SOUTHERN CALIFORNIA GAS COMPANY ADVANCED METER SEMI-ANNUAL REPORT

Table of Contents

In	troduction	5
	Chapter 1 - Project Overview and Summary	6
	Chapter 2 - Network Construction and Module Installation Status	7
	2.A Communication Network Construction Status	7
	Table 1 Status of DCUs (December 31, 2013)	9
	Table 2 Location of Installed DCUs	10
	Table 3 Power Source for DCUs	11
	2.B Module Installation	11
	Table 4 Schedule for Warehouses	12
	Table 5 Module Installations by Advanced Meter Warehouse	13
	Table 6 Advanced Meter Injuries and Vehicle Incidents	14
	Chapter 3 - System Performance	14
	3.A. Network Performance	14
	Table 7 Module Communication Status	15
	3.B. Billing Data Performance	16
	Table 8 Advanced Meters Utilized for Billing	17
	Table 9 Customer Bills Based on Advanced Meter Reads	18
	Table 10 Comparison of Advanced Meter Read to Manual Read Meters Read April 1 – May 24 2013	
	3.C. Hourly Gas Consumption Data	21
	Table 11 Advanced Meter Hourly Reads Received	22
	Chapter 4 – Network Customer Outreach Activities	23
	Chapter 5 – Pre-Installation Customer Outreach Activities	26
	5.A General Outreach Strategy	27
	5.B General Outreach Organizations & Events	29
	5.B.1 South Gate Warehouse	30
	5.B.2 Irwindale Warehouse	32
	5.B.3 Sun Valley Warehouse	34
	5.B.4 Bakersfield Warehouse	35
	5.B.5 Indio Warehouse	37

5.B.6 Hemet and Perris warehouses	39
5.C Radio Disney	40
5.D Customer Awareness of the Advanced Meter Project	41
Chapter 6 – Module Installation Outreach Activities	44
6.A Pre-Installation	44
6.B Installation	45
6.C Transition to Advanced Meter Billed (AM Billed)	45
6.D Customer Awareness and Satisfaction With the Module Installation Process	45
6.D.1 Pre-Installation Surveys	46
6.D.2 Post-Installation Surveys	46
6.E Online Market Research Community	49
Chapter 7 – Customer Inquiries and Deferrals	49
Table 12 Customer Inquiries Elevated to Advanced Meter Team	50
Table 13 Number of Customers Receiving Installation Notification Letter Requesting Defe Advanced Meter Module	
Chapter 8 - Conservation Outreach Campaign	52
8.A My Account	53
Table 14 Percentage of Residential Customers Likely to	54
8.B SoCalGas Bill Tracker Alerts	54
8.C Opower	56
8.D Residential Conservation Campaign Design	57
8.E Business Conservation Campaign Design	61
8.F Hard-to-Reach Community Events	63
8.G Conservation Campaign Update	63
8.G.1 Bill Tracker Alerts Enrollment	66
8.G.2 "Ways to Save" tool utilization	72
Chapter 9 - Financial Status	73
Table 15 Financial Results Recorded 2010 through December 2013 Forecast July 2013 – 2	01774
Chapter 10 - Meter Reading Work Force Impacts	76
Table 16 Status of Meter Reading Personnel Employed in April 2010	77
Appendix A Sample Data Collection Unit Installations	79
Appendix B Master Schedule of Warehouse Openings and Closings	83

Appendix C DCU Construction Notification Letter	84
Appendix D Cities with All DCUs Installed (as of December 31, 2013)	85
Appendix E Radio Disney Samples	86
Appendix F July, 2013 Bill Insert	90
Appendix G Pre Installation Letter	93
Appendix H Frequently Asked Questions "Pocket Cards"	98
Appendix I "Successful Installation" Door Hanger	101
Appendix J "Unsuccessful Installation" Collateral Materials	103
Appendix K AM Billed Notifications	111
Appendix L Deferral Sticker and Door Hanger	114
Appendix M Bill Tracker Alert Emails (My Account)	116
Appendix N Opower Collateral Materials	122
Appendix O Nextant Conservation Plan	129
Appendix P Socalgas.com Ways-to-Save Residential Screen Shot	162
Appendix Q PRM Community Events	165
Appendix R 2013/14 Conservation Outreach Campaign Collateral Materials	165
Appendix S socalgas.com Advanced Meter Online Information Pages	187
Appendix T billtracker.socalgas.com Enrollment Microsite	189
Appendix U IKahan Media	194

Southern California Gas Company Advanced Meter Semi-Annual Report

Introduction

This is the second 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 as of December 31, 2013.

- Chapter 1 provides a project overview and summary.
- Chapter 2 summarizes the status of the construction of the Advanced Meter system as of December 31, 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 December 31, 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 57% over 2,000 DCUs are constructed or ready to construct
- About 375 SoCalGas employees installing modules
- Over 1.1 million modules installed

- Over 4.5 million bills based on automated reads have been provided to customers
- Over 99% of automated reads for billing are accurate
- Nearly 99% of automated reads are available to provide and display hourly usage data [to support customer conservation of natural gas consumption]

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

- Continued promotion of its My Account website and new energy analysis tools 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.

In addition, the conservation campaign launched in October 2013, and will 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.

2.A 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 3,733 DCUs based on an updated 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 3,733 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 provide sufficient network reliability and to ensure that customers can receive their hourly data.

SoCalGas' plan is to install DCUs prior to the scheduled module installation so that data can 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 December 31, 2013, based on the installation of the 3,733 DCUs indicated in the propagation study.

Table 1
Status of DCUs (December 31, 2013)

DCU Status	Number of DCUs	Percent of DCUs
Installed	2,001	53.6%
Ready to Construct	125	3.3%
Negotiating with Local Governments/Other Third Parties	428	11.5%
Not Started	1,179	31.6%
Total To Be Installed	3,733	100.0%

Approximately 57 percent of the network has been constructed or is ready to construct. SoCalGas is currently negotiating with local governments and third parties to install another 11.5 percent of the network. By December 31, 2013, SoCalGas installed 2,001 DCUs with another 125 ready for construction.

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	1,497
Caltrans Right of Way	2
Lease Other Third Party Property	0
Private Easement	12
Total	1,574
Attached to Third Party Asset	
Los Angeles Bureau of Street Lighting	337
SCE Street Lights	11
PG&E Street Lights	3
SDG&E Street Lights	0
Other Cities Street Lights	76
Other Public/Private Assets	0
Total	427
Total Installed	2,001

To date SoCalGas had installed DCUs on a SoCalGas owned pole in the public right of way under its franchise almost two-thirds of the time. The second most common option has been to install DCUs on a local government owned street light. SoCalGas has constructed two DCUs in the Caltrans rights of way and twelve DCUs have been constructed on a private easement. Appendix A provides photographs of the DCU types.

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

- 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 executed contracts 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 Atascadero, Bakersfield, Bellflower, Brawley, Brea, Burbank, Cerritos, Chino Hills, Claremont, Coachella, Fullerton, Glendale, Indio, Lemoore, Monrovia, Morro Bay, Pasadena, Pomona, Ontario, Rancho Mirage, San Marino, Whittier, and Yorba Linda. ¹

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.

Table 3
Power Source for DCUs

Installed DCUs	Solar Powered	AC Powered
2,001	1,561	440

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.B Module Installation

SoCalGas installed its first module on October 29, 2012. As of December 31, 2013, SoCalGas installed 1,127,389 modules. Installation teams work out of warehouses leased specifically for the Advanced Meter project. Appendix B provides a master schedule of warehouse opening and closings. Table 4 below displays the schedule and workforce for each of the 10 warehouses opened thus far.

11

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

Table 4
Schedule for Warehouses

Warehouse	Opening Date	Closing Date	Number of
		3	Employees*
South Gate	October 29, 2012	September 12, 2014	70
El Centro	February 4, 2013	May 10, 2013	28
Irwindale	March 4, 2013	November 21, 2014	70
Sun Valley	April 1, 2013	May 15, 2014	28
Bakersfield	April 15, 2013	November 22, 2013	47
Indio	May 13, 2013	November 22, 2013	87
Northridge	September 3, 2013	August 21, 2015	46
Visalia	November 25, 2013	October 31, 2014	52
Hemet	November 25, 2013	July 31, 2014	37
Perris	November 25, 2013	January 30, 2014	55

^{*}Employee count when warehouse is fully staffed

As of December 31, 2013, approximately 375 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	Number of Modules Installed		
Warehouse	Module Only	Meter Change w/Module	Total
South Gate	198,030	88,047	286,077
El Centro	30,088	5,732	35,820
Irwindale	125,816	55,374	181,190
Sun Valley	100,883	32,734	133,617
Bakersfield	84,233	20,552	104,785
Indio	165,944	28,617	194,561
Northridge	28,334	6,013	34,347
Visalia	17,647	5,959	23,606
Hemet	17,064	2,145	19,209
Perris	18,221	4,225	22,446
Total Advanced Meter	786,260	249,398	1,035,658
Other SoCalGas Personnel	0	91,731	91,731
Total	786,260	341,129	1,127,389

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 SoCalGas personnel are involved when the installation requires extensive modifications to the existing meter configuration such as installing the modules on complex industrial and commercial meters. Other personnel are also replacing existing curb meters with new curb meters with a pre-installed module.

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 customers who have deferred the installation

of the module. Chapter 8 further discusses the number of deferral customers to date.

While installing the 1,127,389 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	20	4.3
Administration Incidents	20	4.5
Controllable Motor Vehicle Incidents	19	7.3

^{*}OSHA Rate is the number of incidents per 200,000 hours worked.

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.

^{*}CMVI rate is the number of incidents per million miles driven.

Table 7

Module Communication Status

Module Communication Status	Modules Installed	Percent Installed
		With Network
Total Modules Installed	1,127,389	
Modules Installed – Incomplete		
Network	350,813	
Modules Installed with Complete		68.9%
Network ¹	776,576	08.9%
Delivering 100 Percent of	689,028	88.7%
Expected Reads	069,026	00.770
Missing 1-12 Reads		5.9%
	45,572	3.9%
Missing More Than 12 Reads ²		5.1%
	39,721	3.1%
Missing All Reads	2,255	0.3%

¹ A Complete Network indicates that all planned DCUs for a given area per the original network design are operational.

Nearly 69 percent of the modules have been installed where network has been completed and only about 30 percent of modules are installed where the network is incomplete. SoCalGas generally installs modules where the network is available but exceptions include instances when new business meters are connected and a select number of planned meter changes are being performed by other SoCalGas personnel. Additionally, when a meter fails in the field, it is now replaced with an integrated meter and 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 0.3 percent of similarly installed modules have not yet successfully communicated.

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

Once communication is established, the focus shifts to the frequency of successful reporting. As illustrated in Table 7, nearly 90 percent of the installed modules are successfully communicating all of a customer's hourly data on a monthly basis. About 6 percent of the modules are missing 1-12 reads, which means that they have had only 1 or 2 unsuccessful communications per month. That is, one or two six-hour periods have not been successfully communicated to the SoCalGas back office systems. SoCalGas does not consider modules performing at this level to be problematic as enough hourly data is being received for billing purposes.

