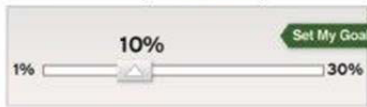
What's Your Goal?

Based on your current home energy update, you could:

Cut Energy Waste by 8 percent Your natural gas usage would be similar to other homes like yours.	Lower Your Bill by \$72 Per Year This represents a 15 percent reduction off your average annual energy bill.	Plan for a Night Out With Your Energy Savings Use the savings from the energy waste you've cut at home towards dinner or your other favorite treat.
--	--	---

Set your savings goal at myaccount.socalgas.com and we will help you reach it

10 percent in savings could save you **\$48** per year



Get Ready For Winter

These incentives are currently available for you:

Save water, save money and save your clothes
Use half the water of your top loader and save 30 percent on your gas bills with a new ENERGY STAR® Most Efficient front-loading clothes washer. Plus get a \$75 rebate. Gentle on your wallet and gentle on your clothes.
Visit socalgas.com (search "SAVE ENERGY") today to take advantage of this offer.

Complimentary showerhead and faucet aerators
Maintain high water pressure while saving energy, water and money. Get 3 faucet aerators and a showerhead at no cost.
Visit socalgas.com (search "SAVE ENERGY") today to take advantage of this offer.

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Insights by  ACLARA

Figure B - 4: Aclara December Paper HER Example (Front)



Figure B - 5: Aclara December Paper HER Example (Back)

How Does Your Usage Compare to Last Year?

Great news! You're on track to use 21 percent less natural gas this year!

For more about keeping your bills down, visit: socialgas.com (search "SAVE ENERGY")

Month	Usage (therms*)
Oct 2013	38
Oct 2014	30

Your natural gas usage (therms*)

* Therms: A standard unit of measuring heat energy.

Get Ready For Winter

These incentives are currently available for you:

Save water, save money and save your clothes

Use half the water of your top loader and save 30 percent on your gas bills with a new ENERGY STAR® Most Efficient front-loading clothes washer. Plus get a \$75 rebate. Gentle on your wallet and gentle on your clothes.

Visit socialgas.com (search "SAVE ENERGY") today to take advantage of this offer.

Complimentary showerhead and faucet aerators

Maintain high water pressure while saving energy, water and money. Get 3 faucet aerators and a showerhead at no cost.

Visit socialgas.com (search "SAVE ENERGY") today to take advantage of this offer.

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Insights by ACLARA

Figure B - 6: Aclara January Paper HER Example (Front)

