SOUTHERN CALIFORNIA GAS COMPANY
ADVANCED METER
SEMI-ANNUAL REPORT

August 30, 2013

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Southern California Gas Company
Advanced Meter Semi-Annual Report

Introduction

This is the first semi-annual report (Report) regarding the progress of Southern California Gas Company's (SoCalGas) Advanced Meter project. In Decision 10-04-027 (Decision), the California Public Utilities Commission (CPUC or Commission) authorized the project. In Ordering Paragraph 5 of that Decision, the CPUC identified 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. "

In addition to the specific requirements identified in the Decision, this Report also describes the overall status of the Advanced Meter project.

- Chapter 1 provides a project overview and summary.
- Chapter 2 summarizes the status of the construction of the Advanced Meter system as of June 30, 2013.
- Chapter 3 examines the performance of the system, focusing on the provision of data for billing and for presentment to customers through the SoCalGas website.
- Chapter 4 describes the Customer Education and Outreach Plan filed in December 2010.
- Chapter 5 identifies the outreach SoCalGas has performed to install its communication network.
- Chapter 6 describes the general outreach to customers performed prior to the installation of their Advanced Meters.
- Chapter 7 describes the outreach delivered around the installation of the module on customers' meters.
- Chapter 8 summarizes customer inquiries about the project and the status of customer requests to defer installation of the module.
- Chapter 9 identifies the outreach to customers aimed at promoting gas conservation.
- Chapter 10 provides the project's current financial status.
- Chapter 11 provides a summary of the impact of the project on SoCalGas' Meter Reading work force.

Chapter 1 - Project Overview and Summary

This Report describes the progress of the SoCalGas Advanced Meter project through June 30, 2013. The Advanced Meter infrastructure consists of two primary components – a meter transmission unit (MTU or module) attached to every SoCalGas meter, and a communications network consisting of data collection units (DCU) installed across the SoCalGas service territory. Highlights of the construction of the infrastructure and performance of the system are:

- Approximately 37% - over 1,300 DCUs – are constructed or ready to construct
- About 275 SoCalGas employees installing modules
- Over 384,000 modules installed
- More than 361,000 bills based on automated reads issued to customers
- 99.9% of automated reads for billing are accurate

- Over 96% of hourly reads for Energy Presentment are accurate

SoCalGas is also poised to launch a targeted campaign to market the conservation benefits of the Advanced Meter system, with the major features being:

- Continued promotion of its MyAccount website and new energy analysis tools recently made available to customers
- Promotion of a Bill Tracker Alert (BTA) functionality which allows customers to receive weekly information about the likely amount of their gas bill
- Offering of the Opower Home Energy Report (HER) which compares an individual's gas usage to a group of customers who are similarly situated

Overall, the Advanced Meter project is meeting its schedule and budget goals. All major milestones have been met. The software to allow for billing and the presentation of hourly data to customers has been implemented. The construction of the network has preceded the installation of modules so that customers can be transitioned to automated billing soon after the installation of the modules. The system is providing accurate data for billing, with very few missed reads. Customers also have access to their hourly data soon after their modules are installed.

The final major piece to be implemented – the conservation campaign - will commence in October 2013, and extend through the heating season ending in March 2014. The impacts on customers' consumption will be determined in the second quarter of 2014. The lessons learned from this campaign will be analyzed and used as part of a 'test and learn' approach which will guide the 2014/2015 heating season campaign.

Chapter 2 - Network Construction and Module Installation Status

This section describes the progress to date constructing the system. The section also describes how SoCalGas complied with one of the provisions in the Decision to obtain CPUC approval of the contracts covering the technology for Advanced Meter.

2.A CPUC Approval of Contracts

SoCalGas conducted a lengthy bid process to select its vendors for the Advanced Meter project. SoCalGas selected Aclara RF Systems, Agile Sourcing Partners, Inc.,

and, Capgemini America, Inc. to manufacture and deliver the technology and to provide support for the development and integration of the various information systems necessary to implement the project.

Ordering Paragraph 6 of the Decision states:

> "SoCalGas shall file one or more Advice Letter with the executed contract with vendors for AMI technology, installation and/or systems integration for its AMI project, as adopted herein. These contracts are contingent upon Commission approval that they meet the functionality criteria set forth in Section 7 of this decision. The advice letters should describe how their choice of vendors enables compliance with criteria set forth in Section 7, in particular compatibility with widely adopted standards for communications with consumer-owned devices, and assurance that changes in customer preference of access frequency do not result in additional AMI system hardware costs."

On May 27, 2011, SoCalGas filed Advice Letter (AL) 4245 requesting approval of the contracts with these three vendors. On October 21, 2011, SoCalGas filed Partial Supplemental AL-4245-A, which included an amendment to the Aclara contract. The CPUC approved the contracts in Resolution G-3470 on March 22, 2012. With CPUC approval of the contracts, SoCalGas was able to proceed with the construction of the Advanced Meter project.

2.B Communication Network Construction Status

The communications network consists of thousands of DCUs across the SoCalGas service territory. The DCUs receive the meter reading data from the modules installed on each meter. Each module transmits twelve hourly meter reads four times a day, communicating for less than two minutes per year. The data is encrypted and transmitted across a licensed frequency from the module to the DCU.

SoCalGas is currently in the process of installing 3,731 DCUs based on the initial propagation study provided by Aclara, the technology vendor. 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 built

environment on the transmission of the radio signal. The DCUs can be placed within a 500 foot radius of the design point.

The Advanced Meter system is designed to ensure that SoCalGas customers receive their hourly consumption data the vast majority of the time. To achieve this goal, most modules will communicate with at least three DCUs. The actual number of DCUs to be installed will be determined by a two-step process. After these 3,731 DCUs are installed, SoCalGas will evaluate the performance of the network and identify gaps in the network. SoCalGas will then install additional DCUs to remediate these deficiencies in performance. SoCalGas estimates that 4,000 DCUs may ultimately be necessary to ensure that customers can receive their hourly data.

SoCalGas installed its first DCU on a SoCalGas facility in February 2012. The first DCU installed in a city took place in June 2012. SoCalGas' goal is to install the DCUs prior to the modules in order for data to be received immediately after the module is installed. In general, SoCalGas has achieved this goal. Table 1 displays the status of the SoCalGas network as of June 30, 2013, based on the installation of the 3,731 DCUs indicated in the propagation study.

Table 1

Status of DCUs

DCU Status	Number of DCUs	Percent of DCUs
Installed	1,116	29.9%
Ready to Construct	261	7.0%
Negotiating with Local Governments/Other Third Parties	1,604	43.0%
Not Started	750	20.1%
Total To Be Installed	3,731	100.0%

About 37 percent of the network has been constructed or is ready to construct, and SoCalGas is currently negotiating with local governments and third parties to install another 45 percent of the network. SoCalGas expects to have more than 1,800 DCUs installed by the end of 2013, with another 1,000 approved for

construction. The cities with which SoCalGas has not started negotiations are generally not scheduled for module installation until 2015 and beyond.

SoCalGas pursues several options to install DCUs. Table 2 displays the DCU locations installed to date.

Table 2

Location of Installed DCUs

DCU Location	Installed DCUs
SoCalGas Owned Pole in	
SoCalGas Facilities	63
Public Right of Way	733
Caltrans Right of Way	2
Lease Other Third Party Property	0
Private Easement	1
Total	799
Attached to Third Party Asset	
Los Angeles Bureau of Street Lighting	270
SCE Street Lights	0
PG&E Street Lights	0
SDG&E Street Lights	0
Other Cities Street Lights	47
Other Public/Private Assets	0
Total	317
Total Installed	1,116

Thus far SoCalGas installs the DCU on a SoCalGas owned pole in the public right of way under its franchise rights almost two-thirds of the time. The second most common option has been to install the DCU on a local government owned street light. Only three DCUs have been installed in a different manner. SoCalGas has constructed two DCUs in Caltrans rights of way. One DCU has been constructed on a private easement. Appendix A provides pictures of the DCU types.

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

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

So far, street lights are the only asset to which SoCalGas has attached DCUs. SoCalGas has negotiated contracts thus far with Pacific Gas & Electric Company (PG&E), Southern California Edison Company (SCE), San Diego Gas & Electric Company (SDG&E), the City of Los Angeles Bureau of Street Lights (BSL), and with the cities of Bakersfield, Brea, Coachella, Fullerton, Glendale, Lemoore, Pasadena, and Whittier.

The three CPUC-regulated utilities obtained permission from the CPUC under the applicable general orders to allow SoCalGas to permanently attach the DCUs to their street lights.[1] SDG&E and PG&E had existing tariffs for an energy rate that applied to the SoCalGas DCUs. SCE filed an advice letter and received CPUC approval of an energy rate for AMI projects like SoCalGas' Advanced Meter project. The final CPUC approvals were received in May and June, 2013. SoCalGas expects to begin installations on SCE and PG&E street lights later this year.

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

Given the preponderance of new poles, most of the DCUs are solar powered. 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. Table 3 shows the breakdown between solar and A/C powered DCUs.

[1] See Resolution ESRB-1 dated May 10, 2012 (SCE), Resolution ESRB-2 dated June 27, 2013 (SDG&E) and Resolution ESRB-3 dated June 27, 2012 (PG&E).

Table 3

Power Source for DCUs

Installed DCUs	Solar Powered	AC Powered
1,116	758	358

The primary challenge in constructing the network has been negotiating with local governments to obtain permits to install the DCUs. This process is described in Chapter 5.

2.C Module Installation

SoCalGas installed its first module on October 29, 2012. As of June 30, 2013, SoCalGas has installed 384,041 modules. Installation teams work out of warehouses leased specifically for the Advanced Meter project. Five warehouses are currently in operation – Bakersfield, Indio, Irwindale, South Gate, and Sun Valley. One warehouse – El Centro – has already opened and closed. Appendix B provides a master schedule of warehouse opening and closings. Table 4 below displays the schedule and workforce for each of the six warehouses opened thus far.

Table 4

Schedule for Warehouses

Warehouse	Opening Date	Closing Date	Number of Employees*
South Gate	October 29, 2012	Sept 10, 2014	65
El Centro	February 4, 2013	May 24, 2013	28
Irwindale	March 4, 2013	October 10, 2014	65
Sun Valley	April 1, 2013	July 3, 2014	34
Bakersfield	April 15, 2013	November 27, 2013	47
Indio	May 28, 2013	November 15, 2013	87

*Employee count when fully staffed

When fully staffed, 326 personnel will be involved in the installation of the modules. As of June 30, 2013, approximately 275 installers were employed.

Table 5 displays the installations by warehouse and identifies the installations done by other SoCalGas personnel.

Table 5
Module Installations by Advanced Meter Warehouse

Advanced Meter Warehouse	Number of Modules Installed		
	Module Only	Meter Change w/Module	Total
South Gate	130,925	38,074	168,999
El Centro	29,937	5,734	35,671
Irwindale	37,739	16,008	53,747
Sun Valley	26,610	9,085	35,695
Bakersfield	18,601	5,342	23,943
Indio	25,545	3,269	28,814
Total Advanced Meter	268,357	77,512	345,869
Other SoCalGas Personnel		38,172	38,172
Total	268,357	115,684	384,041

About 90 percent of the modules are being installed by Advanced Meter personnel, with about 10 percent being installed by other SoCalGas personnel. In general, other 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. Other personnel are also replacing existing curb meters with new curb meters with a module already installed.

As Table 5 displays, about 70 percent of the modules were installed on existing meters. About 30 percent of the time, the meter is replaced with a new meter with a module already installed. At this point, all new meters being purchased by SoCalGas have an Advanced Meter module already installed. The only customers who will not receive a module are deferral customers. Chapter 8 further discusses the number of deferral customers to date.

While installing the 345,000 modules identified above, the Advanced Meter team has experienced some injuries and been involved in some vehicle incidents. Table 6 displays those results.

Table 6

Advanced Meter Injuries and Vehicle Incidents

	Incidents	Rate*
Occupational Safety & Health Administration Incidents	4	2.1
Controllable Motor Vehicle Incidents	6	7.5

*OSHA Rate is the number of incidents per 200,000 hours worked.
*CMVI rate is the number of incidents per million miles driven.
*SoCalGas rates for the same period are 3.4 for OSHA and 3.8 for CMVI.

Chapter 3 - System Performance

The most significant impacts of the Advanced Meter project are in the areas of billing, Customer Services field orders, and presentment of hourly gas consumption data to customers. These are the most critical areas for measuring the performance of the system.

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. 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 the SoCalGas back office systems, and those that have not.

Table 7

Module Communication Status

Module Communication Status	Modules Installed	Percent Installed With Network
Total Modules Installed	384,041	
Modules Installed – No Network	14,615	
Modules Installed with Network	369,426	
Delivering 100 Percent of Expected Reads	297,556	80.5%
Missing 1-12 Reads	27,321	7.4%
Missing More Than 12 Reads	41,364	11.2%
Missing All Reads	2,171	0.6%
Installed and Replaced	1,014	0.3%

Ninety-six percent of the modules have been installed where network is available. Only about 14,000 modules are installed where no network has been constructed. SoCalGas generally installs modules where the network is available. Exceptions include when new business meters are connected, and a select number of planned meter changes being performed by other SoCalGas personnel. In addition, when a meter fails in the field, it is now always replaced with a meter with a module, regardless of whether the network is installed or not.

Over 99 percent of the modules installed in areas with network coverage have successfully communicated with the back office systems. Only 0.6 percent of similarly installed modules have not yet successfully communicated.

Once communication is established, the focus shifts to the frequency of successful reporting. Again referring to Table 7, more than 80 percent of the installed modules are successfully communicating all of a customer's hourly data on a monthly basis. About 7 percent of the modules are missing 1-12 reads, which means that they have 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. Modules in this category are successfully communicating over 98 percent of a customer's monthly hourly data. SoCalGas

does not consider modules performing at this level to be problematic as enough hourly data is being received for billing purposes.

About 11 percent of the modules are missing more than 12 reads, which is potentially problematic for the provision of hourly gas consumption data. SoCalGas is examining module modifications and network enhancements to improve the performance of these modules.

Given the overall level of network performance described in this section, the next two sections describe the operational results for the two areas of most significant operational impact. First is the ability to produce an accurate bill. Second is the ability to provide hourly data for the tools SoCalGas is providing which support customers in conserving natural gas.

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). Before a module is used for billing, it must pass a 'Billing Ready' test, which consists of three elements:

- The module must communicate data successfully for 7 consecutive days;
- Over the 7 days, the 'per day average' (PDA) is calculated and compared to the prior month's consumption; and,
- A follow up manual read is compared to the automated read.

Based on the results of this three-pronged test, modules are either moved to the 'Billing Ready' status or placed on a remediation list. 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, 2013	384,041
Modules in 'Billing Ready' Status	295,219
Advanced Meter Reads Requested for Billing	202,133
Billing Data Provided by Advanced Meter	201,971
Billing Data Not Provided by Advanced Meter	162
Percent Provided by Advanced Meter – Actual Read	99.6%
Percent Provided by Advanced Meter – Estimated Read	0.3%
Percent Not Provided by Advanced Meter	0.1%

Over 75 percent of the installed modules have been deemed 'Billing Ready' and are now used or ready to be used for billing customers. Of the remaining 25 percent, most are still in the process of completing one of the three test elements 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.[2]

For the Billing Ready modules, the system provides a high percentage of accurate reads. 99.6 percent of the reads requested were actual, accurate reads. The system also provided an additional 0.3 percent of reads which were 'estimated reads' based substantially on reads received earlier in the month, rather than on the designated day. So even most of the 'estimated reads' are based primarily on actual data, with the estimate covering only a portion of the month as opposed to the entire month, as was the case prior to Advanced Meter deployment. Less than 0.1 percent of the reads could not be provided by the Advanced Meter system.

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

Thus far, the modules missing more than 12 reads per month identified in Table 7 have not been problematic for billing. SoCalGas began to base bills on automated reads in April 2013. Table 9 displays the number of bills based on Advanced Meter reads from April through June.

Table 9

Customer Bills Based on Advanced Meter Reads

Month	Number of Bills Based on Advanced Meter Reads
April	18,310
May	141,358
June	202,133
Total	361,801

During June, SoCalGas provided over 202,000 customers with bills based on Advanced Meter reads. In total, over 361,000 bills based on automated reads were provided to customers from April through June, 2013. By the end of July, SoCalGas will have successfully transitioned most of the customers with Advanced Meters installed prior to April to automated billing.

This transition appears to be transparent to customers. Before they receive their first bill based on an Advanced Meter read, customers receive a letter informing them of this change. SoCalGas has received no comments or complaints in its formal Customer Comment Tracking system concerning the change to Advanced Meter billing.

SoCalGas believes several factors contribute to this outcome. First and foremost, the bills are accurate. Second, SoCalGas has not changed the look of its bill; therefore, the bill itself appears to customers to be the normal gas bill they receive. Third, gas bills are usually lower in the summer and may not receive the same attention from customers that they receive in the winter when the bills are higher.

Because SoCalGas is confident that the system is performing to expectation for billing purposes, SoCalGas intends to stop performing the third step in the Billing Ready test – reading the meter manually in the month following the module

installation. SoCalGas compared over 93,000 manual reads with automated reads and is convinced the follow-up read is unnecessary. Table 10 displays the results of the evaluation.

Table 10
Comparison of Advanced Meter Read to Manual Read
Meters Read April 1 – May 24

Total Meters	93,290	100%
Advanced Meter and Manual Read are Comparable	91,625	98.2%
Did Not Pass Manual Comparison Test	1,665	1.8%
Assessed by Analyst to be Manual Error	1,582	1.7%
Error Discovered During Advanced Meter Validation	83	0.1%
Potentially Missed Error	1	Negligible

The automated read and manual read aligned 98.2 percent of the time. The reads which were not comparable were reviewed by SoCalGas billing analysts. Of the 1.8 percent of reads which were not comparable, 1.7 percent of the reads was deemed to be manual meter reading errors. Of the remaining errors, all but 1 had been identified during the Advanced Meter validation reviews which are performed before data on a new installation is finally submitted to officially register the installation. So the data actually submitted to the system by Advanced Meter for these installations was accurate, but the changes had not yet entered the system at the time the manual meter read was performed and the evaluation was conducted.

In the lone case which was not identified, the meter's index was broken but the automated read was actually accurate. Ironically, the customer would have received accurate bills, but the index was not accurately displaying the consumption.

Based on these results, SoCalGas will no longer perform a follow-up manual meter read. In its place, SoCalGas will perform a second PDA test, this one after 21 days. SoCalGas believes performing the PDA tests at 7 and 21 days will provide adequate assurance that the system is accurate.

SoCalGas will begin billing customers with automated reads at change of service time in August 2013, when the software to enable this functionality will be available. The impacts in this area will be described in future semi-annual reports.

3.C. Hourly Gas Consumption Data

In D.10-04-027, the CPUC describes the requirement for SoCalGas to provide gas consumption information to its customers in Ordering Paragraph 3 stating:

> "SoCalGas shall offer customers direct access to near-real time gas usage data, provide retail and wholesale prices to customers on a real-time or near real-time basis in a machine readable form, and provide access to such AMI data to customer authorized third parties, on a timeline concurrent with meter installation."

The Commission described four functionality criteria which might be applicable to a gas AMI system, two of which apply to the SoCalGas Advanced Meter system:[3]

> "1. Collection of usage data at a level of detail (interval data) that supports customer understanding of hourly usage patterns and how those usage patterns relate to energy costs."
>
> 3. Compatibility with communications protocols and applications that utilize collected data to provide customer education and energy management services, customized billing, and support improved complaint resolution."

As explained in Advice Letter (AL) 4245, SoCalGas' Advanced Meter technology meets the requirement by meeting the two functionality criteria identified above. The Advanced Meter system provides customers with access to their hourly natural gas usage information on a "next-day" basis enabling them to better manage their gas usage. This information is provided to customers through SoCalGas' MyAccount website portal.

In addition to providing the usage data, SoCalGas also provides tools customers can use to analyze their energy usage and develop individualized conservation

[3] D.10-04-027, page 12.

programs to reduce their gas usage. These energy presentment solutions are provided to customers through Aclara's 'Consumer Engagement' energy and bill analysis tools. Customers can access these personalized analytical tools in the 'Ways to Save' section of the MyAccount website. Each of SoCalGas' Customer Service Representatives also have access to complementary Aclara-based energy and bill analysis tools so that they can support customer inquiries received over the phone or via email. These tools reflect SoCalGas actual rates, so when customers analyze various conservation scenarios for their residences or business facilities, or view their hourly usage and costs, they see the potential impacts on their energy costs.

This suite of online tools also provides an 'Export' feature and a 'Green Button' energy usage download option so that authorized MyAccount users can choose to download their energy usage for further analysis, or to share with third parties of their choosing.

Customers have access to their hourly data immediately after the Advanced Meter module is installed and the module is deemed 'Billing Ready.' SoCalGas sends a letter to customers informing them of the availability of the data approximately 45-60 days following module installation.

Table 11 displays the overall performance of the network with respect to providing hourly data, addressing all of the modules whose performance is summarized in Table 7.

Table 11
Advanced Meter Hourly Reads Received

Total Modules Installed	384,041
Total Modules Installed w/Network Coverage	369,426
Number of Hourly Reads Expected	240,080,088
Number of Hourly Reads Received	231,210,616
Percent of Hourly Reads Received	96.3%

The SoCalGas Advanced Meter system is currently providing over 96 percent of hourly reads. SoCalGas is pursuing efforts to improve the percentage of hourly

reads. In particular, SoCalGas is working on a change in one module technology and examining how to augment the network to improve the collection of hourly reads.

Chapter 4 – Customer Education and Outreach Plan

D.10-04-027 outlined specific outreach requirements to be addressed by SoCalGas. This section describes the foundational requirements for SoCalGas' customer outreach activities.

The Decision required SoCalGas to hold a public workshop, submit a Customer Outreach Plan, and form a Technical Advisory Panel (TAP). Ordering Paragraph 4 of the Decision states:

> "Southern California Gas Company shall host a public workshop within 180 days of the issuance of this decision to present a draft plan for advanced metering infrastructure outreach and conservation support. The plan shall include marketing and education elements to prepare customers for advanced metering infrastructure roll-out, sample versions of web-based energy management feedback to encourage conservation, as well as planned marketing to channel customers towards energy efficiency offerings. In order to support the development of its plan, SoCalGas shall convene a Technical Advisory Panel to assist in planning and implementation of AMI. A final written plan shall be submitted to the director of the Commission's Energy Division and served on the most recent service list for this proceeding within 60 days after the workshop."

4.A – Public Workshop and Customer Outreach Plan

The public workshop was held on October 4, 2010, at SoCalGas' Energy Resource Center in Downey. The results of the public workshop are documented in the SoCalGas Advanced Meter Project Customer Outreach and Conservation Support Plan (Plan) filed with the CPUC on December 3, 2010. The Plan can be found on the SoCalGas website at the Public Workshop Link:

http://socalgas.com/innovation/advanced-meter/workshop.shtml .

The Plan was developed from the Draft Outreach Plan prepared and presented by SoCalGas at the public workshop. The Plan incorporates the feedback from the

workshop; from the Technical Advisory Panel; from meetings with other California utility smart/advanced meter teams; from market research performed in 2010; from reviewing other utilities leading practices; and, from energy efficiency academic literature.

The Plan outlines a customer strategy which addresses the scale, diversity, timing, and Advanced Meter team knowledge, given the formative stage of the Advanced Meter project at that time. The geographical sequencing of the installation of advanced meters, and the demographic make-up of each installation area drove the tactical aspects of the outreach Plan.

The three overarching objectives of the Plan were:

- To increase awareness about the Advanced Meter project and prepare customers and stakeholders for installation of advanced meters and the communication network (DCUs)
- To educate customers about the benefits and how the Advanced Meter project can help them save money, energy, help the environment and potentially enable future technology advancements
- To engage customers to use the information to conserve natural gas

Approximately, 54% of California's population will be affected by the Advanced Meter project. The scope of the Plan includes:

- Residential customers (about 95% of the 6 million meters with 64% being single family residences and 31% being multifamily residences)
- Small and medium businesses (about 4% of the 6 million meters)
- Industrial/other (about 1% of the 6 million meters)

The Plan did not outline a "one size fits all" approach. In fact, the Commission directed SoCalGas to ensure that some very specific communities were addressed in SoCalGas' outreach efforts:

> "It is critical to acknowledge that initiating and sustaining the behavioral change necessary to maximize conservation response cannot be accomplished through a one-size-fits-all approach to marketing, education, outreach, and customer support. Thus, consistent with our objectives in

other demand side programs, we direct SoCalGas to specify in its plan outreach strategies for all market segments, including ethnic, minority, and hard-to-reach communities and small businesses. It will be incumbent upon SoCalGas to discuss specific proposals for utilizing a competitive solicitation process for the selection of Community Based Organizations (CBOs) with a demonstrated record of success in reaching these market segments."[4]

The Plan accounts for the various audiences and customers that SoCalGas must address to ensure that the Advanced Meter project is successful for all SoCalGas customers. The Plan outlined approaches for the following primary audiences:

- Mass market (residential and small/medium businesses)
- Sensitive communities/customers. These are communities and customers that are hard-to-reach or have special needs including: disabled, various cultural groups including groups with limited English proficiency, low income, rural, seniors and small business.

SoCalGas identified several enablers, in addition to marketing channels (e.g., print media, broadcast media, and web), to assist with the achievement of the Plan, including:

- Coordination of customer services
- Incorporation of customer, employee and stakeholder feedback
- Ongoing customer research
- Customer tools such as natural gas usage information presentation options
- Use of community- and faith-based organizations (CBOs, FBOs) and disability agencies to conduct outreach to sensitive communities/customers
- Coordinating with the CPUC Business and Community Outreach (BCO)
- Collaborating with SoCalGas customer assistance and energy efficiency (EE) programs to educate customers on Advanced Meter
- Ongoing customer campaigns and pilots, and
- Use of customer metrics

[4] D.10-04-027, p. 45.

4.B Technical Advisory Panel

To assist in the development of the Customer Outreach Plan and the entire Advanced Meter project, SoCalGas formed a Technical Advisory Panel.[5] It is an expert group established to provide advice and input to SoCalGas' project team. SoCalGas works collaboratively with TAP members to exchange ideas, advice and feedback regarding customer and program needs. The TAP draws from the collective expertise of regulatory agencies, technical experts and community leaders for advice and best practices related to the installation of advanced meters. TAP members include representatives from the following groups:

- CPUC - Division of Ratepayer Advocates (DRA)
- CPUC - Energy Division
- CPUC - Business and Community Outreach (BCO)
- California Energy Commission
- Subject Matter Experts in
  - Technology
  - Behavioral Science
  - Community Leaders

The first TAP meeting was held September 9, 2010. SoCalGas has since met with the TAP two to four times a year. The meetings are public. Periodic updates are communicated to TAP members outside of the formal meetings. The presentation from the latest TAP meeting can be found at http://SoCalGas.com/innovation/advanced-meter/tap.shtml.

Chapter 5 – Network Customer Outreach Activities

As discussed in Chapter 4 above, the SoCalGas Outreach Plan was submitted in December 2010. Since 2010, SoCalGas has been refining and implementing the Plan.

This Chapter describes the plan and activities that SoCalGas is now implementing around the installation of its communications network.

[5] D.10-04-027, Ordering Paragraph 4. In order to support the development of its plan, SoCalGas shall convene a Technical Advisory Panel to assist in planning and implementation of AMI.

5.A Three Phase Outreach Process

SoCalGas wanted to ensure that all of its elected officials were informed about the project. As a result, SoCalGas partnered with GeM Communications to coordinate 20 legislative briefings with 130 local and state elected officials and their staffs. The legislative briefings covered an overview of the project along with a resource binder containing information on the Advanced Meter project and other SoCalGas programs. These binders are reference documents for legislators and staffs to respond to constituent questions that might come to the legislative offices.

While these briefings served a useful purpose, particularly for making state elected officials and their staffs aware of the project, each individual city and county had to be approached to obtain agreement to install the DCUs. With each local government, SoCalGas implements a three phased outreach process.

First, SoCalGas contacts the local government officials in affected cities and provides briefings on the Advanced Meter project. The outcome of this phase is to reach agreement to install the DCUs. In the second phase, SoCalGas works with local administrative officials to identify the ideal locations for the DCUs. Finally, in the third phase, SoCalGas works with the affected customers around the DCU locations to inform them of the pending construction of the DCUs. The outcome of this phase is that DCU locations may be modified based on the customer feedback, as long as the alternate location meets the basic network requirements. This outreach usually begins 9-12 months prior to module installation so that the network is constructed before the modules are installed.

In the first phase, SoCalGas' outreach efforts focus on educating local public works officials, planning staff, city managers and elected officials on the Advanced Meter project. These briefings usually involve City Council members, County Boards of Supervisors, elected officials' staffs, and city and county administrators. The briefings provide background about the project, and they include information about where the network propagation study mentioned in Chapter 2 indicates DCUs should be located.

The negotiations with local governments generally revolve around the issue of whether the DCUs can be installed within the franchise agreement SoCalGas has with each local government. Typical negotiations are taking 6-9 months.

Local governments are accustomed to the processes for installing pipelines under the SoCalGas franchise, but they are not accustomed to SoCalGas installing above ground facilities under franchise as we are doing with the Advanced Meter project. This often results in a series of exchanges in which SoCalGas demonstrates that the DCUs are covered by the SoCalGas franchise agreements. The discussion revolves around whether the local jurisdiction has ministerial or discretionary authority over the DCUs.

To facilitate this process, SoCalGas has requested clarification from the Commission regarding its authority to preempt local rules, regulations and ordinances that conflict with the CPUC's paramount authority over utility transmission and distribution systems, including DCU's installed within public rights of way as appurtenances to our natural gas transmission and distribution systems. SoCalGas understands that the Commission has been working towards issuing a clarifying resolution describing the Commission's position on the subject matter. SoCalGas believes the resolution will be a critical tool in clarifying SoCalGas' authority with various local agencies whom would otherwise desire to assert discretionary regulatory authority over the design and installation of DCU's through various schemes, including wireless telecommunication ordinances. To date, however, the Commission has not issued the resolution.

Once the local jurisdiction and SoCalGas agree that this is franchise work, a separate set of negotiations ensue to determine the process for selecting the sites for the DCUs and the public hearing process SoCalGas will follow to inform affected customers of the DCU construction. Once these two issues have been resolved, SoCalGas works with the local government to identify the specific DCU locations.

In the second phase of outreach, SoCalGas uses the DCU design points from its propagation study as the starting point to identify DCU locations. As indicated in Table 2, the majority of DCUs have been constructed in the public right-of-way or attached to city-owned street lights.

At this point in the process, SoCalGas works with the local government to determine whether the DCU can be attached to street lights or some other local government asset. If an appropriate street light is available, SoCalGas and the local government begin negotiating the terms for SoCalGas to attach a DCU to the

street light. The negotiating parameters are described in Section 2.B. Because the necessary regulatory and contractual arrangements are now in place, SoCalGas will also be able to examine the potential for installing DCUs on PG&E, SCE, and SDG&E street lights. This will potentially reduce the number of new pole installations.

However, if no appropriate street light is available, SoCalGas works with the local government to determine the optimal DCU locations in the public right-of-way. This usually entails a 'joint site walk' with a SoCalGas and a local representative to examine the design points indicated by the propagation study and then to select a specific location, still within the acceptable radius from the design point. Once the locations are determined, SoCalGas usually receives an encroachment permit to construct the DCU and proceeds to the third phase of outreach. In some cases, local governments have asked SoCalGas to hold public briefings in the affected areas before they issue the encroachment permit.

In the third phase of outreach, SoCalGas notifies impacted customers by distributing a construction notification letter to residents located close to the proposed DCU installation, typically 2-4 weeks prior to construction.[6] Frequently, SoCalGas personnel make personal contact with customers in the immediate area around the DCU. Where customers raise objections, SoCalGas has usually been able to resolve the objections or identify other locations that are acceptable to residents and still meet the communication needs of the project. This involves finding a more suitable location nearby, usually within the same block or two surrounding the proposed location.

With 1,116 DCUs constructed, SoCalGas has received 25 complaints, including concerns about the DCU's 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 4 DCUs. Otherwise, the concerns have been resolved without relocating the DCU.

Of the 12 counties and 210 cities in the SoCalGas service territory, SoCalGas has finished installing DCUs in 1 county and in 89 cities.[7] SoCalGas has reached agreement with eight other counties and is currently in the process of installing

[6] Appendix C provides a copy of the DCU construction notification letter provided to customers.
[7] Appendix D provides a list of the county and cities installed as of June 30, 2013.

DCUs. In addition, SoCalGas is in active negotiations with 60 cities and 10 counties to install approximately 1,600 more DCUs over the next year.

5.B Examples of Network Outreach

As part of its network outreach efforts, SoCalGas has conducted a wide variety of briefings and presentations to 'get the word out' about the construction of the DCUs. This section provides a sample of SoCalGas outreach activities.

Perhaps the best example of outreach has been in the City of Los Angeles. As indicated in Section 2.B, SoCalGas has a contract with the City of Los Angeles' Bureau of Street Lighting (BSL) to install on BSL street lights almost 90 percent of the DCUs needed in the City. The remaining DCUs will likely be new poles. That process is currently being worked out with the City.

Outreach in the City included a briefing of the Mayor's Office and all of the offices, both downtown and district offices, for the 15 council members. In addition, SoCalGas provided presentations to over 67 'neighborhood councils,' citizen organizations that advise the City on various local issues. These councils blanket the City.

The briefings of these neighborhood councils led to additional briefings of more neighborhood groups in the City such as the Hillside Federation, the Laurel Canyon Association, and the Beverly Wilshire Homes Association.

SoCalGas also organized community meetings specifically to educate communities outside of neighborhood councils about the project. Meetings were held in areas around the City such as Mount Washington, Boyle Heights, and Arroyo Seco.

In another example of SoCalGas' outreach efforts, in the Coachella Valley surrounding the Indio warehouse, outreach was done to Home Owners Associations during their regular board meetings as well as one-on-one presentations with boards of directors. In a final example, in the northern area of our service territory, presentations were made at Senior Centers during lunch, as well as to Home Owners Associations and Town Councils.