About 5 percent of the modules are missing more than 12 reads but have communicated at least one read. SoCalGas continues to examine module modifications and network enhancements to improve the performance of these modules.

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 and second is the ability to provide and display hourly usage data to support customer conservation of natural gas consumption.

3.B. Billing Data Performance

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

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

Table 8
Advanced Meters Utilized for Billing

Modules Installed as of December 31, 2013	1,127,389
Modules in 'Billing Ready' Status	1,032,451
Advanced Meter Reads Requested for Billing	931,031
Billing Data Provided by Advanced Meter	890,527
Billing Data Not Provided by Advanced Meter	
	40,504
Percent Provided by Advanced Meter – Actual Read	99.73%
Percent Provided by Advanced Meter – Estimated Read	0.20%
Percent Not Provided by Advanced Meter	0.07%

Over 91 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 10 percent, most are still in the process of completing one of the test elements needed to become 'Billing Ready.' Others are located in areas with incomplete DCU coverage, or are located in areas with insufficient module density to support conversion to Advanced Meter billing.

Modules in areas with network coverage which do not pass the 'Billing Ready' tests are monitored and, if necessary, replaced. They may also point to insufficient network coverage or DCU problems, which are then remediated.²

For the Billing Ready modules, the system provides a high percentage of accurate reads. 99.7 percent of the reads requested were actual, accurate reads. The system also provided an additional 0.2 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.

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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 8 have not been problematic for billing.

SoCalGas began to calculate bills using automated reads in April 2013. Table 9 displays the number of bills based on Advanced Meter reads from April through December 2013.

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	
July	357,809	
August	486,682	
September	619,603	
October	769,341	
November	900,911	
December	1,032,451	
Total	4,528,598	

In total, over 4.5 million bills based on automated reads have been provided to customers since April through December 31, 2013.

SoCalGas has strived to ensure a seamless transition to Advanced Meter billing. As a customer transitions to having their bills based on an Advanced Meter data, they are notified of the change through a letter as outlined in 7.C.

In order for an Advanced Meter to be billed it is required to pass a 'Billing Ready' test. During the early stages of deployment, SoCalGas conducted a three-pronged test on all modules to ensure installation and billing accuracy. The test consisted of the following three elements:

- Data Communication Test All accounts are required to communicate consecutive billing reads for seven days before being transitioned to Advanced Meter billing.
- 2. Per Day Average (PDA) Test The PDA consumption usage prior to the Advanced Meter installation is compared to the PDA consumption for the seven days following a module installation. Accounts failing this test are routed to a billing analyst.
- 3. Manual Read Comparison Test –The manual meter read is compared to the Advanced Meter read for the same day.

Based on the results of this three-pronged test, modules were either moved to the 'Billing Ready' status or placed on a remediation list.

Only after thorough analysis, has SoCalGas determined that the system is performing as expected for billing purposes. Hence, SoCalGas has stopped performing the third step in the Billing Ready test —the Manual Read Comparison Test. SoCalGas compared over 93,000 manual reads with automated reads and concluded that the follow-up manual read was 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, 2013

Total Meters	93,290	100%
Advanced Meter and Manual Read are	91,625	98.2%
Comparable		
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	83	0.1%
Validation		
Other Errors	1	Negligible

As shown in Table 10, 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 those reads was deemed to be manual meter reading errors. Of the remaining errors, all but one 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 single 'other error' instance, the meter's index was broken but the automated read was accurate. While the index would not have accurately displayed consumption, the customer would have still received accurate bills.

Given the results of its analysis, SoCalGas opted to discontinue the Manual Read Comparison Test for installations performed by the project's Mass Installation team. However, installations performed by other SoCalGas personnel continue to undergo the three-pronged test. The project's Mass Installation team Work Order Management System (WOMS) and handheld devices have the capability to store images of the meter read at the time of installation which allows a dedicated team from Mass Installation to compare visible information in the image (i.e. meter read, drive-dial size, and meter number) to the information captured by the handheld. This exercise has been highly effective in remediating any potential billing issues, negating the need to perform the Manual Read Comparison Test.

In order to enhance the PDA test and increase the level of assurance in the accuracy of the system, SoCalGas elected to perform a second PDA test. In addition to comparing PDA consumption usage prior to the Advanced Meter installation against the PDA consumption for the seven days following a module installation, the comparison is now also performed 21 days following a module installation. No changes have been made to the Data Communication Test as analysis has indicated this test to be highly effective for determining long-term network reliability at the individual account level.

In July 2013, SoCalGas implemented software that enabled the utilization of automated reads for the initiation of new service. With Advanced Meter technology, a field visit to collect a customer's starting read was no longer necessary for turn-on orders that did not require entry into the home. Since the

implementation of this capability, SoCalGas' Customer Services Field organization has seen a reduction of nearly 30,000 orders.

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' My Account website portal.⁴

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.

⁴ In addition, as of February 2014, this information is also available to customers through the SoCalGas Mobile App.

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 My Account 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 My Account 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	1,127,389
Total Modules Installed w/Complete Network	
Coverage ¹	774,576
Percent of Hourly Reads Received ²	98.8%

¹ A Complete Network indicates that all planned DCUs for a given area per the original network design are operational.

² Based on Modules Installed w/Complete Network Coverage.

As indicated in Table 11 above, the SoCalGas Advanced Meter system is currently providing nearly 99 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 – Network Customer Outreach Activities

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

SoCalGas wanted to ensure that all of its elected officials were informed about the project. 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 believes that clarification of this matter by the Commission will be a valuable 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.

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.A. SoCalGas

is also able to examine the potential for installing DCUs on PG&E, SCE, and SDG&E street lights, which can 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. 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 2,001 DCUs constructed, SoCalGas has received 77 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 19 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 one county and in 112 cities/communities. Between June and December the number of cities/communities requiring a DCU decreased from 210 to 205. The decrease represents five areas where a neighboring DCU

25

⁵ Appendix C provides a copy of the DCU construction notification letter provided to customers.

⁶ Appendix D provides a list of the county and cities installed as of December 31, 2013.

provided the network coverage needed. The five cities/communities are Woodlake, Los Alamitos, San Diego County, Laguna Woods and Guadalupe.

SoCalGas has reached agreement with eight other counties and is currently in the process of installing DCUs. In addition, SoCalGas is in active negotiations with 93 cities and 3 counties to install approximately 1,800 more DCUs over the next year.

Chapter 5 – 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 following directive from the CPUC.

"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."

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⁷ D.10-04-027, p.45.

Figure 1 Customer Outreach Process

Awareness

•Overarching advanced meter messaging integrated with other SoCalGas stories/messages via low-to-no-cost channels (e.g. email, billing statement, website, etc)

90-60 Days

- Conduct communication and engagement with community leaders, media and local elected officials
- •Conduct community meetings, events, workshops to prepare key stakeholders of advanced meter installation and benefits

60-30 Days

•Direct mail letter with advanced meter informational fact sheet – first direct customer touch point to prepare customer for installation at their home

Day Of

- Residential Customers: Customer receives door hanger confirming advanced meter installation
- Large Commercial & Industrial Customers: Leverage existing SoCalGas Account Executive's relationships to prepare business customers for installation

- •Letter informing customers that energy usage information is available online
- Email notifying existing MyAccount customers of the new hourly data online
- •Continue customer education and outreach efforts promoting conservation and tools available to AM billed customers

Post

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.

5.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 manages the RFP process and contracts with community- and faith-based organizations (CBOs, FBOs), disability agencies, Chambers of Commerce, and Business Organizations that conduct outreach to sensitive communities/ customers in specific Advanced Meter installation areas. As of December 2013, over 90 organizations have been contracted to support outreach activities for the project.

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:

- American Indian Chamber of Commerce a statewide organization with three chapters- Southern California, San Diego and Northern California. The mission is to provide opportunities and support of American Indian business people in California and provide a mentor's environment for those individuals beginning new endeavors and establish a vehicle for education, networking and growth opportunities. The chamber holds meetings throughout the state each month bringing together the American Indian community including Pow-wows and other community festivals.
- Black Business Association with over 40 years of service the Black Business Association has been a prominent resource for black-owned businesses in the community by promoting entrepreneurship, stimulating growth and by providing networking and mentoring opportunities. As one of the tools for outreach the Black Business Association has been publishing information about the program in their magazine and online sites which has over 100,000 unique visitors.
- East San Gabriel Valley Japanese Service Center established in 1936 and incorporated in 1951, the center services Los Angeles and San Bernardino Counties. Its mission is to foster and preserve the cultural heritage unique

to those of Japanese American ancestry and to serve the community through social services, artistic, recreational and educational programs. The membership base is now diverse with an increase in interracial, Latino, Anglo and African American members.

Mujeres Activas en el Comercio Hispano – was established in 2008, is an
organization that provides a variety of opportunities available to the
Hispanic communities. Its mission is to promote small business, especially
those headed by women and to educate people on the best way to
enhance their businesses.

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 relatively stable members with a structured approach to disseminating information. The Chambers have provided:

- 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.

5.B General Outreach Organizations & Events

The local organizations have presented Advanced Meter information at over 1,000 community events surrounding all warehouses opened through December 2014. Coupled with the more than 500 events conducted by SoCalGas personnel,

Advanced Meter has delivered more than 1,500 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 10 Advanced Meter warehouses opened thus far.

5.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 installed 286,077 modules as of December 31, 2013 and a total of over 350,000 modules to install through December 2016.

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.

By December 2013, the following were added to the program: Mujeres Activas en el Comercio Hispano (MACH), Regional Hispanic Chamber of Commerce, Latin Business Association, Greater Los Angeles African American Chamber of Commerce, California Small Business Association, Black Business Association, Asian Business Association and the American Indian Chamber 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.

By December 2013, the following events were added: Independent Cities Association Annual Meeting, Cerritos Senior Fair, Taste of Cerritos, Los Angeles Largest Chamber Mixer, All American Cities Business Expo (Lynwood, South Gate, Bell, Maywood, Cudahy), Asian Business Association Business Makeover Edition, El Clasificado's Su Socio de Negocio Business Networking Breakfast, Asian Pacific American Legislative Staff Intern Reception Event, Congresswoman Linda Sanchez's Senior Fair in Cerritos and Pico Rivera, Los Angeles County Fair, HEALTHY AGING FESTIVAL OF FITNESS, Compton High School Parents Center Meeting, Century Heights Neighborhood Watch Association Street Meeting, Korean Churches for Community Development (KCCD) Disaster Readiness Seminar, Commerce Business Expo, Pico Rivera Neighborhood Council Meeting, Los Angeles Green Festival, Taste of Soul, LA City Council Member Curren Price

Senior Fair, City Council briefings were also given to Montebello, Commerce, Pico Rivera, Bell, Bell Gardens, Cudahy, and Maywood to inform of upcoming installation activity.

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.

5.B.2 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 more than 400,000 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.

By December 2013, the following organizations were added to the program to support outreach efforts: Temple City Chamber, Azusa Chamber, City of West Covina in Partnership with Greater West Covina Business Association, Duarte

Chamber, East San Gabriel Center, Family Services Association, Foundation for Economic Stability (CAP Agency), Foothill Unity Center, Glendora Chamber, and San Dimas Chamber.

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.