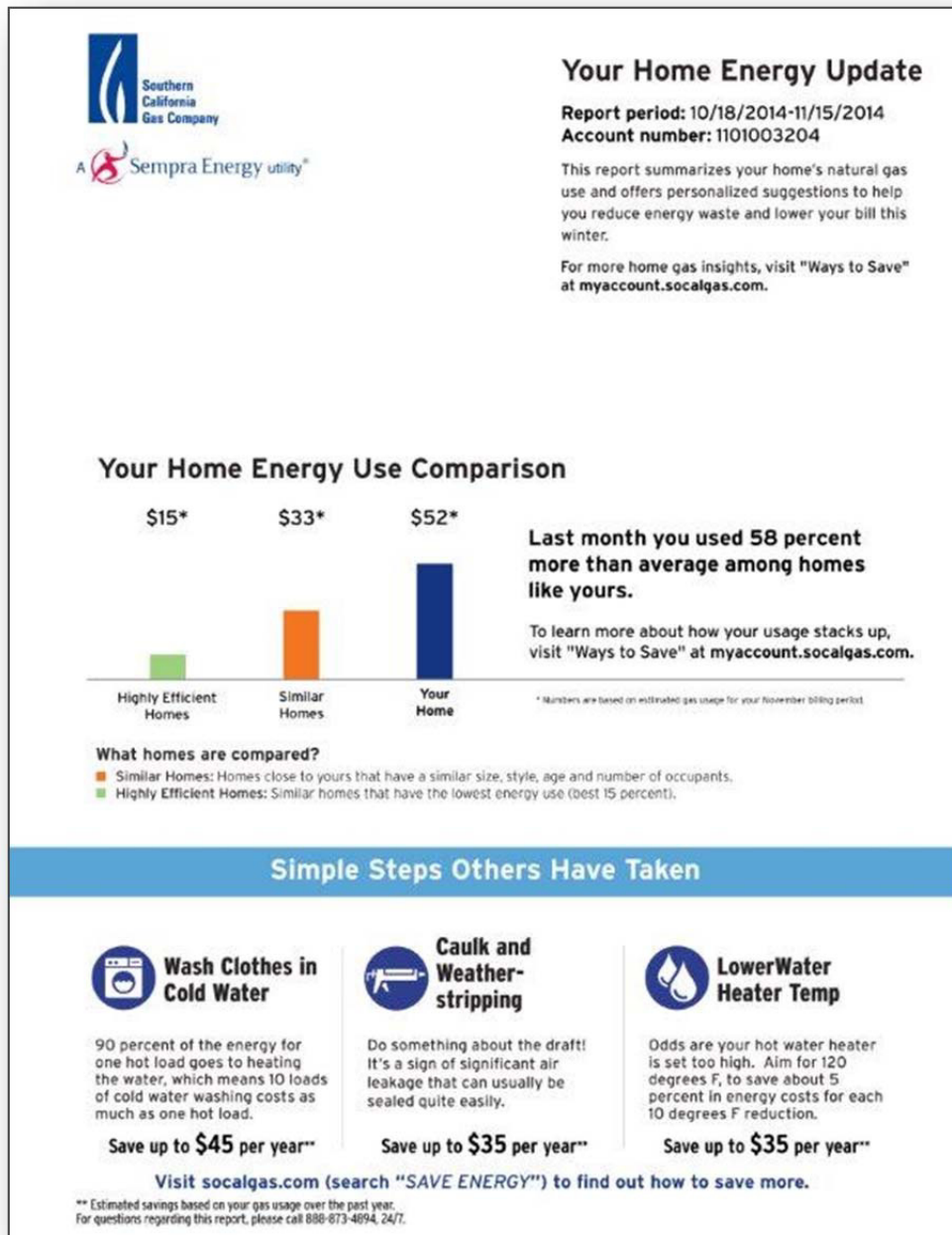


Figure B - 7: Aclara January Paper HER Example (Back)