Chapter 6 – Pre-Installation Customer Outreach Activities

After the DCUS are installed, SoCalGas follows the process shown in Figure 1 to inform customers about the installation of the module in their homes and small

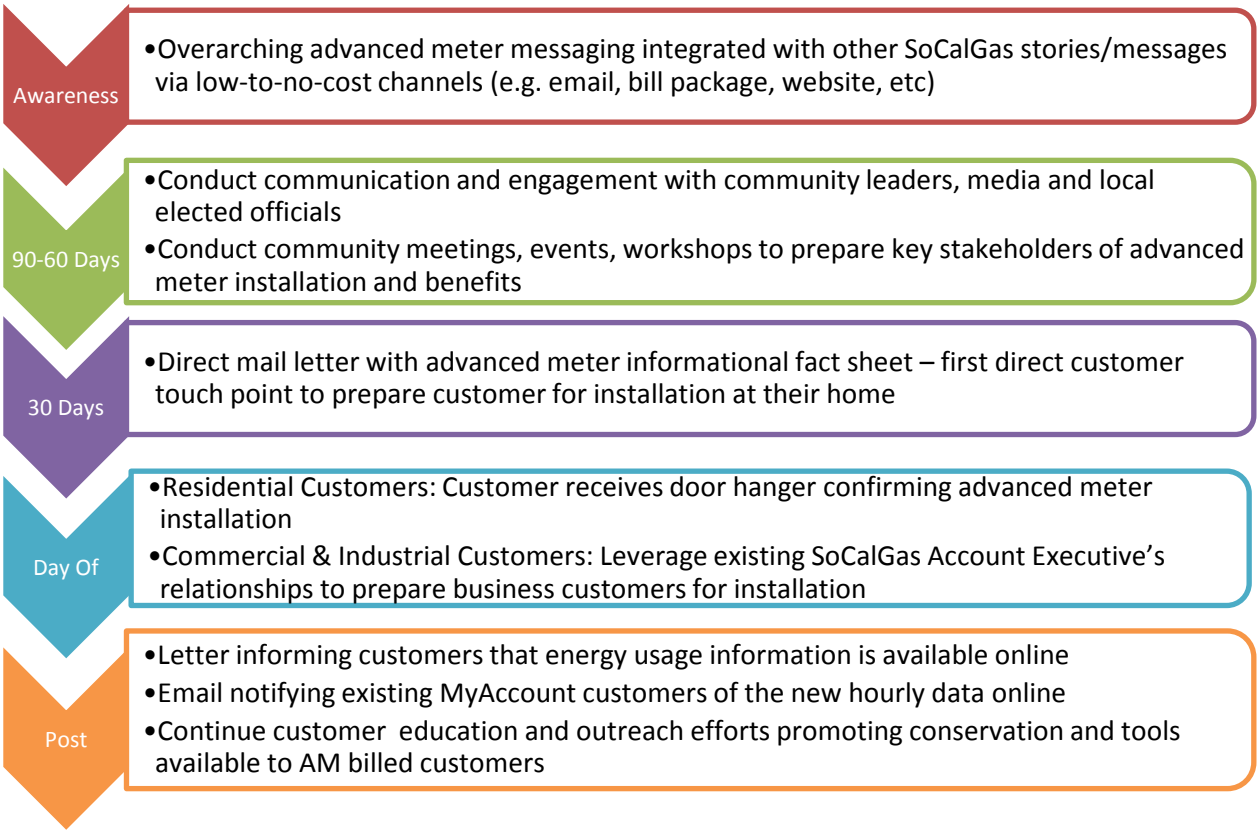
businesses. This outreach typically begins about 90 days prior to the start of module installation.

The process is driven, in part, by the directive from the CPUC that is worth repeating.

> "It is critical to acknowledge that initiating and sustaining the behavioral change necessary to maximize conservation response cannot be accomplished through a one-size-fits-all approach to marketing, education, outreach, and customer support. Thus, consistent with our objectives in other demand side programs, we direct SoCalGas to specify in its plan **outreach strategies for all market segments, including ethnic, minority, and hard-to-reach communities and small businesses.** It will be incumbent upon SoCalGas to discuss specific proposals for utilizing a competitive solicitation process for the selection of Community Based Organizations (CBOs) with a demonstrated record of success in reaching these market segments."[8]

[8] D.10-04-027, p.45.

Figure 1
Customer Outreach Process



The customer outreach activities surrounding installation fall into two categories. The first is general outreach, and the second is individual customer outreach. This Chapter describes the general outreach which precedes the module installation. Those are the arrows labeled 'Awareness' and '90-60 Days' in the above figure. Chapter 7 will describe the outreach focused on the period from 30 days prior to module installation to the post-installation activities.

6.A General Outreach Strategy

To fulfill the mandate in D.10-04-027, SoCalGas has implemented a two-pronged general outreach strategy. SoCalGas staff performs a multitude of outreach activities to 'get the word out' about Advanced Meter installations. SoCalGas personnel develop a local stakeholder education and community outreach program to ensure every city and county SoCalGas serves is touched. These efforts include briefing local elected officials, media outreach, community town hall events and local speaking engagements.

These efforts are complemented by a number of local organizations who simultaneously perform outreach activities under contract to SoCalGas. SoCalGas has partnered with GeM Communications (GeM) to manage the solicitation and implementation efforts for local organizations to perform community outreach. GeM managed the RFP process and contracts for the 51 community- and faith-based organizations (CBOs, FBOs), disability agencies, Chambers of Commerce, and Business Organizations that conduct outreach to sensitive communities/customers in specific advanced meter installation areas. On-boarding of the 51 organizations consisted of a full-day training event geographically centered by region, creation of an informative binder, and distribution of materials and giveaways to all organizations.

SoCalGas developed a solicitation and selection process, in partnership with GeM, to implement a community-based education and outreach program leveraging the local organizations knowledge, relationships and affinities with sensitive communities and customers to assist with regional and local outreach activities.

The solicitation process included identifying potential community partners in an advanced meter installation geography and conducting “Request for Information” invitational meetings to provide interested community organizations with project overview, proposal requirements and submission timing.

The proposals received are then reviewed and scored by an advisory committee comprised of a SoCalGas representative, community leader and GeM Communications.

Contracts awarded may range from $3,000 to $50,000 depending on the complexity of the scope of work proposed and geography or communities served/reached.

Each organization provides a specialized focus that allows SoCalGas to reach a specific audience in a given geography. The strength of the program is the ability to leverage the resources, experience and reach of each organization to create awareness of the advanced meter program and educate customers and communities of the benefits. A few examples of the unique partnerships include:

- **Greater Los Angeles Agency on Deafness (GLAD)** – GLAD has provided the opportunity to share information with the deaf and hard of hearing community in the greater Los Angeles area
- **Armenian National Committee** – The Armenian National Committee has provided the opportunity to reach the Armenian community in the greater Glendale area
- **Radio Campesina** – This unique partnership has provided the opportunity to share project information in-language with the farm working community in the San Joaquin Valley via "Cuadrilla" meetings taking place in the agriculture fields
- **Southeast Community Development Corporation (SCDC)** – Leverages the Mobile Technology Center to demonstrate the energy saving tools and gas usage information available to customers via advanced meter. The mobile unit is utilized at key community events.

As evidenced by the examples above, the community based organizations offer a wide variety of outreach approaches and audiences addressed. In contrast, the chambers of commerce offer a set of outreach events and tools which are more similar.

Chambers of Commerce typically have a fairly stable set of members with a very structured approach to disseminating information. Among the outreach chambers have provided are:

- Website articles with a link to the SoCalGas website
- SoCalGas sponsorship at Chamber events
- Advanced Meter banner on the Chamber website
- Email blasts to members
- Banner on other events partially sponsored by the Chamber
- Access to executives who are chamber members
- Access to monthly breakfast and luncheon networking meetings
- Posts on Chamber Facebook and Twitter sites
- Blog posts and e-bulletins
- E-newsletters, and flyers in newsletters

All of these outreach channels have allowed SoCalGas to inform business customers about the Advanced Meter project through multiple touches with the business audience.

6.B General Outreach Organizations & Events

The local organizations have presented Advanced Meter information at over 800 community events surrounding all warehouses opened through June 30, 2013. Coupled with the more than 500 events conducted by SoCalGas personnel, Advanced Meter has delivered more than 1,300 events to inform customers about the project. The following sections identify the local organization working with SoCalGas, and describe both the local organization outreach and the SoCalGas outreach, organized by the six Advanced Meter warehouses opened thus far.

6.B.1 South Gate Warehouse

The South Gate warehouse opened on October 29, 2012. This warehouse serves the cities of Artesia, Cerritos, Cypress, Downey, Lakewood, Paramount, Bellflower, Hawaiian Gardens, Hacienda Heights, La Mirada, Norwalk, Rowland Heights, Santa Fe Springs, Bell Gardens, Brea, Fullerton, La Habra Heights, Pico, Rivera, Whittier, Industry, Walnut, South Gate, Commerce; Bell, Maywood, Montebello, Monterey Park, Vernon, Cudahy, Lynwood, and Huntington Park. The warehouse has over 427,000 modules to install through September 2014.

Local Organization Outreach SoCalGas engaged both community based organizations and chambers of commerce to assist in the outreach efforts. Three organizations were involved in the initial campaign - Long Beach Community Action Partnership (LBCAP), Mexican American Opportunity Fund (MAOF) and The Southeast Community Development Corporation (SCDC). These community partners focused their outreach efforts on seniors, limited income, limited English, physically challenged and the general public. SoCalGas' partners provided Advanced Meter education to the following ethnic groups: African American/Black, Asian (Cambodian, Chinese, Filipino, Japanese, Korean, Malaysian, Thai, and Vietnamese), Hispanic /Latino, White (Russian).

In January, 2013, SoCalGas began its partnerships with the following organizations: Human Services Association; Oldtimers Foundation; Success in

Challenges Inc.; Filipino American Service Group Inc.; and, the L.A. Conservation Corps.

In addition to the community partners, which provide access to hard-to-reach communities, SoCalGas is also focused on the small business community. As such, SoCalGas is currently partnered with the Artesia, Cerritos Regional, Greater Lakewood, Bell Gardens, Norwalk, Whittier, Huntington Park, Fullerton, Brea and Placentia Chambers of Commerce.

SoCalGas Outreach SoCalGas also directly engaged stakeholders in multiple community events, including: Orange County Planners Association meeting; La Palma Night Out; Huntington Beach Green Expo; Paramount Fiesta; Cerritos Health Fair; Greater Lakewood Chamber of Commerce Business Expo; Walnut Family Festival; Paramount Senior Citizen Holiday Party; Cerritos Senior Center Halloween Festival; Paramount Senior Citizen Holiday Party; Brea Chamber of Commerce Women's Conference; Paramount Senior Citizen Holiday Party; Lakewood Chamber Mixer; Brea Rotary; Lakewood Economic Forecast Luncheon; Orange County Cities Partnership Meeting; Los Alamitos 31st Annual Police Appreciation Luncheon; Artesia State of the City; Wake-up Whittier Chamber of Commerce Breakfast; i-CAN (Inter Community Action Network; Whittier State of the City; South Gate State of the City Luncheon; Montebello Chamber Business Expo; Commerce State of the City; Commerce Industrial Council Women in Business Luncheon; Huntington Park State of the City; State of the Community in Senator Ricardo Lara's District (Lynwood, South Gate, Downey, Cerritos, Montebello, Bell, Bell Gardens and Commerce); and, Morning Business Mixer 3.0 – Montebello and Bell Gardens.

Media Highlights:

- *Long Beach Press Telegram*; Lakewood Chamber of Commerce newspaper; the Artesia and Cerritos city web sites; Downey and Paramount city web sites; *Downey Patriot*; *Whittier Business Focus* Artesia Chamber newsletter; and, the Whittier Chamber e-newsletter.

Further, SoCalGas received coverage in the *Buena Park Independent; Cerritos-Artesia Patch*, *OC Breeze*, Community Media Corp., *LA Business Journal*, *OC Business Journal*, *OC Register*, *Bellflower Bulletin*, *Los Cerritos Community News*,

Lakewood Community News, *The Wave/La Ola*, Lakewood News-Topix, The Artesian (City of Artesia newsletter), City of Lakewood e-newsletter, *The Bellflower Citizen* (City of Bellflower quarterly newsletter), City of Bellflower e-bulletin, and *The Cerritos News*.

6.B.2 El Centro Warehouse

The El Centro warehouse opened on February 4, 2013 and closed on May 24, 2013. This warehouse served the cities of Brawley, Calexico, Calipatria, El Centro, Holtville, Heber, Westmorland, and Imperial as well as unincorporated Imperial County. The warehouse installed almost 37,000 modules.

Local Organization Outreach SoCalGas engaged both community based organizations and chambers of commerce to assist in the outreach efforts. In El Centro, the organizations were Campesinos Unidos, La Cooperativa Campensina, Neighborhood House of Calexico, Escuela De La Raza, and the Brawley and El Centro Chambers of Commerce.

In addition to the events the El Centro Chamber of Commerce holds throughout the year, the Chamber added SoCalGas' Advanced Meter project on its marquee, which is viewed every day by commuters. The City of Brawley's Chamber of Commerce posted information about the project on the Imperial Valley Expo marquee that is viewed by commuters driving on Highway 86. Both Chambers also inserted project information in their newsletters and email blasts to Chamber members. CBOs also canvassed communities to reach seniors, physically challenged, low-income, and limited English customers in the Imperial Valley.

SoCalGas Outreach SoCalGas has engaged the community by providing briefings, presentations, and participating in other outreach activities, including: El Centro and Holtville Rotaries; El Centro Kiwanis Club; Imperial Valley Joint Chambers of Commerce 2013 Business Showcase; California Mid-Winter Fair in Imperial; Imperial Valley Press 2013 Scripps Regional Spelling Bee; the 34th annual Children's Fair in El Centro; El Centro City Council Advanced Meter briefing; and, the El Centro Chamber of Commerce-Good Morning Mixer.

Media Highlights:

- Imperial Valley Press (article published on 1/12 - http://articles.ivpressonline.com/2013-01-12/gas-meter_36301740, and on 2/2 http://articles.ivpressonline.com/2013-02-02/smart-meters_36710219).
- The Advanced Meter presentation at the "Good Morning Brawley" breakfast and Mayor's State of the City address received media coverage from the *Imperial Valley Press, The Desert Review,* and *I.V. Weekly/Holtville Tribune/Calexico Chronicle (*http://www.thedesertreview.com/brawley-chamber-hosts-mayors-breakfast/ *and* http://tribwekchron.com/).
- Imperial Valley's all-news radio station provided Advanced Meter information on-air and published a story online (http://kxoradio.com/kxo/news/local/4934-advanced-meters-are-coming.html).
- SoCalGas also had articles published on the El Centro, Brawley, and Imperial city websites.

6.B.3 Irwindale Warehouse

The Irwindale warehouse opened on March 4, 2013. This warehouse serves the communities within the City of Los Angeles of Eagle Rock, Highland Park, and Glassell Park, among others. It also serves the cities of Rosemead, San Gabriel, Temple City, Arcadia, Altadena, Pasadena, and San Marino. The warehouse has almost 467,000 modules to install through October 2014.

Local Organization Outreach SoCalGas engaged both community based organizations and chambers of commerce to assist in the outreach efforts, including: San Gabriel Valley Economic Partnership; APAC Service Center; Human Services Association; Greater Los Angeles Agency on Deafness Inc.; Mexican American Opportunity Fund; Asian Pacific Community Fund; Success in Challenges; South East Development Corporation; Long Beach Community Action Partnership; and, the Chambers of Commerce in Pasadena, South Pasadena, El Monte/South El Monte, Arcadia, Monrovia, and Huntington Park.

SoCalGas Outreach In addition to the community partners' and chambers of commerce outreach efforts, SoCalGas also directly engaged stakeholders at different community events, including: Alhambra Eco Fair; San Gabriel Chamber Business Expo; Rosemead State of the City; Altadena Chamber of Commerce Executive Board Briefing to chamber leadership; Altadena Chamber of Commerce

89th Annual Installation Dinner; Presentation to the Altadena Town Council - which was televised locally; Adelante Latina Conference; Pasadena Braille Institute Presentation; Kinneloa Homeowners Association Presentation; Women's Leadership Legacy Public Works Conference; City of Pasadena's Iranian New Year's celebration - which was attended by over 300 community members and dignitaries; South Pasadena Chamber local small business "ShopTalk" breakfasts; and, the South Pasadena Eclectic Music Festival.

Media Highlights:

- Two Advanced Meter articles appeared in the local Altadena community blog: www.altadenablog.com.
- The Monrovia Chamber published four e-articles sent via E-Blast Newsletters and Community Calendars, and the Arcadia Chamber included information on its web page and e-blast newsletter.
- Advanced Meter information was posted on the City of San Marino website, providing residents with a link to SoCalGas Advanced Meter website, and a link to the Advanced Meter three-minute installation video.
- Articles have also been published in the Blvd Sentinel, West San Gabriel Journal, Midland Valley News, Pasadena Star News, and San Gabriel Valley Tribune newspapers.

6.B.4 Sun Valley Warehouse

The Sun Valley warehouse opened on April 1, 2013. This warehouse serves the cities of Burbank, Glendale, La Crescenta, and parts of the City of Los Angeles. The warehouse has over 44,000 modules to install through August 2013.

Local Organization Outreach SoCalGas engaged both community based organizations and chambers of commerce to assist in the outreach efforts. Partners include the Burbank Chamber of Commerce and the Armenian National Committee. Much of the local organization outreach for this warehouse was performed through the organizations supporting the adjacent Irwindale warehouse.

SoCalGas Outreach In addition to the community partners' and chambers of commerce outreach efforts, SoCalGas also directly engaged stakeholders at different community events, including: the Braille Institute in Burbank; a Burbank City Council Candidates forum; Burbank Chamber of Commerce's annual gala; and, briefings with Burbank City Council Members and the Mayor, in addition to a

presentation at a televised City Council meeting. Others included the Glendale Chamber of Commerce; the City of Glendale posting Advanced Meter information on the city website; the Crescenta Valley Town Council; and, Arbor Day festivities in La Crescenta.

Media Highlights:

- City of Burbank include news coverage in the local newspaper, the Burbank Leader;
- SoCalGas' presence at the Burbank City Council Candidates forum was covered in a Daily News article.

6.B.5 Bakersfield Warehouse

The Bakersfield warehouse opened on April 15, 2013. This warehouse serves the cities of Arvin, Bakersfield, Delano, and McFarland. The warehouse has over 103,000 modules to install through November 2013.

Local Organization Outreach SoCalGas engaged both community based organizations and chambers of commerce to assist in the outreach efforts, including: the Arts Council of Kern; Community Action Partnership of Kern (CPAK); Kern Green; Housing and Opportunity Foundation of Kern; Mexican American Opportunity Foundation; Proteus, Inc.; and, Radio Bilingue.

To inform the small business community about Advanced Meter, outreach partnerships have been established with the Greater Bakersfield Chamber of Commerce; the Kern County Black Chamber of Commerce; the Kern County Black Chamber of Commerce; Kern Economic Development Corporation; and, the North of the River Chamber of Commerce.

SoCalGas Outreach SoCalGas also directly engaged stakeholders at multiple community events, including: an information booth at a health fair; and presentations in Spanish for residents at an Energy Conservation Fair in Arvin, organized by one of the non-profit partners, the Housing Authority of the County of Kern.

In Bakersfield, outreach activities included a group briefing with all area elected officials or their representatives; area chambers of commerce and business organizations; and, a presentation at the Bakersfield Senior Center, coordinated in partnership with the Kern County Black Chamber of Commerce.

SoCalGas met with the Kern County Farm Bureau to inform farming stakeholders about the Advanced Meter project. SoCalGas brought information to farm workers while they were working in the fields by doing Spanish presentations during a hosted lunch, in partnership with the non-profit Spanish radio station, Radio Campesina 92.5FM, part of the Cesar Chavez Foundation. This also allowed for on-air time to talk about Advanced Meter.

SoCalGas has met with, and held one-on-one briefings with the Executive Directors of the following Chambers of Commerce: Delano, McFarland, Taft, Tehachapi and Wasco.

Other community presentations in different parts of Kern County include: a meeting with Spanish-speaking residents in Lost Hills, an event which was coordinated in partnership with the Dolores Huerta Foundation; a presentation at the quarterly Kern Council of Governments, which has representatives from various cities within Kern County; and , presentations at the Association of Women in Energy, the Kern County Black Chamber of Commerce quarterly membership mixer, the Air and Waste Management Association, and the 15th Annual Latino Food Festival and Menudo Cook-off.

Some large-scale outreach events and sponsorship events in Bakersfield include: Greater Bakersfield Chamber of Commerce Business Expo; the 2013 Fight for Air Walk and Resource Fair; and, the Housing Authority of Kern Landlord Workshop.

Media Highlights:

- Bakersfield Californian;
- news coverage on the local news affiliate;
- a one hour on-air interview on Spanish non-profit Radio Bilingue; and,
- an ad in the Spanish magazine, Nuestro Tiempo.

6.B.6 Indio Warehouse

The Indio warehouse opened on May 28, 2013. This warehouse serves the cities of Blythe, Cathedral City, Coachella, Desert Hot Springs, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, Rancho Mirage, Twentynine Palms, Yucca Valley, Bermuda Dunes (County), Ripley (County), Thermal (County), Thousand Palms (County), County of San Bernardino, Joshua Tree (County), Morongo Valley (County), and County of Riverside. The warehouse has over 198,000 modules to install through November, 2013.

Local Organization Outreach SoCalGas has worked closely with various community based organizations and chambers of commerce, including: Campesinos Unidos; Coachella Valley Housing; Desert Samaritans; Escuela De La Raza; Find Food Bank; Todec Legal Center; and, the Chambers of Commerce in Coachella, Desert Hot Springs, Indio, La Quinta, Palm Desert, Palm Springs, and Yucca Valley.

SoCalGas Outreach SoCalGas has engaged the community by providing briefings, presentations, and/or participated in over 35 outreach activities, such as the presenting to various Home Owner Associations (HOAs) in the valley -- as many homes are located in country clubs and gated communities. SoCalGas has distributed information to HOA managers and Property Management representatives so they can assist with sharing Advanced Meter information with permanent and seasonal homeowners living in these gated communities.

Other outreach activities have included having a presence at community festivals and events such as the 21st annual Indio Tamale Festival, which had an attendance of over 100,000; Southwest Arts Festival; Zumba for a Cure event (Indio Chamber and Coachella Valley Boys and Girls Club) in Indio; MS Walk in Palm Desert; City of Palm Springs Mayor's Race and Wellness Festival; Coachella Cinco de Mayo Festival; Southern California Energy Summit in Palm Springs; Riverside State of the County and Business Expo event in Cabezon; Coachella Valley Wildflower Festival in Palm Desert; Desert Living Home Show in Palm Springs; Riverside County Fifth District San Gorgonio Pass Water, Transportation & Economic Development Summit; 56th Annual Palo Verde Valley Community Outlook Conference in Blythe; City of La Quinta Anniversary; Blythe Health Fair; 2013 SCAG Regional Conference and General Assembly in Palm Desert; Desert Hot Springs Salsa Festival; Coachella 5 de Mayo Festival and 5K Run; Temecula State of the City Address event; Coachella Valley Chapter Community Associations Institute (CAI) meeting in Palm Desert; Riverside County League of Cities dinner/meeting; briefing for Chairman and Co-Chair of the Concerned Citizens of La Quinta group; and, the Palm Springs Neighborhood Involvement Committee meeting.

Media Highlights:

- SoCalGas has also worked on earned and paid media opportunities which have garnered positive media coverage. Thus far, stories have been

published in the Desert Sun (May 20, 2013); MyDesert Community Weeklies; and, The Desert Star Weekly (March 20, 2013).

- Other articles were published in several Chamber newsletters including La Quinta, Palm Springs, and Desert Hot Springs; spots airing on Time Warner Cable / Coachella Valley; on-camera interview at KVER-TV Univision Palm Springs studios that aired on April 26, 2013; story on KVER-TV Univision Palm Desert aired on May 14, 2013 (http://www.kvertv.com/2013/05/14/nuevos-medidores-avanzados-en-el-valle-de-coachella/); and, an article published in the May edition of Coachella Valley Chapter's Community Associations Institute (CAI) Quorum Magazine.
- Advanced Meter PSAs began airing on CBS, FOX, and CW in the Coachella Valley.

SoCalGas also collaborated with the Gulf-California Broadcasting Group to develop 15 and 30 second public service announcements (PSA). Advanced Meter banners were shown on each news station's websites. PSAs ran until May 28, and were re-aired on July 8 to July 28 and will re-air again from September 9 to September 29.

Coverage of a SoCalGas module installation was done by KESQ-TV CBS Local 2 and aired on May 30, 2013 (http://www.kesq.com/kesq/gas-company-replacing-meters/-/232254/20363980/-/3785mq/-/index.html). Project information was published in the Desert Sun and in the MyDesert West Valley Edition. News stories have also aired on KVER-TV Univision (http://www.kvertv.com/2013/05/14/nuevos-medidores-avanzados-en-el-valle-de-coachella/), KESQ-TV CBS Local 2 (http://www.kesq.com/kesq/gas-company-replacing-meters/-/232254/20363980/-/3785mq/-/index.html), and Time Warner Cable has begun airing SoCalGas' Advanced Meter installation YouTube video during TV programming as well as an Advanced Meter Project Overview Presentation during city council and public access programming.

6.C Radio Disney

SoCalGas has pursued a unique opportunity in partnering with Radio Disney. SoCalGas and Radio Disney developed an integrated marketing plan that included events at ten elementary schools, 175 on-air spots (combination of both 30 and 60 second spots), and online elements.

From October 2012 through March 2013, Radio Disney educated students and teachers about the Advanced Meter project, gas safety and energy saving tips. The schools were located in areas where SoCalGas had already begun installing modules, or would soon be installing modules. Each school assembly was one hour long. Literature was bundled and distributed to students to take home in "parent packs" to provide families with detailed information about the AM project and other SoCalGas programs.

The package also included a 30-minute pre-recorded segment on Radio Disney's Community Relations Show, which aired on April 28, 2013. Appendix E provides samples of information from the Radio Disney partnership.

Due to the success of the partnership, the contract between SoCalGas and Radio Disney has been extended through December 31, 2013 to include eight more school assemblies, four community events, and 315 on-air spots.

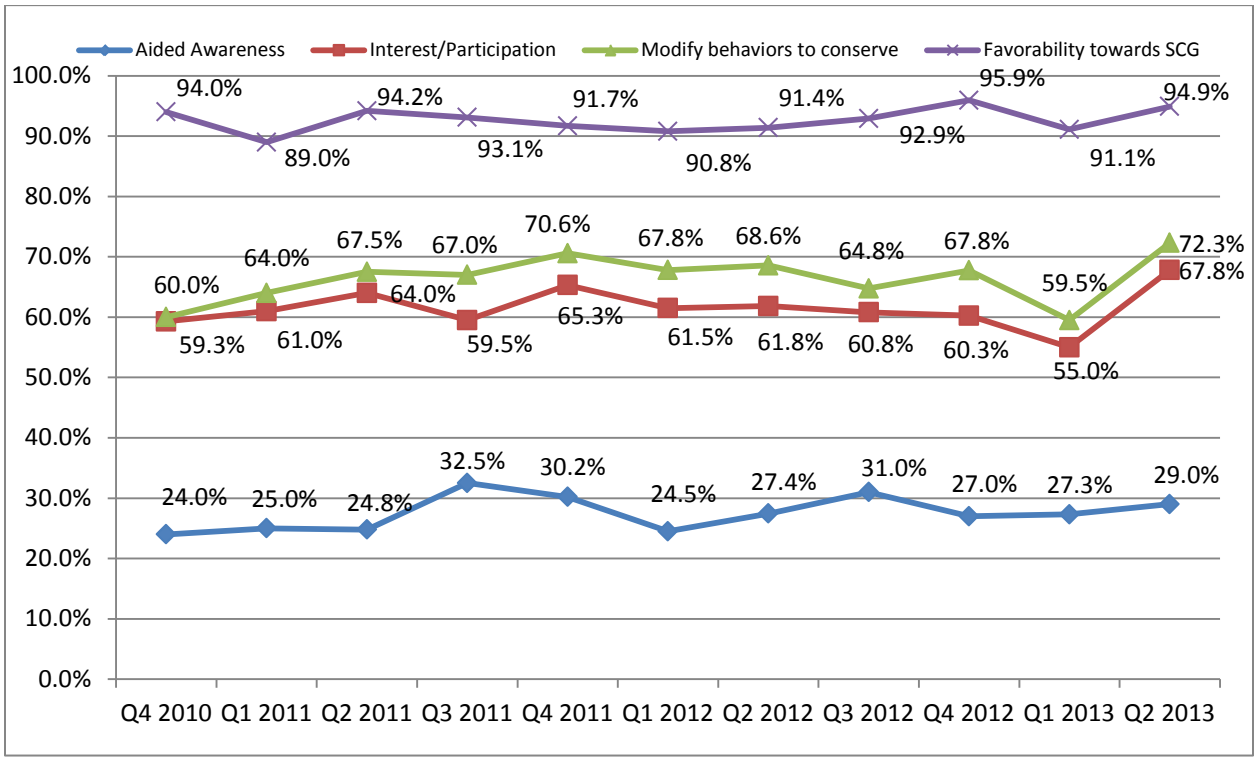
6.D Customer Awareness of the Advanced Meter Project

Given the extent of the general outreach activities, SoCalGas monitors how these activities translate into customer awareness and, ultimately, customer satisfaction about the 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.

For the purposes of monitoring overall customer awareness and perceptions, SoCalGas uses the iTracker Customer Perception Study, administered by Davis Research. iTracker is SoCalGas' public opinion tracking study. It is a quarterly phone survey measuring residential and business customer favorability across several factors: favorability, price and value, safety, reliability and reputation.

Beginning in the fourth quarter of 2012, SoCalGas added three Advanced Meter related questions to the quarterly survey. Figure 2 displays the iTracker results for the general awareness questions about Advanced Meter for residential customers. Figure 3 displays the results for business customers.

Figure 2
iTracker Results – Residential Customers



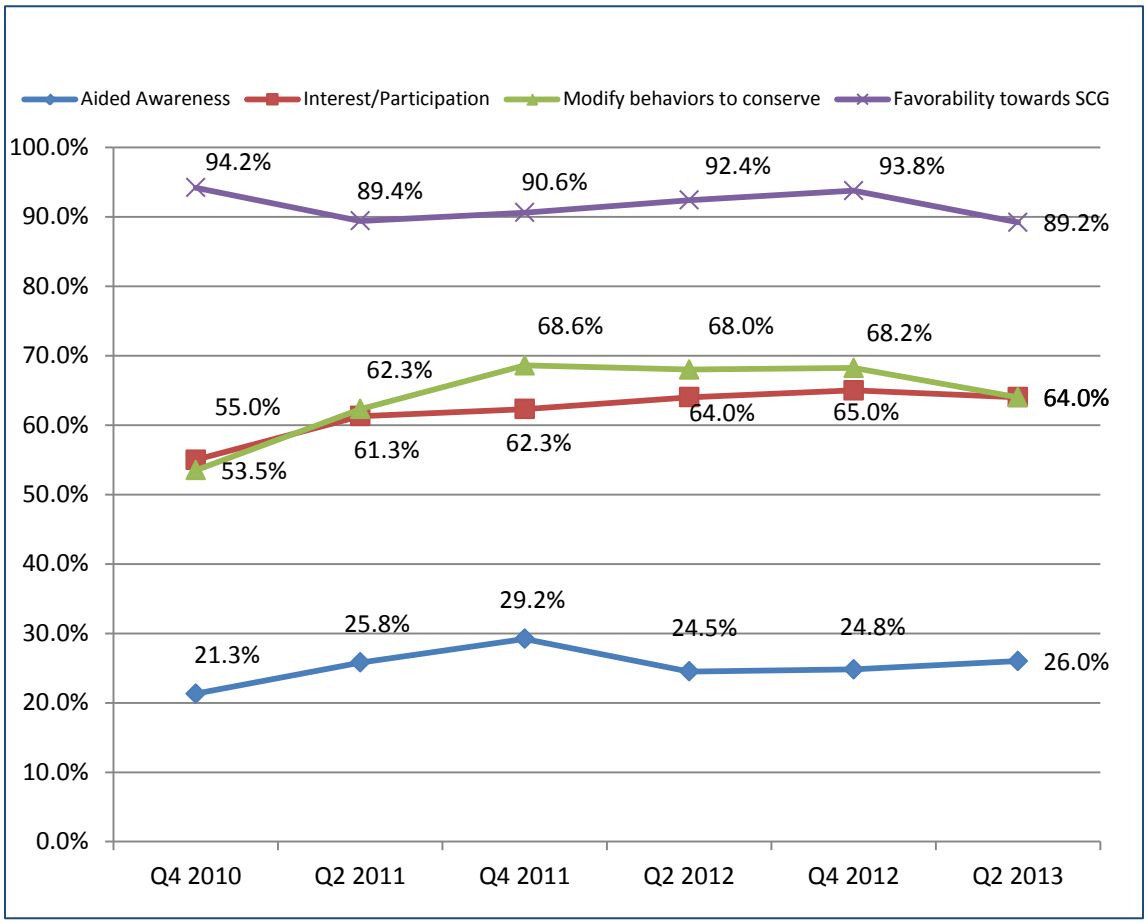
Questions:
IM1. How would you rate SoCalGas overall on a scale of 1 to 7 where 1 means very unfavorable and 7 means very favorable?
AM1. Are you aware of a new gas meter that transmits natural gas usage information remotely and more frequently from the meter to SoCalGas?
AM2a. Having access to your daily 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)

In general, SoCalGas' customers' awareness about the Advanced Meter project has hovered in the 25-30 percent range since 2010. The spike above 30 percent in the third quarter of 2011 could be related to SoCalGas' outreach efforts at the Los Angeles County Fair, which is attended by hundreds of thousands of customers. The spike above 30 percent in the third quarter of 2012 could be related to a bill insert and an increased level of publicity about the project. Of those customers who were aware of the project, 35 percent mentioned bill inserts as their source and 21 percent mentioned a story on the news or an article on the internet as their source. Appendix F provides a copy of the Advanced Meter bill inserts.

In the first quarter of 2013, customers' interest in viewing the hourly consumption data and conserving natural gas dropped, but then it rebounded in the second quarter. The increase in the second quarter of 2013 could be related

to the fact that SoCalGas' module installations were increasing and hundreds of thousands of customers had received their installation notification letters.

Figure 3
iTracker Results – Business Customers



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 among business customers has hovered in the 25 to 30 percent range since the second quarter of 2011. Business customers' interest in viewing the hourly consumption data has been in the mid- to high 60% range for the past 4 quarters.

Chapter 7 – Module Installation Outreach Activities

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 customer journey consists of five phases:

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

This Chapter describes the first four steps in that journey. Chapter 9 describes the SoCalGas conservation campaign planned to begin in September for the 2013-14 heating season.

7.A Pre-Installation

Thirty to sixty days prior to having the advanced meter installed, SoCalGas customers are sent a Pre-Installation Letter that explains the installation process and provides them with the option to make special access arrangements.

Included with the pre-installation letter is a one-page Advanced Meter Overview which provides information on the Advanced Meter network, meters, and general information about the project and new programs and services (e.g., access to hourly and daily interval data online). Appendix G provides copies of the pre-installation letter and the Advanced Meter Overview.

In the Overview document, customers are provided information about the SoCalGas "Deferral List" in the event they would like to defer meter installation. Chapter 8 summarizes SoCalGas' experience to date with deferral requests.

7.B Installation

Advanced Meter and Customer Service Field (CSF) installers leave a Successful or Unsuccessful door hanger with each customer that informs them that the meter installation was completed or delayed based on access issues. Advanced Meter and CSF installers also carry "Pocket Cards" to provide customers in the field that gives general information about the Advanced Meter project. Appendix H provides a copy of the Pocket Card.

When SoCalGas is able to successfully install a module, the customer receives a 'Successful' door hanger. Appendix I provides a copy of the 'Successful' door hanger.