By December 2013, the following events and presentations were also conducted to support installation activities in the San Gabriel Valley: Arcadia Home and Backyard Show, Alhambra Business Expo, San Gabriel Valley Council of Governments, San Gabriel Valley Economic Partnership Lunch Speaker's Bureau, Network Breakfast with Montebello, Monterey Park City of Commerce Chambers, Arcadia Chamber Networking Breakfast, Chinese Elected Officials Installation Dinner, Hope United Church Hope Walk 2013, Annual Asian Small Business Expo, Alhambra Chamber of Commerce Board Installation Dinner, Chinese Elected Officials Community Event, Taste of Arcadia, Asian Youth Center's 24th Anniversary Celebration, Monterey Park State of the City, 26th Annual Glendora Classic Car & Motorcycle Show, 2013 San Gabriel Valley Water Forum, San Dimas Western Days, 2013 Family Health Fair, San Dimas Chamber Breakfast, Azusa Chamber Breakfast and Foothill Unity Center's Holiday Food Distribution. In addition, city council presentations were given to San Gabriel, Alhambra, South El Monte, El Monte, Rosemead, Temple City and Monterey Park to update on upcoming installation activity.

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.

By December 2013, the following media activity took place:

- 13 week newspaper buy with Beacon Media was secured which included print ads with information in 17 newspapers each run throughout the San Gabriel Valley including Arcadia Weekly, Rosemead Reader, Monrovia Weekly, El Monte Examiner and the Chinese Language Paper Dragon Times.
- Los Angeles Times article and KTLA-TV story on AM project http://ktla.com/2013/11/13/ask-laz-are-socal-gas-smart-meters-safe/#axzz2rfMdluow
- Positive San Gabriel Valley Tribune article on AM installations http://www.sgvtribune.com/general-news/20140115/southern-california-gas-company-to-upgrade-meters-in-west-covina

5.B.3 Sun Valley Warehouse

The Sun Valley warehouse opened on April 1, 2013 and closed in August 2013. Over 130,000 modules were installed by this warehouse. This warehouse served the cities of Burbank, Glendale, La Crescenta, and parts of the City of Los Angeles.

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.

<u>SoCalGas Outreach</u> 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.

By December 2013, the following events and presentations were conducted: Valley Industrial and Commerce Association (VICA) Local Elected Office Holders Luncheon, Los Angeles Department of Water and Power Outreach Grantee Quarterly Update Meeting Presentation, Latino Expo, Northeast Community Clinics Event for Speaker John Perez, Valley Industrial and Commerce Association (VICA) Business Forecast Conference, Eagle Rock Music Festival, and the Los Feliz Street Fair.

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.

5.B.4 Bakersfield Warehouse

The Bakersfield warehouse opened on April 15, 2013. This warehouse serves the cities of Arvin, Bakersfield, Delano, and McFarland. Over 100,000 modules were installed by this warehouse through November 2013.

<u>Local Organization Outreach</u> 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.

5.B.5 Indio Warehouse

The Indio warehouse opened on May 28, 2013 and closed on November 22, 2013. Over 190,000 modules were installed in the area. This warehouse served 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.

<u>Local Organization Outreach</u> SoCalGas 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 50 outreach activities in the Coachella Valley, 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 included presenting at various meetings and 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 Palm Springs Neighborhood Involvement Committee meeting.

By December 2013, the following events and presentations were also conducted: American Indian Chamber of Commerce CA Expo 2013; AM Coachella Mayor's Luncheon; Indio Chamber 'Morning Perks' program; Palm Desert Chamber Breakfast meeting; 2013 El Grito Festival; Palm Desert Business Expo; 2013 So Cal Energy Summit; and Palm Springs and Business and Community Expo.

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).
- On-camera TV interviews were conducted on Telemundo KUNA-TV Channel 15 and an in-studio radio interview on KUNA 96.7 FM La Poderosa Radio in Palm Springs (Aug. 15, 2013). Also conducted a one-hour live radio interview on Radio Bilingue (National Latino Public Radio Network).
- Other articles were published in several Chamber newsletters including La Quinta, Palm Springs, Desert Hot Springs, Yucca Valley, and Coachella; 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 aired on CBS, FOX, and CW in the Coachella Valley.
- SoCalGas also collaborated with the Gulf-California Broadcasting Group (KESQ-TV ABC 3, KPSP-TV CBS 2, KDFX FOX 11, KCWQ-TV CW 5) to develop 15 and 30 second public service announcements (PSAs). Advanced Meter banners were shown on each news station's websites and on social media. PSAs ran in April/May 2013, and re-aired on July 8 to July 28 and 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/-/3785mg/-/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 aired 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.

5.B.6 Hemet and Perris warehouses

The Hemet and Perris warehouses opened on November 25, 2013. The Hemet warehouses serve the cities of Banning, Beaumont, Calimesa, Hemet, Yucaipa, and San Jacinto, as well as unincorporated areas of Riverside and San Bernardino Counties. It is scheduled to install over 100,000 modules by the time it closes in August 2014. The Perris warehouse serves the cities of Jurupa Valley, Moreno Valley, Perris, Riverside, Menifee, and unincorporated areas of Riverside County. It is scheduled to install over 295,000 modules by August 2014 as well. Since opening a combined total of over 41,655 modules have been installed through December 2013.

<u>Local Organization Outreach</u> SoCalGas engaged both community based organizations and chambers of commerce to assist in the outreach efforts in these neighboring regions. In Hemet and Perris, the organizations were Beaumont Chamber, Boys/Girls of San Gorgonio Pass, Casa Blanca Home, Coachella Valley Housing Coalition, Family Services Association, Foundation for Economic Stability

(CAP Agency), Hemet/San Jacinto Chamber, Moreno Valley Black Chamber, Riverside NAACP and Todec Legal Center –Perris.

The Beaumont and Hemet/San Jacinto Chambers inserted project information in their newsletters and email blasts to Chamber members. CBOs in this area also canvassed communities to reach seniors, physically challenged, low-income, and limited English customers in Riverside County.

<u>SoCalGas Outreach</u> SoCalGas has engaged the community by providing briefings, presentations, and participating in outreach activities, including: The Riverside Safety Emergency Preparedness Fair; Riverside County Supervisor Jeffries' Town Hall meeting; Beaumont Chamber Breakfast and Hemet Harvest Festival.

Media Highlights:

- Positive article in the *Record Gazette* in Banning on December 17, 2013. http://www.recordgazette.net/news/article_b694573a-6745-11e3-877a-001a4bcf887a.html
- Radio interview on KUCR-FM in Riverside re: upcoming AM installations

5.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 December 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 was extended through December 31, 2013 to include nine more school assemblies, four community events, and 315 on-air spots. Totaling 19 school assemblies, four community events, and close to 500 On-air spots. Additional program promotional opportunities were provided through social media and online promotions for events. For 2014 additional partnership opportunities are being coordinated to include an additional six school assemblies, four community events (promotional table at existing event), one Radio Disney (specifically created for Radio Disney) community event and 340 on-air spots.

Ikahan Media

As part of the outreach efforts a partnership was developed with Ikahan Media. A boutique outdoor media company with a significant inventory of billboards and wallscapes primarily in Southern California, many of which reach the Hispanic market through Point of Purchase posters inside, outside and on cart corrals at local super markets, in-store displays laundry mats, and convenience stores throughout the Los Angeles DMA. The goal of this partnership was to create awareness at the neighborhood level within high-density Hispanic neighborhoods through key zip codes were installs were beginning to take place. The campaign lasted 12 weeks and delivered approximately 6.5 million monthly impressions (6,446,250) or approximately 19.3 million monthly impressions (19,338,750) for the 12 week execution.

Appendix U provides samples of the IKahan partnership.

5.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 Customer Information Study (CIS),⁸ administered by Davis Research. CIS is SoCalGas' public opinion tracking study. It is a quarterly phone

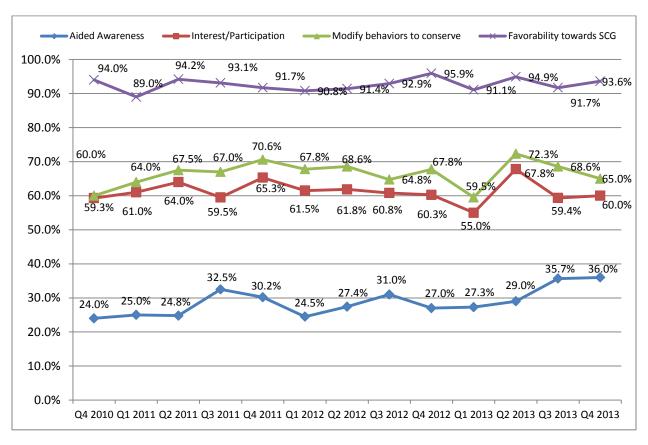
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⁸ Formerly called iTracker Customer Perception Study.

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
Customer Information Study – 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)

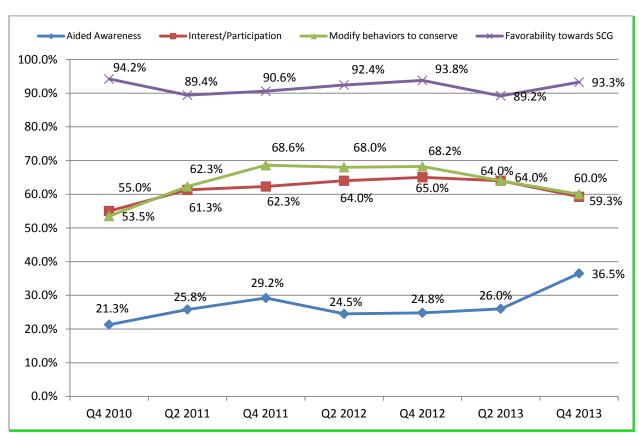
AM2b. Having access to your daily natural gas usage (therms/dollars) information would cause you to modify your behaviors to conserve natural gas? (% Agree)

Awareness about the Advanced Meter project among SoCalGas residential customers reached its highest point to date, 36 percent, in Q4 2013. The general upward trend over the past three quarters seems to reflect the increased volume of customer communications about the project as well as installations

themselves. Of those customers who were aware of the project, 34 percent mentioned bill inserts as their source, and 15 percent mentioned that a meter had been installed at their home. Appendix F provides a copy of the Advanced Meter bill inserts.

In the fourth quarter of 2013, customers' interest in viewing the hourly consumption data increased to 60 percent, edging up slightly (but not significantly) from 59 percent in the previous quarter after a significant drop from 68 percent in the second quarter 2013. Interest conserving natural gas appears to be on a downward trend, dropping to 65 percent in the fourth quarter of 2013 from an all-time high of 72 percent in Q2 2013.

Figure 3
Customer Information Study – 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)

Advanced Meter awareness among business customers jumped to 37 percent in the fourth quarter of 2013, a significant increase over the previous quarters, after hovering in the 25 to 30 percent range since second quarter of 2011. Business customers' interest in viewing the hourly consumption data dropped to 60% after hovering in the mid- to high 60% range for the past 4 quarters.

Chapter 6 – 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 Advanced Meter customer experience 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 the customer touch point experience with SoCalGas. Chapter 9 describes the SoCalGas conservation campaign that kicked-off in October 2013 for the 2013-14 winter heating season.