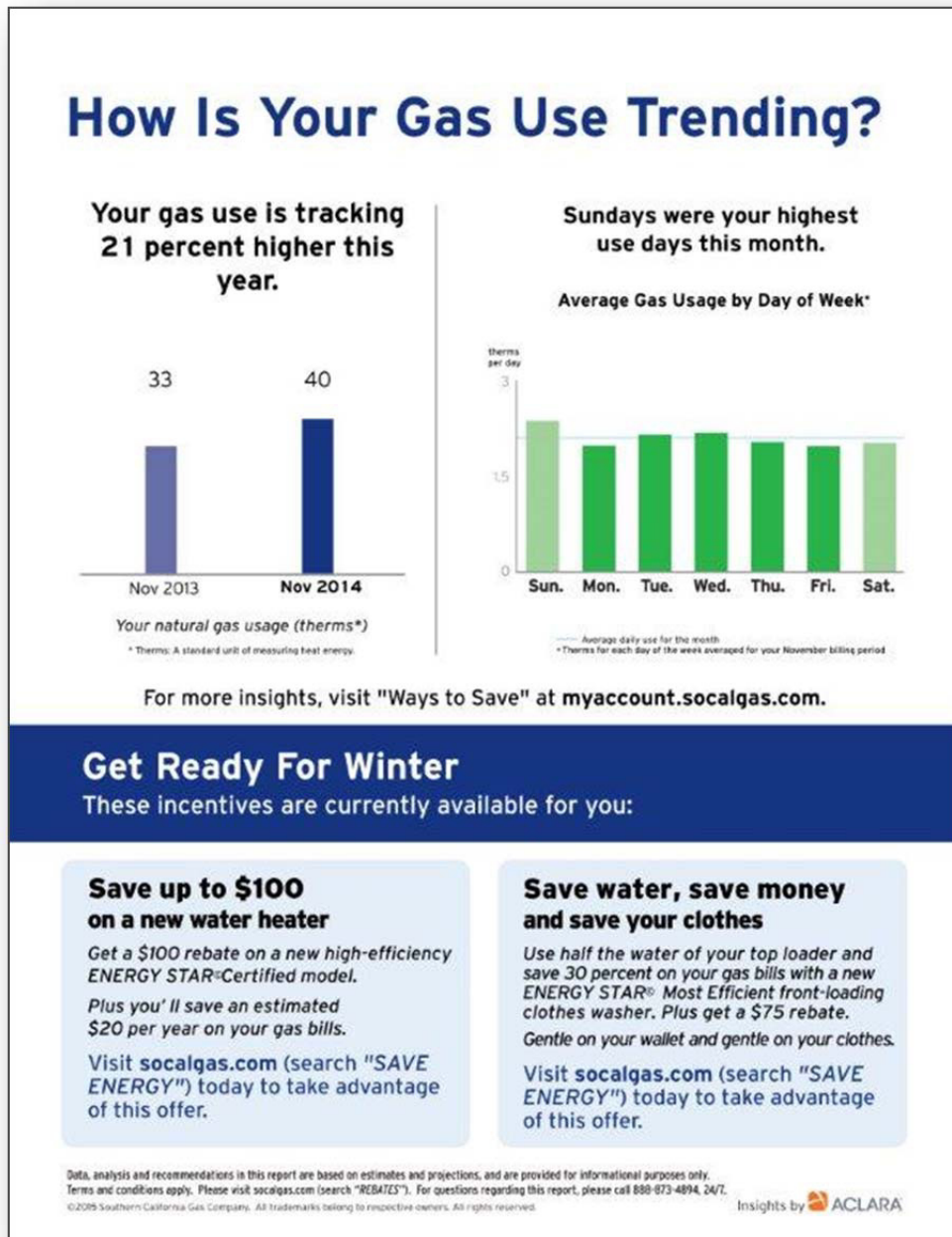


Figure B - 8: Aclara February Paper HER Example (Front)