When SoCalGas fails in its first attempt to install a module, usually because the meter is inaccessible, the customer receives an 'Unsuccessful' door hanger with instructions on how to follow-up. Some customers respond to the door hanger, contact the Advanced Meter Customer Information Center and arrange to have the module installed. When a customer does not follow-up, the customer receives a combination of phone calls, letters, emails, and personal visits attempting to make access arrangements until the meter installation is completed. Appendix J provides copies of the various materials SoCalGas uses to contact customers to gain access to their meters.

7.C Transition to Advanced Meter Billed

Approximately 30-60 days after a module is installed, customers receive a letter notifying them that their bill is now based on an Advanced Meter read and the monthly in-person meter reading will no longer take place. They are also informed about new online information and tools (e.g., hourly and daily usage data) which are available online through the SoCalGas.com Ways-to-Save tab. MyAccount customers also receive an email containing similar information once they become AM Billed. Appendix K provides copies of the letter and email informing customers they are now billed based on Advanced Meter reads.

7.D Customer Awareness and Satisfaction With the Module Installation Process

To ensure that its installation process is meeting customer needs, SoCalGas conducts both pre and post-installation surveys.

7.D.1 Pre-Installation Surveys

Prior to having their modules installed, phone surveys were conducted with residential and business customers to assess Advanced Meter awareness and attitudes. Two waves of pre-installation research were conducted with residential customers, and one wave was conducted with business customers. The first wave of pre-installation surveys was conducted as a pilot test for upcoming surveys, with a sample of 201 residential customers in the initial installation area of Commerce, Bell Gardens, Lakewood, Artesia and Cerritos. The second wave consisted of 400 residential and 300 business customers spread over a broader geographic area that aligned with the Advanced Meter installation footprint.

In the pilot wave, 22% of residential customers were aware of advanced meters prior to installation. Primary sources of awareness included news stories, SoCalGas bill inserts and word of mouth.

In the most recent pre-installation studies, 27% of residential customers and 34% of business customers were aware of advanced meters. Key sources of awareness include the pre-installation letter and SoCalGas newsletters or bill inserts.

7.D.2 Post-Installation Surveys

Within approximately seven days after their modules were installed, phone surveys were conducted with residential and business 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. Two waves of residential post-installation research have been conducted. The pilot wave consisted of 203 residential customers; the second wave surveyed 403 customers. The business study will begin in mid-July. Moving forward, post-installation surveys will be conducted with residential and business customers twice a year through 2015.

In the first wave of post-installation surveys, 78% of customers whose meters were installed within the past 7-day period were aware of Advanced Meters in a general sense. Additionally, 68% were aware that a meter had been installed on their property. Of these, 67% recalled receiving the pre-installation letter and overview sheet.

Customers reported high levels of satisfaction with the installers and the installation process. 91% of customers who interacted with an installer said they were “very satisfied” with the installer’s performance. Customers reported that the installers were courteous, friendly and treated their property with care. 83% of customers indicated they were “very satisfied” with the overall process.

Once Advanced Meters are installed, roughly two-thirds of customers in the pilot wave said they would use gas usage information to conserve natural gas (67%) and manage energy costs (63%). In order to access the gas usage information, 41% of customers who were not currently enrolled said they would enroll in My Account. Another 38% would not enroll, but would be interested in accessing the information another way. The remaining 21% of customers were neither interested in enrolling in My Account nor in accessing the gas usage information.

Customers considered saving money (82%) and operational savings passed on to customers (81%) to be the more important benefits of advanced meters.

The second wave of post-installation research surveyed customers in a broader area than the pilot wave, resulting in demographic differences which are reflected in lower scores on some measures. In the second wave, 55% of residential customers whose meters were installed in the past 7-day period were aware of Advanced Meters, and 42% were cognizant that a meter had been installed on their property. 69% of customers who were aware of the installation recalled receiving the pre-installation letter and overview.

As in the initial wave, customer satisfaction with installers and the installation process was high. 93% of the customers surveyed reported being "very satisfied" with the installers. Customers gave installers high ratings for their friendliness, courtesy, and professionalism. 81% of customers surveyed reported being "very satisfied" with the installation process overall.

Once their Advanced Meter has been installed, the majority of residential customers planned to use the gas usage information to conserve natural gas (55%) and to better manage their energy costs (54%).

Advanced Meter benefits that resonated with residential customers in the second wave were cost savings (91%), operational savings passed on to customers (89%), the ability to monitor spikes in gas usage that might signal a leak (88%), helping the environment (86%), and improved billing accuracy (86%).

Interest in the gas usage information would encourage some customers to sign up with MyAccount, although the percentages shifted slightly from the pilot wave. Among residential customers who are not currently enrolled, 38% say they would sign up for MyAccount in order to view their gas usage information. Another 21% would not enroll, but would be interested in viewing the data some other way. 41% said they are unlikely to sign up for MyAccount and not interested in the gas usage information.

7.E Online Market Research Community

SoCalGas has made extensive use of the Customer Insight Community, which consists of approximately 400 residential customers who participate in weekly moderator-led discussions, short surveys and polls on an online platform similar to Facebook. The community is used to explore customer attitudes on aspects

related to Advanced Meter and conservation. SoCalGas has found the Insight Community to be a particularly effective way to obtain fast and useful input on the process, materials and messaging for Advanced Meter communications.

Chapter 8 – Customer Inquiries and Deferrals

To make inquiries about the Advanced Meter project, customers can contact either the SoCalGas Customer Contact Center (CCC) or the Advanced Meter Customer Information Center (CIC). The CCC can deal with any customer inquiry about any subject. The CIC usually deals with making appointment arrangements with customers to have their Advanced Meter installed. The CCC and the CIC can also initiate the process for a customer to defer the installation of the module. Some customer inquiries were not routinely resolved and were elevated to Advanced Meter customer support staff. The number of customer inquiries elevated to Advanced Meter staff is low, considering the various Advanced Meter communications that have gone to all of SoCalGas' customers in addition to the hundreds of thousands of pre-installation letters that have been mailed to customers. Table 12 displays the elevated inquiries received to date.

Table 12

Customer Inquiries Elevated to Advanced Meter Team

Inquiry Type	Number Received	Explanation
Deferral Requests	239	Includes all elevated deferral requests
General Inquiries	549	Includes: DCU inquiries, opt-in requests, MTU removals, MTU installation requests for previously deferred customers, requests for more detailed project information, customer complaints and requests for Advanced Meter literature.
Requests for Advanced Meter	32	Usually aimed at resolving access issues
Total Escalated Inquiries	820	

The most common specific cause of the elevated inquiries is requests to defer the installation of the module. While customers can call either the CCC or the CIC and have their deferral requests recorded, some want to talk to the Advanced Meter support staff. Often the questions revolve around why SoCalGas does not yet have an opt-out option and what the fee might be, if and when the CPUC approves opt-out for SoCalGas.

In Application 12-05-016, filed in May, 2012, SoCalGas requested the CPUC to authorize interim charges for customers wishing to opt-out of Advanced Meter service. SoCalGas requested approval of a one-time charge of $75 and a monthly meter reading fee of $10. The requested fees were identical to those adopted for SCE, PG&E, and SDG&E.[9] The CPUC has not yet acted on this application.

SoCalGas also became a party to Application 11-03-014 and requested, in a filing on August 10, 2012, opt-out fees which would be put in place on a permanent basis. In this proceeding, all three electric companies also requested permanent opt-out fees. This matter is also still pending before the Commission.

In the absence of an approved opt-out fee structure, SoCalGas allows customers to 'defer' the installation of an Advanced Meter until such time as an opt-out decision is rendered by the Commission. Most customers pursue the deferral option when they receive the letter which is mailed to each customer informing them that an Advanced Meter will be installed shortly. Table 13 displays the number and percentage of customers who requested a deferral in response to the individual letter. This is currently the best measure of the percentage of SoCalGas customers who are likely to opt-out.

Table 13

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

Number of Individual Letters Mailed	665,199
Number of Customers Requesting a Deferral	2,197
Percentage	0.33%

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

Approximately 0.33% of the 665,199 customers receiving a letter have chosen to defer the installation of their Advanced Meter module. SoCalGas has another 73 customers who have requested to be deferred even though they have not yet received the installation letter. Given the size and diversity of the customer population included in the letters mailed to date, SoCalGas still expects the percentage of customers who will opt-out to be within the planning assumption of 0.5% that SoCalGas used in its opt-out applications.

When a customer requests to have the module installation deferred, SoCalGas places a sticker on the customer's meter indicating the module deferral status. This sticker informs any SoCalGas employee working at the meter that a module should not be installed. The customer also receives a door hanger notifying them that the sticker has been placed on the meter. Appendix L provides copies of the sticker and door hanger.

Chapter 9 - Conservation Outreach Campaign

The Decision sets for SoCalGas a goal of reducing residential gas consumption by 1% and places reporting requirements on SoCalGas which are described in the Introduction to this report. The Commission provided clear direction to SoCalGas in its Decision, stating that:

> "It is critical to acknowledge that initiating and sustaining the behavioral change necessary to maximize conservation response cannot be accomplished through a one-size-fits-all approach to marketing, education, outreach, and customer support. Thus, consistent with our objectives in other demand side programs, we direct SoCalGas to specify in its plan outreach strategies for all market segments, including ethnic, minority, and hard-to-reach communities and small businesses."[10]

In September, 2013, SoCalGas will initiate the first year of a multi-year conservation outreach campaign aimed at reaching the 1% conservation goal contained in the Decision. The conservation outreach campaign will follow a 'test and learn' approach. SoCalGas will take the 'lessons learned' from this initial campaign and adjust campaigns in future years to focus on the most promising customer segments and communications channels.

[10] D.10-04-027, p. 45.

The test and learn methodology embodied in this plan will assess two types of impacts:

- The impact of different marketing tactics (i.e., opt-in vs. default program enrollment, message content and frequency of touches) on customer acceptance of and attention to the different feedback mechanisms being provided; and,
- The impact of different feedback messages (i.e., bills alerts and home energy reports) and channels (i.e., direct mail, email and SMS text messages) on gas consumption.

The campaign will focus on three objectives which aim to expand opportunities for SoCalGas customers to take advantage of the new hourly gas consumption data. The objectives are:

- To enroll more customers in the SoCalGas MyAccount website, which now includes additional tools customers can utilize to help reduce their gas usage, including bill alerts.
- To enroll customers for billing alerts (Bill Tracker Alert), a promising new SoCalGas offering which is also intended to help customers manage their gas consumption.
- To examine the efficacy of the Opower Home Energy Reports (HERs), also a new SoCalGas offering, as a means of getting customers to conserve.

9.A MyAccount

Customers whose bills are based on Advanced Meter reads (i.e., AM Billed) are currently able to view their hourly and daily gas usage online through SoCalGas.com. The Ways-to-Save tab on the website provides AM Billed customers the ability to:

- Analyze Advanced Meter enabled hourly and daily usage
- Compare their usage to that of their neighbors
- Set a spending goal through My Savings Plan
- Complete the My Energy Survey
- Compare previous bills
- Review usage history and identify where their usage is coming from (e.g., heating, water heating, pool/spa, etc.)
- Calculate their carbon footprint

These enhancements, installed in October 2012, offer customers more effective tools for managing their gas bills. The MyAccount website is the primary tool customers now have to utilize the Advanced Meter information. SoCalGas will continue to promote the use of the website through the notification letters being sent to customers, as described in Section 7.C. The marketing will focus on growing the number of MyAccount users by trying to increase enrollment, and also to increase the use of the new tools by existing MyAccount users.[11]

However, based on recent research, SoCalGas knows that many customers may not enroll in MyAccount. The website is simply a channel that not all customers will choose to use.

In the two waves of pre-installation surveys described in Section 7.D.1, customers were asked about their likelihood of enrolling in MyAccount and their interest in accessing their consumption data. Table 14 displays the survey results.

Table 14

Percentage of Customers Likely to Enroll in MyAccount or Use Information

	Wave 1	Wave 2
Likely to Enroll in MyAccount	41%	38%
Unlikely to Enroll in MyAccount, Interesting in Information	38%	21%
Unlikely to Enroll and Not Interested in Information	22%	41%

The percentage of customers who said they are likely to enroll in MyAccount was roughly 40 percent in both waves. SoCalGas currently has approximately 31 percent of its customers enrolled in MyAccount. Because some customers appear unlikely to enroll for MyAccount, SoCalGas' plan for this winter extends beyond MyAccount to provide avenues for those customers who may be interested in using Advanced Meter information.

The two promising options SoCalGas will test in this initial campaign are Bill Tracker alerts and Opower Home Energy Reports.

9.B Bill Tracker Alerts

Bill Tracker Alert has several features which hold promise for customers to utilize. First, the alert can be sent via email and/or mobile phone SMS text message.

[11] See Appendix P for Sample Ways-to-Save screen shots.

Mobile phones are nearly universal, much more so than personal computers.[12] Second, SoCalGas is developing an 'easy enrollment' approach. SoCalGas customers will be able to enroll in weekly SoCalGas Bill Tracker alerts through SoCalGas.com effective September 23, 2013. The new Bill Tracker alert will provide AM Billed customers with the following information on a weekly basis:

- Bill-to-Date ($)
- Projected Next Bill ($)
- Last year, Same Month Bill Amount ($) [Seasonal comparison]
- Days Remaining in the Current Billing Cycle (#)
- Last Month's Bill Amount ($)*
- Days Elapsed in the Current Billing Cycle (#)*
- Choice of weekly email and/or text messages

  * Email only, due to 160 character text limitation

For Bill Tracker alerts, Customer Insight Community members consider Bill-to-Date and Projected Next Bill amount the most important elements. For many, the information pertaining to their current balance (Bill-to-Date) is viewed as most recent and pertinent, and therefore most actionable.

Bill Tracker alerts also support a growing trend with customers where they prefer to have desired information sent ("pushed") to them as opposed to having to go retrieve it on their own (e.g., login to a company website). These weekly alerts help keep a customer's natural gas usage "top of mind" which is a key ingredient in creating and maintaining behavioral change.

SoCalGas has also constructed a simplified enrollment approach for Bill Tracker alerts. BillTracker.SoCalGas.com is a Bill Tracker web enrollment channel (microsite) that was developed to make it simple and fast for customers to register. The site facilitates both MyAccount and non-MyAccount customers to sign up to receive the Bill Tracker Alerts via e-mail and/or text message. SoCalGas customers can also pre-enroll through the microsite prior to becoming AM Billed.

The Customer Preference Center (CPC) is a new page within SoCalGas.com/MyAccount that also allows customers to enroll in Bill

[12] See Public Policy Institute of California, *Californians & Information Technology*, June 2013. http://www.ppic.org/content/pubs/survey/S_613MBS.pdf

Tracker alerts and select their preferred methods of contact. The CPC also enables customers to unsubscribe from alerts and to update their customer contact information. Non-MyAccount customers can unsubscribe from Bill Tracker alerts by calling the Customer Contact Center (CCC) or reregistering for MyAccount.
In addition to the two online channels supporting Bill Tracker, customers can also enroll by returning a business response card (BRC) from the conservation campaign direct mail letters in a SoCalGas return envelope with pre-paid postage. Customers only need to provide their preferred email and/or mobile phone number on the BRC.[13]

9.C Opower

SoCalGas is partnering with Opower, an energy efficiency and customer engagement marketing provider, to develop and implement a Home Energy Report pilot program.

The Opower Home Energy Reports (HERs) are promising because they have proven successful elsewhere, although SoCalGas will be the first extensive test case for a gas-only utility. The typical HER is mailed, which means that customers do not have to have a personal computer or be computer literate. However, Opower will be testing both paper and email reports with SoCalGas.

The SoCalGas/Opower pilot program will provide 50,000 AM Billed customers a monthly paper and/or e-mail HER. The report will provide the following based on Opower's "Best Practices":

- *Information on energy use:* View of the customer's energy use, leveraging SoCalGas interval data, in the context of the energy use of their neighbors' homes that are nearby and similar in size
- *Progress tracking:* Changes in customer's energy use over time
- *Ideas on Energy Efficiency:* Ways to save energy ("tips"), including where to find SoCalGas information on rebates and other special programs offered

Copies of the Opower collateral materials are provided in Appendix N.

[13] See Appendix M for various Bill Tracker Alert materials.

Therefore, the overall strategy in this, year one, is to leverage the MyAccount website as the core offering for SoCalGas customers and attempt to drive more customers to the website. In addition, SoCalGas will provide two additional offerings customers can use to access and utilize the Advanced Meter information.

9.D Residential Campaign Design

SoCalGas has teamed with Freeman, Sullivan & Co. (FSC) to develop a comprehensive conservation outreach plan (Plan). The Plan calls for using a *test and learn* program development strategy in which continuous assessment and improvement in the performance of feedback programs is the objective. As implementation proceeds from year to year, 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 Advanced Meter roll out, the most effective means for encouraging energy savings from information feedback will be identified and offered to customers. A complete copy of FSC's Plan can be found in Appendix O.

The conservation outreach campaign will occur during the “heating season” that runs from October 1, 2013 through March 31, 2014. The campaign theme is based on a plan to include every eligible AM Billed customer in the marketing outreach efforts under the *test and learn* program design. Based on the energy conservation results at the end of heating season, some underperforming customer segments may be excluded from the following year's conservation campaign in order to allocate limited marketing resources towards segments that have a higher propensity to change behavior and conserve energy, based on the FSC energy conservation analysis.

Although in future years, some customers may be excluded from targeted conservation campaign outreach activities, every SoCalGas customer will receive a letter within 60 days of becoming AM Billed that outlines all the Ways-to-Save online tools and information, plus Bill Tracker, enabled by their new Advanced Meter throughout the duration of the project. MyAccount customers will also receive an email highlighting the new functionality.

Based on the AM module installation schedule, SoCalGas will have approximately 600,000 residential customers with installed modules that are AM Billed by September 30, 2013. This group of customers, plus 25,000 AM Billed business customers will represent the target audience for the 2013/14 conservation campaign.

These customers will be assigned into various test cells to address as many customer segments as possible. Some customers will be assigned into a "control group" and will not receive any direct mail or email solicitations from SoCalGas or Opower. This is necessary to ensure accurate measurement of the actual gas consumption impacts of the campaign.

Through the FSC energy conservation analysis, SoCalGas will be able to identify customer segments that are more likely to take advantage of the information feedback options made available and to respond by conserving natural gas. This will include analyzing the performance of various test cell groups and conducting "post-responder analysis" on test cells that performed the highest, including the overlay of additional SoCalGas customer data (e.g., AM customer segment, usage deciles, CARE, MyAccount, etc.).

The Plan will allow SoCalGas to identify behavioral changes that that lead to energy conservation between the following combinations of attributes, customer segments, and communication channels:

- **Default versus opt-in customers**: Default customers are automatically placed into a program (e.g., HER or Bill Tracker) with the ability to opt-out (i.e., unsubscribe). Whereas, opt-in customers must proactively enroll in a program (i.e., Bill Tracker) and/or visit the Ways-to-Save tab on SoCalGas.com to receive usage information and savings tips which requires an additional step and can yield reduced participation rates.
    - **SoCalGas MyAccount versus non-MyAccount customers**: MyAccount customers are thought to be the most "engaged" SoCalGas customer segment based on historical program participation levels. Non-My Account customers have historically low program participation levels.
      Opower eligible versus non-eligible customers: Opower has a proprietary "eligibility screen" based on various criteria developed with other utilities over the years that eliminate certain customers

from receiving Opower HER marketing outreach materials. SoCalGas and Opower expect 80+% of AM Billed customers will pass the Opower eligibility screen. In addition, SoCalGas will market to customers that don't pass the Opower eligibility screen as part of our Leave No Customer Behind plan for the 2013/14 heating season. Below are some of the factors included in the Opower eligibility screen:

- Minimum of 12-months of usage data
- Type of home (e.g., single family, multi-family, condo, etc.)
- Rate plan
- Minimum of 100 quality "neighbors" (homes similar in characteristics to which the customer can be compared)
- Exclusion of overly high or low usage "outliers"
- Historical program participation rates, including MyAccount
- Plus other factors proprietary to Opower

- **Medium-to-high usage versus low usage customers**: Residential customers were divided into four annual usage quartiles. The top three quartiles represent medium-to-high usage customers and the bottom quartile represents low usage customers.
- **Direct mail versus email versus direct mail and email outreach**: The Plan will test various combinations of outreach channels for the SoCalGas customer segments.
- **Website versus microsite versus mail-back alert enrollment response channel analysis**: For opt-in customers, the Plan will test the preferred enrollment channel for customers between the SoCalGas.com website, the BillTracker.SoCalGas.com enrollment microsite, and a BRC included in the direct mail solicitations and community event brochures. The SoCalGas CCC and outbound telemarketing enrollment channels may be added in early 2014.

Specifically, the Plan will assess the:

- Impact of opt-in Bill Tracker alert (BTA) on gas consumption
- Relative effectiveness of different marketing messages for opt-in BTA
- Impact of default BTA on gas consumption
- Impact of default HERs on gas consumption

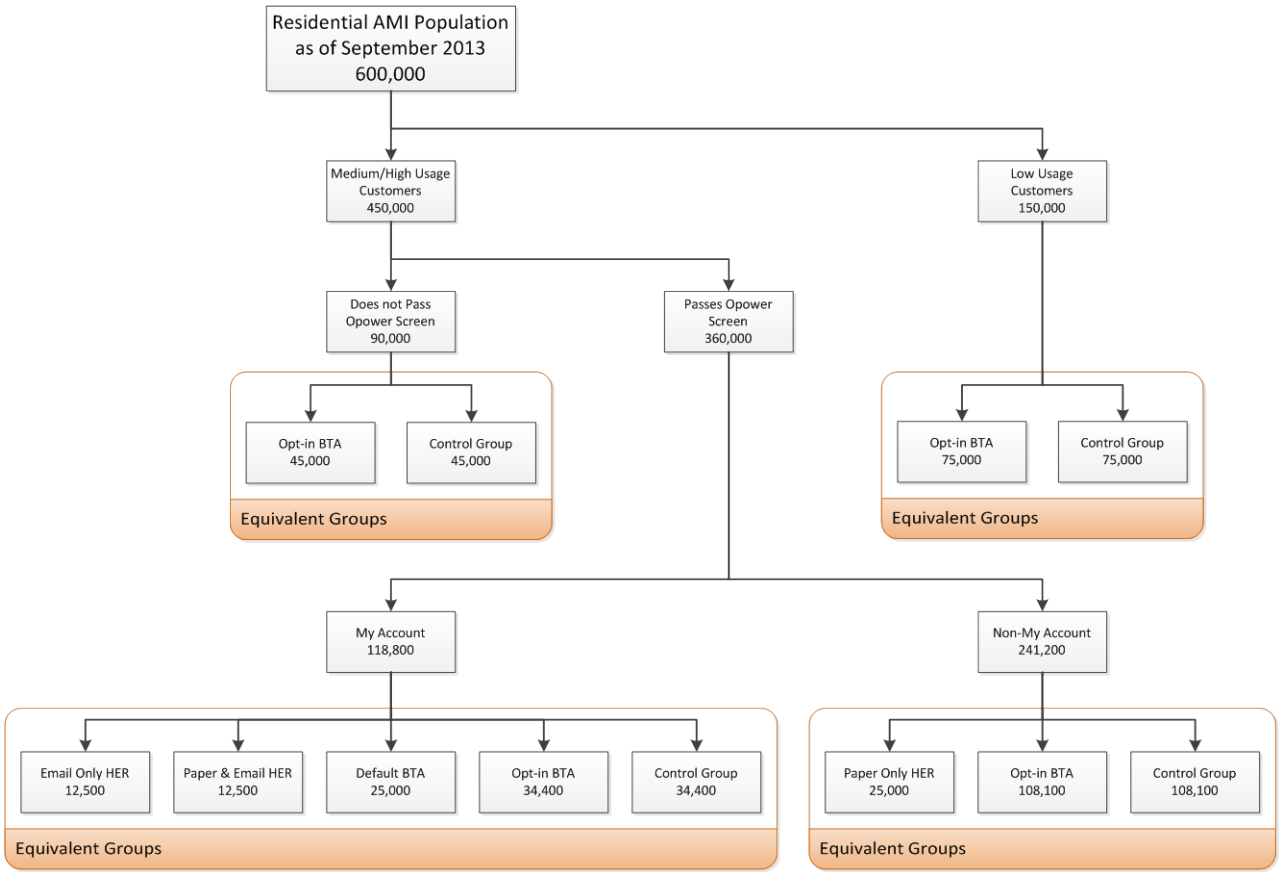
- Relative impacts of three different types of HERs (email only, paper only, paper and email)
- Relative impacts of default BTA and default HERs among medium to high usage MyAccount customers

SoCalGas and FSC considered the full spectrum of experimental and quasi-experimental options before determining that a randomized encouragement design (RED) was the preferred option for the opt-in Bill Tracker treatments and a randomized control trial (RCT) design could be implemented for the default enrollment programs.

RED and RCT design options require large control groups for each corresponding test cell. Therefore, out of the approximately 600,000 AM Billed residential customers for the 2013/14 conservation campaign, 44% (262,500) will be assigned to a FSC control group, 8% (50,000) to Opower, and the remaining 48% (287,500) will be incorporated into the SoCalGas test cells. Figure 4 graphically depicts the overall design of the residential conservation outreach campaign.[14]

[14] Pursuant to D.12-11-015, SoCalGas also is utilizing its Advanced Meter project to support its Energy Efficiency non-resource behavioral goals, which contain a 5% behavioral target for residential households by 2014. This goal translates to approximately 268,000 customers (5% of 5,372,645 residential customers). SoCalGas will separately submit annual reports in 2014 and 2015, which will address its efforts in meeting its year Energy Efficiency non-resource behavioral goals adopted in D.12-11-015.

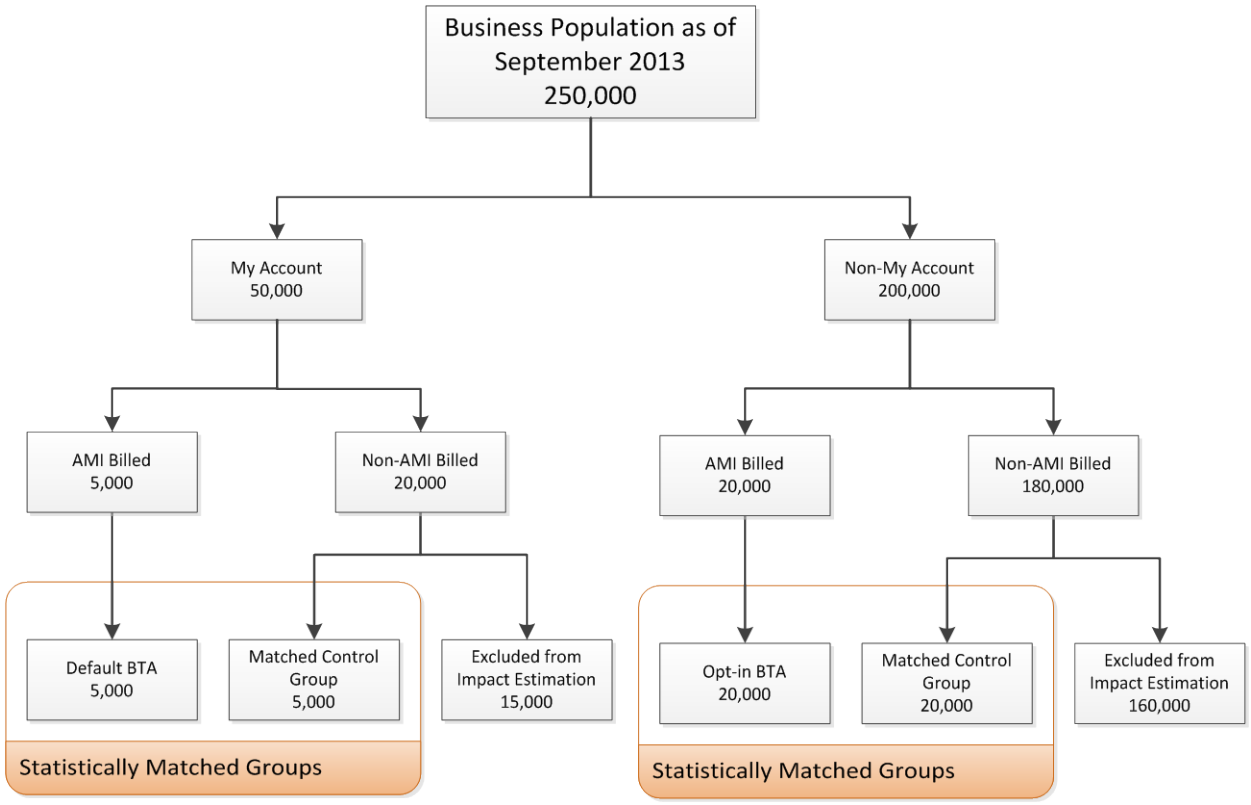
Figure 4
Market Segmentation and Sample Requirements for Initial Residential Customer Tests



9.E Business Campaign Design

SoCalGas estimates that 25,000 of its approximately 250,000 business customers will be AM Billed by September 1, 2013. This number of AM Billed customers is insufficient to conduct rigorous impact analyses with an RED or RCT design. Nonetheless, SoCalGas plans to test customer acceptance of two programs among the AM Billed business customers – default Bill Tracker Alert and opt-in Bill Tracker Alert. SoCalGas plans to conduct impact analyses for these two programs using a statistically matched control group of business customers that are not AM Billed. Although this impact estimation method is not as precise as a RED or RCT, it is still worthwhile to conduct the matched control group analysis. If default Bill Tracker Alert or opt-in Bill Tracker Alert have a relatively large percentage impact on usage, this method will be able to detect the effect.

Figure 5
Market Segmentation and Sample Requirements for Initial Business Customer Tests



9.F Hard-to-Reach Community Events

SoCalGas has engaged PRM Consulting (PRM) to pilot a series of community events in the Imperial and Riverside counties to extend customer outreach to AM Billed hard-to-reach customers October 2013 through March 2014. PRM will engage:

- Local community organizations
- Faith-based-organizations
- Civic organizations
- Business organizations

PRM will participate in local events to increase customer awareness of the Advanced Meter enabled Ways-to-Save online tools and information, plus obtain enrollments in the new Bill Tracker alert. Appendix Q provides a list of local

events scheduled by PRM. PRM also plans to establish relationships with community papers, Spanish language papers and radio, and local schools to increase awareness of Advanced Meter enabled programs and services.

Based on the success of the 2013/14 events, SoCalGas may expand these events to other communities in 2014/15.

Although the PRM activities may reach some customers in the FSC designated "control groups," we do not expect that this will have any significant "contamination" effect on the energy conservation results of the various test cells due to their overall size, as outlined in Section 9.D and 9.E above.

Chapter 10 - Financial Status

To track expenses during the project, Ordering Paragraph 7 of the Decision, 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 AMI application was submitted, and in the AMI application requested that this funding be re-directed to the AMI project In D.10-04-027, the CPUC approved this request.[15] The total budget for the SoCalGas Advanced Meter project is $1,064 million, which included a contingency fund of $68.7 million.

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

Table 15 displays the Advanced Meter spending through June 2013, by the major project activities, and also displays the forecast for the entire project. At this point, SoCalGas believes the project will be delivered within the approved budget.

Table 15
Financial Results
Recorded 2010 through June 2013
Forecast July 2013 – 2017

	2010	2011	2012	YTD 2013	Project to Date	Project Forecast
Project Management Office	2,619	6,477	6,634	2,537	18,267	28,830
Meters, Modules & Installation	120	3,718	28,410	40,323	72,571	516,188
Network	777	3,744	14,429	12,366	31,317	91,317
Information Technology	6,011	16,873	21,931	7,300	52,115	93,289
Customer Outreach	324	1,027	2,085	2,111	5,612	26,218
Employee Awareness	65	3,078	3,732	1,417	8,227	12,441
Other	303	-	710	1,068	2,081	14,445
Taxes						29,201
Overheads & AFUDC	2,382	10,828	23,663	19,251	56,124	222,359
Contingency						29,968
Total	12,601	45,745	101,594	86,374	246,314	1,064,256

The sequencing of the spending to date is typical of the pattern for virtually all such major projects. The early years of the project are 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. The SoCalGas plan always contemplated that the DCUs would be constructed prior to the installation of the modules so that the modules would be immediately effective in delivering benefits to customers. Finally, the modules themselves would be installed. As indicated in Chapter 2, SoCalGas began installing its DCUs in June 2012, and its modules in October 2012.

Table 15 displays a spending pattern consistent with that plan. In 2010 and 2011, SoCalGas spent $47.3 million. Almost half - $22.3 million - was spent on information systems. The second largest activity was the Project Management Office at $9.1 million. The primary activities performed in the PMO were to develop the new business processes around which the IT systems were built, and to develop the governance and financial systems to be used through the project fruition. The third largest activity involved the planning for the network construction, which totaled about $4.5 million.

In 2012, the pattern shifted. First, the project pace accelerated. SoCalGas spent almost twice as much in 2012 ($80.1 million) as it had in 2010 and 2011 combined ($47.3 million). The largest spending activity – almost $25 million – was for the purchases of new meters and modules and the commencement of their installation in October 2012. The second largest activity involved the continued building and implementation of information systems at $21.7 million. The third largest activity was the construction of the DCUs at about $15 million. In both 2011 and 2012, SoCalGas spent over $3 million in training and preparing its employees to use the new Advanced Meter technology.

The 2013 spending reflects a project in full construction. The purchase and installation of meters and modules dominates at almost $32 million. The second largest activity is the continued construction of the communications network at over $9 million. The continued building of information systems is the third largest activity at about $5 million.

The project forecast is displayed in the right hand column of Table 15. While this report will not contain a comparison of current spending to the business case, some overall trends can be identified. The first is that the contingency fund of about $30 million is below the approved contingency of $68.7 million.

Most of this money was redirected to activities related to informing customers about the SoCalGas Advanced Meter project. The business case underlying the application contained about $10 million for general customer outreach. As the table shows, SoCalGas now expects to spend approximately $26.2 million, over twice as much as contemplated in the business case.

This shift is driven largely by two factors. First, smart meters became a 'front page' issue as the electric utilities in California implemented their AMI projects. Heightened customer awareness in California about smart meters elevated the importance of SoCalGas having an effective outreach program. Second, the CPUC decision, in both letter and spirit, instructed SoCalGas to perform outreach to all of its customers, including contracting with community and faith based organizations to reach hard-to-reach customers. The current SoCalGas budget reflects more aggressive customer outreach than planned in the original business case.

The remaining use of the contingency is distributed across multiple cost categories.

Chapter 11 - 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 be virtually eliminated by the project. Both SoCalGas and the CPUC are concerned about these impacts. The Commission specifically addressed this concern. Ordering Paragraph 1 of the Decision 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 Educational Assistance Fund specifically to support the Meter Reading personnel in place in April 2010. As of June 30, 2013, meter readers had been reimbursed approximately $88,500 through this fund. While this fund has not been heavily utilized by meter readers, they have been active in seeking employment opportunities within the Company.

To assist full-time meter reading personnel in finding other positions within the Company, SoCalGas negotiated a Priority Placement Program. The Program

provided Meter Reading personnel who were full-time in April 2010, with enhanced priority in bidding for positions elsewhere in the Company. Employees had a choice as to whether or not they wanted to participate.

Table 16 displays the current status of those Meter Reading personnel who were employed in April, 2010, when the project was approved by the CPUC.