6.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 insert 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" (the precursor to the Opt-Out request list) in the event they would like to defer meter installation. Chapter 8 summarizes SoCalGas' experience to date with deferral requests.

6.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 by contacting the Advanced Meter Customer Information Center and arrange a convenient time to have the module installed. If a customer does not follow-up to make meter installation arrangements, then the customer receives a combination of phone calls, letters, emails, and personal visits 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.

6.C Transition to Advanced Meter Billed (AM Billed)

Approximately 45 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 <u>SoCalGas.com</u> My Account customer portal within the Ways-to-Save section. My Account 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.

6.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.

6.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.

6.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. Three waves of residential post-installation research have been conducted. The pilot wave consisted of 203 residential customers; the second and third waves surveyed 403 and 402 customers respectively. Two waves have been conducted with business customers – the first in September 2013 with 231 customers and the second in November 2013 with 300 customers. Moving forward, post-installation surveys will be conducted annually with residential and business customers through 2016.

In the first wave of residential 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. Ninety-three percent 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 My Account, although the percentages shifted slightly from the pilot wave. Among residential customers who are not currently enrolled, 38% say they would sign up for My Account 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 My Account and not interested in the gas usage information.

The November 2013 residential post-Installation study saw awareness of advanced meters on a general level increase to 61%, up from 55% the previous wave. Of these customers, 47% were aware that the new meter had been installed on their property. 65% recalled receiving the pre-installation letter, and about 1 in 5 took action to prepare, such as clearing brush, securing pets or unlocking a gate, as result of receiving the letter.

Satisfaction with the installer and the installation process each decreased slightly but remained high overall. Satisfaction with the installer was 89%, down from 93% in the previous wave, while installation process satisfaction was 78%, compared to 81% in the last study. These slight decreases are not statistically significant.

Expected behavioral changes stayed consistent with the previous wave with over half of customers planning to use their Advanced Meter to manage their energy costs (52%) and conserve natural gas (62%). Helping the environment, conserving natural gas and saving money were the considered the most important benefits provided by the meters.

For roughly a third of customers, interest in the gas usage information provided by advanced meters continues to be a driver to My Account. 35% indicated that they are likely to sign up in order to view the gas usage information. The percentage of customers who would be interested in receiving the information another way increased to 38%, a significant increase from the 21% who expressed interest in the prior wave.

Results of post-installation studies among business customers show slightly lower levels of awareness and engagement with Advanced Meters. In the most recent wave, half of business customers (51%) were aware of the meters on a general level, and 26% were aware of the installation. 55% of customers recalled receiving the pre-installation letter.

75% of business customers were satisfied with the performance of the installer, and 73% were satisfied with the installation process overall. Installation communications played a significant role in customer satisfaction with the installation process. Satisfaction among customers who received communications was 89%, compared to 38% reported by customers who did not receive any communications.

As is seen with residential customers, the information provided by Advanced Meters is a motivator to sign up for My Account. 37% of business customers who are not currently enrolled said they would be likely to sign up in order to view the gas usage information. Another 31% are interested in the information, but are not likely to sign up for My Account.

6.E Online Market Research Community

During 2013, SoCalGas made extensive use of the Customer Insight Community, which consisted 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 was used to explore customer attitudes on aspects related to Advanced Meter and conservation. SoCalGas 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 7 – 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 escalated to Advanced Meter customer support staff. The number of escalated customer inquiries is very low, considering all the various Advanced Meter communications that have gone out to SoCalGas' customers and over 1.5 million pre-installation letters that have been mailed. Table 12 displays the elevated inquiries received through December 31, 2013.

Table 12
Customer Inquiries Elevated to Advanced Meter Team

Inquiry Type	Number	Explanation			
	Received				
Deferral Requests	7,178	Includes all escalated deferral requests			
Cancelled Deferral	461	Customers who no longer want to be on			
Requests		the deferral list			
Escalated Inquires:		Includes: DCU inquiries, opt-in requests,			
Customer Contact	3,672	MTU removals, MTU installation			
Center (CCC)		requests, requests for more detailed			
		project information, customer			
Customer Information	900	complaints about the project in general			
Center (CIC)		and requests for Advanced Meter			
		literature.			
Requests for Advanced	40	Usually aimed at resolving access issues			
Meter					
Total Escalated Inquiries	12,251				

The most common specific cause of the escalated inquiries is requests to defer the installation of the communications 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 when SoCalGas will offer a formal opt-out program and the cost of the associated fees.

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 As of December 31, 2013 this Application was still pending before the Commission.¹⁰

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

¹⁰ In January 2014, Administrative Law Judge Amy Yip-Kikugawa issued a Proposed Decision approving SoCalGas' request to establish its Advanced Meter Opt-Out Program. The Proposed Decision was adopted by the Commission at its February 27, 2014 Commission meeting. Pursuant to the Commission's decision SoCalGas will be filing an advice letter to implement its Advanced Meter Opt-Out Program.

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 still pending before the Commission.

In the absence of an approved opt-out fee structure, through December 2013, SoCalGas allowed 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 pre-installation letter which is mailed to each customer informing them that an Advanced Meter will be installed. Table 13 displays the number and percentage of customers who requested a deferral in response to the pre-installation 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	1,580,119
Number of Customers Requesting a Deferral	4,668
Percentage	0.30%

As of December 31, 2013, approximately 0.30% of the 1,580,119 customers receiving a pre-installation letter have chosen to defer the installation of their Advanced Meter module. SoCalGas has another 2,510 customers who have requested to be deferred even though they have not yet received the pre-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 the opt-out applications referenced above.

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

51

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 deferral sticker and door hanger.

Chapter 8 - Conservation Outreach Campaign

The Decision sets a goal for SoCalGas 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." ¹¹

In October 2013, SoCalGas initiated the first year of a multi-year outreach campaign aimed at reaching the 1% conservation goal contained in the Decision. The current conservation outreach campaign follows a "test and learn" approach and will run through March 31, 2014, and conservation results will be presented in the SoCalGas August 2014 semi-annual report. 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 communication channels.

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., bill alerts and home energy reports) and channels (i.e., direct mail, website, email and SMS text messages) on natural gas consumption.

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¹¹ D.10-04-027, p. 45.

The current campaign focuses on three objectives which aim to expand opportunities for SoCalGas customers to take advantage of the new Advanced Meter enabled hourly and daily gas consumption information. The objectives are:

- To enroll customers for billing alerts (SoCalGas Bill Tracker Alerts), a new SoCalGas offering which is also intended to help customers manage their natural gas consumption.
- To enroll more customers in the SoCalGas My Account website, which now includes additional Ways-to-Save tools customers can utilize to help reduce their natural gas usage, including bill alerts, as well as to increase utilization of these new tools by existing My Account users.
- To examine the efficacy of the Opower Home Energy Reports (HERs), also a new SoCalGas offering, as a means of getting customers to conserve.

8.A My Account

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 within the My Account customer portal. The Ways-to-Save tab within My Account provides AM Billed customers the ability to:

- Analyze Advanced Meter-enabled hourly and daily usage
- Compare their usage to that of their neighbors or similar businesses
- Set a savings goal through My Savings Plan
- Complete the My Energy Survey
- Compare previous monthly 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, first rolled out in October 2012, offer customers more effective tools for managing their natural gas bills. The My Account 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 Chapter 7. The marketing will focus on growing the number of My Account users by trying to increase enrollment and the use of Ways-to-Save tools by existing My Account users. 12

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¹² See Appendix P for Sample Ways-to-Save screen shots.

Over the course of 2013, a total of 116,392 residential My Account users (both new and return users) had engaged with the Ways to Save tool "My Savings Plan" web page from which users could view their energy use profile, neighbor comparison and start of a Savings Plan, as well as navigate to view their hourly and daily gas usage and other energy usage and bill-related information.

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

In the all the post-installation surveys described in Section 7.D.2, customers were asked about their likelihood of enrolling in My Account and their interest in accessing their consumption data. Table 14 displays the most current survey results.

Table 14
Percentage of Residential Customers Likely to
Enroll in My Account or Use Information

	November 2013
Likely to Enroll in My Account	35%
Unlikely to Enroll in My Account, Interested in Usage	38%
Information	
Unlikely to Enroll and Not Interested in Usage Information	27%

The percentage of residential customers who said they are likely to enroll in My Account was roughly 35% in the November survey. SoCalGas currently has approximately 31% of its customers enrolled in My Account. Because approximately 38% of customers were unlikely to enroll in My Account, but were still interested in gaining access to Advanced Meter usage information, SoCalGas launched Bill Tracker Alerts in September 2013.

8.B SoCalGas Bill Tracker Alerts

Bill Tracker Alerts have several key features to help customers maintain a high level of "energy usage awareness" and "engagement" with SoCalGas. First, the alerts can be sent via email and/or mobile phone SMS text message. Mobile

phones are nearly universal, much more so than personal computers.¹³ Second, SoCalGas has developed several "easy enrollment" approaches, including My Account, an enrollment microsite (see Appendix T), and mail-back business response cards.

SoCalGas Bill Tracker Alerts 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 SMS 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. Appendix M shows samples of the various Bill Tracker Alerts email messages.

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.

"Manage Alerts" is a new section with the "Manage My Account" section of My Account that allows customers to enroll in Bill Tracker Alerts and select their preferred methods of contact. Manage Alerts also enables customers to unsubscribe from alerts and update their alert preference information. Non-My Account customers can unsubscribe from Bill Tracker Alerts by calling the SoCalGas Customer Contact Center (CCC) or reregistering for My Account, then unsubscribing.

55

¹³ See Public Policy Institute of California, *Californians & Information Technology*, June 2013. http://www.ppic.org/content/pubs/survey/S_613MBS.pdf

SoCalGas has also constructed a simplified online enrollment approach for Bill Tracker Alerts. <u>BillTracker.SoCalGas.com</u> is a Bill Tracker Alerts online enrollment channel (microsite) that was developed to make it simple and fast for customers to subscribe. The microsite is built with a "responsive design" which allows customers to enroll though a desk top or laptop computer, mobile phone or tablet device. In addition, the microsite facilitates both My Account and non-My Account customers to sign-up to receive the Bill Tracker Alerts via e-mail and/or SMS text message. SoCalGas customers can also pre-enroll through the microsite prior to becoming AM Billed.

In addition to the two online channels supporting Bill Tracker Alerts, 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 since all other required information is preprinted on the response card.¹⁴

8.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 for 50,000 AM Billed customers.

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 large gas-only utility. The typical HER is mailed, which means that customers do not need a personal computer or be computer literate. However, Opower will be testing three combinations of HERs with SoCalGas:

- Mailed HER
- Mailed and emailed HER
- Predominately emailed HER

The HERs 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

56

¹⁴ See Appendix M for various Bill Tracker Alert materials.

- 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.

Therefore, the overall strategy for 2013/14 conservation campaign design is to include every AM Billed customer ("leave no customer behind") and increase engagement levels through the promotion of Bill Tracker Alerts and the My Account Ways-to-Save online tools in order to achieve behavioral change that will drive energy conservation of 1% or more.

8.D Residential Conservation Campaign Design

SoCalGas has teamed with Nexant (formerly Freeman, Sullivan & Co.) 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 Nexant's Plan can be found in Appendix O.