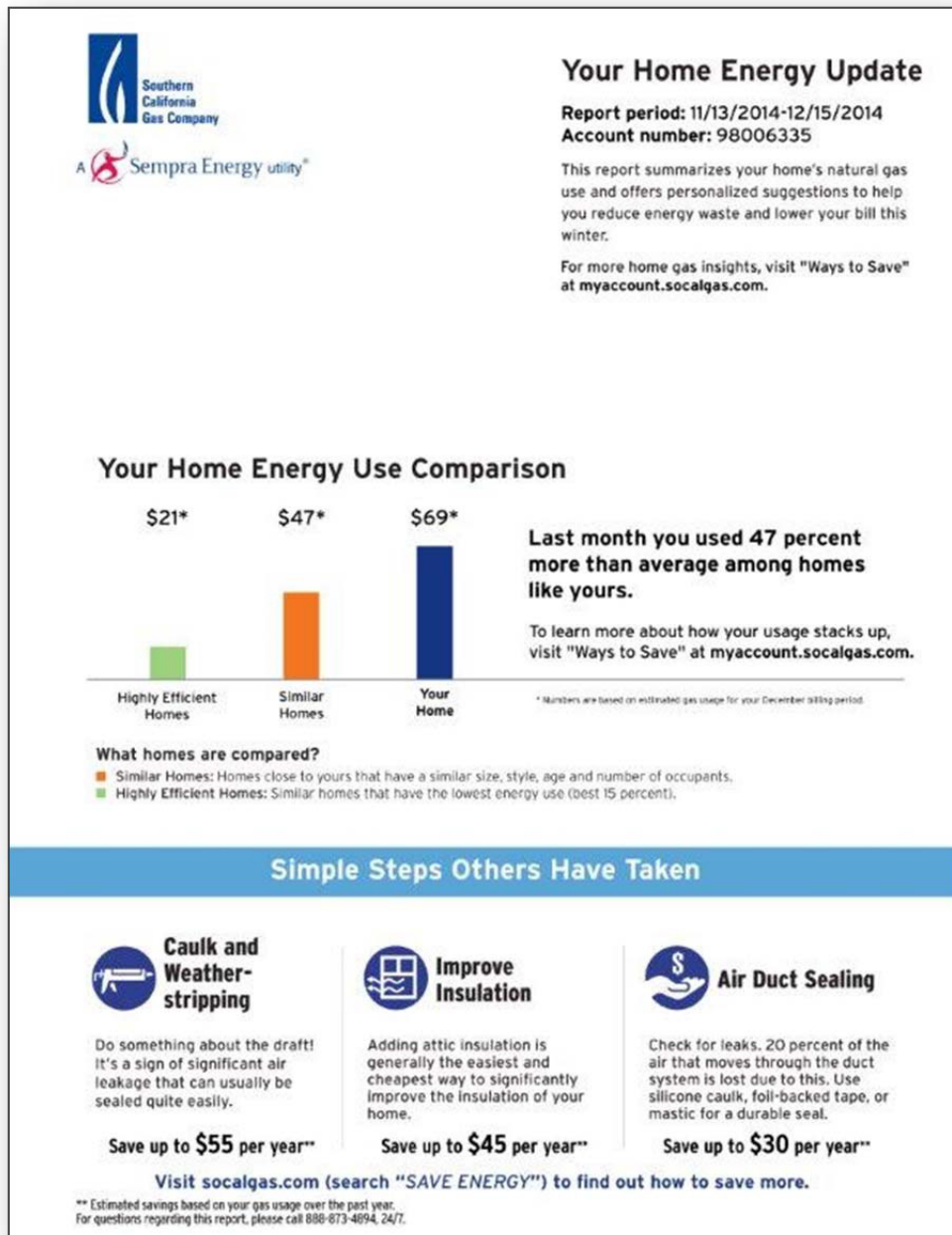


Figure B - 9: Aclara February Paper HER Example (Back)




B.3 Aclara Email HERs

Figure B - 10: Aclara – November HER – email


We're pleased to provide you with this personalized snapshot of your natural gas usage and share some simple steps and rebate offers that others in similar homes have used to lower their bills, increase comfort and reduce energy waste at home.

For more home gas insights, visit "Ways to Save" at myaccount.socalgas.com.

To view this email as a web page, [go here](#).



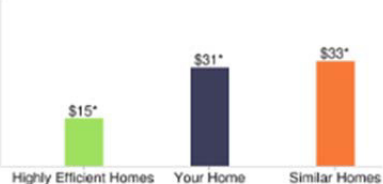
Southern California Gas Company



A Semptra Energy utility*

Report period: 10/14/2014 - 11/15/2014
Account number: *****09100

Your Home Energy Use Comparison



Good news! Last month you used 6 percent less energy than other homes like yours.


To learn more about how your usage stacks up, visit "Ways to Save" at myaccount.socalgas.com

*Numbers are based on estimated usage for your November billing period.

What homes are compared?

- Similar Homes: Homes close to yours that have a similar size, style, age and number of occupants.
- Highly Efficient Homes: Similar homes that have the lowest energy use (best 15 percent).


Simple Steps Others Have Taken



Caulk and Weather-stripping

Do something about the draft! It's a sign of significant air leakage that can usually be sealed quite easily.


Save up to \$70 per year**



Improve Insulation

Adding attic insulation is generally the easiest and cheapest way to significantly improve the insulation of your home.

Save up to \$55 per year**



Wash Clothes in Cold Water

90 percent of the energy for one hot load goes to heating the water, which means 10 loads of cold water washing costs as much as one hot load.

Save up to \$55 per year**

Visit socalgas.com (search "SAVE ENERGY") to find out how to save more.

** Estimated savings based on your gas usage during the past year.

Get Ready for Winter


Save Water, Save Money and Save Your Clothes

Use half the water of your top loader and save 30 percent on your gas bills with a new ENERGY STAR® Most Efficient front-loading clothes washer. Plus get a \$75 rebate.

Gentle on your wallet and gentle on your clothes.

To take advantage of this offer today visit: socalgas.com/rebates

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Insights by  ACLARA

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Figure B - 11: Aclara – December HER – email

We're pleased to provide you with this personalized snapshot of your natural gas usage and share some simple steps and rebate offers that others in similar homes have used to lower their bills, increase comfort and reduce energy waste at home.

For more home gas insights, visit "Ways to Save" at myaccount.socalgas.com.

To view this email as a web page, [go here](#).

Report period: 10/14/2014 - 11/15/2014
Account number: *****09100

How does your usage compare to last year?

Great news. You're on track to use 31 percent less natural gas this year.