Table 16

Status of Meter Reading Personnel Employed in April 2010

Meter Reading Personnel	Work Force in April 2010	Remain in Meter Reading March 31, 2013	Left Company	Transition Within Company
Full-time	166	48	16	596
Part-time	818	189*	133	
Management	46	31	2	15
Total	1,030	268	151	611
Percent of Work Force	100%	26.0%	14.7%	59.3%

*90 of these employees have been promoted to full-time positions, but still within Meter Reading.

As Table 16 shows, almost 600 employees (60 percent of the non-management Meter Reading workforce) have transitioned to another position within the Company. About 15 percent of those employed in 2010 have left the Company. 268 employees (26 percent) remain in the Meter Reading organization.

237 of the remaining 268 employees are full-time and part-time Meter Reading employees. As indicated above, the 48 full-time employees had the opportunity to participate in the Priority Placement Program. Of the remaining 189 part-time meter readers, 90 have been promoted to full-time positions in Meter Reading. While these positions will eventually be eliminated, the employees in these positions are gaining full-time seniority and will be better positioned to bid to other jobs outside of Meter Reading.

Appendices

Appendix A – Sample Data Collection Unit Installations

1. Wood Pole

2. Concrete Pole

3. Steel Pole

4. Attachment

Appendix B - Master Schedule of Warehouse Openings and Closings

	Warehouse	Start	End	# of Modules to Install
Area A	Sun Valley	4/1/2013	8/16/2013	44,425
	Northridge	8/19/2013	7/10/2015	608,005
	Oxnard	7/13/2015	3/11/2016	203,622
	Bakersfield	4/15/2013	11/27/2013	103,253
	Visalia	12/2/2013	10/17/2014	187,891
	Templeton	10/20/2014	1/23/2015	32,016
	Morro Bay	10/20/2014	1/23/2015	32,727
	Nipomo	1/26/2015	10/23/2015	88,641
	Santa Barbara	10/26/2015	12/22/2016	71,896
Area B	Irwindale	3/4/2013	10/10/2014	466,631
	Chino	10/13/2014	3/27/2015	147,797
	Rancho Cucamonga	3/30/2015	10/23/2015	183,711
	San Bernardino	10/26/2015	8/5/2016	215,682
	Lancaster	8/8/2016	2/3/2017	123,139
	Valencia	2/6/2017	6/23/2017	93,014
Area C	South Gate	10/29/2012	9/12/2014	427,258
	Los Angeles	6/2/2014	12/18/2015	493,615
	Santa Monica	12/21/2015	9/30/2016	297,824
	Lawndale	10/3/2016	8/18/2017	276,349
	San Pedro	10/3/2016	5/12/2017	114,490
Area D	El Centro	2/4/2013	5/13/2013	36,777
	Indio	5/13/2013	11/15/2013	197,917
	Beaumont	11/18/2013	5/9/2014	47,564
	Moreno Valley	11/18/2013	8/15/2014	156,986
	Hemet	11/18/2013	5/23/2014	61,949
	Murrieta	5/12/2014	10/24/2014	134,682
	Corona	10/27/2014	3/6/2015	145,548
	Garden Grove	3/9/2015	6/3/2016	594,389
	Laguna Niguel	6/6/2016	5/12/2017	247,584

Appendix C – DCU Construction Notification Letter

August 30, 2013

Dear Valued Customer:

In the upcoming weeks, an authorized contractor of Southern California Gas Company (SoCalGas®) will be working in your neighborhood to install equipment to support the advanced meter communication network. This effort is the first step towards upgrading our metering technology which will transform the way we deliver service to our customers and enhance your ability to manage your energy usage. *Enclosed please find additional information regarding the advanced meter project.*

The installation of the communication network may involve the construction of a new pole and/or replacement of an existing pole to support our network communication equipment. During this time, we may need to excavate within a designated area in your neighborhood and maintain a safe working environment within your community. We apologize in advance for any inconvenience during our construction.

If you have any questions, please contact me and I will be happy to assist you.

Sincerely,

Construction Project Manager

ADVANCEDmeter

Appendix D – Cities with All DCUs Installed (as of June 30, 2013)

Cities			Counties
Adelanto	Duarte	Porterville	Imperial County
Alhambra	El Centro	Reedley	
Artesia	El Monte	Rosemead	
Bakersfield	Fullerton	San Gabriel	
Baldwin Park	Glendale	San Jacinto	
Banning	Glendora	San Marino	
Beaumont	Hanford	Santa Fe Springs	
Bell	Hawaiian Gardens	Shafter	
Bell Gardens	Hawthorne	South El Monte	
Bellflower	Hemet	South Gate	
Blythe	Holtville	South Pasadena	
Brawley	Huntington Park	Stanton	
Buellton	Imperial	Taft	
Buena Park	Industry	Temple City	
Calexico	Irwindale	Tulare	
Calimesa	La Habra	Twentynine Palms	
Calipatria	La Habra Heights	Vernon	
Carson	La Mirada	Villa Park	
Cathedral City	La Palma	Visalia	
Cerritos	La Puente	Walnut	
Coachella	Lakewood	Wasco	
Colton	Lemoore	Westminster	
Commerce	Lompoc	Westmorland	
Compton	Lynwood	Whittier	
Corcoran	Menifee	Yucca Valley	
Covina	Montebello		
Cudahy	Monterey Park		
Cypress	Norwalk		
Delano	Paramount		
Desert Hot Springs	Pasadena		
Dinuba	Pico Rivera		
Downey	Placentia		

Appendix E – Radio Disney Samples

School Assembly Schedule

11/5/12:	Frank E. Woodruff Elementary/Bellflower
12/18/12:	Nixon Academy/Cerritos
1/28/13:	Kennedy Elementary/Artesia
2/8/13:	Intensive Learning Center/Lakewood
2/21/13:	San Rafael Elementary/Lakewood
2/22/13:	Wittman Elementary/Cerritos
3/8/13:	Longfellow Elementary/Pasadena
3/22/13:	Luther Burbank Elementary/Artesia
3/28/13:	Gompers Elementary/Lakewood
3/29/13:	Baxter Elementary/Bellflower

School Assembly Set Up

- On-site set-up to include Team Green 7x7' backdrop, and Team Green table cover
- 2 wing banners customized with SO CA Gas Company logo

School Assembly Set Up

School Certificate-Team Green School with SoCalGas Company

Games were customized for SoCalGas Company

Frank E. Woodruff Elementary School

11/5/12

Bellflower

Southern California Gas Company
A Sempra Energy utility

Radio Disney
team green

Frank E. Woodruff Elementary

Bellflower-11/5/12

Kids & teachers getting to learn all about the Advanced Meters!

Scratch & Sniff Cards

Frank E. Woodruff Elementary

Bellflower-11/5/12

What is the Advanced Meter...

Gas vs. Electric Relay

Prices for participants

Frank E. Woodruff Elementary

Bellflower-11/5/12



DJ Mike asking what gas smells like...

Word scramble


Team Green prizing...

Frank E. Woodruff Elementary

Bellflower-11/5/12

DJ Mike presenting school certificate...on behalf of the SoCalGas Company

Appendix F – Bill Insert

August 2012 Bill Insert

Front

August 2012 Bill Insert

Back

SOUTHERN CALIFORNIA GAS COMPANY (SOCALGAS®) IS ADVANCING THE WAY WE DO BUSINESS, AND LIKE MANY ENERGY COMPANIES AROUND THE WORLD, WE'RE UPGRADING OUR INFRASTRUCTURE WITH NEW TECHNOLOGY TO PROVIDE OUR CUSTOMERS WITH MORE ENHANCED SERVICES.

Across our service territory, we will be upgrading our natural gas meters with an advanced meter communication device to automatically and securely transmit gas usage information to our customer service and billing center.

Once installed, advanced meters will improve operating efficiencies and enable more privacy and security for our customers by reducing access to their premises. Also, by empowering our customers with more information to manage and better control their gas use and costs, we anticipate reducing 140,000 tons of greenhouse gases every year.

With the advanced meter, hourly usage will be available to you through My Account at **socalgas.com**. With just a few clicks of a mouse, customers will be able to view hourly and daily gas usage on a next-day basis rather than waiting for a monthly bill. For those who do not have online, smart phone or other technology-related access, we are investigating other potential ways to view usage information, such as calling SoCalGas or requesting a report by mail.

The advanced meter project will start later this year and will continue through 2017. To find out more about this initiative and to view our schedule to see when we will be installing in your area, go to **socalgas.com** (search *"ADVANCED"*).

EN SOUTHERN CALIFORNIA GAS COMPANY (SOCALGAS®) ESTAMOS AVANZANDO EN LA FORMA EN QUE HACEMOS NEGOCIO Y, AL IGUAL QUE MUCHAS EMPRESAS DE ENERGÍA ALREDEDOR DEL MUNDO, ESTAMOS ACTUALIZANDO NUESTRA INFRAESTRUCTURA CON TECNOLOGÍA NUEVA PARA OFRECER A NUESTROS CLIENTES MÁS SERVICIOS MEJORADOS.

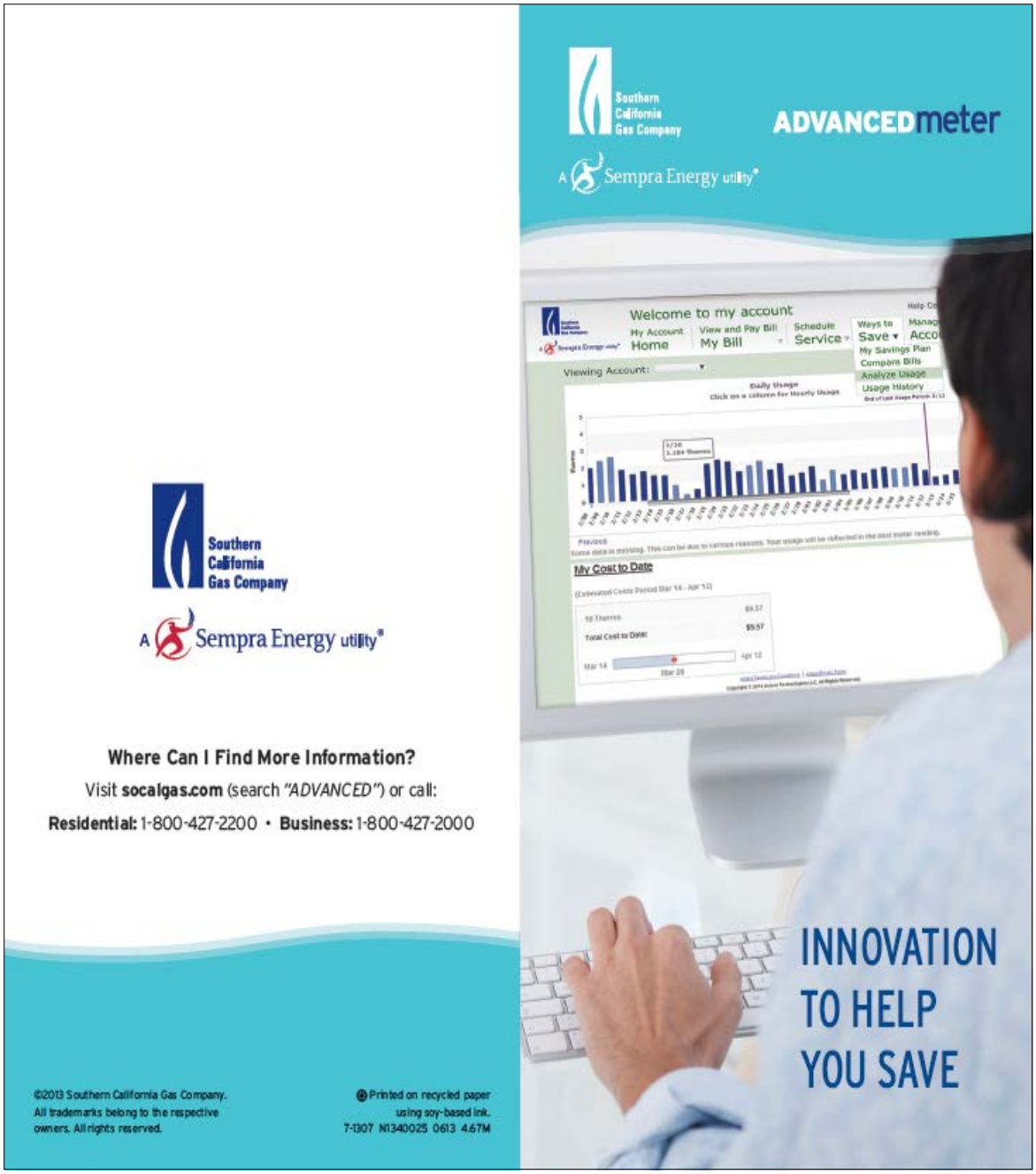
En todo nuestro territorio de servicio, estaremos actualizando nuestros medidores de gas natural con un dispositivo de comunicación para medidores avanzados (advanced meters), a fin de que automáticamente y de manera segura transmita información sobre el consumo de gas a nuestro centro de servicio al cliente y facturación.

Una vez instalados, los medidores advanced meter podrán ayudar a mejorar las eficiencias operativas, y permitirán que nuestros clientes tengan mayor privacidad y seguridad al reducir el acceso a sus instalaciones. Además, al empoderar a nuestros clientes con más información para administrar y controlar mejor su consumo de gas y lo que les cuesta, anticipamos la reducción de 140,000 toneladas de gases de efecto invernadero cada año.

Con el medidor advanced meter, podrá ver el consumo por hora a través de My Account en **socalgas.com**. Con darle unos cuantos clics al mouse, los clientes podrán ver al día siguiente el consumo de gas por hora y día sin tener que esperar a que llegue la factura mensual. Para aquellos que no tienen Internet, teléfono inteligente u otro acceso tecnológico, estamos investigando otras formas potenciales de ver la información de consumo, como llamar a SoCalGas o pedir un informe por correo.

El programa de medidores advanced meter empezará a finales de este año y continuará durante 2017. Para averiguar más acerca de esta iniciativa y consultar nuestro calendario para ver cuándo estaremos haciendo instalaciones en su zona, visite **socalgas.com/espanol** (busque la palabra clave *"AVANZADO"*).

Appendix G – Module Installation Notification Letter



Pre Installation Letter

Front

Southern California Gas Company
A Sempra Energy utility®

ADVANCEDmeter

Southern California Gas Company (SoCalGas®) will be in your area over the next few weeks to upgrade the natural gas meter with an advanced meter communications device. The upgrade will enable you to access more detailed information about your gas usage so you can better control and manage your energy costs.

What you can expect:

- Advanced meter installations will typically occur Monday through Friday 7 a.m. to 5 p.m. and will take about 15 minutes to complete.
- In most cases, you will not need to be present and you should not have an interruption to your gas service.
- Until our communications network is fully operational in your area, we will need access to manually read the meter for a few more months.

How you can help:

- For the safety of our employees, please provide safe access to the natural gas meter by keeping the area around the meter clear of any obstructions, plants or shrubs. If you have a locked gate or a dog that prevents access, please call the Advanced Meter Customer Information Center at **1-877-268-6211**, Monday through Friday 7 a.m. to 8 p.m. or Saturday 8 a.m. to 5 p.m., to make access arrangements.

The easiest way to view your gas usage information will be through My Account at **socalgas.com**, where you can also view and pay your bill, request service and sign up for paperless billing. If you're not already enrolled in My Account, sign up today and we will email you when your more detailed advanced meter usage information becomes available online.

Thank you for your cooperation during the installation process. If you have any questions, please call SoCalGas at **1-877-268-6211** or visit **socalgas.com** (search "*ADVANCED*").

Sincerely,

Patrick Petersilia

Patrick Petersilia
Director, Advanced Meter Project

Enclosure [Advanced Meter Overview]

Printed on recycled paper.
N1350068 0413 100K

Pre Installation Letter

Back

ADVANCEDmeter

Southern California Gas Company (SoCalGas®) va a estar en su área las próximas semanas para mejorar el medidor de gas natural con un aparato de comunicación de medidor avanzado (advanced meter). La mejora le permitirá tener acceso a información más detallada acerca de su consumo de gas para que pueda controlar y administrar mejor sus costos de energía.

Lo que puede anticipar:

- Las instalaciones de los advanced meters tendrán lugar normalmente de lunes a viernes, de 7 a.m. a 5 p.m. y tardarán como 15 minutos en hacerse.
- En la mayoría de los casos, no necesitará estar usted presente, y no debe haber interrupciones en el servicio de gas.
- Hasta que nuestra red de comunicación esté funcionando plenamente en su área, necesitaremos tener acceso para leer manualmente el medidor por unos cuantos meses más.

Cómo puede ayudar:

- Para la seguridad de nuestros empleados, por favor facilite un acceso seguro al medidor de gas natural manteniendo el área que está alrededor del medidor libre de obstrucciones, plantas o arbustos. Si hay una puerta con candado o un perro que impide el acceso, por favor llame al Advanced Meter Customer Information Center al **1-877-268-6211** de lunes a viernes de 7 a.m. a 8 p.m. o sábados de 8 a.m. a 5 p.m., a fin de ponernos de acuerdo para el acceso.

La manera más fácil de ver la información de su consumo de gas va a ser a través de My Account en **socalgas.com**, donde podrá también ver y pagar su factura, solicitar servicio y inscribirse para la facturación sin papel (disponible en inglés únicamente). Si todavía no está inscrito en My Account, anótese hoy mismo y le enviaremos un mensaje por correo electrónico cuando ya pueda ver por Internet la información más detallada de su advanced meter.

Gracias por su cooperación durante el proceso de instalación. Si tiene alguna pregunta, por favor llame a SoCalGas al **1-877-268-6211** o visite **socalgas.com/espanol** (busque la palabra clave "*AVANZADO*").

Southern California Gas Company (SoCalGas®) 將在今後數周內對您所在區域的天然瓦斯計量表進行升級，安裝先進計量表 (Advanced Meter) 通訊裝置。 此次升級將使您獲得有關您使用情況的更多詳細資訊，從而更好地控制和管理您的能源成本。

您可預期：

- Advanced Meter 的安裝將在星期一至星期五上午 7 點至下午 5 點之間進行。此過程約需要 15 分鐘完成。
- 大多數情況下，您不必在現場，也不需要中斷瓦斯服務。
- 在您所在區域內的通訊網路尚未全面運作之前，我們仍需在接下來的幾個月內採取人工讀表方式。

您能幫助：

- 出於對我們員工的安全考慮，請您保持計量表周圍區域開闊，無障礙，植物或灌木，以便我們能安全接近天然瓦斯計量表。如果您的大門已上鎖或有狗看門，這將妨礙我們進入，請於星期一至星期五上午 7 點至下午 8 點或星期六上午 8 點至下午 5 點撥打 **1-877-268-6211** 聯絡 Advanced Meter 客戶資訊中心，以方便做好訪問安排。

查閱瓦斯使用資訊最簡便的方法是造訪 **socalgas.com** 網站中「My Account」進行查閱。在這裡，您還可以查閱和支付帳單，請求服務以及簽署無紙化帳單。如果您還沒有註冊「My Account」，請立即註冊，當有更多您的 Advanced Meter 使用相關資訊時，我們將傳送電子郵件與您聯絡。

感謝您在安裝過程中的配合。如有任何疑問，請撥打 **1-877-268-6211** 聯絡 SoCalGas 或造訪網站 **socalgas.com**（搜尋「*ADVANCED*」）。

Southern California Gas Company (SoCalGas®)는 천연가스 계량기를 고급 계량기 (Advanced Meter) 통신장치로 업그레이드 하기 위하여 다음 몇 주 동안 귀하의 거주 지역에서 설치 작업을 하게 됩니다. 업그레이드는 가스 사용량에 대하여 좀 더 자세히 알 수 있게 해주기 때문에 에너지 비용을 좀 더 잘 관리할 수 있도록 도와줄 것입니다.

설치 기본 정보:

- Advanced Meter 설치는 월요일부터 금요일까지 오전 7시에서 오후 5시 사이에 진행될 것이며, 설치완료하는데 15분 정도 소요될 것입니다.
- 대부분의 경우, 고객이 집에 있을 필요가 없으며, 설치 중 가스 서비스는 중단되지 않을 것입니다.
- 귀하의 해당 지역 내에서 저희 통신망이 완전히 가동되기까지는 몇 달 더 계량기를 수동으로 검침하기 위해 접근이 필요할 것입니다.

도움이 필요한 사항:

- 설치 직원이 천연가스 계량기에 안전하게 접근할 수 있도록 근처에 장애물, 식물이나 관목을 치워주시면 고맙겠습니다. 게이트가 잠겨 있거나 개 때문에 접근이 불가능하면, 월–금요일 오전 7시에서 오후 8시 또는 토요일 오전 8시에서 오후 5시 사이 Advanced Meter 고객정보센터(**1-877-268-6211**)로 전화하셔서 접근 가능 시간을 예약하시기 바랍니다.

고객이 가스 사용량을 점검할 수 있는 가장 쉬운 방법은 **socalgas.com**에서 My Account를 방문하시는 것 입니다. 여기서, 청구서도 볼 수 있고, 가스비도 납부할 수 있으며, 서비스 요청 및 전자 청구서 신청도 하실 수 있습니다. 아직 My Account에 가입하지 않으셨으면 오늘 가입하십시오. 귀하의 Advanced Meter 사용 정보가 좀 더 자세히 나오면 저희들이 이메일로 알려드리겠습니다.

설치 기간 동안 귀하의 협조에 감사를 드립니다. 질문이 있으시면 SoCalGas (**1-877-268-6211**)로 전화주시거나, **socalgas.com** ("*ADVANCED*"검색)을 방문하시기 바랍니다.

Southern California Gas Company (SoCalGas®) sẽ có mặt trong khu vực của quý vị trong một vài tuần tới để gắn thêm bộ truyền thông tin đồng hồ đo tiên tiến (Advanced Meter) vào đồng hồ đo gas tự nhiên. Nhờ vậy, quý vị có thể xem thông tin chi tiết hơn về việc sử dụng gas để kiểm soát cũng như quản lý chi phí năng lượng của mình tốt hơn.

Quý vị có thể lường trước rằng:

- Sẽ gắn Advanced Meter trong khoảng từ 7:00 giờ sáng đến 5:00 giờ chiều từ thứ Hai đến thứ Sáu, và sẽ mất khoảng 15 phút.
- Hầu như quý vị sẽ không cần có mặt, và quý vị sẽ không bị cắt gas.
- Cho đến khi hệ thống truyền thông của chúng tôi được đưa vào hoạt động đầy đủ ở khu vực của quý vị thì chúng tôi sẽ vẫn cần đích thân đến đọc đồng hồ trong vài tháng nữa.

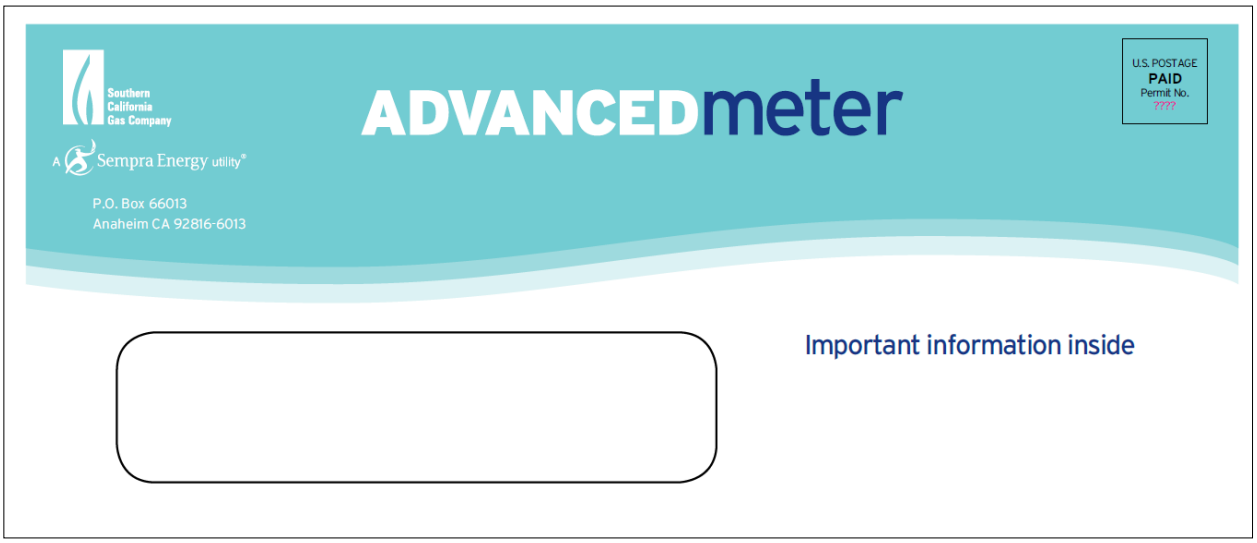
Quý vị có thể giúp bằng cách nào:

- Vì sự an toàn cho nhân viên của chúng tôi, xin vui lòng sắp xếp lối vào an toàn đến nơi gắn đồng hồ đo gas tự nhiên bằng cách dọn sạch vật cản, cây nhỏ và cây bụi xung quanh nơi gắn đồng hồ. Nếu có trở ngại khi vào nơi gắn đồng hồ như cổng có khóa hoặc có nuôi chó, xin vui lòng gọi cho Trung Tâm Thông Tin Khách Hàng Advanced Meter tại **1-877-268-6211**, từ 7:00 giờ sáng đến 8:00 giờ tối từ thứ Hai đến thứ Sáu hoặc từ 8:00 giờ sáng đến 5:00 giờ chiều ngày Thứ Bảy, để hẹn lịch đến gắn đồng hồ với nhân viên của chúng tôi.

Cách dễ nhất để xem thông tin sử dụng gas của quý vị là vào My Account tại **socalgas.com**, ở đó quý vị cũng có thể xem và trả hóa đơn, yêu cầu dịch vụ và ghi danh để được gửi hóa đơn điện tử. Nếu quý vị chưa đăng ký My Account, hãy đăng ký ngay hôm nay và chúng tôi sẽ gửi email cho quý vị khi trên mạng có thêm thông tin chi tiết hơn về việc sử dụng Advanced Meter của quý vị.

Cảm ơn quý vị đã hợp tác trong thời gian gắn đồng hồ. Nếu quý vị có bất kỳ câu hỏi nào, vui lòng gọi cho SoCalGas tại **1-877-268-6211** hoặc ghé thăm **socalgas.com** (tìm "*ADVANCED*").

Pre Installation Envelope



Advanced Meter Overview

English

Southern California Gas Company
A Sempra Energy utility®

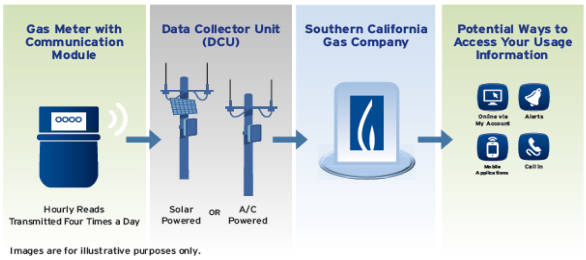
ADVANCEDmeter OVERVIEW

What are Advanced Meters?

Southern California Gas Company (SoCalGas®) is upgrading its system by adding an advanced meter communications device to all residential and business natural gas meters. The advanced meter device will read and transmit your natural gas usage information back to SoCalGas. However, until our communications network is fully operational in your area we will need access to manually read the meter for a few more months.

The advanced meter device, which will be installed on the existing analog meter, is battery-powered and turns on for only a fraction of a second a day, for a total of less than two minutes a year. Advanced meters cannot turn on or turn off your gas service. With this upgrade, you will have access to more frequent and detailed information about your gas consumption at **socalgas.com**, enabling you to have better control over your energy usage and potentially save money.

SoCalGas is scheduled to install the advanced meter device on approximately 6 million natural gas meters through 2017.



Images are for illustrative purposes only.

What if I don't want an Advanced Meter?

SoCalGas supports customer choice and recognizes that some residential customers may prefer not to have an advanced meter installed and would rather have the gas meter manually read each month. *If you do not want an advanced meter installed, you should immediately call our Customer Contact Center at **1-800-427-2200** and request to be added to the "advanced meter deferral list."

If you defer installation now, SoCalGas will contact you once the California Public Utilities Commission (CPUC) has ruled on our advanced meter opt-out program. You can decide at that time, based on the rate approved by the CPUC, whether you want to formally opt-out and pay the applicable fees or allow the installation of an advanced meter at no incremental cost.

*Deferral list option applicable to residential customers only.

Printed on recycled paper. N1350057 0513

BENEFITS OF ADVANCED METERS

- **Manage Energy Use Better:** You will have access to more detailed information and analysis tools online through My Account at **socalgas.com**, where you can also view and pay your bill, schedule service and sign up for paperless billing. We will notify you when your more detailed information becomes available online.
- **New "Ways to Save" interactive tool on socalgas.com (search *"WAYS TO SAVE"*):** You can currently create your own customized energy plan by answering a few questions. Track and update your progress and learn how your actions can help you save energy and money. In addition, you can view your hourly, daily and monthly gas usage online once we complete meter installations in your area.
- **Location Privacy and Security:** Customers who, in the past, had to provide SoCalGas with a key to their gates, leave latches unlocked or confine their dogs to allow meter reading will only need to provide entry for periodic maintenance. To increase privacy and security, only encrypted gas usage information will be transmitted from the meters.
- **Greater Accuracy:** Advanced meters can also improve billing accuracy, reducing the potential for errors.
- **Help the Environment:** Advanced meters will take 1,000 SoCalGas vehicles off the road every day, reduce 6.3 million vehicle miles and approximately 140,000 tons of greenhouse gases per year.
- **New Bill Tracker Alert:** Later this year, advanced meter customers will be able to sign-up for weekly alerts, providing up-to-date information on your energy usage, Bill-to-Date and Projected Next Bill via text or email.
- **Operational Efficiencies:** The advanced meter project will enable operational savings over the life of the project, estimated to be more than double the value of our investment. Operational savings will be passed along to customers in overall rates.
- **Where Can I Find More Information?**
  Visit **socalgas.com** (search *"ADVANCED"*) or call:

Residential Customers:

English	1-800-427-2200
國語	1-800-427-1429
粵語	1-800-427-1420
한국어	1-800-427-0471
Tiếng Việt	1-800-427-0478
For other languages	1-888-427-1345
Hearing Impaired (TDD)	1-800-252-0259

Business Customers:

English	1-800-427-2000

Advanced Meter Overview

Spanish

Southern California Gas Company

A Sempra Energy utility®

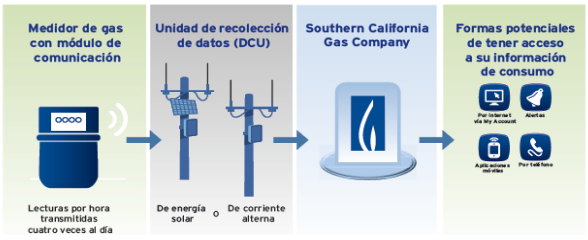
ADVANCEDmeter INFORMATIVO

¿Qué son los Advanced Meters?

Southern California Gas Company (SoCalGas®) está mejorando su sistema añadiendo un aparato de comunicaciones advanced meter a todos los medidores de gas natural residenciales y comerciales. El aparato advanced meter leerá la información de su consumo de gas natural y la transmitirá a SoCalGas. Sin embargo, hasta que nuestra red de comunicaciones esté en plena operación en su área, necesitaremos tener acceso para manualmente leer el medidor unos cuantos meses más.

El aparato advanced meter, que se instalará en el medidor analógico existente, es de baterías y se enciende solo una fracción de segundo al día, para un total de menos de dos minutos al año. Los advanced meters no pueden conectar o interrumpir el servicio de gas. Con esta mejora, usted tendrá acceso a información más frecuente y detallada sobre su consumo de gas en **socalgas.com/espanol**, lo que le permitirá tener más control sobre su consumo de energía y potencialmente ahorrar dinero.

SoCalGas tiene programado instalar el aparato advanced meter en aproximadamente 6 millones de medidores de gas natural para terminar en 2017.



Imágenes para fines ilustrativos únicamente.

¿Qué pasa si no quiero un Advanced Meter?

SoCalGas respalda la decisión del cliente y reconoce que algunos clientes residenciales tal vez prefieran que no se les instale un advanced meter y que mejor les lean manualmente el medidor de gas cada mes. *Si no quiere que le instalen un advanced meter, debe llamar inmediatamente a nuestro Centro de Contacto con el Cliente al **1-800-342-4545** y pedir que se le añada a la "lista de diferimiento de advanced meters".

Si difiere la instalación en este momento, SoCalGas se comunicará con usted una vez que la Comisión de Servicios Públicos de California (CPUC) se pronuncie acerca de nuestro programa para optar por excluirse del advanced meter. Puede decidir en ese momento, con base en la tarifa aprobada por la CPUC, si desea optar por excluirse formalmente y pagar las cuotas correspondientes o permitir la instalación de un advanced meter sin que se incremente gradualmente el costo.

* La opción de la lista de diferimiento se aplica a clientes residenciales únicamente.

Impreso en papel reciclado. N1350057 0413

BENEFICIOS DE LOS ADVANCED METERS

- **Mayor control del consumo de energía:** Tendrá acceso a información más detallada y herramientas de análisis por internet a través de My Account en **socalgas.com/espanol,** donde también puede ver y pagar la factura, programar servicios e inscribirse para facturación sin papel. Le notificaremos cuando pueda consultar por internet información más detallada.
- **Nueva herramienta interactiva "Ways To Save" en socalgas.com/espanol (busque las palabras clave *"WAYS TO SAVE"*):** Actualmente puede crear su propio plan de energía personalizado contestando unas cuantas preguntas. Controlar y actualice su progreso y averigüe cómo sus acciones pueden ayudarle a ahorrar energía y dinero. Además, puede ver por internet su consumo de gas por hora, día y mes una vez que terminemos la instalación de los medidores en su zona.
- **Privacidad y seguridad del lugar:** Los clientes que antes daban a SoCalGas una llave de sus puertas, dejaban los cerrojos sin candado o confinaban a sus perros para permitir la lectura del medidor ahora solo necesitarán permitir la entrada para mantenimiento periódico. Para aumentar la privacidad y seguridad, los medidores solo transmitirán información cifrada del consumo de gas.
- **Mayor exactitud:** Los advanced meters también pueden mejorar la exactitud de la facturación, reduciendo el potencial de errores.
- **Ayuda al medio ambiente:** Los advanced meters van a sacar diariamente de circulación 1,000 vehículos de SoCalGas, y cada año van a reducir en 6.3 millones las millas recorridas por sus vehículos y en aproximadamente 140,000 toneladas las emisiones de gases de efecto invernadero.
- **Nueva alerta "Bill Tracker Alert" para monitorear la factura:** Este año, los clientes con advanced meters podrán inscribirse para recibir alertas semanales, ofreciéndoles información actualizada sobre su consumo de energía, el monto de la factura hasta ese momento y el monto pronosticado de la siguiente factura, vía mensaje de texto o correo electrónico.
- **Eficiencias operativas:** El programa advanced meter generará ahorros operativos a lo largo de la vida del programa, que se calculan en más del doble del valor de nuestra inversión. Los ahorros operativos se transferirán a los clientes en tarifas generales.
- **¿Dónde puedo encontrar más información?**

  Visite **socalgas.com/espanol** (busque la palabra clave *"AVANZADO"*) o llame al:

Clientes residenciales:

Español	1-800-342-4545
國語	1-800-427-1429
粵語	1-800-427-1420
한국어	1-800-427-0471
Tiếng Việt	1-800-427-0478
Para otros idiomas	1-888-427-1345
Personas con problemas auditivos (TDD)	1-800-252-0259

Clientes comerciales:

Español	1-800-427-6029

Appendix H – Frequently Asked Questions "Pocket Cards"

English

FORM 0165

Southern California Gas Company

A Sempra Energy utility®

ADVANCEDmeter

Frequently Asked Questions

Q. Who is getting an advanced meter?

A. All Southern California Gas Company (SoCalGas®) residential and business customers will receive an advanced meter over the next few years.