The conservation outreach campaign is occurring 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 Nexant 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. My Account customers will also receive an email and a notification message within the My Account portal highlighting the new functionality.

Based on the AM module installation schedule, SoCalGas had 558,474 residential customers with installed modules that were AM Billed on September 1, 2013. This group of customers, plus 19,036 AM Billed business customers represents the total audience for the 2013/14 conservation campaign.

These customers were assigned into multiple test cells to address as many customer segments as possible. Approximately half of the total audience was assigned into a "control group" and have not received any direct mail or email communications from SoCalGas or Opower. Control groups are necessary to ensure accurate measurement of the actual natural gas consumption impacts of the conservation campaign customer outreach.

Through the Nexant 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, My Account, single-family, multi-family, Bill Tracker Alerts, 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 were automatically placed into a program (e.g., HER or Bill Tracker Alerts) with the ability to opt-out (i.e., unsubscribe). Whereas, opt-in customers must proactively enroll in a program (i.e., Bill Tracker Alerts) and/or visit the Ways-to-Save section of SoCalGas.com to receive usage information and savings tips

which requires an additional step and can yield reduced participation/engagement rates.

- SoCalGas My Account versus non-My Account customers: My
 Account 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. The Opower eligibility screen yielded a 96% "pass rate" based on the total audience. In addition, SoCalGas is marketing to customers that don't pass the Opower eligibility screen as part of our "leave no customer behind" strategy 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 (relaxed for SoCalGas program)
 - 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 My Account
 - 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 is testing 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 <u>SoCalGas.com</u> website,

the <u>BillTracker.SoCalGas.com</u> enrollment microsite, and a business response card included in the direct mail solicitations.

Specifically, the Plan will assess the:

- Impact of opt-in Bill Tracker Alerts (BTA) on natural gas consumption
- Relative effectiveness of different marketing messages for opt-in BTA
- Impact of default BTA on natural gas consumption
- Impact of default HERs on natural 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 My Account customers

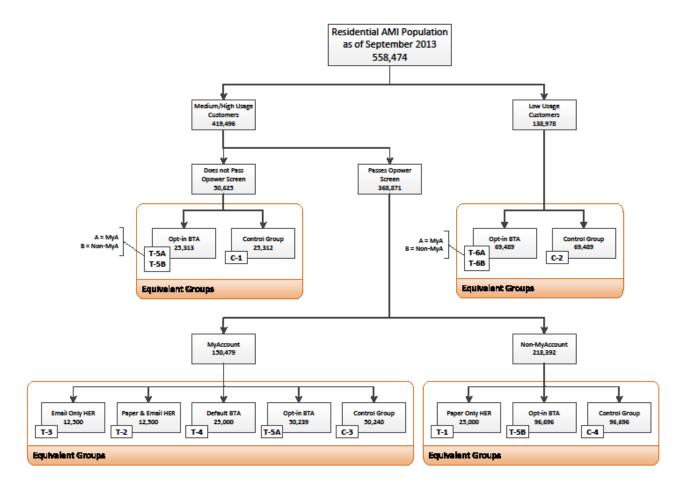
SoCalGas and Nexant considered the full spectrum of experimental and quasiexperimental options before determining that a randomized encouragement design (RED) was the preferred option for the opt-in Bill Tracker Alerts treatments and a randomized control trial (RCT) design could be implemented for the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

RED and RCT design options require large control groups for each corresponding test cell. Therefore, out of 558,474 AM Billed residential customers for the 2013/14 conservation campaign, 43% (241,737) were assigned to a Nexant control group, 9% (50,000) to Opower, and the remaining 48% (266,737) were incorporated into the SoCalGas test cells. Figure 4 graphically depicts the overall design of the residential conservation outreach campaign. ¹⁵

¹⁵ 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 268,632 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
2013/14 SoCalGas Conservation Test Cell Plan
Residential Customers

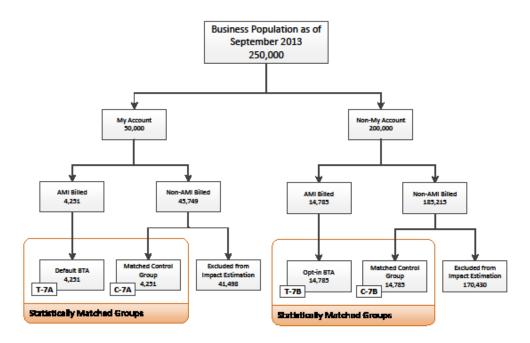


8.E Business Conservation Campaign Design

SoCalGas had 19,036 of its approximately 250,000 business customers AM Billed on September 1, 2013. This number of AM Billed customers was 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 Alerts and opt-in Bill Tracker Alerts. 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 Alerts or opt-in Bill Tracker Alerts have a relatively large percentage impact on usage, this method will be able to detect the effect. Figure 5 graphically depicts the overall design of the business conservation outreach campaign.

Figure 5
2013/14 SoCalGas Conservation Test Cell Plan
Business Customers



8.F Hard-to-Reach Community Events

SoCalGas 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 is engaging:

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

PRM is participating 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 Alerts. Appendix Q provides a list of local PRM events. 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 Nexant 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.

8.G Conservation Campaign Update

SoCalGas and Opower have been executing their respective customer engagement conservation communications via direct mail and email under the Nexant Plan. Since the Conservation Campaign will run through March 31, 2014, SoCalGas will not have any energy conservation results available until July, 2014. Figure 6 represents the Opower marketing calendar and Figure 7 the SoCalGas outreach plan in process:

Figure 6 Opower Marketing Calendar

SoCalGas – Opower Program Design

No Email Addresses 25K Treatment SCG has 100% Email Addresses 25K Treatment

Group 1 (25K HHs)

Group 2 (12.5K HHs)

Group 3 (12.5K HHs)

	Oct	No v	De c	Jan	Feb	Mar	Oct	No v	De c	Jan	Feb	Mar	Oct	No v	De c	Jan	Feb	Mar
Paper HER							E	E		E	E							
Welcom e Insert													*					
Door Hanger																		
Email HER								\sim		<u> </u>	<u> </u>			\subseteq		<u> </u>	<u> </u>	

★Welcome message for Group 3 will be included in module on Home Energy Report



OPOWER CONFIDENTIAL: DO NOT DISTRIBUTE

Figure 7
SoCalGas Marketing Calendar

	AM CONSERV					
			LETTERS			
Test Cell	Oct 11 - 14	Nov 21 - 27	Week Dec 16	Week Jan 13	Week Feb 10	Week Mar 10
S4	Touch 1	Touch 2		Touch 3	Touch 4	
S5A	Touch 1	Touch 2		Touch 3	Touch 4	
S5B	Touch 1	Touch 2		Touch 3	Touch 4	
S6A	Touch 1	Touch 2		Touch 3	Touch 4	
S6B	Touch 1	Touch 2		Touch 3	Touch 4	
P5A	Touch 1	Touch 2	Touch 3	T4-Amazon	T5-Amazon^	
P6A	Touch 1	Touch 2	Touch 3	T4-Amazon	T5-Amazon^	
P5B	Touch 1	Touch 2	Touch 3	T4-Amazon	T5-Amazon^	
P6B	Touch 1	Touch 2	Touch 3	T4-Amazon	T5-Amazon^	
S7A	Touch 1	Touch 2		Touch 3	Touch 4	
S7B	Touch 1	Touch 2		Touch 3	Touch 4	
P7B	Touch 1	Touch 2	Touch 3	T4-Amazon	T5-Amazon^	
			EMAILS			
Cell	October 9		Week Dec 16	Week Jan 13	Week Feb 10	Week Mar 10
S4	Touch 1	Touch 2		Touch 3	Touch 4	Touch 5^
S5A	Touch 1	Touch 2		Touch 3	Touch 4	Touch 5^
S6A	Touch 1	Touch 2		Touch 3	Touch 4	Touch 5^
P5A	Touch 1	Touch 2	Touch 3	T4-Amazon	T5-Amazon^	Touch 6^
P6A	Touch 1	Touch 2	Touch 3	T4-Amazon	T5-Amazon^	Touch 6^
S7A	Touch 1	Touch 2		Touch 3	Touch 4	Touch 5^
		I Tracker Alerts				
	Mailed					
	Dark, no comi					
	Creative comp					
	Creative unde	r development				
A Do mail of	Dravious Touch	n (New Johnson	Box/Headline/	(Subject Line)		

Samples of 2013/14 Conservation Outreach Campaign Collateral Materials are included in Appendix R.

8.G.1 Bill Tracker Alerts Enrollment

As a leading indicator of enhanced customer engagement which can lead to behavioral change and energy conservation, SoCalGas has enrolled 40,256 customers in Bill Tracker Alerts, thus far, representing 15.1% of the total test cell population, excluding all the control groups.

Bill Tracker Alerts help customers maintain "top of mind" awareness of their natural gas consumption which is critical to creating the ongoing behavioral change necessary to achieve energy conservation.

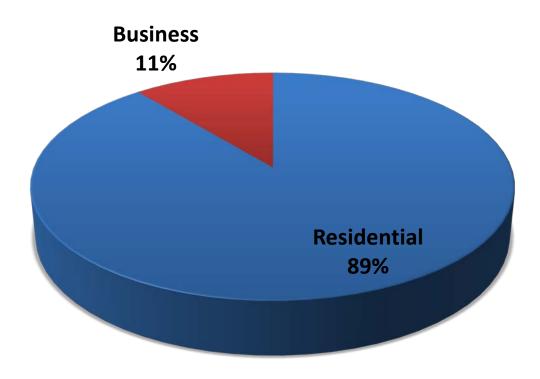
In addition, customers are using multiple channels to enroll in the new alert as evidenced in Figure 8. Moreover, the Bill Tracker Alerts retention rate is running at a very high 96.8%, indicating that customers value the weekly email and/or SMS text messages that keep them apprised of their bill-to-date, projected next bill, last month's bill, last year same month bill, and the number of days remaining in their current billing cycle. In fact, closed customer accounts represented over 81% of the unsubscribed Bill Tracker Alerts.

Figure 8
SoCalGas Bill Tracker Alerts

Item	Count
Total Subscriptions	40,256
Microsite – Batch (Auto/default enrollments)	28,184
Microsite – Online @ billtracker.socalgas.com	6,197
Microsite – Business Response Cards (BRC)	3,362
Microsite – Hard-to-Reach Events (HTR)	186
My Account/CSR – 'Manage Alerts'	2,328
Total Unsubscriptions	1,275 (3.2%)
By customer (subscribed via Microsite)	235
By customer (subscribed via My Account)	25
By System (i.e., Account Closed)	1,035
Total Active subscriptions	38,981

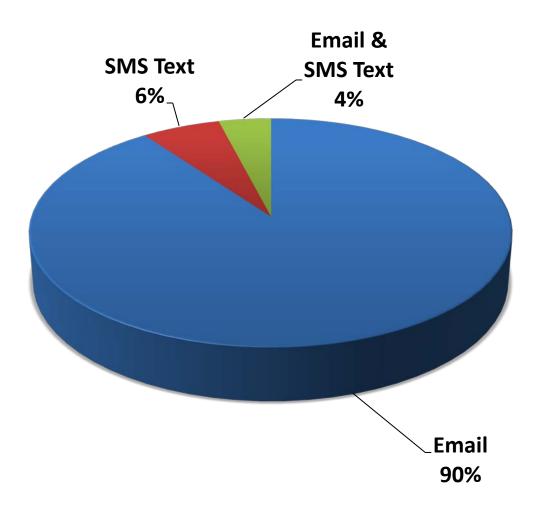
Figures 9.1 through 9.5 display some of the customer characteristics of existing AM Billed Bill Tracker Alerts customers, as of December 31, 2013.