For more about keeping your bills down, visit socalgas.com (search "SAVE ENERGY")

Month	Usage
Nov 2013	31
Nov 2014	30

Get Ready for Winter

Save Water, Save Money and Save Your Clothes

Use half the water of your top loader and save 30 percent on your gas bills with a new ENERGY STAR® Most Efficient front-loading clothes washer. Plus get a \$75 rebate.

Gentle on your wallet and gentle on your clothes.

To take advantage of this offer today visit: socalgas.com/rebates

What's Your Goal?

Based on your current home energy update, you could:

Cut Energy Waste by 8 percent

Your natural gas usage would be similar to other homes like yours.

Lower Your Bill by \$67 Per Year

This represents a 15 percent reduction off your average yearly energy bill.

Plan a Night Out With Your Energy Savings

Use the savings from the energy waste you've cut out at home towards dinner or your other favorite treat.

Set your savings goal at myaccount.socalgas.com and we will help you reach it

10% in savings could save you **\$44** per year

1% 30% Set My Goal

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Figure B - 12: Aclara – January HER – email

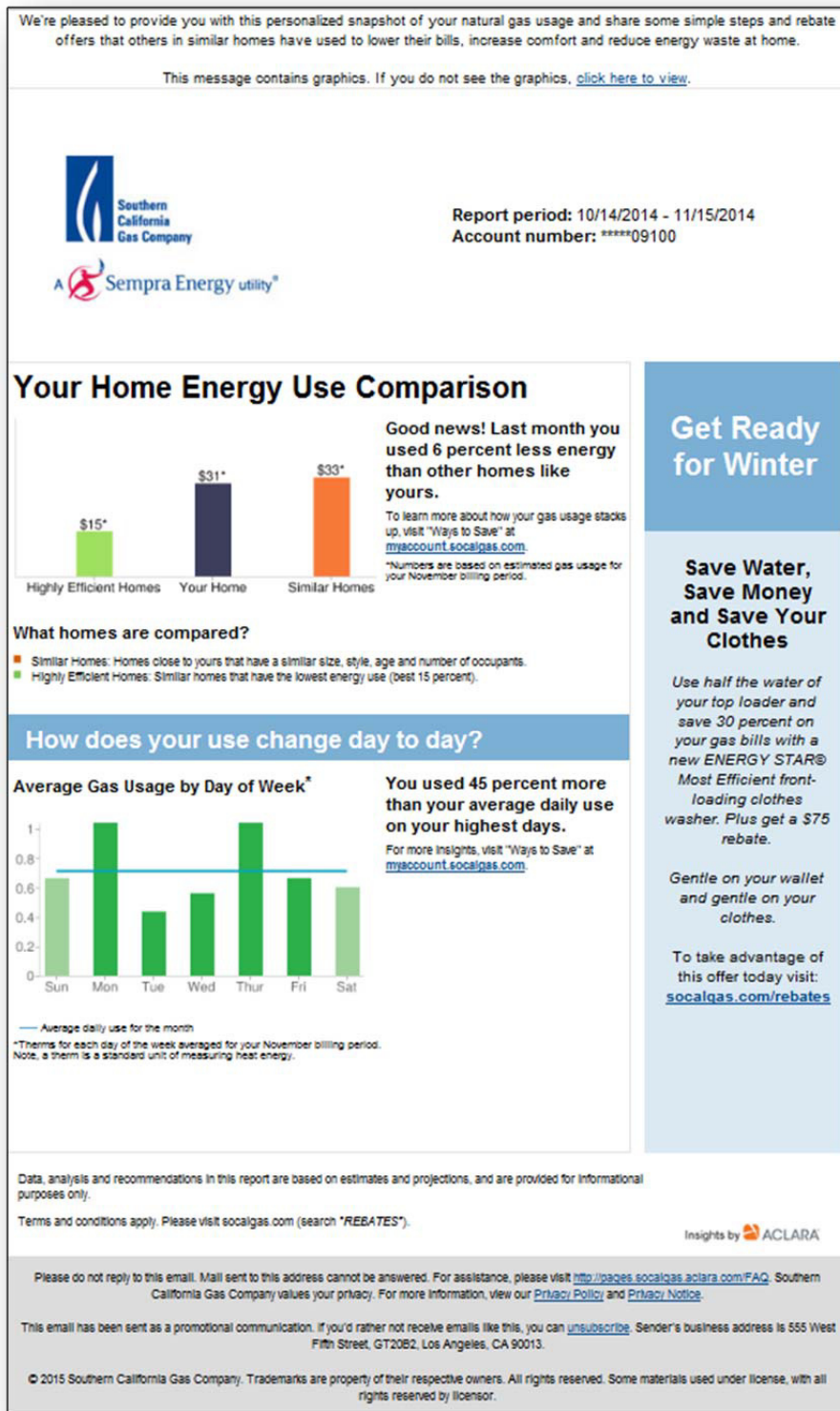




Figure B - 13: Aclara – February HER – email

We're pleased to provide you with this personalized snapshot of your natural gas usage and share some simple steps and rebate offers that others in similar homes have used to lower their bills, increase comfort and reduce energy waste at home.

This message contains graphics. If you do not see the graphics, [click here to view](#).



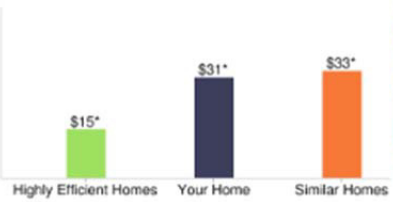
Southern California Gas Company



A Sempra Energy utility

Report period: 10/14/2014 - 11/15/2014
Account number: *****09100

Your Home Energy Use Comparison



Good news! Last month you used 6 percent less energy than other homes like yours.

To learn more about how your gas usage stacks up, visit "Ways to Save" at myaccount.socalgas.com.

*Numbers are based on estimated gas usage for your November billing period.

What homes are compared?

- Similar Homes: Homes close to yours that have a similar size, style, age and number of occupants.
- Highly Efficient Homes: Similar homes that have the lowest energy use (best 15 percent).

Get Ready for Winter

Save Water, Save Money and Save Your Clothes

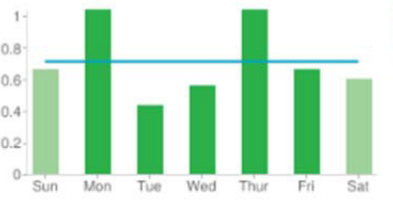