Q. What does installation of the advanced meter involve?

A. A SoCalGas employee will attach a communications device to the existing gas meter. In most cases, there will not be an interruption in your natural gas service and the installation will take only a few minutes to complete. In some instances, we may need to replace the meter.

Q. How often does the meter transmit information back to SoCalGas and does it emit a radio frequency (RF)?

A. The advanced meter transmits a signal for a fraction of a second per day (less than two minutes total per year) and the RF energy emitted is significantly less than many other devices we use every day like cell phones, laptop computers and microwave ovens. Advanced meters do not transmit any personally identifiable information, and all transmissions of usage information are encrypted for added security.

Q. When can I stop providing monthly access to the natural gas meter?

A. We will need safe access to manually read the meter for several more months; until our communications network is fully operational in your area. In the future, we will need meter access for periodic maintenance. We will notify you when you can view your natural gas usage online through My Account at **socalgas.com**.

Q. Why wasn't I notified about the advanced meter installation?

A. Some customers may not receive advance notification when a meter change is necessary for maintenance reasons (e.g. outdated meter, meter malfunction, change in meter size, safety issue, etc.).

Q. How can I learn more about advanced meters?

A. If you have additional questions, please visit us at **socalgas.com** (search *"ADVANCED"*) or call our Customer Contact Center at 1-800-427-2200.

Q. What if I don't want an advanced meter?

A. SoCalGas supports customer choice and recognizes that some residential customers may prefer not to have an advanced meter and would rather have the gas meter manually read each month. If you do not want an advanced meter, you should immediately call our Customer Contact Center at 1-800-427-2200 and request to be added to the "advanced meter deferral list." Deferral list option applicable to residential customers only.

If you defer installation now, SoCalGas will notify you once the California Public Utilities Commission (CPUC) has ruled on the advanced meter opt-out program. You can decide at that time, based on the rate approved by the CPUC, whether you want to formally opt-out and pay the applicable fees or allow the installation of an advanced meter at no incremental cost.

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Spanish

FORM 0165

Southern California Gas Company

A Sempra Energy utility®

ADVANCEDmeter

Preguntas frecuentes

P. ¿Quiénes van a recibir un medidor avanzado (advanced meter)?

R. Todos los clientes residenciales y comerciales de Southern California Gas Company (SoCalGas®) van a recibir un advanced meter en los próximos años.

P. ¿Qué implica la instalación del advanced meter?

R. Un empleado de SoCalGas va a ponerle un aparato de comunicaciones al medidor de gas existente. En la mayoría de los casos, no habrá una interrupción en el servicio de gas natural y la instalación sólo tomará unos minutos. En algunos casos, tal vez necesitemos reemplazar el medidor.

P. ¿Con qué frecuencia transmite el medidor información a SoCalGas? ¿Emite una radiofrecuencia (RF)?

R. El advanced meter transmite una señal por una fracción de segundo al día (menos de dos minutos en total al año) y la energía de RF emitida es considerablemente menor que la de muchos otros aparatos que usamos todos los días, como teléfonos celulares, computadoras portátiles y hornos de microondas. Los advanced meters no transmiten ninguna información de identificación personal y todas las transmisiones de información de consumo se cifran para mayor seguridad.

P. ¿Cuándo puedo dejar de permitir acceso mensual al medidor de gas natural?

R. Vamos a necesitar tener acceso seguro para leer manualmente el medidor por varios meses más; hasta que nuestra red de comunicaciones esté funcionando plenamente en su zona. En el futuro, necesitaremos acceso por un período de tiempo para el mantenimiento del medidor. Le notificaremos cuando pueda ver su consumo de gas natural por internet a través de My Account en **socalgas.com/espanol**.

P. ¿Por qué no me notificaron sobre la instalación del advanced meter?

R. Puede ser que algunos clientes no reciban una notificación previa cuando se tiene que cambiar el medidor por razones de mantenimiento (por ejemplo, un medidor obsoleto, fallas en el medidor, cambio en el tamaño del medidor, problemas de seguridad, etc.).

P. ¿Cómo puedo obtener más información sobre los advanced meters?

R. Si tiene más preguntas, por favor visítenos en **socalgas.com/espanol** (busque la palabra clave *"AVANZADO"*) o llame a nuestro Centro de Contacto con el Cliente al 1-800-342-4545.

P. ¿Y si no quiero un advanced meter?

R. SoCalGas respalda la decisión del cliente y reconoce que algunos clientes residenciales tal vez prefieran que no se les instale un advanced meter y que mejor les lean manualmente el medidor de gas cada mes. *Si no quiere un advanced meter, debe llamar inmediatamente a nuestro Centro de Contacto con el Cliente al 1-800-342-4545 y pedir que se le añada a la "lista de diferimiento de advanced meter". La opción de la lista de diferimiento se aplica a clientes residenciales únicamente.

Si difiere la instalación en este momento, SoCalGas se comunicará con usted una vez que la Comisión de Servicios Públicos de California (CPUC) se haya pronunciado acerca del programa para optar por excluirse del advanced meter. Puede decidir en ese momento, con base en la tarifa aprobada por la CPUC, si desea optar por excluirse formalmente y pagar las cuotas correspondientes o permitir la instalación de un advanced meter sin que se incremente gradualmente el costo.

Impreso en papel reciclado con tintas a base de soya.

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Appendix I – "Successful Installation" Door Hanger

Front

Back


FORM AM0537
Southern California Gas Company
A Sempra Energy utility®
NOTICE
IMPORTANT INFORMATION ON REVERSE
ADVANCEDmeter
To learn more, visit socalgas.com (search "ADVANCED") or call:
Customer Contact Center 1-800-427-2200
Hearing Impaired (TDD) 1-800-252-0259
What if I Don't Want an Advanced Meter?
Southern California Gas Company (SoCalGas®) supports customer choice and recognizes that some residential customers may prefer not to have an advanced meter and would rather have the gas meter manually read each month. If you would like to have the advanced meter removed and be added to our deferral list, please contact our Customer Contact Center at 1-800-427-2200. Deferral list option applicable to residential customers only.
If you request to be added to the SoCalGas deferral list, we will notify you once the California Public Utilities Commission (CPUC) has ruled on our advanced meter opt-out program. You can decide at that time, based on the rate approved by the CPUC, whether you want to formally opt-out and pay the applicable fees or allow the re-installation of an advanced meter.
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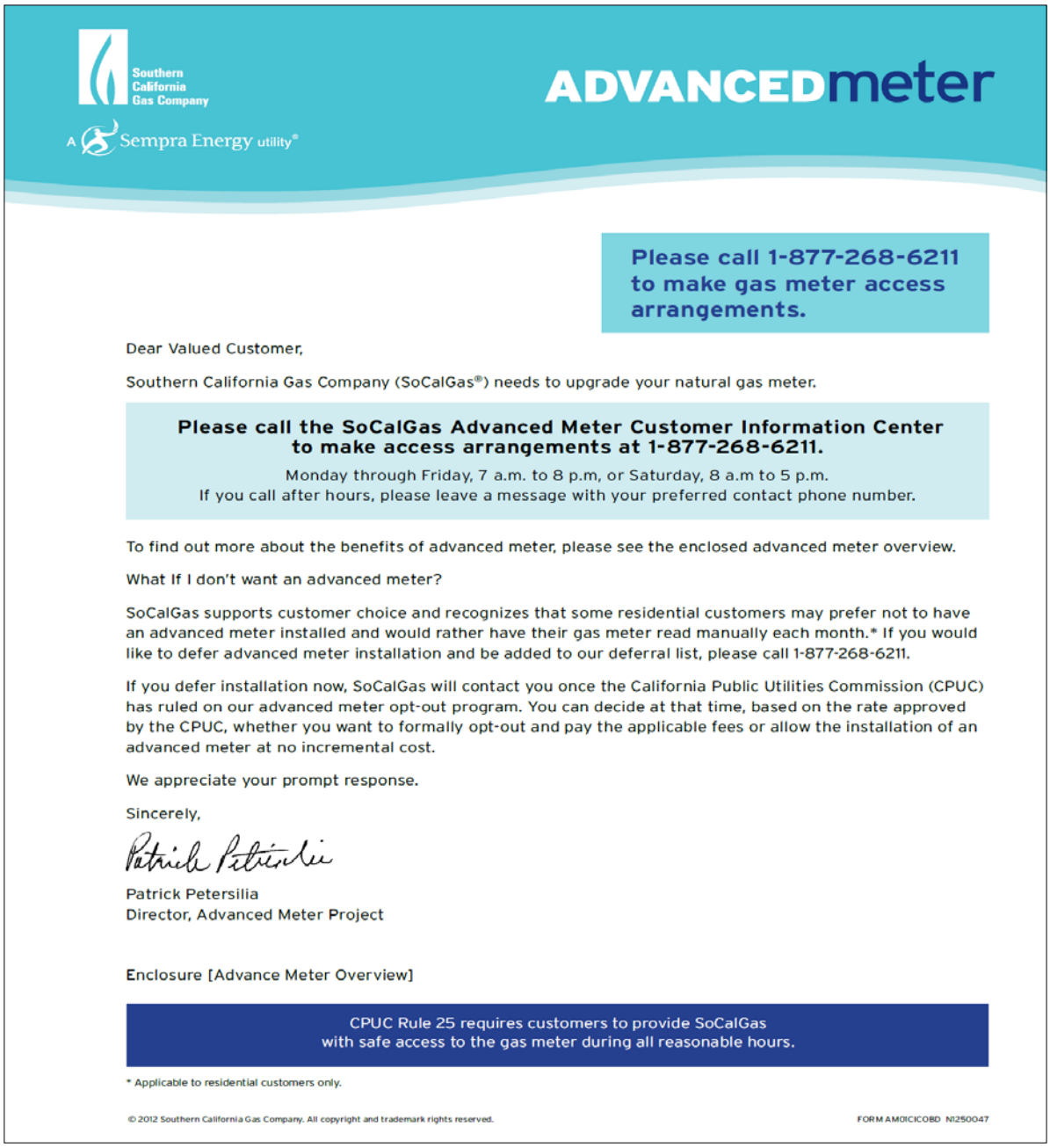
Appendix J – 'Unsuccessful Installation' Collateral Materials

Follow-up Pre Installation Letter



Southern California Gas Company
A Sempra Energy utility®

ADVANCEDmeter

Please call 1-877-268-6211 to make gas meter access arrangements.

Dear Valued Customer,

Southern California Gas Company (SoCalGas®) needs to upgrade your natural gas meter.

Please call the SoCalGas Advanced Meter Customer Information Center to make access arrangements at 1-877-268-6211.

Monday through Friday, 7 a.m. to 8 p.m, or Saturday, 8 a.m to 5 p.m.
If you call after hours, please leave a message with your preferred contact phone number.

To find out more about the benefits of advanced meter, please see the enclosed advanced meter overview.

What If I don't want an advanced meter?

SoCalGas supports customer choice and recognizes that some residential customers may prefer not to have an advanced meter installed and would rather have their gas meter read manually each month.* If you would like to defer advanced meter installation and be added to our deferral list, please call 1-877-268-6211.

If you defer installation now, SoCalGas will contact you once the California Public Utilities Commission (CPUC) has ruled on our advanced meter opt-out program. You can decide at that time, based on the rate approved by the CPUC, whether you want to formally opt-out and pay the applicable fees or allow the installation of an advanced meter at no incremental cost.

We appreciate your prompt response.

Sincerely,

Patrick Petersilia

Patrick Petersilia
Director, Advanced Meter Project

Enclosure [Advance Meter Overview]

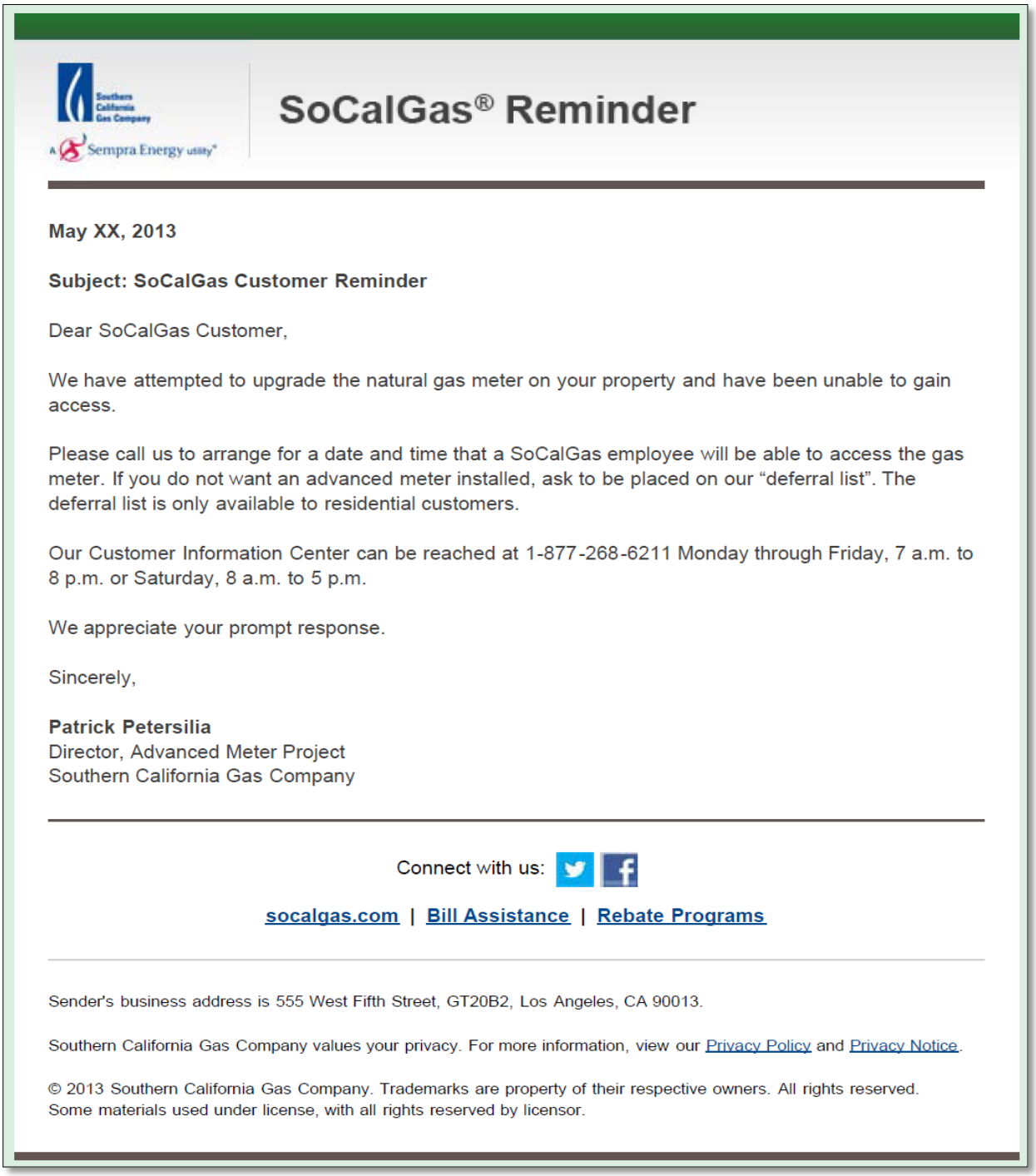
CPUC Rule 25 requires customers to provide SoCalGas with safe access to the gas meter during all reasonable hours.

* Applicable to residential customers only.

FORM AM01CICOBD N1250047

Schedule an Appointment Email

First Attempt Email



Southern California Gas Company
A Sempra Energy utility®

SoCalGas® Reminder

May XX, 2013

Subject: SoCalGas Customer Reminder

Dear SoCalGas Customer,

We have attempted to upgrade the natural gas meter on your property and have been unable to gain access.

Please call us to arrange for a date and time that a SoCalGas employee will be able to access the gas meter. If you do not want an advanced meter installed, ask to be placed on our "deferral list". The deferral list is only available to residential customers.

Our Customer Information Center can be reached at 1-877-268-6211 Monday through Friday, 7 a.m. to 8 p.m. or Saturday, 8 a.m. to 5 p.m.

We appreciate your prompt response.

Sincerely,

Patrick Petersilia
Director, Advanced Meter Project
Southern California Gas Company

Connect with us:

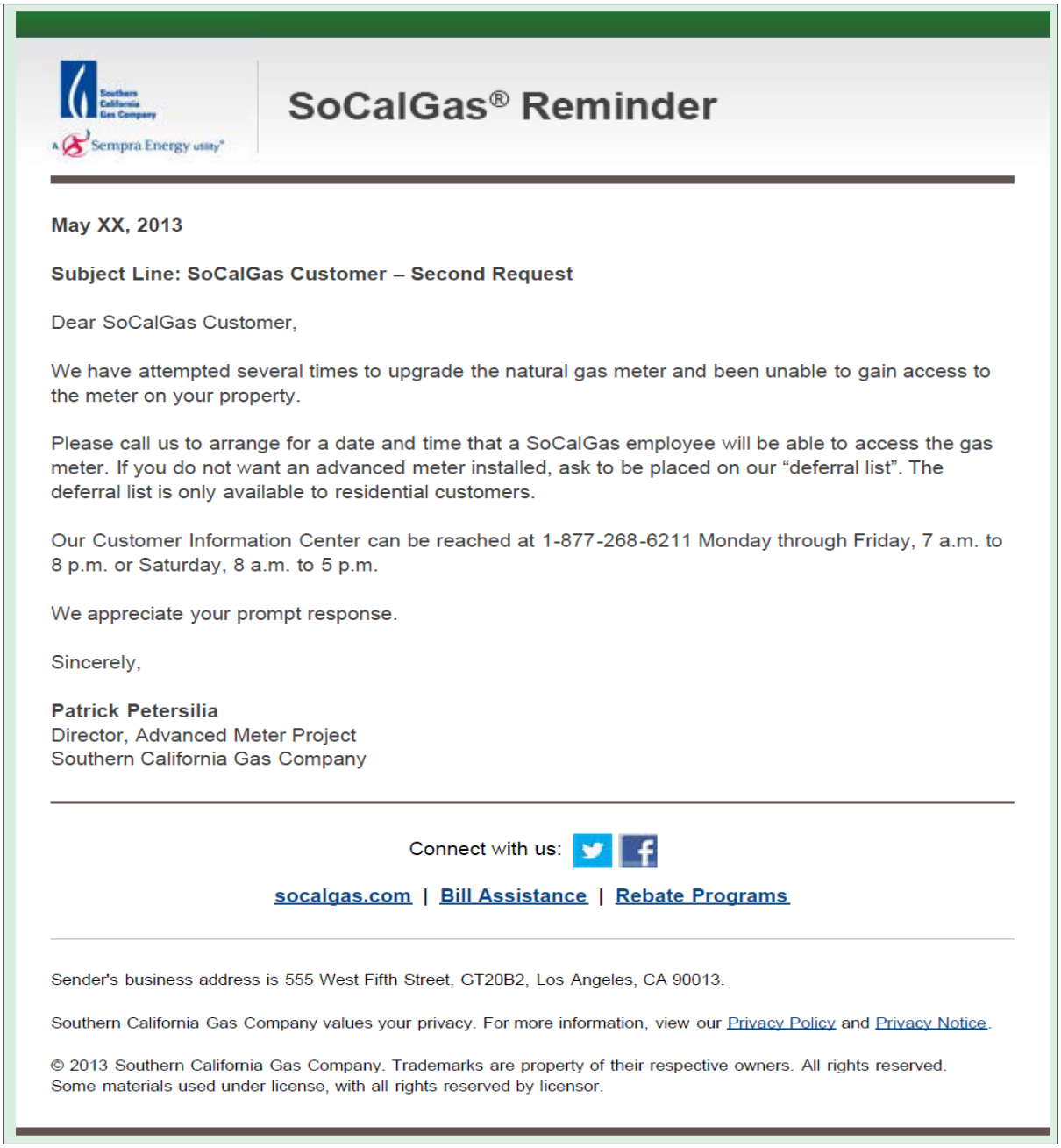
socalgas.com | Bill Assistance | Rebate Programs

Sender's business address is 555 West Fifth Street, GT20B2, Los Angeles, CA 90013.

Southern California Gas Company values your privacy. For more information, view our Privacy Policy and Privacy Notice.

Schedule an Appointment Email

Second Attempt Email



Southern California Gas Company
A Sempra Energy utility®

SoCalGas® Reminder

May XX, 2013

Subject Line: SoCalGas Customer – Second Request

Dear SoCalGas Customer,

We have attempted several times to upgrade the natural gas meter and been unable to gain access to the meter on your property.

Please call us to arrange for a date and time that a SoCalGas employee will be able to access the gas meter. If you do not want an advanced meter installed, ask to be placed on our "deferral list". The deferral list is only available to residential customers.

Our Customer Information Center can be reached at 1-877-268-6211 Monday through Friday, 7 a.m. to 8 p.m. or Saturday, 8 a.m. to 5 p.m.

We appreciate your prompt response.

Sincerely,

Patrick Petersilia
Director, Advanced Meter Project
Southern California Gas Company

Connect with us:

socalgas.com | Bill Assistance | Rebate Programs

Sender's business address is 555 West Fifth Street, GT20B2, Los Angeles, CA 90013.

Southern California Gas Company values your privacy. For more information, view our Privacy Policy and Privacy Notice.

Schedule an Appointment Letter

First Attempt Letter

Southern California Gas Company

A Sempra Energy utility®

ADVANCED meter

Please call 1-877-268-6211 to make meter access arrangements.

Date: _____ /_____ /_____

Dear Valued Customer,

A technician from Southern California Gas Company (SoCalGas®) was sent to upgrade your natural gas meter. Unfortunately, our technician was not able to gain access to the gas meter at this location.

We need your immediate assistance to schedule this upgrade. Please call the SoCalGas Advanced Meter Customer Information Center to make access arrangements at 1-877-268-6211.

Monday through Friday, 7 a.m. to 8 p.m., or Saturday, 8 a.m to 5 p.m.
If you call after hours, please leave a message with your preferred contact phone number.

What If I don't want an advanced meter?

SoCalGas supports customer choice and recognizes that some residential customers may prefer not to have an advanced meter installed and would rather have their gas meter read manually each month.* If you would like to defer advanced meter installation and be added to our deferral list, please contact our Customer Contact Center at 1-800-427-2200.

If you defer installation now, SoCalGas will contact you once the California Public Utilities Commission (CPUC) has ruled on our advanced meter opt-out program. You can decide at that time, based on the rate approved by the CPUC, whether you want to formally opt-out and pay the applicable fees or allow the installation of an advanced meter at no incremental cost.

We appreciate your prompt response.

Sincerely,

Patrick Petersilia

Patrick Petersilia
Director, Advanced Meter Project

CPUC Rule 25 requires customers to provide SoCalGas with safe access to the gas meter during all reasonable hours.

* Applicable to residential customers only.

FORM AM9910A N125 0043

Schedule an Appointment Letter

Second Attempt Letter

Southern California Gas Company
A Sempra Energy utility*

ADVANCEDmeter
SECOND NOTICE

Date: ____/____/____

Action Required. Please call 1-877-268-6211 today to make meter access arrangements.

Dear Valued Customer,

We made another attempt to upgrade your natural gas meter. Unfortunately, our technician was unable to gain access to the gas meter at this location.

We need your immediate assistance to schedule this upgrade. Please call the SoCalGas Advanced Meter Customer Information Center to make access arrangements at 1-877-268-6211.

Monday through Friday, 7 a.m. to 8 p.m, or Saturday, 8 a.m to 5 p.m.
If you call after hours, please leave a message with your preferred contact phone number.

What if I don't want an advanced meter?

SoCalGas supports customer choice and recognizes that some residential customers may prefer not to have an advanced meter installed and would rather have their gas meter read manually each month.* If you would like to defer advanced meter installation and be added to our deferral list, please contact our Customer Contact Center at 1-800-427-2200.

If you defer installation now, SoCalGas will contact you once the California Public Utilities Commission (CPUC) has ruled on our advanced meter opt-out program. You can decide at that time, based on the rate approved by the CPUC, whether you want to formally opt-out and pay the applicable fees or allow the installation of an advanced meter at no incremental cost.

We appreciate your prompt response.

Sincerely,

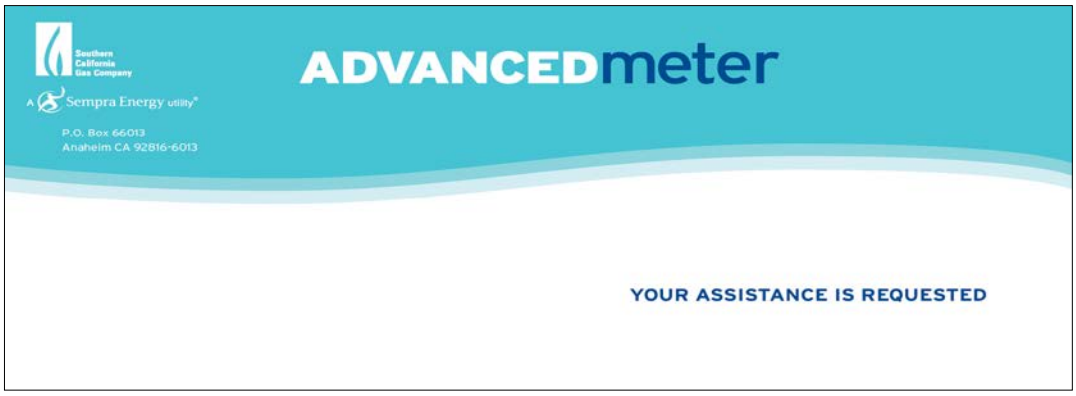
Patrick Petersilia
Director, Advanced Meter Project

CPUC Rule 25 requires customers to provide SoCalGas with safe access to the gas meter during all reasonable hours.

* Applicable to residential customers only.

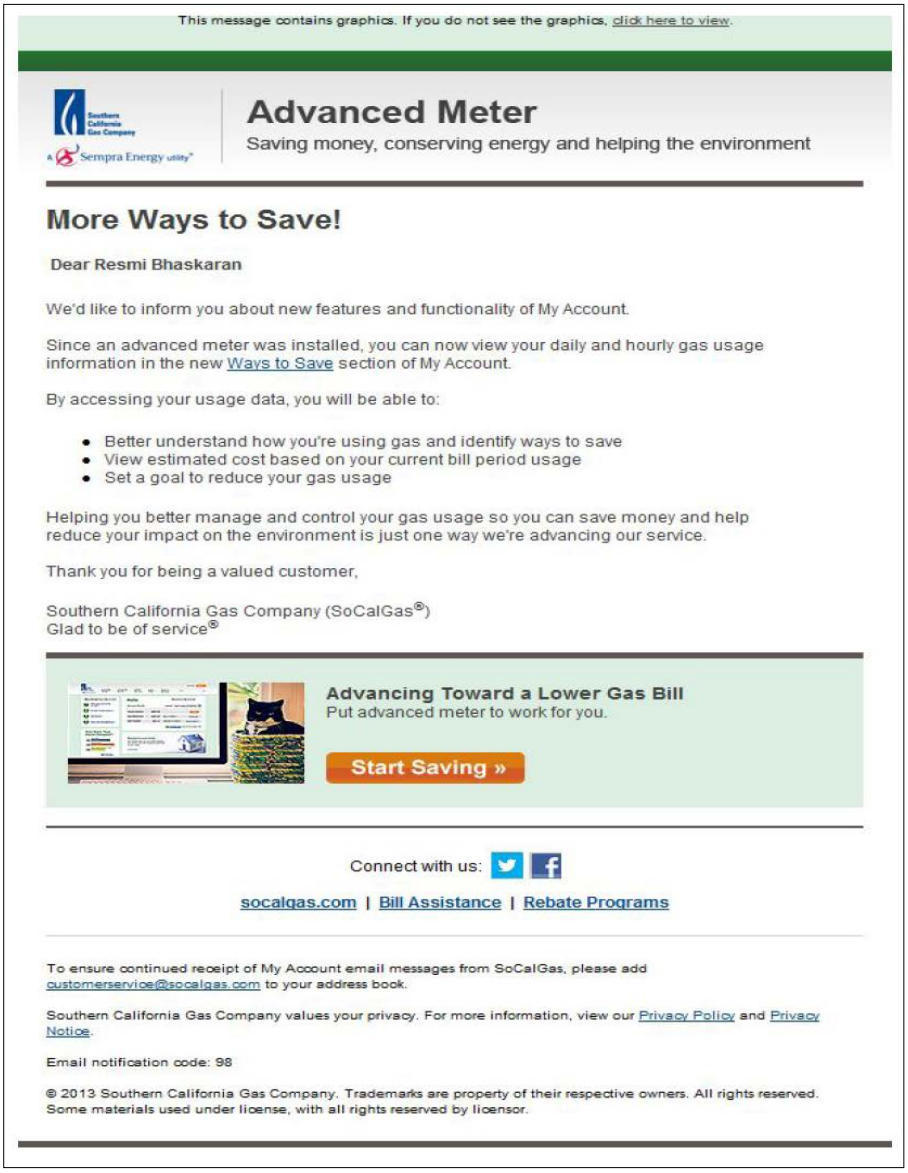
Schedule an appointment envelopes

First and Second Attempts



Appendix K – Billing Notification Letter

30 Days AM Billed Email



This message contains graphics. If you do not see the graphics, click here to view.

Southern California Gas Company
A Sempra Energy utility

Advanced Meter
Saving money, conserving energy and helping the environment

More Ways to Save!

Dear Resmi Bhaskaran

We'd like to inform you about new features and functionality of My Account.

Since an advanced meter was installed, you can now view your daily and hourly gas usage information in the new Ways to Save section of My Account.

By accessing your usage data, you will be able to:

- Better understand how you're using gas and identify ways to save
- View estimated cost based on your current bill period usage
- Set a goal to reduce your gas usage

Helping you better manage and control your gas usage so you can save money and help reduce your impact on the environment is just one way we're advancing our service.

Thank you for being a valued customer,

Southern California Gas Company (SoCalGas®)
Glad to be of service®

Advancing Toward a Lower Gas Bill
Put advanced meter to work for you.

Start Saving »

Connect with us:

socalgas.com | Bill Assistance | Rebate Programs

To ensure continued receipt of My Account email messages from SoCalGas, please add customerservice@socalgas.com to your address book.

Southern California Gas Company values your privacy. For more information, view our Privacy Policy and Privacy Notice.

Email notification code: 98

60 Days AM Billed Letter

Southern California Gas Company
A Sempra Energy utility®

ADVANCEDmeter

‹ Name ›
‹ Address ›
‹ Address ›

NEW ONLINE SAVING TOOLS!

Visit the *Ways to Save* section in *My Account* at **socalgas.com**

Dear ‹First Name Last Name›,

Congratulations, the Advanced Meter is now fully operational and you now have access to a variety of new online tools that can help you reach your energy saving goals.

- View your usage and costs including hourly, daily and monthly usage reports.
- Analyze your bill history.
- Set and review your savings and conservation goals.
- Take an energy survey to learn how you can save even more.

New Ways to Save Tools

To begin using the new Ways to Save tools, log in to My Account today at **socalgas.com**.

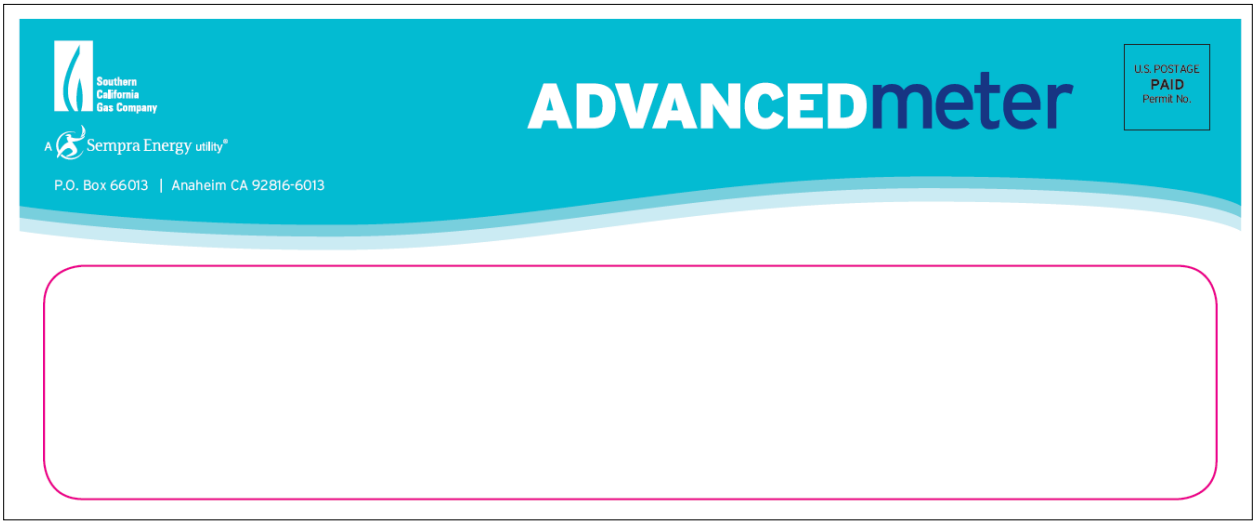
Sincerely,

Patrick Petersilia
Director, Advanced Meter Project

P.S. Now that the Advanced Meter network is fully operational, we will only need access to the meter for periodic maintenance.

Printed on recycled paper.
N1350060 0513

60 Days AM Billed Letter Envelope



Appendix L – Deferral Sticker and Door Hanger

Deferral Sticker

Deferral Door Hanger

FORM 8602

Southern California Gas Company

A Sempra Energy utility®

NOTICE

ADVANCEDmeter

DEFERRAL CUSTOMER

Your gas meter was labeled to confirm that you do not want the advanced meter communications device installed.

If you have any questions, please contact our Customer Contact Center at 1-800-427-2200.

Thank you.