Figure 9.1 SoCalGas Bill Tracker Alerts Customer Characteristics



68

Figure 9.2 SoCalGas Bill Tracker Alerts Customer Characteristics



69

Figure 9.3
SoCalGas Bill Tracker Alerts Customer Characteristics

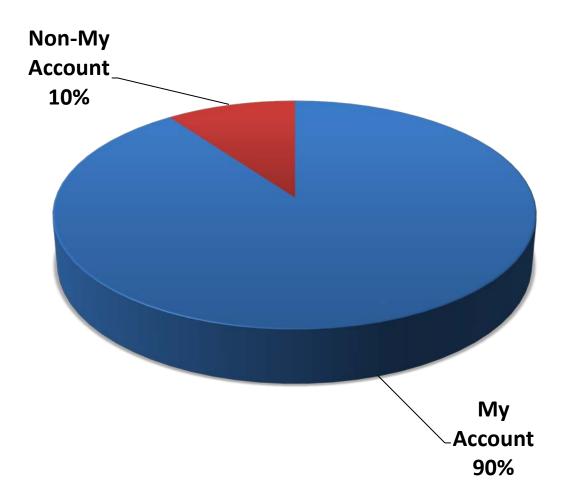
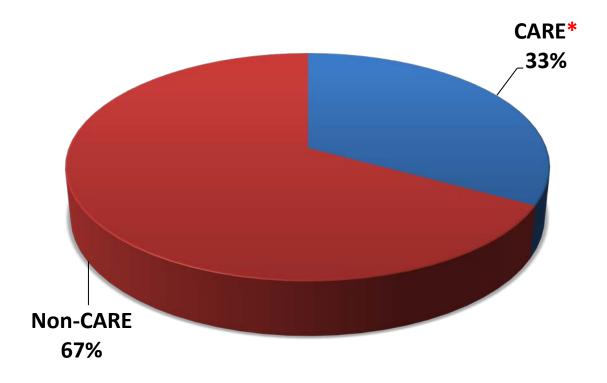
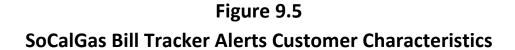
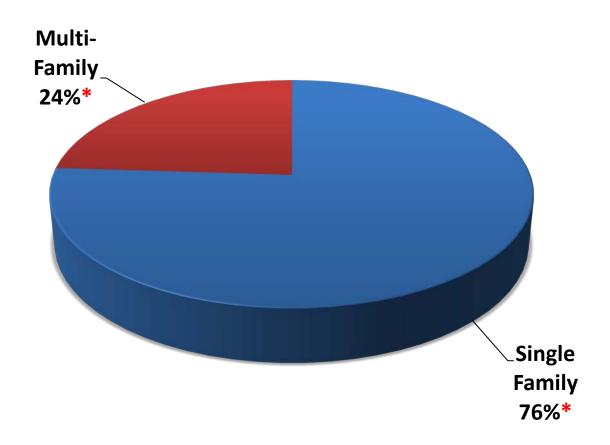


Figure 9.4
SoCalGas Bill Tracker Alerts Customer Characteristics



^{*} As of January 2014, CARE customers accounted for 29.28% of SoCalGas' customer base. The Test Cell population for this Conservation Campaign contained 32.35% CARE customers.





^{*} The breakdown by residential customer type in the Test Cell population for this Conservation Campaign contained 28% Multifamily and 72% Single Family.

8.G.2 "Ways to Save" tool utilization

Over the course of 2013, a total of 116,392 residential My Account users (both new and return users) had engaged with the Ways to Save tool "My Savings Plan" web page from which users could view their energy use profile, neighbor comparison and start of a Savings Plan, as well as navigate to view their hourly and daily gas usage and other energy usage and bill-related information.

SoCalGas will document the energy conservation savings realized by each of the ten test cells in the August, 2014 Semi-Annual Advanced Meter report based on Nexant's analysis and their conservation campaign final report.

Chapter 9 - 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. The total budget for the SoCalGas Advanced Meter project is \$1,064 million, which included a contingency fund of \$68.7 million.

Table 15 displays the Advanced Meter spending through December 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.

 $^{^{\}rm 16}$ A.08-09-023, Prepared Direct Testimony of Edward Fong, page 15.

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

	2010	2011	2012	YE 2013	Project to Date	Project Forecast
Project Management Office	2,619	6,477	6,634	4,945	20,675	29,720
Meters, Modules & Installation	120	3,718	28,410	116,483	148,731	519,903
Network	777	3,744	14,429	23,805	42,755	87,800
Information Technology	6,011	16,873	21,931	16,015	60,830	96,412
Customer Outreach	324	1,027	2,085	5,502	9,003	26,282
Employee Awareness	65	3,078	3,732	2,088	8,898	11,848
Other	303	0	710	3,097	4,110	13,360
Taxes						27,845
Overheads & AFUDC	2,382	10,828	23,663	33,812	70,684	225,842
Contingency						25,244
Total	12,601	45,745	101,594	205,746	365,686	1,064,257

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 \$58.3 million. Almost half - \$22.8 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 (\$101.6 million) as it had in 2010 and 2011 combined (\$58.3 million). The largest spending activity – almost \$28 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 \$21.9 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 reflected a project in full construction. The purchase and installation of meters and modules dominated at almost \$116 million. The second largest activity is the continued construction of the communications network at approximately \$24 million. The continued building of information systems was the third largest activity at about \$16 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 \$25 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 Table 15 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 10 - 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 December 31, 2013, meter readers had been reimbursed approximately \$90,200 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	Work Force	Remain in	Left Company	Transition
Personnel	in April 2010	Meter Reading		Within
		December 31,		Company
		2013		
Full-time	166	45	18	640
Part-time	818	135	146	040
Management	46	26	4	17
Total	1,030	206	168	657
Percent of Work	100%	20.00%	16.31%	63.79%
Force	10070	20.0070	10.5170	03.7370

As Table 16 shows, almost 650 employees (60 percent of the non-management Meter Reading workforce) have transitioned to another position within the Company. About 17 percent of those employed in 2010 have left the Company and 206 employees (20 percent) remain in the Meter Reading organization.

180 of the remaining 206 employees are full-time and part-time Meter Reading employees. As indicated above, the 45 full-time employees had the opportunity to participate in the Priority Placement Program. As of 2013, all full-time Meter Reading employees who qualified and wished to participate in the program did so, and the Program is no longer being utilized.

77

Appendices

Appendix A Sample Data Collection Unit Installations

1. Wood Pole





2. Concrete Pole



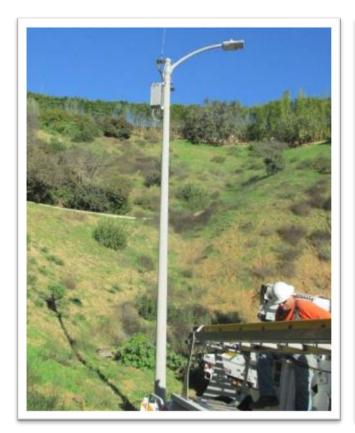


3. Steel Pole





4. Attachment





Appendix B Master Schedule of Warehouse Openings and Closings

	Warehouse	Start	End	# of Modules to Install
	Sun Valley	4/1/2013	5/15/2015	253,846
	Northridge	9/3/2013	8/21/2015	403,428
	Valencia	8/24/2015	12/31/2015	113,435
	Lancaster	1/4/2016	5/31/2016	121,968
	Santa Monica	6/1/2016	1/27/2017	208,878
Area A	Bakersfield	4/15/2013	11/22/2013	102,468
Alea A	Visalia	11/4/2013	10/31/2014	186,231
	Templeton	11/3/2014	2/27/2015	26,357
	Morro Bay	11/3/2014	2/27/2015	34,335
	Nipomo	3/2/2015	7/31/2015	85,154
	Santa Barbara	8/3/2015	11/30/2015	56,186
	Oxnard	12/1/2015	10/14/2016	188,038
	Irwindale	3/4/2013	11/21/2014	441,915
	Chino	11/24/2014	4/30/2015	121,359
Area B	Rancho Cucamonga	5/1/2015	11/30/2015	178,606
	San Bernardino	12/1/2015	8/31/2016	213,448
	South Gate	10/29/2012	4/18/2014	351,782
Area C	Los Angeles	4/21/2014	12/31/2015	528,191
Aleac	Lawndale	1/4/2016	3/31/2017	273,352
	San Pedro	1/4/2016	3/17/2017	99,725
	El Centro	2/4/2013	5/10/2013	36,646
	Indio	5/13/2013	11/22/2013	195,678
	Perris	12/2/2013	1/30/2015	295,501
Area D	Hemet	12/2/2013	7/31/2014	100,520
	Corona	8/1/2014	4/24/2015	111,121
	Garden Grove	2/2/2015	7/29/2016	606,112
	Laguna Niguel	8/1/2016	2/28/2017	248,038

Appendix C DCU Construction Notification Letter

Date

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 December 31, 2013)

	Cities		Counties
ADELANTO	EASTVALE	PASADENA	Imperial County
ALHAMBRA	EL CENTRO	PERRIS	
ARCADIA	EL MONTE	PICO RIVERA	
ARTESIA	FULLERTON	POMONA	
BAKERSFIELD	GARDEN GROVE	PORTERVILLE	
BALDWIN PARK	GLENDALE	RANCHO CUCAMONGA	
BANNING	GLENDORA	REEDLEY	
BEAUMONT	GRAND TERRACE	ROSEMEAD	
BELL	GROVER BEACH	SAN FERNANDO	
BELL GARDENS	HANFORD	SAN GABRIEL	
BELLFLOWER	HAWAIIAN GARDENS	SAN JACINTO	
BEVERLY HILLS	HAWTHORNE	SAN MARINO	
BLYTHE	HEMET	SANTA FE SPRINGS	
BRAWLEY	HOLTVILLE	SANTA MARIA	
BREA	HUNTINGTON PARK	SHAFTER	
BUELLTON	IMPERIAL	SOLVANG	
BUENA PARK	INDIO	SOUTH EL MONTE	
BURBANK	INDUSTRY	SOUTH GATE	
Calexico	INGLEWOOD	SOUTH PASADENA	
CALIMESA	IRWINDALE	STANTON	
CALIPATRIA	JURUPA VALLEY	TAFT	
	LA CANADA		
CARSON	FLINTRIDGE	TEMECULA	
CATHEDRAL CITY	LA HABRA	TEMPLE CITY	
CERRITOS	LA HABRA HEIGHTS	TULARE	
CLAREMONT	LA PALMA	TWENTYNINE PALMS	
COACHELLA	LA PUENTE	VERNON	
COLTON	LAKEWOOD	VILLA PARK	
COMMERCE	LEMOORE	VISALIA	
COMPTON	LOMPOC	WALNUT	
CORCORAN	LYNWOOD	WASCO	
COVINA	MENIFEE	WEST COVINA	
CUDAHY	MONTEBELLO	WESTMINSTER	
CYPRESS	MONTEREY PARK	WESTMORLAND	
DELANO	MORENO VALLEY	WHITTIER	
DESERT HOT SPRINGS	NORCO	YUCAIPA	
DINUBA	NORWALK	YUCCA VALLEY	
DOWNEY	PALM DESERT		
DUARTE	PARAMOUNT		