Use half the water of your top loader and save 30 percent on your gas bills with a new ENERGY STAR® Most Efficient front-loading clothes washer. Plus get a \$75 rebate.

Gentle on your wallet and gentle on your clothes.

To take advantage of this offer today visit: socalgas.com/rebates

How does your use change day to day?

Average Gas Usage by Day of Week*



— Average daily use for the month


*Therms for each day of the week averaged for your November billing period. Note, a therm is a standard unit of measuring heat energy.

You used 45 percent more than your average daily use on your highest days.

For more insights, visit "Ways to Save" at myaccount.socalgas.com.

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Figure B - 14: Aclara – March HER – email

We're pleased to provide you with this personalized snapshot of your natural gas usage and share some simple steps and rebate offers that others in similar homes have used to lower their bills, increase comfort and reduce energy waste at home.

This message contains graphics. If you do not see the graphics, [click here to view](#).



SoCalGas

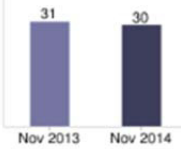
A  Sempra Energy utility

Report period: 10/14/2014 - 11/15/2014
Account number: *****09100

How does your usage compare to last year?

Great news. You're on track to use 31 percent less natural gas this year.

For more about keeping your bills down, visit socalgas.com (search "SAVE ENERGY")



Month	Usage
Nov 2013	31
Nov 2014	30

What's Your Goal?

Based on your current home energy update, you could:

Cut Energy Waste by 8 percent

Your natural gas usage would be similar to other homes like yours.

Lower Your Bill by \$67 Per Year

This represents a 15 percent reduction off your average yearly energy bill.

Plan a Night Out With Your Energy Savings

Use the savings from the energy waste you've cut out at home towards dinner or your other favorite treat.

Set your savings goal at myaccount.socalgas.com and we will help you reach it

10% in savings could save you **\$44** per year

10%

1%
30%

Set My Goal

Helping Make It Easier To Save

Save Water, Save Money and Save Your Clothes


Use half the water of your top loader and save 30 percent on your gas bills with a new ENERGY STAR® Most Efficient front-loading clothes washer. Plus get a \$75 rebate.

Gentle on your wallet and gentle on your clothes.

To take advantage of this offer today visit: socalgas.com/rebates

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