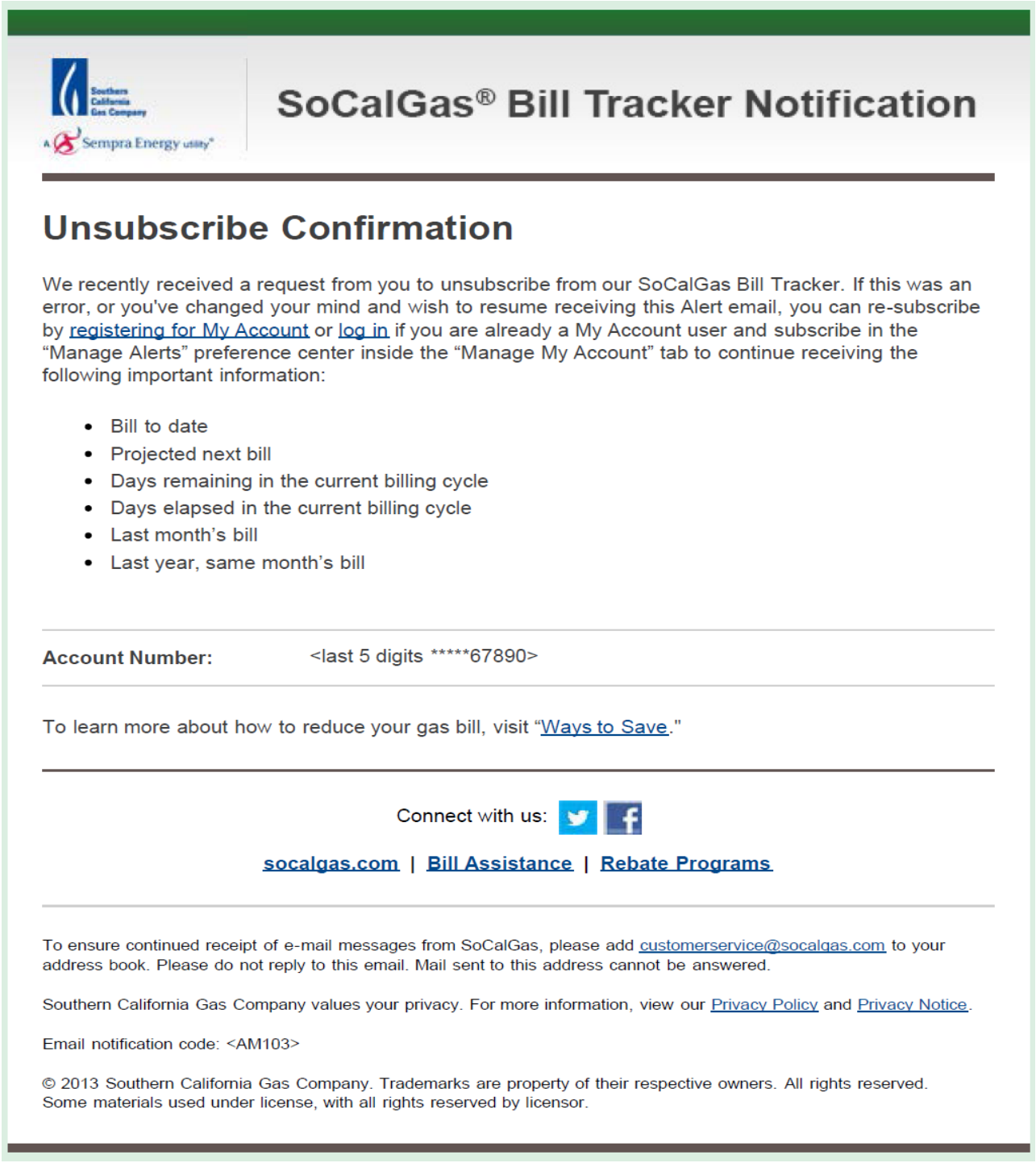
Date: ____/____/____

Printed on recycled paper with soy-based inks. N1250038 1112

Appendix M – Bill Tracker Alerts

Bill Tracker Alert Emails (My Account & Non My Account)

Unsubscribe Confirmation



SoCalGas® Bill Tracker Notification

Unsubscribe Confirmation

We recently received a request from you to unsubscribe from our SoCalGas Bill Tracker. If this was an error, or you've changed your mind and wish to resume receiving this Alert email, you can re-subscribe by registering for My Account or log in if you are already a My Account user and subscribe in the "Manage Alerts" preference center inside the "Manage My Account" tab to continue receiving the following important information:

- Bill to date
- Projected next bill
- Days remaining in the current billing cycle
- Days elapsed in the current billing cycle
- Last month's bill
- Last year, same month's bill

Account Number: <last 5 digits *****67890>

To learn more about how to reduce your gas bill, visit "Ways to Save."

Connect with us:

socalgas.com | Bill Assistance | Rebate Programs

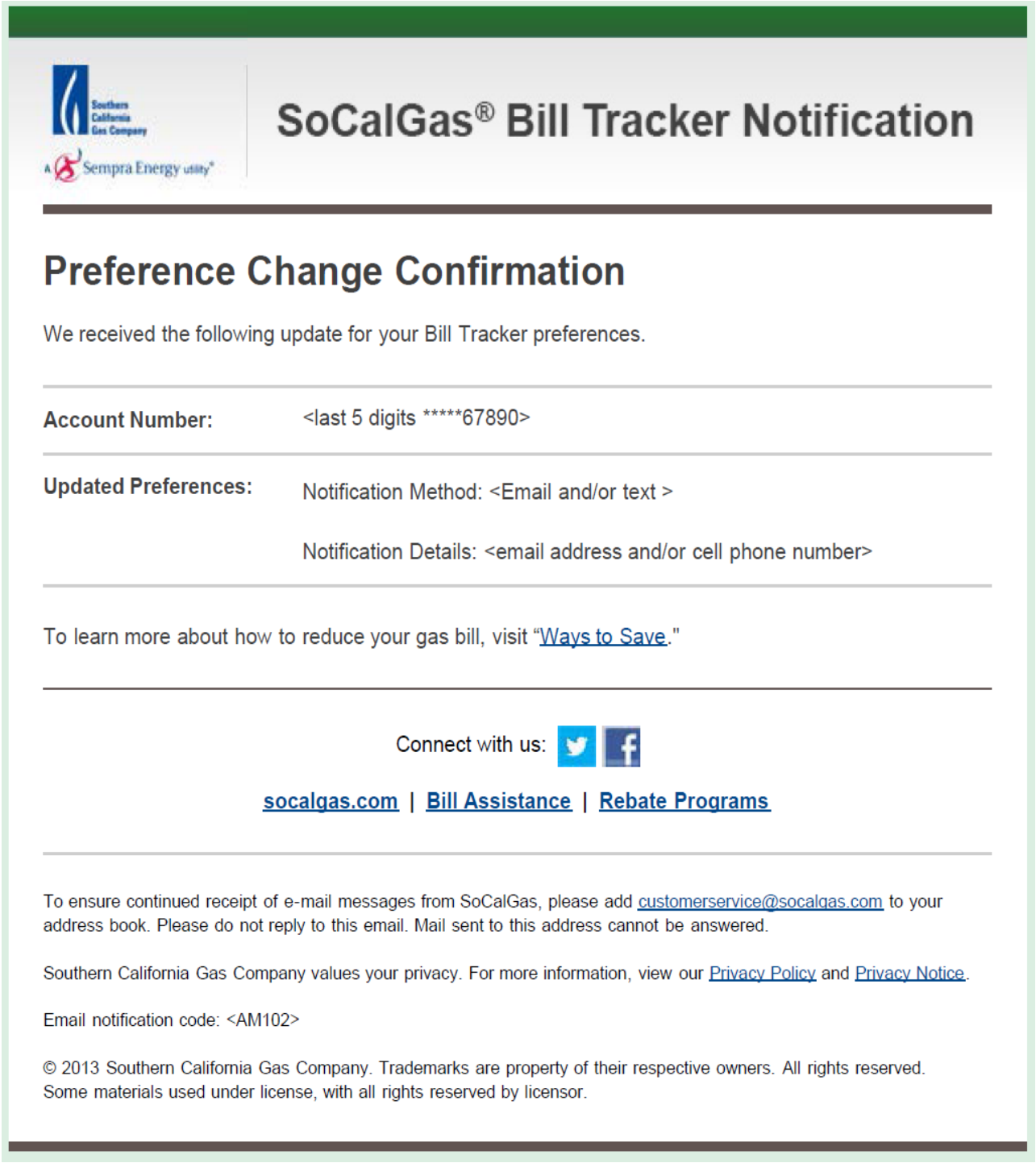
To ensure continued receipt of e-mail messages from SoCalGas, please add customerservice@socalgas.com to your address book. Please do not reply to this email. Mail sent to this address cannot be answered.

Southern California Gas Company values your privacy. For more information, view our Privacy Policy and Privacy Notice.

Email notification code: <AM103>

Bill Tracker Alert Emails (MyAccount & non-MyAccount)

Preference Change Confirmation



SoCalGas® Bill Tracker Notification

Preference Change Confirmation

We received the following update for your Bill Tracker preferences.

Account Number:	<last 5 digits *****67890>
Updated Preferences:	Notification Method: <Email and/or text > Notification Details: <email address and/or cell phone number>

To learn more about how to reduce your gas bill, visit "Ways to Save."

Connect with us:

socalgas.com | Bill Assistance | Rebate Programs

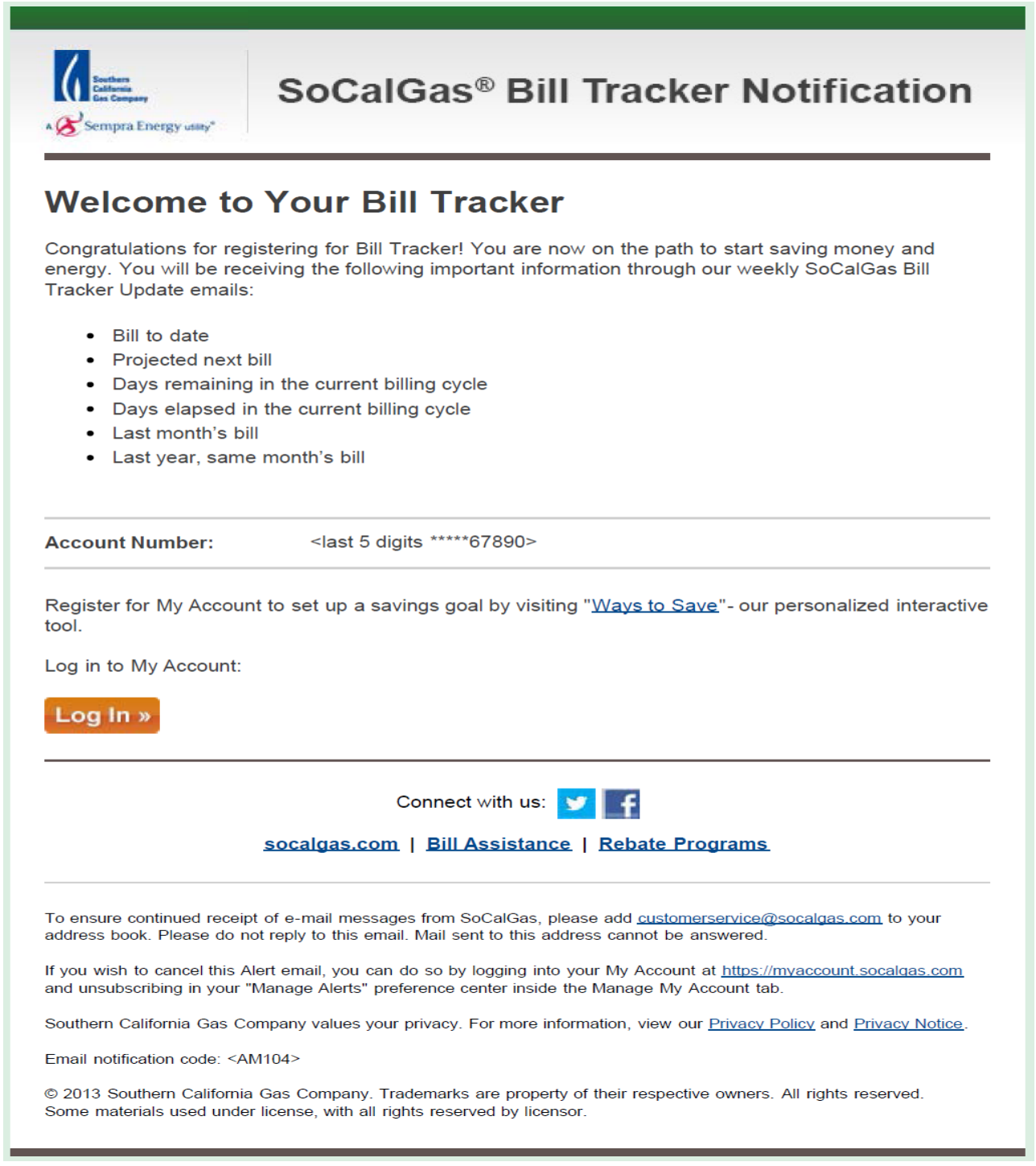
To ensure continued receipt of e-mail messages from SoCalGas, please add customerservice@socalgas.com to your address book. Please do not reply to this email. Mail sent to this address cannot be answered.

Southern California Gas Company values your privacy. For more information, view our Privacy Policy and Privacy Notice.

Email notification code: <AM102>

Bill Tracker Alert Emails (MyAccount)

Welcome Email



SoCalGas® Bill Tracker Notification

Welcome to Your Bill Tracker

Congratulations for registering for Bill Tracker! You are now on the path to start saving money and energy. You will be receiving the following important information through our weekly SoCalGas Bill Tracker Update emails:

- Bill to date
- Projected next bill
- Days remaining in the current billing cycle
- Days elapsed in the current billing cycle
- Last month's bill
- Last year, same month's bill

Account Number: <last 5 digits *****67890>

Register for My Account to set up a savings goal by visiting "Ways to Save"- our personalized interactive tool.

Log in to My Account:

Log In »

Connect with us:

socalgas.com | Bill Assistance | Rebate Programs

To ensure continued receipt of e-mail messages from SoCalGas, please add customerservice@socalgas.com to your address book. Please do not reply to this email. Mail sent to this address cannot be answered.

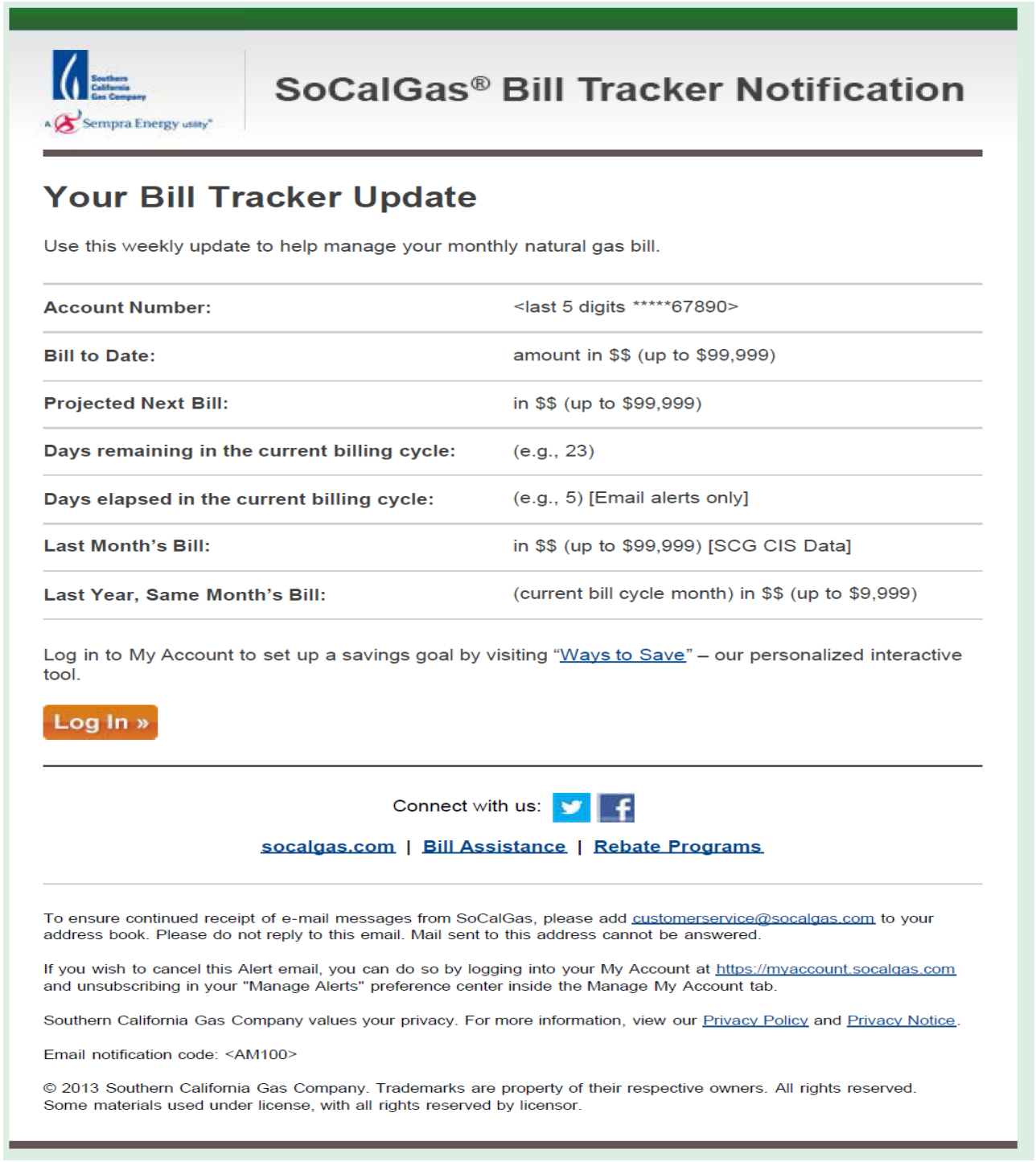
If you wish to cancel this Alert email, you can do so by logging into your My Account at https://myaccount.socalgas.com and unsubscribing in your "Manage Alerts" preference center inside the Manage My Account tab.

Southern California Gas Company values your privacy. For more information, view our Privacy Policy and Privacy Notice.

Email notification code: <AM104>

Bill Tracker Alert Emails (MyAccount)

Bill Tracker alert email



SoCalGas® Bill Tracker Notification

Your Bill Tracker Update

Use this weekly update to help manage your monthly natural gas bill.

Account Number:	<last 5 digits *****67890>
Bill to Date:	amount in $$ (up to $99,999)
Projected Next Bill:	in $$ (up to $99,999)
Days remaining in the current billing cycle:	(e.g., 23)
Days elapsed in the current billing cycle:	(e.g., 5) [Email alerts only]
Last Month's Bill:	in $$ (up to $99,999) [SCG CIS Data]
Last Year, Same Month's Bill:	(current bill cycle month) in $$ (up to $9,999)

Log in to My Account to set up a savings goal by visiting "Ways to Save" – our personalized interactive tool.

Log In »

Connect with us:

socalgas.com | Bill Assistance | Rebate Programs

To ensure continued receipt of e-mail messages from SoCalGas, please add customerservice@socalgas.com to your address book. Please do not reply to this email. Mail sent to this address cannot be answered.

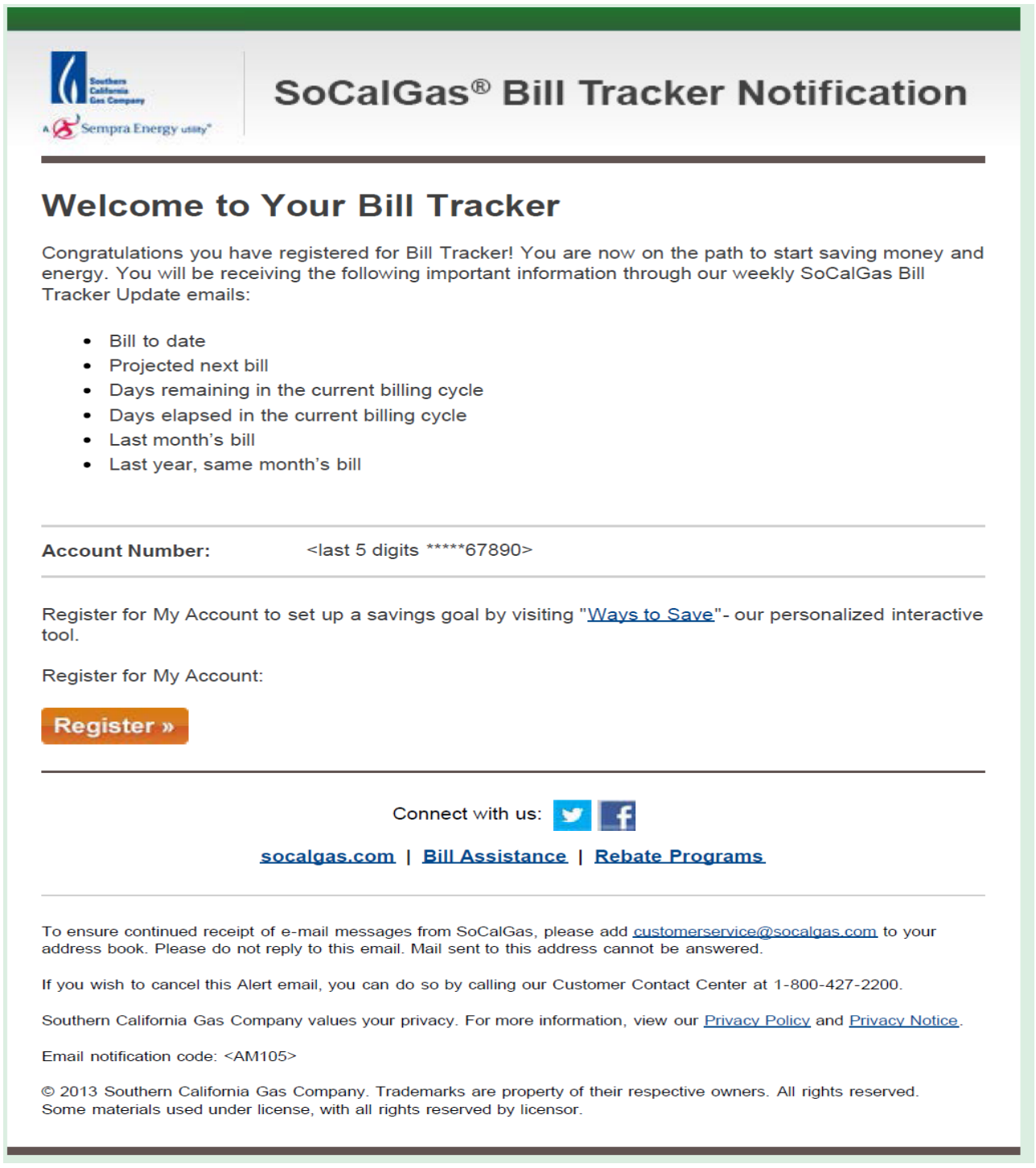
If you wish to cancel this Alert email, you can do so by logging into your My Account at https://myaccount.socalgas.com and unsubscribing in your "Manage Alerts" preference center inside the Manage My Account tab.

Southern California Gas Company values your privacy. For more information, view our Privacy Policy and Privacy Notice.

Email notification code: <AM100>

Bill Tracker Alert Emails (Non-MyAccount)

Welcome Email



SoCalGas® Bill Tracker Notification

Welcome to Your Bill Tracker

Congratulations you have registered for Bill Tracker! You are now on the path to start saving money and energy. You will be receiving the following important information through our weekly SoCalGas Bill Tracker Update emails:

- Bill to date
- Projected next bill
- Days remaining in the current billing cycle
- Days elapsed in the current billing cycle
- Last month's bill
- Last year, same month's bill

Account Number: <last 5 digits *****67890>

Register for My Account to set up a savings goal by visiting "Ways to Save"- our personalized interactive tool.

Register for My Account:

Register »

Connect with us:

socalgas.com | Bill Assistance | Rebate Programs

To ensure continued receipt of e-mail messages from SoCalGas, please add customerservice@socalgas.com to your address book. Please do not reply to this email. Mail sent to this address cannot be answered.

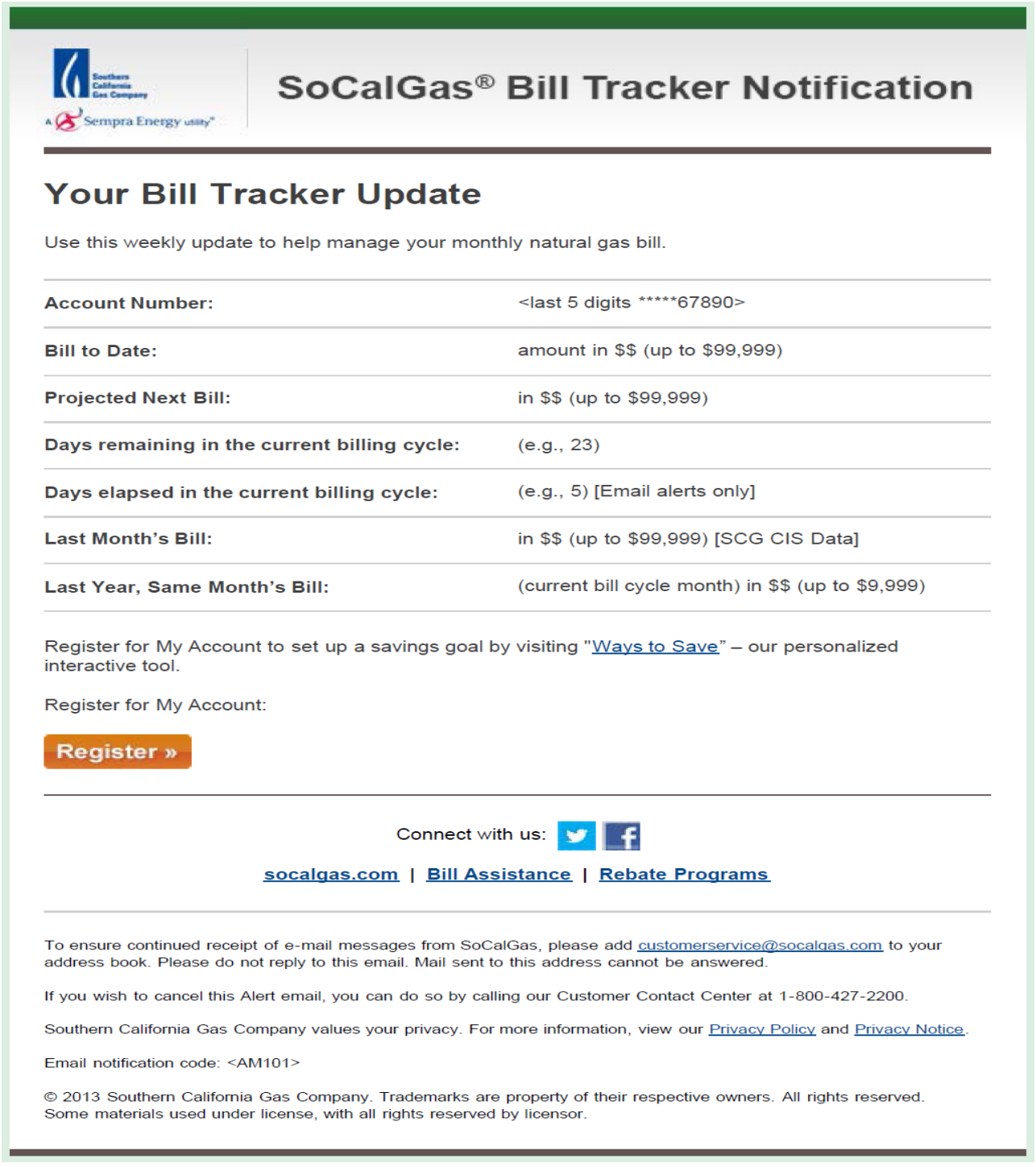
If you wish to cancel this Alert email, you can do so by calling our Customer Contact Center at 1-800-427-2200.

Southern California Gas Company values your privacy. For more information, view our Privacy Policy and Privacy Notice.

Email notification code: <AM105>

Bill Tracker Alert Emails (Non-MyAccount)

Bill Tracker alert email



SoCalGas® Bill Tracker Notification

Your Bill Tracker Update

Use this weekly update to help manage your monthly natural gas bill.

Account Number:	<last 5 digits *****67890>
Bill to Date:	amount in $$ (up to $99,999)
Projected Next Bill:	in $$ (up to $99,999)
Days remaining in the current billing cycle:	(e.g., 23)
Days elapsed in the current billing cycle:	(e.g., 5) [Email alerts only]
Last Month's Bill:	in $$ (up to $99,999) [SCG CIS Data]
Last Year, Same Month's Bill:	(current bill cycle month) in $$ (up to $9,999)

Register for My Account to set up a savings goal by visiting "Ways to Save" – our personalized interactive tool.

Register for My Account:

Register »

Connect with us:

socalgas.com | Bill Assistance | Rebate Programs

To ensure continued receipt of e-mail messages from SoCalGas, please add customerservice@socalgas.com to your address book. Please do not reply to this email. Mail sent to this address cannot be answered.

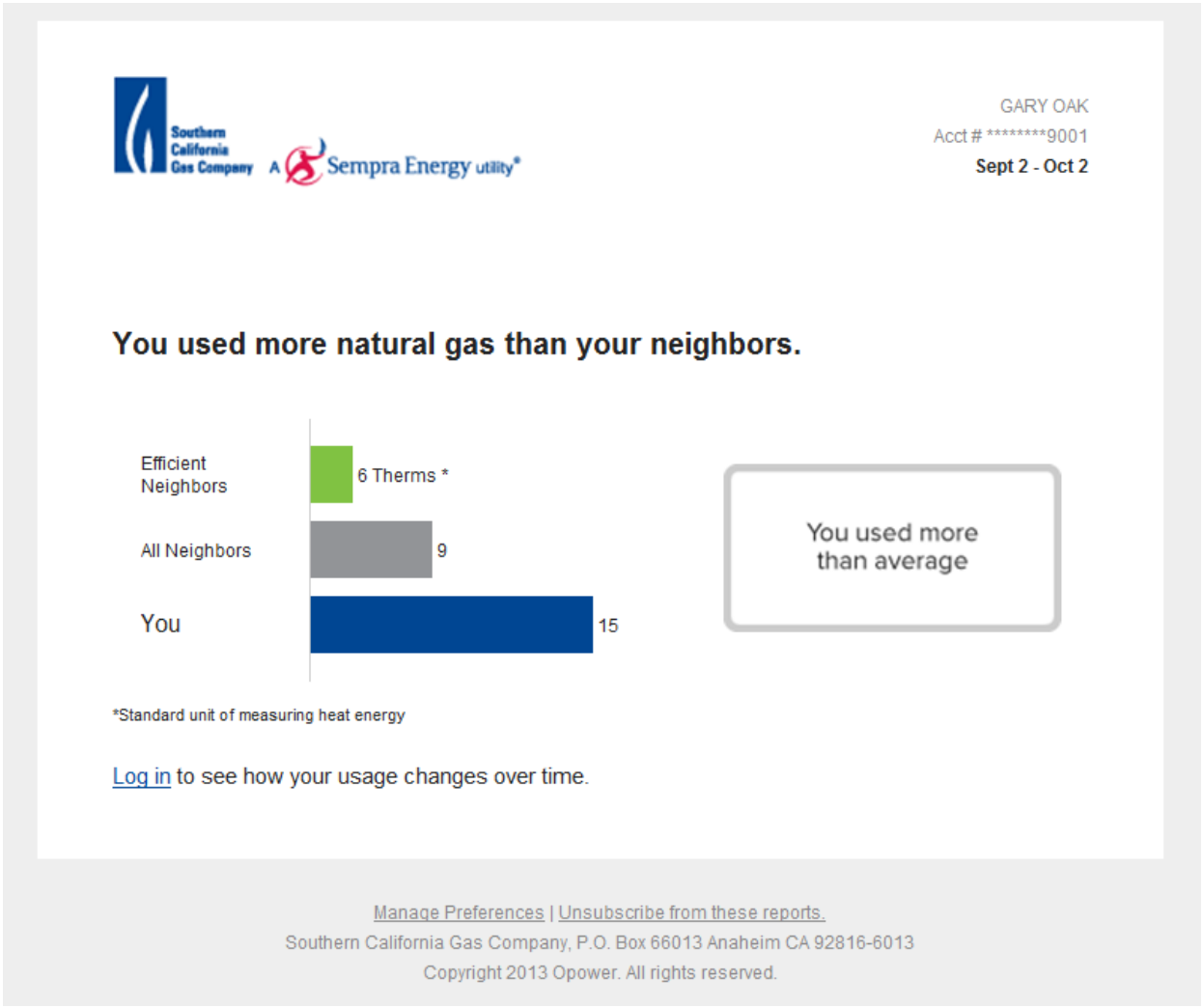
If you wish to cancel this Alert email, you can do so by calling our Customer Contact Center at 1-800-427-2200.

Southern California Gas Company values your privacy. For more information, view our Privacy Policy and Privacy Notice.

Email notification code: <AM101>

Appendix N – Opower Collateral Materials

Opower Email Report



Door Hanger

Front

Door Hanger

Back

Welcome Insert

Front

Say hello to your first Home Energy Report

Learn about your home's gas use, see how you compare to your neighbors and learn ways to save money.

Southern California Gas Company A Sempra Energy utility®

(877) 959-7188 | amcic@socalgas.com

SCG_0005_WELCOME_NEI

Southern California Gas Company A Sempra Energy utility®

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.

Home Energy Report

Front

Southern California Gas Company A Sempra Energy utility®

P.O. Box 66013 Anaheim CA
92816-6013

BOB SMITH
555 MAIN STREET
ANYTOWN, ST 12345

Home Energy Report

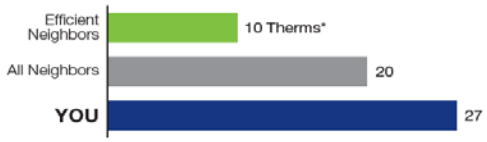
Account number: 1234567890
Report period: 05/26/13 – 06/25/13

This report gives you context on your energy use to help you make smart energy-saving decisions.

For a full list of energy-saving products and services for purchase, including rebates from Southern California Gas Company (SoCalGas®), visit **socalgas.com/rebates.**

If you have questions or no longer want to receive reports, call 1-877-959-7188.

Last Month Neighbor Comparison | You used **35% MORE** natural gas than your neighbors.



* Therms: Standard unit of measuring heat energy

How you're doing:

You used more than average

Turn over for ways to save →

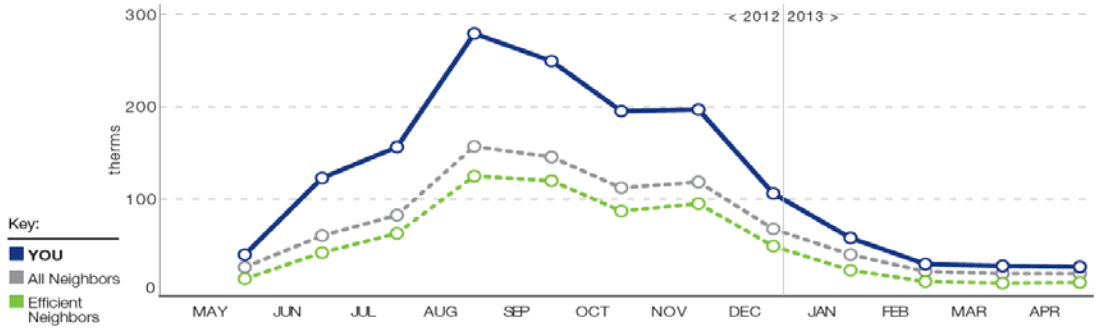
Who are your Neighbors?