Appendix E Radio Disney Samples



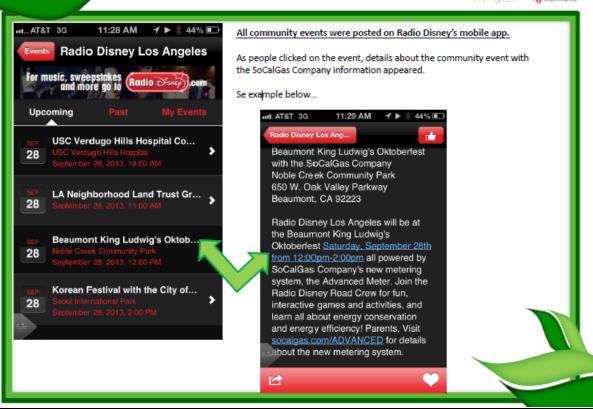
School Assembly Schedule

10/10/13: Stonehurst Elementary/LA-Tujunda/Sun Valley 10/18/13: Benjamin Franklin Elementary/Glendale Cameron Elementary/West Covina 11/7/13: Arovista Elementary/Brea 11/15/13: 11/19/13 Corona Avenue Elementary/Bell 12/4/13: Middleton Street Elementary/Huntington Park 12/6/13 Palm Elementary/Beaumont 12/13/13: Lincoln Elementary/Lynwood Mark Twain Elementary/Lynwood BONUS 12/19/13:

Mobile Ap/Event Calendar







School Assembly Set Up



Appendix F July, 2013 Bill Insert

Front and Back Page



Appendix F July, 2013 Bill Insert

Inside Pages

NEW ONLINE SAVINGS TOOLS THANKS TO ADVANCED METER

Southern California Gas Company (SoCalGas*) is upgrading your meter with an advanced meter communications device, which will safely and securely transmit your natural gas usage information to SoCalGas.

As a result, we will be able to give you more insight into your usage trends with new online tools to help you save money and energy. These tools are available in the new Ways to Save section in My Account. If you have not already registered for My Account, sign up today at socalgas.com. Once the advanced meter is operational, you will be able to view your usage and costs, including hourly, daily and monthly usage reports. Analyze your bill history, set and review your savings and conservation goals.

Installations began in October 2012 and will continue through 2017. We are working closely with community organizations to inform customers about the project. We will notify you by mail several weeks before installations begin in your area. The installation takes about 15 minutes and usually does not disrupt gas service.



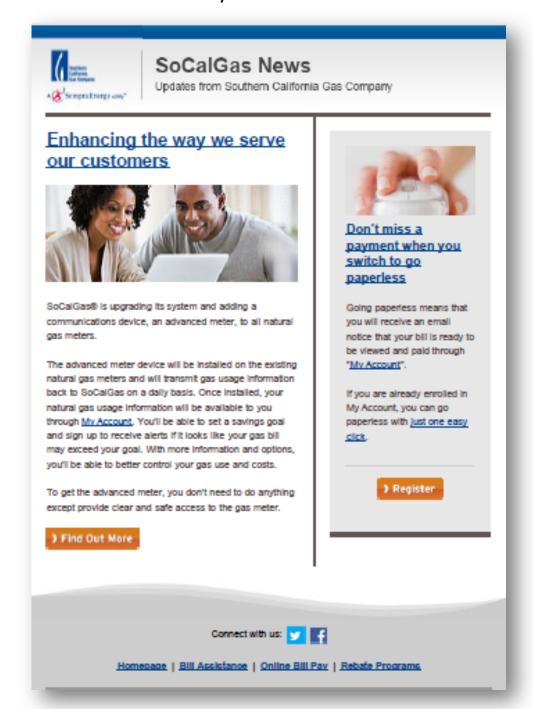
In most cases you do not need to be present. We will leave a door hanger notifying you once we have installed the device on your meter. Until the network is fully operational in your area, we will still need safe access to manually read your meter.

Some customers may not receive a notification letter - those who need a new meter for maintenance reasons (outdated meter, malfunction, etc.). In such cases, the new meter will already include a communications device.

If you do not want an advanced meter, please call us immediately at 1-800-427-2200 and request to be added to the Advanced Meter deferral list. This option is only available to residential customers. If you defer, you will not have access to the new online savings tools.

Appendix F

My Account Email



Appendix G Pre Installation Letter

Front



ADVANCEDmeter

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

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. 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

Southern California Gas Company

Enclosure [Advanced Meter Overview]

Note: inchalations will increase to SCR/Inonth in 2000.

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Appendix G **Pre Installation Letter**

Back

ADVANCEDmeter

Southern California Gas. Company (SoCalGas^a) va a estar en su área las próximas semanas para mejorar el meditior de gas natural con una parato de comunicación de meditior avanta do Advanced Meter. La mejora le permitirá tener acceso a información más detalla da acerca de su consumo die gas para que pueda controlar y administrar mejor sus costos de energia.

Lo que puede anticipar:

- ciones de los Advanced Meters tendirán lugar normalmente de lunes a viernes, de 7 a.m. a 5 p.m. y tardarán como 15 minutos en hace
- En la mayor á de los casos, no necesitar á estar usted presente, y no debe haber interrupciones en el servicio de glas.
- Nast a que nuestra red de comunicación esté funciona ndo pien amente en su área, n exisitaremos tener acceso par a leer

Per als seguridad de nuestros empleados, por fevor facilite un acceso seguro al medidor de que natural manteniend estáre a que está almedador del medidor. De de do birtuccion es plantas o arbusto s. Si hay una puerta con candado o un permo que impide el acceso, por favor iliame al Advanced Meter Cashamer Intermetien Carden, al 1477-268-6211 de lunes a vienes de 7 a.m.a 8 p.m., a fin de ponemos de acciendo para el acceso.

La manera más fásil de veria información de su consumo de gas va a sera través de My Account en **socalgas.com,** donde podrá también aufactura, so licitar servicio e inscribrise para la facturación sin papel (disponible en inglés únicamente). Si todavia no está inscrito en My Account, anótese hoy mismo y le enviar emos un mensaj e por correo electrón ico cuando ya pueda ver por Internet la información más detallada de su Advanced Meter.

Gracias por su cooperación durante el proceso de instalación. Si tien e algun a pregunta, por favor il ame a SoCalGas al 1-977-2-68-6211 o visite s.com/es panol (busque la palabra dave "AVANZADO").

Souther n California Gas Company GoCalGas¹) 陳在今後數回內對您所在區域的天然瓦斯計畫表達行升級。安美先激計量表(Advanced Meter)通訊商豐。此次升級時後多獲 得有關您使用情况的更多詳細資訊・促而更好地控制和管理您的能源成本・

- Advanced Meter 的交換將在星期一里星期五上午7里至下午5里之間進行。此過程的需要 15 分離完成。安装有時可能會支持在星期八進行。
 大多數情况下。多不必在損毒、松不需要中截其期报的。
 在您有在區域內的邊影網路向水之面遷作之前。我們仍需在接下來的幾個月內採取人工競賣方式。

出述別例門員工的女子考慮、請念祭神計量無同議區域問題、無韓姿・被称或者木・以受良門數女子接近天然及取計量表。如果您的大門已上編成有的報門・道院計委我們 進入・請於是新一至是第四上午 7 製売下午 8 製売打 1-077-260-6211 連絡 Advanced Meter 各戶費利中心・以力受養好訓費支援。

查閱其斯使用資訊最幾便的方法是iabi socalq ss.com apki.中"My Acmunt,進行查閱。在這程·您達可以查閱和支付帳單·競求服務以及簽署無紙化帳單·如果您還沒有註目 「My Account」,就立见鞋椅,首有更多您的 Advance d Met er 使用招願責訊時,我們清傳送電子彈件與您歸絡。

駅影を在支表過程中的配合・独有性何級度・誘発打 1-877-268-6211 職務 SoCal Gas 成合計網站 socal gas.com (機器 「ADVANCED」)。

Souther's California Gas Company (SoCalGas[®])는 전염가스 계량기를 그런 계량기 (Advanced Meter) 통신장치로 월그레이드 경기 위하여 다음 몇 후 동안 귀하의 거주 지역에서 설치 작업을 하게 됩니다. 월그레이드는 가스 사용량에 대하여 등 더 자세히 알 수 있게 해주기 때문에 에너지 반응을 등 더 잘 관리할 수 있도록 도착을 것입니다.

설치 기본 정보:

- eker 설치는 혐요일부터 광요일까지 요한 7시에서 요후 5시 사이에 전혀될 것이며, 설치완료하는데 15분 경도 소요될 것입니다. 설치는 가끔 로요일에 전혀될 수

로프로 가능하 작전이 전전가스 계용기의 안전하게 접근할 수 있도록 근처의 장의로, 식물이나 관육을 치탁주시면 고향겠습니다. 게이르가 참겨 있거나 게 물론의 접근이 불가능하면. 행-왕호림 오전7시에서 오후의시 사이 Advanced Meter 고객정보센터(1-877-268-4211)로 전환하셔서 결근 가능 시간을 예약하시기 당합니다

고적이 가스 사용량을 경경할 수 있는 가장 위로 당열은 socalpat.com에서 My Account를 방문하시는 것 입니다. 여기서, 경구서도 를 수 있고, 가스빈도 남부할 수 있으며, 서빈스 요청 및 경자 용구시 상황도 하실 수 있습니다. 아직 My Account에 기업하지 않으셨으면 오늘 기업하십시오, 귀하의 Advanced Meter 사용 정보가 등 더 자세히 나오면 지회들이 이명될도

설치 기간 용안 귀하의 함조에 강사를 드립니다. 결혼이 있으시면 SoCal Gas (1-077-260-626)로 전혀주시기나, secalgas, com ("ADVANCED" 전세)을 방문하시기 반합니다.

Southern California Gas Company & oCalGas 4) si compititiong khu vyb cúa quý vị trong một việt tuần tới để gần thêm bộ truyền thông tin đồng hổ đo tiên tiến (Advanced Meter). viso đồng hổ đo gas tự nhiên. Nhờ vậy, quý vị có thể xem thông tin chi tiết hơn về việc sử dụng gas để kiểm soit cũng như quân lý chi phi năng lượng của minh tới hơn.