All Neighbors
Approximately 100 occupied, nearby homes that are similar in size to yours (avg 2,856 sq ft) and have gas heat

Efficient Neighbors
The most efficient 20 percent from the "All Neighbors" group

Last 12 Months Neighbor Comparison

You used **71% MORE** natural gas than your neighbors.
This costs you about **$669 EXTRA** per year.



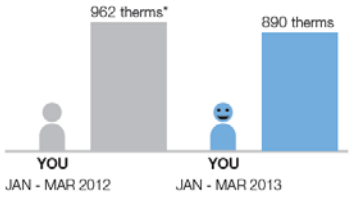
Turn over for savings →

Home Energy Report

Back

Personal Comparison

How you're doing compared to last year:



* Therms: Standard unit of measuring heat energy

So far this year, you used **8% less** natural gas than last year.

★ You're on pace to use less in 2013

Looking for ways to save even more? Visit **socalgas.com/rebates**

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

Quick Fixes

Things you can do right now

☐ **Be smart about clothes washing**

Water heating accounts for about 90% of the energy used for washing clothes.

Unless your clothes have oily stains, washing with cold or warm water is effective. Some detergents are made specially for cold water, though most detergents will work.

For more savings, run only full loads and don't use the "sanitary" or "allergy-free" cycles, which use extremely hot water and increase energy use significantly.

SAVE UP TO $25 PER YEAR

Smart Purchases

Save a lot by spending a little

☐ **Remember to check filters monthly**

By checking your filters monthly, you can improve the energy efficiency of your heating and cooling system, save money and improve your indoor air quality.

First, remove the filter—it usually slides right out. Next, hold the filter up to a light to see if it is clogged.

You can find a new filter at your local hardware store for about $2. Check your manual for cleaning instructions if you have a permanent filter.

SAVE UP TO $50 PER YEAR

Great Investments

Big ideas for big savings

☐ **Choose a more efficient water heater**

If you are in the market to replace your water heater, consider the energy efficiency of the system. The higher the energy factor (EF) of the system, the more efficient it is.

An efficient water heating system can significantly reduce your monthly water heating costs. Solar water heaters are efficient but not appropriate for all households, so you may also want to consider a heat pump water heater or a gas demand (tankless) water heater as efficient alternatives.

SAVE UP TO $140 PER YEAR

Southern California Gas Company A Sempra Energy utility

runs on OPOWER®

Southern California Gas Company Home Energy Report | (877) 959-7188 | amcic@socalgas.com

Printed on 10% post-consumer recycled paper using water-based inks.

Appendix O – Freeman Sullivan Conservation Plan

FREEMAN, SULLIVAN & CO.
A MEMBER OF THE FSC GROUP

Southern California Gas Company's Evaluation Plan for Estimating Conservation Effects from Information Feedback Services

August 9, 2013

Freeman, Sullivan & Co.
101 Montgomery St., 15th Floor
San Francisco, CA 94104
fscgroup.com

Prepared for:

Southern California Gas Company

Prepared by:

Dr. Stephen S. George
Dr. Michael J. Sullivan
Mr. Josh Schellenberg
Freeman, Sullivan & Co.
fscgroup.com

Table of Contents

1 Executive Summary

Southern California Gas Company (SoCalGas) began deploying advanced meters (AM) in its service territory in late 2012. According to its meter deployment plan, AM meters will be deployed to all of the Company's 6 million customers over the next 5 years. These meters are capable of providing enhanced information services that are expected to help consumers better control their energy costs.

In approving SoCalGas' AM application (D.10-04-027), the California Public Utilities Commission (CPUC) directed SoCalGas "to establish a system to track and attribute the conservation impacts of its AM roll-out" and to report the measured savings every six months. This document describes a comprehensive plan (hereafter referred to as the Plan) for developing information feedback related services. The proposed Plan calls for implementing promising feedback program design alternatives using a *test and learn* program development strategy. The proposed implementation process is a cycle of innovation in which continuous assessment and improvement in the performance of feedback programs is the objective. As 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 advanced meter roll out, the most effective means for encouraging energy savings from information feedback will be identified and offered to customers.

The proposed test and learn cycle will begin in the fall of 2013 with development and testing of two promising feedback program design alternatives – bill alerts and home energy reports. These two program design alternatives were chosen for implementation because they have the potential to reach large numbers of consumers and to provide the level of energy savings SoCalGas indicated would result from installation of AM meters.

1.1 Initial Information Services

SoCalGas is developing a bill alert service that will provide weekly information to customers concerning the amount of gas they have used since they received their last bill. It is called Bill Tracker Alert (BTA). Generically, bill alerts are messages that can be sent to customers via email, text messaging, advanced phone apps or telephone providing them with more frequent usage and cost information than is provided through monthly billing. Bill alerts ***do not*** require customers to actively seek out information about their energy use. Instead this information is "pushed" to customers under some agreed upon conditions.

Initially, SoCalGas plans to test email and text messaging as the primary delivery channels for the BTA program. BTAs will be offered to some customers (those for whom the Company has email addresses) on a default basis and to others on an opt-in basis. In the initial test phase, BTAs will be offered to both residential and business customers. The initial test cells for business customers will be small because only about 25,000 customers will have advanced meters by fall of 2013.

In addition to bill alerts, SoCalGas will offer Opower Home Energy Reports (HERs) to a test group of customers. The HERs will be sent to 50,000 residential customers in the 2013-14 timeframe. All customers receiving HERs will be defaulted onto the service and will receive HERs either through direct

mail or through a combination of direct mail and email. The reports will be provided primarily during the winter months. In addition to displaying comparisons of households' gas consumption with that of neighbors, the HERs will provide tips on how to reduce gas consumption.

In addition to the above described feedback services, SoCalGas will make hourly and daily usage information and other tools available through the Ways to Save section of the socalgas.com website to all customers with advanced meters that are cutover to billing (AM Billed) on a day late basis (i.e., for all time prior to the last 24 hours). This meets the requirement in the CPUC Decision to provide access to enhanced information immediately upon installation of advanced meters. However, because all customers will have access to website information, it will not be possible to estimate the impact of information coming through this channel. As such, impact estimates for the BTA and HER services will be incremental to whatever impact might result from access to information through the web portal.

1.2 Overview of Testing Process

After carefully reviewing the available research design alternatives, SoCalGas proposes to assess the energy savings obtained from the feedback services under development using randomized encouragement designs (RED) for opt-in BTA and randomized control trials (RCT) for default HERs and default BTA. RCT and RED experimental designs allow for rigorous assessments of the impacts of BTAs and HERs on gas consumption by ensuring that treatment and control customers are identical except for the fact that one group receives the treatment (or offer of the treatment) and the other does not.[1] When expected average impacts are small, as they are likely to be with HERs and BTAs, rigorous adherence to sound experimental methods is the only sure way to determine whether observed changes in behavior resulted from the treatments of interest and not from some other factor, such as differences in weather, economic conditions or selection. Even using such methods, large sample sizes are required for both treatment and control customers to precisely measure whether the new information services being tested will achieve the 1% savings goal established in the decision.

For opt-in programs such as BTA, randomly selected groups of customers will be offered BTAs but will only receive the alerts if they decide to enroll in the program. In the opt-in BTA control group, other customers receiving advanced meters will not be offered the BTAs (encouraged), although they may receive the alerts if they somehow find out about them and want to join. Since the encouraged group is selected at random, the only factor that is different between the treatment and control group is the propensity to receive the BTAs. Accordingly, any difference in gas consumption between the encouraged and not encouraged groups must be due to the differential rate at which they are receiving BTAs.

In the proposed Plan, SoCalGas will offer BTAs to 262,500 residential customers and roughly 262,500 customers will also be held out as control customers who do not receive BTA offers. These large sample sizes are required to estimate program impacts using RED designs because the observed impacts are a function of both the rate of acceptance of the treatments and the magnitude of the impacts for those who accept the BTA offer. The sample sizes are also large because of the desire to understand how

[1] Differences due to random chance in the selection process may also be observed but with large sample sizes, these differences will be small.

enrollment and impacts differ across selected customer segments, such as MyAccount and non-MyAccount customers and high and low gas users.

For default programs such as HERs and default BTA, randomly selected groups of customers will be defaulted into the programs and will automatically receive the designated information feedback. In the control group, other randomly selected customers (who received advanced meters) will not be provided information feedback through HERs or default BTAs until the impact measurement period is over. Because the percent impact of these programs is expected to be small (i.e., 1-2%), relatively large sample sizes are also required to estimate default program impacts, despite the fact that a rigorous RCT design is being employed. In the proposed Plan, SoCalGas will default 50,000 customers onto HERs and 25,000 customers onto BTA in the fall of 2013. These treatments will be able to use the same control groups as those used for the opt-in BTA treatment.

BTAs will also be offered to the roughly 25,000 business customers that will have advanced meters installed prior to fall 2013 when marketing will begin. Roughly 5,000 business customers that are also MyAccount customers will be defaulted into the BTA program and the remaining 20,000 non-MyAccount business customers will be offered BTAs on an opt-in basis. Because of the small number of business customers with advanced meters at this point in time, analysis of impacts for this group will not be based on an RCT or RED design, but instead will be done using a statistically matched control group of customers that have not yet had advanced meters installed.

1.3 Estimating Impacts

The test and learn methodology embodied in this Plan requires tracking and analysis of two types of impacts:

- The impact of different marketing tactics (i.e., opt-in vs. default, message content and frequency of touches) on customer acceptance of and attention to the different feedback mechanisms being provided; and
- The impact of different feedback messages (i.e., bill alerts and HERs) and channels (i.e., direct mail, email and SMS) on gas consumption.

Under the proposed Plan, the above causal factors will be varied in controlled experiments so that it will be possible to directly observe the differences that occur when a given factor is present and when it is not. For example, a randomly selected group of customers will be offered BTAs and another randomly selected group will not. The two groups will be statistically identical in all respects except for the difference in the rate at which the encouraged group has accepted the BTAs. The impact of the BTAs can be estimated using a difference in differences estimator. A difference in differences estimator first subtracts the usage of the treatment group from that of the control group for the period after the treatment goes into effect. From this value, it subtracts any usage difference between treatment and control customers prior to the treatment period, to ensure that any small, random differences between the two groups do not bias the estimated impact.[2]

[2] An alternative approach to a simple difference in differences calculation can be done using a linear fixed effects (LFER) regression model which expresses the customers' daily gas consumption as a function of the treatment

Virtually all of the impact estimates for studies conducted under the proposed Plan will rely on the above described estimation procedures. The advantage of this simple approach to impact estimation is that there is virtually no statistical mystery about the calculations. They are straightforward and easy to interpret and require little if any explanation to even naïve readers.

1.4 Proposed Schedule and Reporting Process

The AM decision requires SoCalGas to file a report of measured savings every six months and also to describe marketing, education outreach and customer support activities that take place. SoCalGas will comply with this requirement by filing two reports each year. One report, filed in February of each year will describe the results of marketing and outreach activities that have been conducted during the test and learn cycle of each year. The marketing and outreach period of each cycle will span the period from October 1st to March 31st. This is the period during which preparations for marketing and outreach activities will take place in anticipation of the winter heating season. A second report to be filed in August of each test and learn cycle will describe the energy savings that have resulted from program operations and delineate planned program changes and additions for the coming year. Energy savings will be reported for the preceding winter heating season (i.e., from October 1 to March 31 of each year.

In the first test and learn cycle, SoCalGas will provide the following analysis:

- Final Test and Learn Plan for 2013-14 cycle – August 2013;
- Results of Market Tests and Other Operations – February 2014; and
- Impact estimates for 2013-14 cycle with Test and Learn Plan for 2014-15 – August 2014.

In subsequent years, reports will be filed in February and August.

1.5 Plan Organization

The remainder of this Plan contains two sections and two appendices. Section 2 contains an overview of the Plan while Section 3 discusses Plan development. Appendix A contains a brief overview of various research methods that were considered before deciding on the approach outlined here. Appendix B summarizes some simulation analysis that was conducted to determine whether it would be feasible to take advantage of the staggered meter deployment process to estimate usage impacts by using customers without advanced meters as a control group for those who received meters and had access to information. It was not.

2 Plan Overview

This report summarizes Southern California Gas Company's (SoCalGas) plan for determining the impact on gas consumption of information feedback services that can be provided to customers as a result of deployment of advanced meters – its (AM) system. The AM system will allow SoCalGas to obtain hourly

variable (whether or not they received BTAs); an indicator variable for the month of the year and an instrumental variable (whether they were encouraged). Both estimation procedures should yield identical impact estimates but the regression approach should produce small standard errors of the estimate.

usage data on all customers and to make such data available to customers more frequently than monthly (e.g., daily, weekly, etc.). A variety of studies in the electricity industry have shown that more frequent delivery of usage data and related information can lead to reductions in electricity use.[3] The Plan presented here describes how SoCalGas will conduct what we believe to be the largest assessment of the impact of information feedback on gas usage.

The Commission's AM decision also directed SoCalGas "to establish a system to track and attribute the conservation impacts of its AM roll-out" and to report the measured savings every six months. This report presents the Company's Plan for determining the savings attributable to the customer outreach and conservation support plan.

2.1 Plan Objectives

The Plan summarized here has the following primary objectives:

- Meet the requirements of D.10-04-027 to track and attribute the conservation impacts of the AM roll out and to report measured savings every six months; and
- Help meet the objective of achieving a conservation effect among customers in a cost-effective manner.

Meeting the first objective will require 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 will require adherence to a "test and learn" strategy that quickly identifies the marketing strategies and service options that are most effective for achieving conservation impacts through information services. This strategy was envisioned by the Commission decision, which stated that "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."

2.2 Conceptual Approach to the Plan

The Plan is based on well-established principles of innovation management used in other industries. Product/service improvement, or innovation, happens by testing and learning – a systematic process of experimentation in which better products, services or promotional strategies are discovered by trying different options, evaluating the results, quickly abandoning those that do not work, and improving those that do to make them work better.

[3] Residential Electricity Use Feedback: a Research Synthesis and Economic Framework, Electric Power Research Institute, Palo Alto CA, 2009, 1016844

To achieve measurable conservation savings, the Plan must successfully encourage customers to try the information services that will become available and must provide information in a manner that leads to changes in consumer behavior. As such, the plan tests different marketing methods for driving consumers to use information services and different information services designed to change behavior.

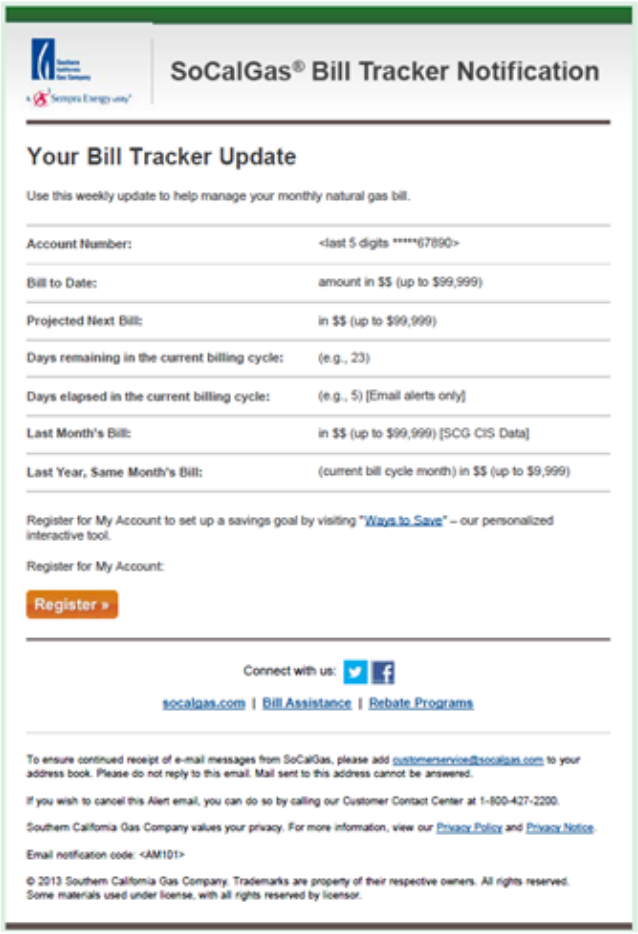
Initially, SoCalGas will provide two information programs -- bill alerts provided through the SoCalGas BTA system and HERs provided by Opower. BTAs are weekly reports provided to customers by email or SMS that describe the cost of gas that they have consumed since receiving their last bill. The BTA will 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 their current rate. In the current testing cycle customers will not be able to set specific goals for daily or weekly gas consumption but this capability is under consideration for future enhancements. BTAs are designed to raise customers' awareness of the amount of gas they are using and its impact on their bill.

When opt-in BTA customers enroll in the program, they can choose to receive alerts via email, text message or both. Default BTA customers will receive notifications through email. Figure 2-1 displays an example email notification for customers enrolled in or defaulted onto BTA. The email provides the following information:

- Bill to Date;
- Projected Next Bill;
- Days remaining in the current billing cycle;
- Days elapsed in the current billing cycle;
- Previous Month's Bill; and
- Previous Year, Same Month's Bill (omitted if customer has less than 12 months of account history).

Due to limitations on the number of characters, the text message BTA notification will provide more limited information. The text message notifications will read as follows, "SoCalGas Bill Tracker Update. Bill-to-Date: $XX. Projected Next Bill: $XX. Last Year Same Month Bill: $XX. XX days left in bill cycle. socalgas.com". Eventually, BTA will be available on the SoCalGas mobile app, but this feature will not be tested during the 2013/2014 test year.

Figure 2-1: Draft SoCalGas BTA Email Notification



SoCalGas® Bill Tracker Notification

Your Bill Tracker Update

Use this weekly update to help manage your monthly natural gas bill.

Account Number:	<last 5 digits *****67890>
Bill to Date:	amount in $$ (up to $99,999)
Projected Next Bill:	in $$ (up to $99,999)
Days remaining in the current billing cycle:	(e.g., 23)
Days elapsed in the current billing cycle:	(e.g., 5) [Email alerts only]
Last Month's Bill:	in $$ (up to $99,999) [SCG CIS Data]
Last Year, Same Month's Bill:	(current bill cycle month) in $$ (up to $9,999)

Register for My Account to set up a savings goal by visiting "Ways to Save" – our personalized interactive tool.

Register for My Account:

Register »

Connect with us:

socalgas.com | Bill Assistance | Rebate Programs

To ensure continued receipt of e-mail messages from SoCalGas, please add customerservice@socalgas.com to your address book. Please do not reply to this email. Mail sent to this address cannot be answered.

If you wish to cancel this Alert email, you can do so by calling our Customer Contact Center at 1-800-427-2200.

Southern California Gas Company values your privacy. For more information, view our Privacy Policy and Privacy Notice.

Email notification code: <AM101>

Default BTA customers will also receive a monthly letter and email throughout the 2013/2014 heating season that will provide cost savings tips and promote the Ways-to-Save online tools.

In addition to BTAs, SoCalGas will also offer HERs to a select group of customers. HERs are designed to change energy consumption by providing customers with periodic (monthly during winter) comparisons of the customers' gas usage with that of their neighbors. The HERs will also provide tips on how to reduce gas consumption.

HERs will be delivered through mail and/or email. The 25,000 MyAccount customers that will be defaulted onto HERs will be split evenly between customers who only receive email HERs and customers who receive both a paper HER in the mail and an email HER. The 25,000 non-MyAccount customers that will be defaulted onto HERs will only receive a paper HER in the mail because an email address is not available for these customers.

Figure 2-2 provides an example paper HER and Figure 2-3 provides an example email HER. Both types of HERs provide a comparison of usage to similar homes and cost savings tips. The cost savings tips in the paper HER are more detailed and provide specific amounts of money that customers can save as a result of those actions. The paper HER also provides more detail on energy usage by showing the neighbor comparison at a monthly level for the preceding year.

Figure 2-2: Draft Paper Home Energy Report (HER)

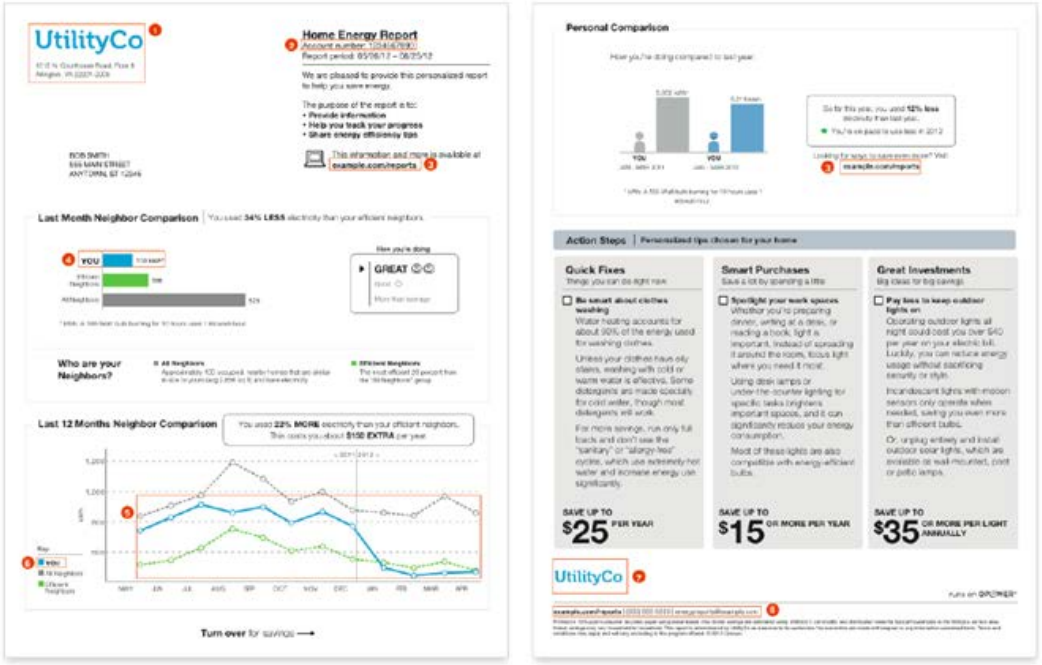
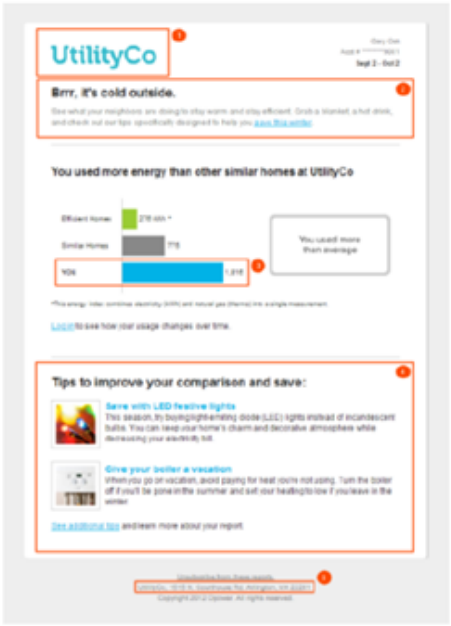


Figure 2-3: Email Home Energy Report (HER)



A fundamental tenet of the Plan is that SoCalGas will vary the information feedback treatments and marketing offers in such a way as to be able to identify combinations of marketing and treatment options that are effective. The Plan described above and in more detail in Section 3.4 will solicit 262,500 residential customers to enroll in bill alerts in the fall of 2013; while roughly 262,500 customers will be held out as control customers. SoCalGas will also default 50,000 customers onto HERs and 25,000 customers onto BTA in the fall of 2013.

Following the above described test and learn strategy, the Plan does not currently identify specific treatments that will be tested beyond the first year. Instead, these tests will be developed based on the experience gained during the current research cycle. SoCalGas is committed to and planning on continuing to implement additional tests and to expanding their information services to the broader population as meter deployment allows. Tests in future years will be dependent on the results obtained from prior rounds of testing. High performing combinations of marketing and feedback designs will be retained and enhanced in future testing rounds and low performing combinations will be abandoned. The higher performing options can be offered to an expanded set of customers and new tests that might involve minor variations on the higher performing options or brand new concepts might also be examined. This process of continuous improvement is a fundamental tenet of the SoCalGas Plan.

2.3 Expected Outcomes of the Plan

Overall, the initial Plan is designed to assess the:

- Impact of opt-in BTA on gas consumption;
- Relative effectiveness of two different marketing messages for opt-in BTA;
- Impact of default BTA on gas consumption;
- Impact of default HERs on gas consumption;
- Relative impacts of three different types of HERs (email only, paper only, paper and email); and
- Relative impacts of default BTA and default HERs among medium to high usage MyAccount customers.

This Plan is compliant with the Commission's order to demonstrate whether or not the claimed savings associated with installation of advanced meters is being achieved; and more importantly, will provide a basis for achieving the maximum savings possible from the installation of this technology, whatever it eventually turns out to be. The Plan will also allow SoCalGas to identify market segments that are more or less likely to take advantage of the information feedback options made available and to respond by conserving gas usage. Through these and subsequent tests in future years, SoCalGas will be able to develop a cost-effective portfolio of information programs and to rigorously estimate the conservation effects of these programs. The basic experimental design and sample sizes employed in the study are designed to ensure that SoCalGas meets its requirement to conclusively show whether it is achieving the 1% savings it claimed would occur as a result of the installation of advanced meters.

3 Plan Development

This Plan was developed with support from Freeman, Sullivan & Co. (FSC), one of the leading consulting firms in the country involved in the design and evaluation of behavioral based conservation and demand response programs. Prior to working on this project, FSC produced a report for the Electric Power Research Institute (EPRI)[4] describing in detail methods to be used for estimating impacts associated with information feedback programs. This report is being widely used in the utility industry to guide research strategy for behavioral based programs. In the last two years, FSC has been involved in the design and/or evaluation of more than a dozen pilots, experiments or programs involving information feedback in the utility industry.[5] Choosing a leading expert on research design and program evaluation to help develop this Plan is a testament to SoCalGas' commitment to the rigorous standards required to determine the impact of information feedback on gas usage.

3.1 Information Feedback Options

Webster's dictionary defines feedback as "a process whereby the results of action serve continually to modify further action."[6] Historically, the primary feedback that utility customers have received concerning the cost and amount of their electricity or gas usage has been through monthly bills. However, with such a long lag between information feedback and the behavior that underlies gas usage and cost, it is difficult if not impossible for consumers to comprehend the relationship between their usage behavior and its costs. With more frequent feedback (e.g., weekly, day after, or real time), consumers should be better able to understand the relationship between usage behavior and costs and, as a result, make more informed decisions about energy use.

More granular data (e.g., daily and hourly usage) can also provide consumers with valuable insight even if it is not delivered in real time. For example, seeing the pattern of energy use across the days of the week or hours of the day in relation to temperature, even if only examined periodically, can provide insight to customers regarding the relationship between usage behaviors, environmental conditions and operating costs.

Besides simply providing usage information on a more granular and frequent basis, conservation behavior may be driven by other factors such as goal setting, normative comparisons, economic incentives or contests tied to usage behavior. Establishing a goal and tracking usage and costs relative to the goal has been shown in other settings to lead to greater reported changes in behavior than simply reporting information without a goal. Comparing a customer's use with that of "best performers" or neighbors may lead to greater reductions than simply providing personal historical usage or cost data.[7]

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[4] Guidelines for Designing Effective Energy Information Feedback Pilots: Research Protocols, Palo Alto, CA, 2010 1020855.

[5] This includes five programs or pilots at PG&E (including web portal access, tier alerts, paper reports, HAN technology, and the provision of feedback and messaging through a communicating thermostat), bill alerts at Central Maine Power, in-home displays at CenterPoint and Kansas City Power & Light, day late and real time information at Minnesota Power Company, access to interval data (rather than monthly data) through a web portal at Avista and the bill alert and HER treatments summarized here for SoCalGas.

[6] Webster's Pocket Dictionary, 1997.

[7] Social Norms and Energy Conservation; Hunt Allcott, Journal of Public Economics, Vol 95, No. 9-10 Oct. 2011, pp. 1982-1995.

Information feedback options vary not only with respect to the type of information provided but also in terms of the delivery channel through which the information is provided to consumers and the process through which the information is obtained. Usage and cost information can also be pushed to customers periodically or in real time through a variety of channels. For example, bill alerts or other information can be sent daily, weekly or based on selected triggers (e.g., threshold amounts or progress toward goals) through telephone calls, email and/or text messages. Real time or near real time data can be delivered through dedicated in-home displays (IHDs) or through "dashboards" accessed through personal computers or smart phones using gateway devices that link to advanced meters.

In short, numerous types of information may help drive consumer behavior; numerous pathways exist for delivering such information to consumers; and various combinations of messages and pathways can be provided to customers at varying frequencies. In developing this Plan, SoCalGas started with an open mind concerning what might be included in the initial stages of the Plan but with a careful eye toward cost effectiveness and differences in the way consumers use gas and electricity. In narrowing down the initial offerings to the tests that will be undertaken in this first year (bill alerts and HERs), the following factors were considered:

- Monthly gas bills are relatively low for the average consumer and for the majority of consumers in the SoCalGas service territory. The average gas bill in SoCalGas' service territory in the winter is $47 per month in the milder, populated climate zone 1 and $76 per month in the colder zone 3. In the summer, average gas bills are between $22 and $25 per month[8]. Because of the low cost of gas service to Southern California households, even large reductions in gas usage will produce small economic savings for the average customer and only modest savings for even large gas users.
- The limited evidence on real time feedback through IHDs and other devices in the electricity industry provide a large range of potential impacts from roughly 0 to greater than 10%. Given the small size of average gas bills compared with electricity bills in California, savings may be smaller for gas customers than for electricity consumers.
- Measurement of the relatively small expected impacts from enabling technology requires relatively large sample sizes. This requirement in combination with relatively high technology costs (i.e., at least $100 per installation) makes robust experimental study of the effects of these technologies relatively expensive.
- Moreover, because of the high cost of gateway devices and in-home displays, their use may be difficult to cost justify for the typical customer.

Taking the above factors into consideration, SoCalGas decided to focus initially on relatively low and moderate cost options (i.e., bill alerts and HERs) and, in the case of bill alerts, on understanding how best to encourage consumers to try these options and make use of information to change behavior. Depending on the findings from these initial offerings, both in terms of customer acceptance and conservation impacts, it will become clearer whether these options will achieve the target savings in a cost effective manner or whether additional, more costly but potentially more effective options will need to be tested. If testing additional, technology centric, options appears warranted after determining the

[8] Source: SoCalGas Customer Information System. Calculations include only single family and multi-family residential customers. Four years of customer billing data were analyzed to smooth out year to year variations in weather with each year's data adjusted to 2012 constant dollars.

impacts of bill alerts and HERs, both the cost of these technologies and the technical problems that are currently widespread are likely to be more favorable than they are today in any case.

3.2 Proposed Experimental Design

In order to determine if the new information services made available by SoCalGas change energy use for consumers who access them, it is necessary to estimate what energy use would have been for those customers if they had not had 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 best approach, but only if the two groups of customers are identical except for the fact that one gets the information service and one doesn't. Obtaining well matched treatment and control groups is the fundamental challenge to getting accurate impact estimates.

Appendix A contains an overview of the experimental and quasi-experimental options that can be used to develop impact estimates for information services. SoCalGas considered the full spectrum of options before determining that a randomized encouragement design (RED) was the preferred option for the opt-in BTA treatment and a randomized control trial (RCT) design could be implemented for the default programs. Below is a brief summary of the reasons why other options were rejected:

- Because the CPUC decision required that usage data be made available to all customers with advanced meters shortly after the meters are installed, and the difficulties that this requirement presents for impact evaluation, SoCalGas initially considered implementing small scale pilots prior to full scale meter deployment. These pilots would provide more flexibility to implement RCTs in order to accurately measure impacts. However, this approach was deemed impractical because it would interfere with the planned deployment of the communications infrastructure and also because of the high cost.
- In the initial planning stage, SoCalGas also considered partnering with SDG&E or PG&E, which already had meters in place, to test the effects of information options using experimental methods. However, both companies are combination gas and electric utilities and there is no way to be sure that the responses from such a comparison would generalize to the situation of SoCalGas, since customers receiving both commodities from a single utility may not separate the cost of the two commodities when thinking about their gas bills. The cost of these types of pilots, even when meters were already in place, was also determined to be very high – especially considering the concerns about whether the estimates would be transferrable to SoCalGas customers.
- Another approach considered involved selecting control groups from among the population of customers that had not yet received advanced meters using matching methods that control for observable differences in the population of customers with and without advanced meters. FSC evaluated this approach using Monte Carlo simulation to determine the statistical precision in the measurement of effect sizes that could be identified using different matching algorithms and treatment group sizes. This analysis is summarized in Appendix B. In all cases, it was not possible to accurately detect average effect sizes in the 1% to 2% range, which is what it is reasonable to expect on average for impacts from information programs. More importantly, effects were often found for populations where no impacts had been imposed. In other words, the impact estimates were biased. These simulations made it very clear that only rigorous

experimental methods are likely to accurately determine the true effects that are reasonably expected to occur in response to information feedback.[9]

- SoCalGas even considered managing the meter deployment process in such a way that a random sample of customers within the geographic regions where meters were deployed would retain their old meters for a period of time after most other meters in the area were changed to advanced meters – as a way of assembling control groups. However, because relatively large control groups would be needed, it quickly became clear that this approach would significantly impact deployment costs and schedules and would require retaining meter readers for an extended period of time in areas that would otherwise become completely automated.

After considering and rejecting all of the above possibilities for the reasons stated, SoCalGas decided to focus the impact measurement on information treatments and market segments that have the greatest potential to help meet the 1% savings goal, while forgoing impact measurement of the new online tools that can be accessed through the Company's socalgas.com website. These new tools will be made available to all users with an advanced meter. Consequently, they meet the CPUC requirement to provide access to new information upon installation of a new meter. However, because they will be available to everyone, it is not possible to accurately measure their impact by establishing a large control group to be used for measurement purposes. On the other hand, SoCalGas has more control over who receives offers for BTAs and HERs. As such, these information treatments allow for implementation of the rigorous experimental research designs that will produce highly accurate impact estimates even when impacts are expected to be small on average. SoCalGas also believes that BTAs and HERs have greater potential to produce measureable usage reductions because they are "pushed" to customers without them having to be proactive in accessing the information. The Ways to Save tools require customers to take the proactive step of logging in to access the information, which studies have shown most customers do not do on a regular basis.

3.3 Sample Size Determination

An important input into development of the evaluation plan is the size of the participant population and control groups required to estimate behavioral effects. The effects to measure are the impacts on energy use for people who enroll in the bill alert program, are defaulted into BTA and are defaulted into HERs. The sample size needed to determine energy impacts is a function of the expected change in energy use attributable to the treatment of interest and the underlying, uncontrolled variation in energy use. In this instance, the variables of interest are monthly and annual energy use. The larger the uncontrolled variation in energy use across customers and/or over time, the larger the sample needed to detect a given change in energy use resulting from program implementation. In addition, the larger the expected impact of the program, the smaller the sample size needed to detect the effect for a given customer population with known variation in energy use. Much of the underlying variation in energy use across customers and over time can be controlled for using regression methods that take into account differences across customers (e.g., fixed effects) and differences across time (e.g., due to weather). That is, for a given population and effect size, the analysis method used to estimate impacts can also influence the required sample size.

[9] A more detailed discussion of the simulation analysis is contained in Appendix B.

Table 3-1 shows the sample sizes needed to estimate impacts for SoCalGas' customer population based on Monte Carlo simulations using actual monthly gas usage data. The sample sizes in the table are sufficient to have an 80% chance of measuring the true hypothesized effect to within ±40% of its magnitude. In other words, if the true effect is 1%, the indicated sample sizes will have an 80% chance of measuring that value to be in the range 0.6% to 1.4%. Alternatively the same sample sizes have a 90% chance of measuring the effect to within ±53% of its magnitude and a 95% chance of measuring it to within ±63% of its magnitude. As seen, the relationship between effect size and required sample size is not linear. It is much easier and less costly to estimate effects if the expected impact is 5% or 10% than if it is 1% or 2%.

Table 3-1
Required Sample Sizes for Selected Effects

Effect Size (%)	Treatment Sample	Treatment + Control
1	12,500	25,000
2	3,000	6,000
3	1,000	2,000
4	600	1,200
5	350	700
6	250	500
7	175	350
8	140	280
9	115	230
10	90	180

As previously discussed, the average impact of information programs is likely to be small. On the electricity side, nearly all studies have found impacts to be significantly less than 10% and most estimates have been less than 5%.

With the RCT design that will be used for default BTA and HERs, the required sample sizes in Table 3-1 can be directly applied to the number of customers that will be defaulted into each of those programs. With a RED design that will be used for opt-in BTA, the application of Table 3-1 is not as straightforward because the sample sizes must be adjusted for the expected enrollment rates. For opt-in BTA, not all customers in the treatment group actually experience the treatment, which can significantly dilute the effect size that must be estimated and significantly increase the required sample size needed to detect it. For example, if the population of people enrolling in bill alerts was expected to be 90%, and the average impact was expected to be 10%, then the average effect size for the entire population would be 9% and

the sample sizes for a RED design would be 115 each for treatment and control groups. On the other hand, if only 10% of customers who are offered BTA ultimately enroll, and those who did reduced usage by 10%, the effect size that would need to be detected using a RED design is 1% and the required sample size is 12,500 each for treatment and control groups. The same sample size would be needed if, say, 20% of customers reduced usage on average by 5%. Obviously, the required sample sizes would be much smaller using an experimental design that does not permit customers to select themselves into or out of treatments such as some form of RCT like a recruit and delay or deny assignment strategy; but these more efficient experimental designs are not possible for opt-in BTA for reasons discussed previously. Fortunately, with the relatively low cost information treatments being considered here, the larger required sample sizes using a RED design are not cost prohibitive. Furthermore, SoCalGas is committed to offering information feedback services to a large portion of the customer population, as long as it proves cost effective to do so. The larger initial samples sizes are consistent with this broader, long term goal.

When there is significant uncertainty about what the effect size is likely to be, another way to think about sample sizes is to ask the question, "How large does the effect size need to be to be of interest?" Put another way, if it is less than 5%, or 2% or 1%, is that large enough to matter? In SoCalGas' AM application, the benefit-cost analysis underlying the business case was based, in part, on an assumed average impact across all customers of 1% from the information that would be made available based on the AM platform. Given this, it was decided that the research samples for the preliminary tests should be large enough to detect an estimated impact of 1% with reasonable confidence for bill alerts. The basic experimental design and sample sizes employed in the study are designed to maximize the likelihood that SocCalGas meets its requirement to conclusively show whether it is achieving the 1% savings it claimed would occur as a result of the installation of advanced meters. In total, the number of treatment and control customers is larger than the values indicated in Table 3-1 because of the desire to estimate impacts for selected customers segments, such as MyAccount and non-MyAccount customers and customers within different usage strata.

The sample sizes required to detect meaningful differences in customer acceptance rates are much smaller than those required to detect small differences in energy use. Marketing offers made to roughly 3,500 customers are large enough to measure a ±1% difference in customer acceptance if the acceptance rate is expected to be approximately 5%.

3.4 Target Population for Initial Residential Tests

Several factors were taken into consideration when determining which customers should be targeted for the initial test cells in 2013 and how the target market should be segmented.

One important consideration is usage. Customers with low annual usage are unlikely to be interested in or to respond to information feedback since their bills are so low that even significant 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, is unlikely), their contribution to the target of 1% savings in aggregate for the overall population would be small and the marketing and implementation costs for these customers per therm conserved would be

very high. In short, it is highly unlikely that these customers will be cost effective and almost certain that they would be less cost effective than customers with larger usage. Given this, the target population for the initial test cells will be separated between low usage customers (bottom quartile) and medium/high usage customers (2nd to 4th quartiles). In addition, the low usage segment will only be offered the opt-in BTA treatment.

Another important segmentation factor is whether customers are MyAccount users. MyAccount customers register with SoCalGas to receive a variety of online services, including receiving, viewing and paying their bills, accessing current and historical usage data, making payment arrangements and scheduling changes in service such as starting or stopping service. Currently, about 33% of residential gas customers are MyAccount customers and this proportion is growing, with about 15,000 additional customers signing up each month. Given their demonstrated interest in online transactions, MyAccount customers may be more likely than non-MyAccount customers to take advantage of the new information available through bill alerts or HERs. They also are a population for whom SoCalGas has email addresses and, thus, can receive email solicitations and information feedback through that inexpensive channel. For all of these reasons, it was felt that the population of customers targeted for both bill alerts and HERs should be segmented into MyAccount and non-MyAccount customers.

The final segmentation of the residential AM-enabled customer base is between those that do and do not pass the eligibility screen for HERs. Opower (the organization that will implement the HERs) has an eligibility screen through which 20% of customers do not pass. As such, 20% of medium/high usage customers will not be eligible for HERs. Considering that SoCalGas plans to compare HER impacts with default BTA impacts and opt-in BTA impacts, the segmentation must allow for an estimation of default BTA impacts and opt-in BTA impacts specifically for customers that would have been eligible for HERs. 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.

Figure 3-1 provides a high level overview of the segmentation and targeting plan for the market and information tests that will be implemented in fall 2013. The starting estimate of 600,000 residential customers with AM meters is based on the current meter deployment plan target for beginning of September 2013. This initial study population is divided into usage quartiles. The 150,000 customers in the lowest quartile are divided evenly into a control group and a treatment group that will receive an opt-in BTA treatment. No other treatments will be provided to low usage customers in the first year. Based on prior experience by Opower, it is assumed that 80% of the 450,000 customers in the top three usage quartiles will pass the Opower eligibility screen. So, 90,000 customers in these usage strata will not be eligible for HERs. This group of customers will be divided evenly into a control group and treatment group that also receive the opt-in BTA treatment. Based on the overall subscription rate of My Account for SoCalGas it is assumed that 33% of the 360,000 medium/high usage customers that pass the Opower eligibility screen will subscribe to MyAccount and, therefore, that SoCalGas will have email addresses for these customers.

The 118,800 medium/high usage, MyAccount customers that pass the Opower eligibility screen provide the opportunity to test the largest variety of treatments on the same population of customers. Considering that SoCalGas has email address for all MyAccount customers, the impact of email-only HERs relative to

paper and email HERs can be tested. As such, 12,500 customers have been allocated to each of these treatments. In addition, SoCalGas is able to use the email address for MyAccount customers to test default BTA, which will be assigned to 25,000 customers. The remaining 68,800 medium/high usage, MyAccount customers that pass the Opower eligibility screen will be divided evenly between the opt-in BTA treatment and a control group. This control group can be used to estimate impacts for all treatments within the segment.

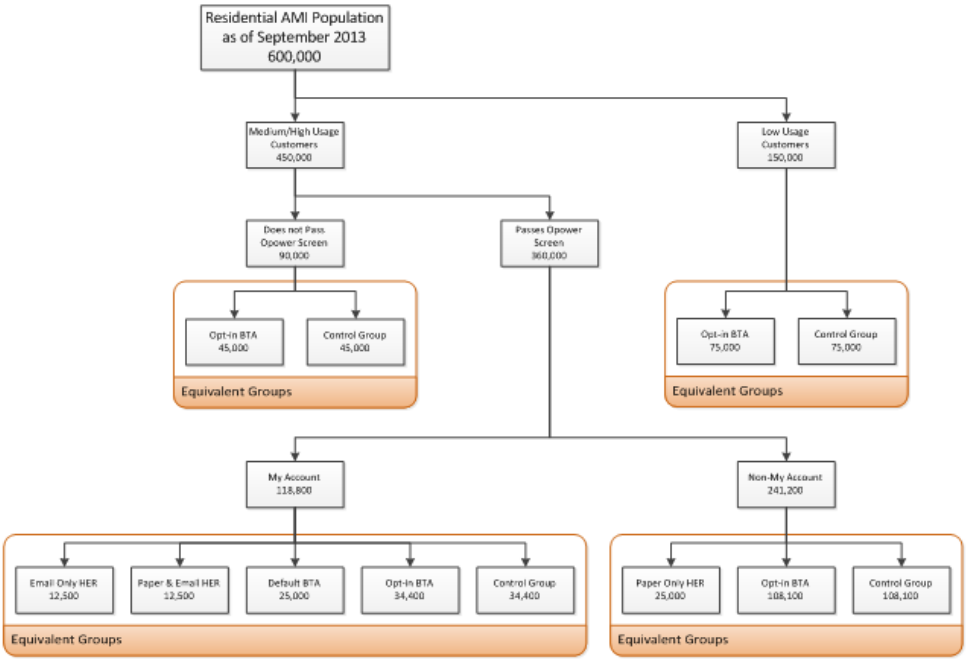
Further comparisons of HERs and opt-in BTA will be made among medium/high usage, non-MyAccount customers that pass the Opower eligibility screen. Around 25,000 of these customers will be assigned the paper only HER treatment and the remaining will be divided evenly between the opt-in BTA treatment and a control group (108,100 each). This control group can be used to estimate impacts for both treatments within the segment. Considering that SoCalGas does not have email addresses for these customers, default BTA and email HERs are not an option in the non-MyAccount segment.

In summary, the 600,000 customers in the initial AM population will be allocated as follows:

- **Opt-in BTA**: 262,500 customers (number of solicitations, not enrollees)
- **Default BTA**: 25,000 customers
- **HERs**: 50,000 customers (25% email only, 25% paper and email, 50% paper only)
- **Control Group**: 262,500 customers

Among the 262,500 customers that SoCalGas will solicit for enrollment in opt-in BTA, many different marketing messages and channels can be tested. However, due to set up costs for each marketing campaign, SoCalGas has decided to limit the marketing testing to two different messaging strategies, each of which will be randomly assigned to half of the opt-in BTA customers within each segment. Depending on email availability, SoCalGas will use a combination of direct mail and email to solicit customers for enrollment in opt-in BTA.

Figure 3-1:
Market Segmentation and Sample Requirements for Initial Residential Tests

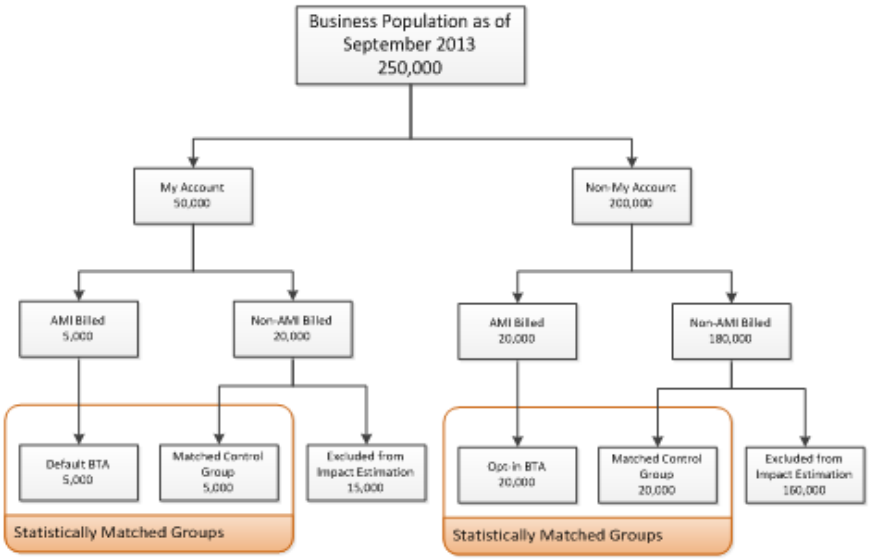


3.5 Plan for Business Customers

In addition to the roughly 600,000 customers that will have advanced meters by September 2013, SoCalGas estimates that 25,000 of its approximately 250,000 business customers will have advanced meters by that time. This number of AM-enabled customers is insufficient to conduct rigorous impact analyses with an RED or RCT design. Nonetheless, SoCalGas plans to test customer acceptance of two programs among the AM-enabled business customers – default BTA and opt-in BTA. SoCalGas plans to conduct impact analyses for these two programs using a statistically matched control group of business customers that are not AM-enabled. Although this impact estimation method is not as precise as an RED or RCT, it is still worthwhile to conduct the matched control group analysis. If default BTA or opt-in BTA have a relatively large percentage impact on usage, this method will be able to detect the effect.

Figure 3-2 summarizes the proposed tests for business customers. As of September 2013, the SoCalGas business population will have 250,000 customers, of which roughly 20% have MyAccount. The 50,000 MyAccount customers are split into 5,000 AM billed customers and 20,000 non-AM billed customers. The AM billed MyAccount customers will all be defaulted onto BTA, and to estimate the impacts, SoCalGas will use a matched control group of 5,000 customers from the pool of non-AM billed MyAccount customers. The remaining non-AM billed MyAccount customers will be excluded from the impact estimation. As for non-MyAccount customers, these 200,000 customers are split into 20,000 AM billed customers and 180,000 non-AM billed customers. The AM billed non-MyAccount customers will all be offered BTA on an opt-in basis, and to estimate the impacts, SoCalGas will use a matched control group of 20,000 customers from the pool of non-AM billed non-MyAccount customers. The remaining non-AM billed non-MyAccount customers will be excluded from the impact estimation.

Figure 3-2:
Proposed Tests for Initial Business Customer Tests



3.6 Timing

The timing of information provision and evaluation reporting is important. Natural gas usage is much lower in the summer than in the winter for most households (households with swimming pools may be an exception to this general pattern). As such, one would expect that most customers will be more focused on gas usage and bills during the winter than in the summer. This variation in focus is likely to significantly affect how many consumers will enroll in bill alerts each season. It will also impact conservation behavior for all treatments. These facts make cross seasonal comparisons of behavior largely inappropriate. For example, it would not be appropriate to compare bill alert enrollment rates for one promotional strategy in the fall and a different one in the spring, because any such difference could as easily be the result of seasonal differences in behavior than due to the different promotional strategies. Even less appropriate would be comparing percentage savings in energy use across seasons, since very different end use behavior and gas usage occurs in the winter and summer.

The AM decision requires SoCalGas to file a report of measured savings every six months and also to describe marketing, education outreach and customer support activities that take place. SoCalGas will comply with this requirement by filing two reports each year. One report, filed in February of each year will describe the results of marketing and outreach activities that have been conducted during the test and learn cycle of each year. The marketing and outreach period of each cycle will span the period from October 1st to March 31st. This is the period during which preparations for marketing and outreach activities will take place in anticipation of the winter heating season. A second report to be filed in August of each test and learn cycle will describe the energy savings that have resulted from program operations and delineate planned program changes and additions for the coming year. Energy savings will be reported for the preceding winter heating season (i.e., from October 1 to March 31 of each year.

In the first test and learn cycle, SoCalGas will provide the following analysis:

- Final Test and Learn Plan for 2013-14 cycle – August 2013;
- Results of Market Tests and Other Operations – February 2014; and
- Impact estimates for 2013-14 cycle with Test and Learn Plan for 2014-15 – August 2014.

Appendix A. Research Design Options

In order to determine if the new information services made available by SoCalGas change energy use, it is necessary to estimate what energy use would have been for those customers if they had not had access to the information. Gas usage that would have occurred in the absence of a new service offering can be called "reference usage." Conceptually, reference usage can be based on usage for participating customers *prior to* taking advantage of the new service options. Alternatively, it can be based on measurements of usage for a control group of customers that are identical to participating customers except for the fact that they are not exposed to the information treatment.

The problem with estimating energy consumption change as the difference in usage for the treatment group before and after the treatment goes into effect is that other factors can cause a change in usage that is unrelated to the treatment. There are many exogenous factors that could change over the course of an experiment and produce a change in energy consumption, including changes in weather, changes in economic conditions, and customer churn to name only a few. While it may be possible to control for some of these factors (e.g., adjusting for differences in the weather using weather data and regression analysis relating weather to energy use), there is always uncertainty about the amount of specification error in models designed to adjust for exogenous variables and it is strictly impossible to be sure that all such factors have been controlled for properly. Consequently, all before-and-after comparisons will leave some doubt about whether all exogenous factors were properly controlled for and, therefore, whether the treatment was the sole cause of the observed change in usage.

Comparing usage measurements from treatment groups with those obtained from control groups is subject to different, but equally difficult problems. The primary challenge in using an external control group as the basis for determining impacts is that it can be difficult to ensure that the treatment and control groups are identical except for the application of the treatment. Drawing two random samples of customers and offering the treatment to one and not the other will only lead to valid causal inferences if the assignment to treatment is compulsory (such as default BTA or HERs). If the experimental variable is presented to the treatment group on a voluntary basis (such as opt-in BTA), volunteers will differ in some way from those who declined the offer. Otherwise, they would have taken the offer. If they differ in terms of the variable of interest, in this case, gas use, computing the impact of the treatment as the difference in usage for the voluntary treatment group and the control group will produce a biased estimate of the impact. For example, suppose, reasonably, that volunteers are more energy conscious than those who decline the offer. Given this, it is likely that the energy use of volunteers would be below the average use of the rest of the population prior to going on the treatment. As such, calculating the impact as the difference in energy use between treatment and control customers will produce an upward biased estimate, with the magnitude of the bias equal to the difference in energy use between the treatment and control groups prior to the treatment being introduced.

Even if usage for the treatment and control groups is the same before the treatment is introduced, it is possible that some other material difference exists between participants and control customers that would produce erroneous causal inferences. For example, suppose that the treatment was introduced around the time of an economic downturn. Under this scenario, it is at least plausible that those who volunteer for the treatment would consist of people who are more at risk in the down economy and would likely

tighten their belts, and reduce their energy use, even if the treatment had not been introduced. If true, a comparison between a pre-selected, random control group and the treatment group would be biased upward because some of the difference in usage would likely be due to the belt tightening associated with the economic downturn.

The two situations referred to above are examples of selection effects. Selection effects are the biggest threat to the internal validity of experiments. An experiment is said to be internally valid if the only possible explanation for the observed change in the variable of interest is the treatment itself. If there are other possible explanations, such as pre-existing differences in the variable of interest, or behavioral factors that lead to changes in usage that are independent of the treatment, the experiment is not internally valid. A goal of every experiment should be to produce internally valid results. This goal can be hard to achieve in the real world.

There are various ways to ensure that an experiment is internally valid. All of them are variations on random assignment to treatment and control conditions. Drawing two random samples of customers and making the treatment for one group mandatory would ensure that the only difference between the two groups is the treatment condition (except for sampling error, which can be a concern with small samples but of little significance with large samples).

Another valid approach is to take a group of customers who volunteer for a treatment and then randomly assign half of the volunteers to the treatment condition and the other half to the control group. This "recruit-and-deny" approach adjusts for selection bias by allowing for the selection process to occur and then denying treatment to half the volunteers. This approach could be implemented for bill alerts, but the potentially negative impact on customer satisfaction is always an important consideration, especially with large sample sizes.

Another approach to ensuring internal validity is called "intention-to-treat." With this approach, two random groups of customers are chosen, and one group is offered the treatment and the other isn't. Among those offered the treatment, some take it and others don't. The effect of the treatment is estimated by comparing usage for the entire group offered the treatment with usage for the group not offered the treatment (the control group). This approach produces an internally valid estimate of the aggregate treatment effect because the only difference between the two groups of customers is that one received the treatment and one did not. Intention-to-treat analysis works best when the impact of a treatment and the percent of customers who take it are large. It is still a valid approach even if the acceptance rate and impacts are small, but much larger samples are needed to detect the effect under these circumstances.

One final approach that is an extension of the intention-to-treat design is called a randomized-encouragement-design (RED). The RED design starts the same way as the intention-to-treat design but does some additional calculations to determine the effect size for the group of customers who actually take the treatment. With a RED design, because the offer has been randomized, you can observe the fraction of the group that received the offer that take the treatment, the value of usage for takers, the value of usage for non-takers, and the value of usage for those not offered the treatment (the control group). Importantly, you can assume that the fraction of takers in the non-encouraged group (which

cannot be observed) is the same as it is in the encouraged group (which is observed) because both groups are randomly selected. With the above information, it is possible to calculate the overall effect of the treatment and also the effect of the treatment for the subgroup of customers who accept it.

None of the above options are possible when evaluations are undertaken after a program has already been launched. In such situations, a variety of quasi-experimental methods can be used in an attempt to estimate impacts.[10] One class of quasi-experimental methods involves the use of various matching techniques to attempt to develop suitable control groups from parties who are not exposed to the treatment. Another quasi-experimental approach involves controlling for selection effects through econometric modeling of customer acceptance and/or usage behavior with observable variables that might vary between treatment and control customers. Such methods are more successful when effect sizes are large and/or when there are strong correlations between observable variables and program usage. If the correlations are weak, model misspecifications can lead to biased impact estimates and when impacts are small, imperfect matching can also produce biased impact estimates.

[10] Guidelines for Designing Effective Energy Information Feedback Pilots: Research Protocols, Palo Alto, CA, 2010 1020655.

Appendix B. Simulation Analysis for Research Planning

The expected effects of the planned information feedback services on gas consumption are expected to be relatively small (i.e., less than 5%) on average. Because month to month variations arising from weather and consumer behavior (i.e., vacations, etc.) are so large, the only reliable approach to estimating the savings resulting from exposure of customers to these services is to compare the energy consumption of the exposed customers with the energy consumption of a control group that has not been exposed to the services over a reasonable period of time (i.e., at least one year).

The most reliable and appropriate methodology for developing control groups involves randomly assigning customers to treatment and control conditions. This usually involves taking a random sample of the customer population (i.e., in this case those who received advanced meters over a given interval) and randomly assigning a reasonably large number of them to the treatment conditions and control conditions. Because the customers are randomly assigned to these conditions, when sample sizes are large enough, the groups of customers will be essentially statistically identical with respect to all factors that might influence their energy consumption. So we expect that any difference in energy consumption (beyond normal sampling variation) will be the result of exposure to the experimental treatment (i.e., the feedback services under study).

In theory, it is possible to create control groups without using random assignment. This is accomplished by selecting customers who are similar in important respects to those in the treatment groups (i.e., those who have received advanced meters) from the population of customers that have not yet received advanced meters. In the first year of the meter rollout, for example, roughly 600,000 meters will be deployed and available for information services – leaving more than 5 million customers who are still receiving service under manual meters and thus cannot receive the feedback information services that are being deployed to customers who have the advanced meters. It is possible, in theory to select a control group of customers from the customers who have not yet received advanced meters that are as similar as possible on known characteristics to the customers who have received the advanced meters; and to compare the energy consumption of these two groups in order to ascertain the effects of providing the information feedback. Whether such matching will provide a reasonable basis for comparison depends to a great degree on whether the variables used to identify similar customers provide a basis for selecting customers that are similar in all important respects.

In the course of evaluating the different experimental design alternatives, FSC undertook a robust test of the accuracy and precision of different matching methodologies for detecting differences in gas consumption for realistic sub-populations of customers who received meters and those that did not. The test was as follows:

1. A Monte Carlo simulation (involving 1,000 iterations) was used to select hypothetical treatment and control group customers for the study.
2. Samples of customers were selected to hypothetically *receive* advanced meters in each month for the first year of the meter deployment. These customers were selected from the geographical

locations at which SoCalGas indicated it intended to install advanced meters in the first year of deployment.[11]

3. Four different matching algorithms were used to select hypothetical control groups including:
    - Random sampling from all customers that did not receive advanced meters for at least 12 months after group that received meters;
    - Selection of all customers from Zip Codes with mean and median January and July usage that were statistically similar to those of the group of customers that received meters;
    - Matching each individual customer that received a advanced meter with a customer that didn't receive a advanced meter that had similar January, July and annual usage; and
4. Matching each individual customer that received a advanced meter with a customer that didn't receive a advanced meter but had similar January Therms/heating degree day (as well as similar July and annual usage).
5. Energy consumption for the customers who hypothetically received advanced meters was arbitrarily reduced by 1% -- inducing a 1% treatment effect.
6. Panel regressions were used to estimate differences in energy consumption for treatment and control groups – variously defined as indicated above. The regressions included: monthly usage data on control and treatment customers before and after meters are were installed, weather, customer fixed effects and month times year fixed effects.

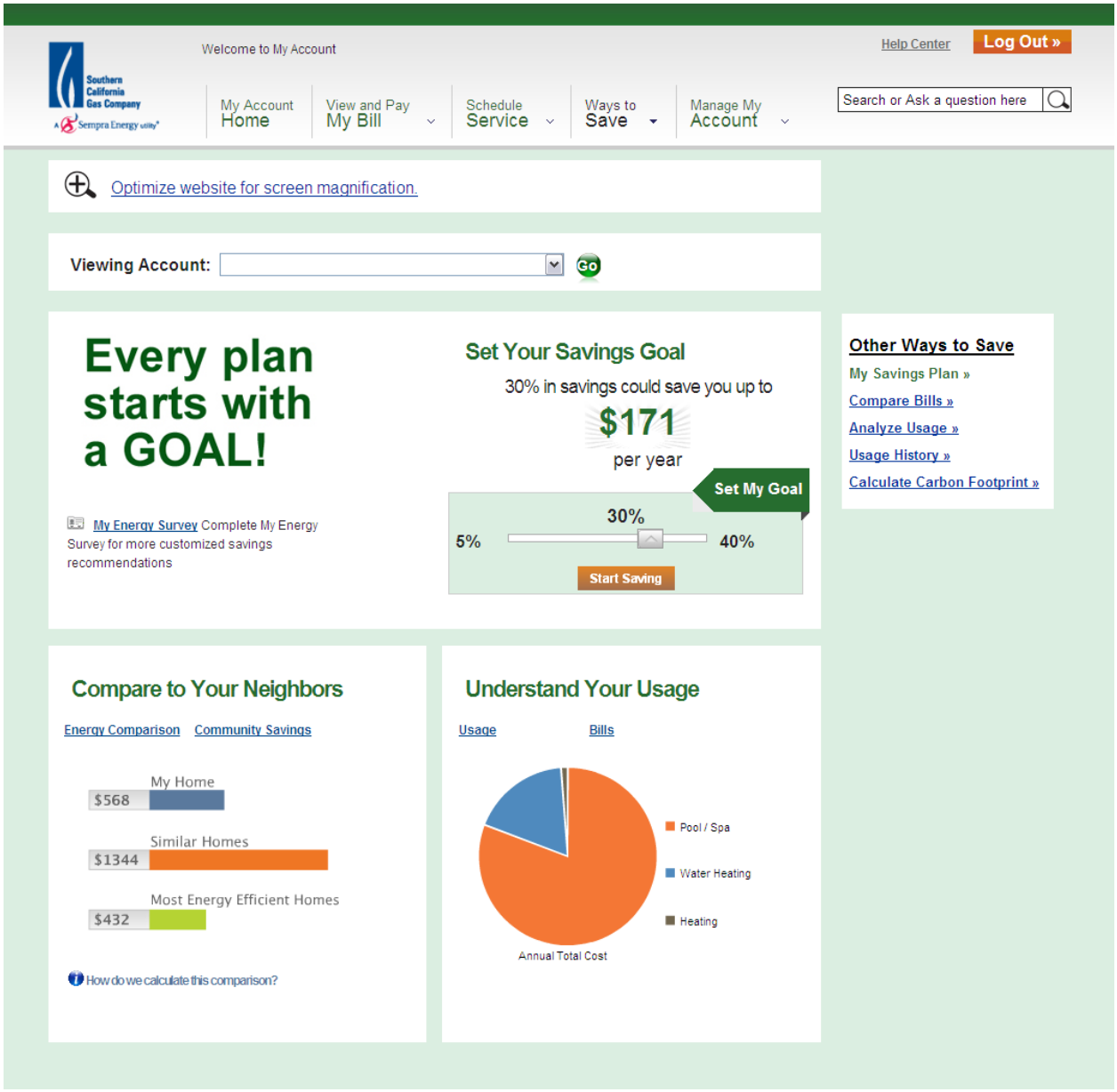
To summarize the test, we selected realistic hypothetical treatment groups based on SoCalGas' proposed deployment strategy. We created matched control groups using 4 realistic matching algorithms. This process was carried out 1,000 times with different samples of customers on each occasion. We installed a known effect of 1% in the treatment groups. Then we analyzed the data from the treatment and control groups using the best available econometric techniques to try to identify the 1% effect that we knew was present in the data. The findings from the test can be summarized as follows:

- None of the matching algorithms were capable of detecting the 1% reduction in energy consumption that had been installed in the treatment groups;
- All of the matching algorithms produced impact estimates that were biased to some degree depending on the month during which the advanced meter was installed;
- Varying deployment year produced different biases by impact month -- so the bias was not simply a function of the starting period of the study;
- To ensure that there was not something in the model specification or analysis approach that caused these results, we randomly selected two groups of customers and imposed the treatment effect on one and not on the other (the true experimental design simulation). The regression models detected the 1% simulated difference. In other words, an RCT design is capable of detecting a 1% effect, but a design using ex post matching on pre-treatment usage is not.

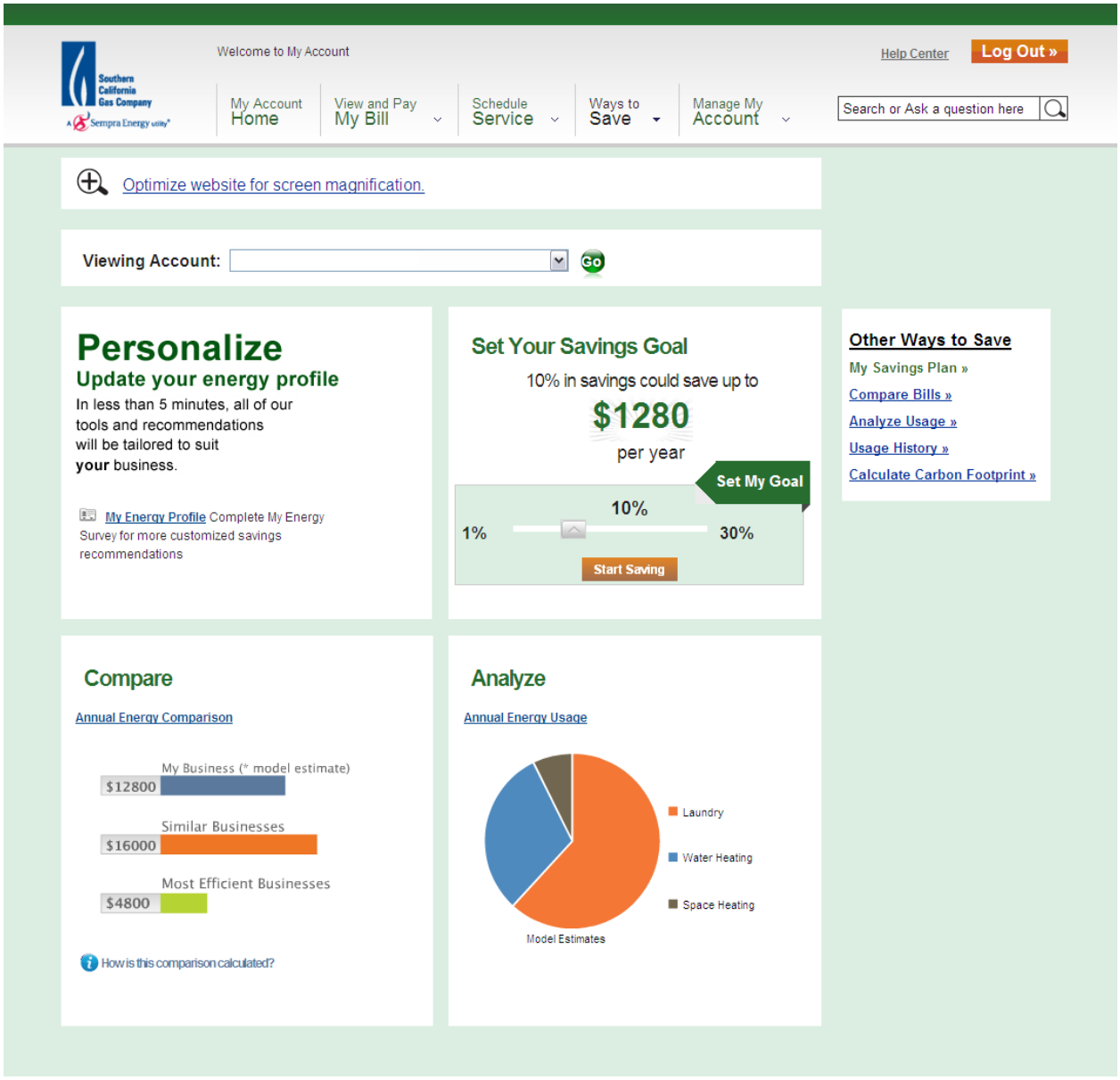
[11] FSC determined that the deployment of advanced meters would take place in Pico Rivera and that SoCalGas' implementation plan called for installing advanced meters "working outward" from this initial deployment area. We also learned that SoCalGas intended to deploy approximately 921,000 meters in the first year of deployment. The meter deployment plan was not specific about the exact geographical locations that would be included in this first year of the roll out. However, for purposes of selecting the population of customers that would receive meters in the first year, it was reasonable to select customers from Zip Codes radiating outward from the center of Pico Rivera.

From these results we concluded that given the small effect size under investigation, matching on pretreatment usage does not adequately control for differences in the usage patterns over time between the treatment and control groups. We therefore recommended abandoning matching as a strategy for formulating control groups in this case.

Appendix P – socalgas.com Ways-to-Save Residential Screen Shots



Business


Welcome to My Account
Help Center
Log Out »
Southern California Gas Company
A Sempra Energy utility
My Account Home
View and Pay My Bill
Schedule Service
Ways to Save
Manage My Account
Search or Ask a question here
Optimize website for screen magnification.
Viewing Account:
Go
Personalize
Update your energy profile
In less than 5 minutes, all of our tools and recommendations will be tailored to suit your business.
My Energy Profile Complete My Energy Survey for more customized savings recommendations
Set Your Savings Goal
10% in savings could save up to
$1280
per year
Set My Goal
10%
1%
30%
Start Saving
Other Ways to Save
My Savings Plan »
Compare Bills »
Analyze Usage »
Usage History »
Calculate Carbon Footprint »
Compare
Annual Energy Comparison
My Business (* model estimate)
$12800
Similar Businesses
$16000
Most Efficient Businesses
$4800
How is this comparison calculated?
Analyze
Annual Energy Usage
Laundry
Water Heating
Space Heating
Model Estimates

Appendix Q – PRM Community Events