- Quy vị có thể lường trước rằng:

 5 tỷ gần Advanced Meter trong khoảng từ 7:00 giờ sáng đến 5:00 giờ chiếu từ thứ Hai đến thứ Sâu, và sẽ mất khoảng 15 phát. Thình thoảng có thể cấn gắn đồng hố vào những ngày thứ Bảy.
- Hấu như quý vị sẽ không cấn có mặt, và quý vị sẽ không bị cất gại.
 Cho đến khi hệ thống truyền thông của chúng tôi được đưa vào hoạt động đấy đủ ở khu vực của quý vị thi chúng tôi sẽ vẫn cấn đích thân đến đọc đồng hổ của. quý vị trong vài tháng nữa

Quý vị có thể giúp bằng cách nào:

Vi sự an toàn cho nhân vớn của chúng tôi, xin vư lòng sắp xếp lối vào an toàn đến nơi gần đồng hỗ đo gas tự nhiên bằng cách dọn sạch vật cân, cây nhỏ và cây bụi xung quanh nơi gần đồng hỏ. Nếu có trở ngại khi vào nơi gần đồng hồ như công có khôa hoặc có nưới chỏ, xin vu lỏng gọi cho Trung Tâm Thông Tin Khách Hàng Advanced Meter tại 1-677-268-62 Ti, Thủ Hai đến thủ Sâu, từ 7 giờ sáng đến 8 giờ tới để thực hiện việc thu siếp lắp đặt.

Cách để nhất để xem thông tin sử dụng ở ás của quý vị là vào Nỳ. Account tại so**calque, com,** ở đô quý vị cùng có thể xem và trả hóa đơn, yêu cấu dịch vụ và ghi danh để được gắt hóa đón điện tử. Nếu quý vị chuả đảng kỳ My Account, hủy đảng kỳ nguy hóm ney và chủng tời xả gắt email cho quý vị khi trên mạng có thêm thông tín chi tiết hơn về vậc sử dụng Advanced Meter của quý vị khi trên mạng có thêm thông tín chi tiết hơn về vậc sử dụng Advanced Meter của quý vị.

Câm ơn quý vị đã hợp tác trong thời gian gần đồng hồ. Nếu quý vị có bất kỳ câu hồi nào, vui lỏng gọi cho SoCal Gas tại 1+8 77-268-6211 hoặc ghé thâm s ocal gas ac om (tim "ADVANCED").

Appendix G Pre Installation Envelope



Appendix G Advanced Meter Overview

Front (English)



ADVANCED meter 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 netural 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 as econd a day, for a total of less than two minutes a year. Advanced Meters cannot turn your gas service on or off. Withis upgrade, you will have access to more frequent and detailed information about your gas consumption at secalgas.cam, 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 ill us trative purposes orly

What if I don't want an Advanced Meter?

SoCalGas 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.

*Deferr all list option applicable to residential cust orner sonly.

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BENEFITS OF ADVANCED METERS

Access to our new online saving tools:

- New Ways to Save section on secalges.com
 You will be able to view hourly, daily and monthly usage summaries, see your bill history, set savings goals and conduct an energy audit.
- Bill Tracker Alerts

By monitoring your gas costs throughout the billing cycle, you can take steps to lower your usage and avoid surprises in your monthly bill. There is no change for this service Weekly notifications are sent via email and/or text. These new tools can help you save energy and money.

Increases accuracy, security and efficiency:

- Advanced Meters can improve billing accuracy and reduce the potential for errors.
- Customers who need to provide 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.
- Gas usage data transmitted from the meter is encrypted to increase privacy and security.
- 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.

Helps the environment:

- . Removes 1,000 SoCalGas vehicles from the road every day
- Reduces 6.3 million vehicle miles
- Eliminates approximately 140,000 tons of greenhouse gasses per year.

Where Can I Find More Information?

Visit socalgas.com (search "ADVANCED") or call:

Residential Customers:

English	1-800-427-2200
MIE	1-800-427-1429
事 胚	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

Appendix G Advanced Meter Overview

Spanish



ADVANCED meter INFORMATIVO

¿Qué son los Advanced Meters?

Southern California Gas Company (SoCalGas#) está mejor ando su sistema afiadiendo un aparato de comunicaciones Advanced Neter a todos los medidores de gas natural residenciales y comerciales. El aparato Advanced Meter leer áta información de su consumo de gas natural y la transmitir á a SoCalGas. Sin embargo, hasta que nu estra red de comunicaciones esté en plena operación e n su á rea, necesitaremos ten er a cosso para manu almente leer el medidor uno s cuantos meses más.

El aparato Advanced Meter, que se instalar á en el medidor analógico existente, es de baterias y se encien de sol o un a fracción de segundo al día, par a un tiobal de menois de dois minutois al año. Los Advan and Metiers no queden con ectar o interrumpir el servicio de gas. Con esta mejora, usted tendrá acceso a información más frecuente y detallada sobre su consumo de ga s en socalgas.com/espanol, lo que le permitirá tener más control sobr e su con sumo de e nergía y potencialmente ahorr ar dinero.

SigCa (Gas, tien e pro gramado installar el apar ato. Ad vence diMeter en apricolmadament e 6 millones de medidores de gas nat unal para terminar en 2017.



¿Qué pasa si no quiero un Advanced Meter?

SioCalGas relcoinoce que alguinos clientes nesidenciales tallivez prefieran que nose les instale un Advanced Meter y que mejor les lean manualmente el medidonde gas cadlames. Si no quiere que le instalen un Advance d'Meter, diebe l'amar in mediat amente la nu est ro Centro de Contacto con el Cliente al1-800-342-4545 y pedir que se le añada alla "lista de diferimiento del

Si differe la instalación en este momento, SoCalGas se comunicar á con u ste d'un a vez que la Comisión de Servicios Públicos de California (CPUC) se pronuncie acerca de nuestro programa para optar poir excluirse del Ad vanced Meter. Pued e decidir en ese momento, comb ase en la tarifa a probada por la CPUC, si dece a optar por excluirse formalmente y paga l'as cuota s correspondientes o permitir la instalación de un Advanced Met er sin que se incremente gradualmente el costo.

* La opción de la lista de diferimiento se aplica a dientes residencial es únicamente.

© 20 3 Sauthur v California Gan Company, Lan mancan nagiobiadan son propindad de son nespecifiros desdios. Salan lan desarban nesarrados.

BENEFICIOS DE LOS ADVANCED METERS

Tendré le oportunité d'de un er por internet mantres fenta s pa na ahornar:

- Nueva secció n Waysto Save en seculo Podrá ver resúmenes de consumo por hora, día y mes consultar su historial de facturas, establecer metas de ahorr o y hacer una auditoria de su con sumo de energia.
- BillTracker Alerts

Al monitorear sus costos de gasdunante todo el ciclo de facturación, puede tomar medidas para reducir su consumo y evitar sorpresasen la factura mensual. No hay cargos por este servicio. Se envian notificaciones semanales via mensal e d e comeo el ectrónico y/o texto. Estas nuevas hemanientas pueden ayudarle a ahorrar energia y dinero.

- Aumente n le precisión, segurided y efficiencia: Los Advenced Neters pueden mejorar la precisión de la facturación y reducir el potencial de erro res
- Los dientes que tenían que propordonar una llave de sus puertes, dejar los cerrojos sin candado o confinar a sus perros para permitir la lectura del medidor, sólo necesitarán facilitar la entrada para que se dé mantenimiento periódico.
- La información de consumo de que que se transmite desde el medidor está cifrada para aumentar la privacidad y segunidad.
- El programa Advanced Nieter permitir à generar aho mos o perativos durante la vida del programa, que se calculan en más del doble del valor de nuestra inversión. Los ahorros operativos se transmitir án a los dilentes en las tarifas generales

- Siacan de circulación di ariamente 1,000 vehícul os de SoCalGas.
- Reducen en 6.3 mil iones les mill es recondes por vehículos.
- Eliminan cada año aproximadamente NQ 000 to neladas de emisiones de gases de efecto invernadero.

(Dånde puedo encontre r más información? Visite socalga s.com/espeno i (busque la palabra clave "AVANZADO") o llame al:

Clientes res

Español 14	100-342-4545
	100-427-1429
開新 10	IOZSKOTSK
한국어 1년	100-427-0471
Tiếng Biệt 14	100-427-0478
Para otros idiomas 14	しゃごうものもこと
Person as comproblemas	
auditivos (TID) 1-9	100-252-0259

1-800-427-6029

Appendix H Frequently Asked Questions "Pocket Cards"

English



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 still 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.

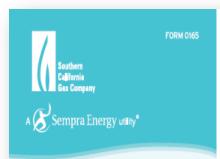
If you defer installation now, SoCalGas will notify you once the California Public Utilities Commission (CPUC) has ruled on the advanced meter opt-out program. You can decide at that time, based on the rate approved by the CPUC, whether you want to formally opt-out and pay the applicable fees or allow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

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Appendix H Frequently Asked Questions "Pocket Cards"

Spanish



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, todavía 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.

R. ¿Y si no quiero un advanced meter?

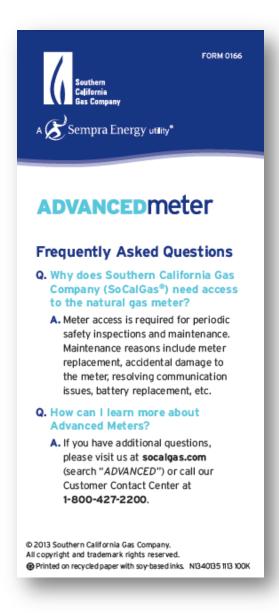
R. SoCalGas respalda la decisión del cliente y reconoce que algunos clientes residenciales tal vez prefieran que no se les instale un advanced meter y que mejor les lean manualmente el medidor de gas cada mes. *Si no quiere un advanced meter, debe llamar inmediatamente a nuestro Centro de Contacto con 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.

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Appendix H Remediation Pocket Card



"Successful Installation" Door Hanger Front

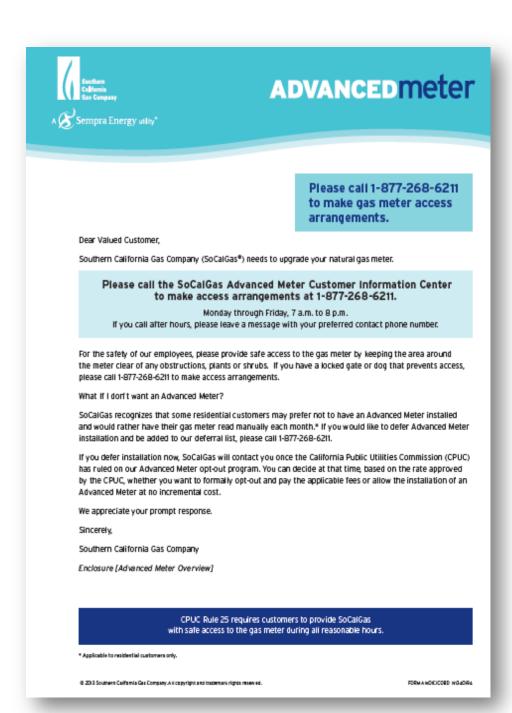


Appendix I "Successful Installation" Door Hanger Back



"Unsuccessful Installation" Collateral Materials

Follow-up Letter (English)



"Unsuccessful Installation" Collateral Materials

Follow-up Letter (Spanish)



ADVANCED meter

Por favor llame al 1-877-268-6211 para hacer los arreglos pertinentes para el acceso al medidor de gas.

Apreciado cliente:

Southern California Gas Company (SoCalGas®) necesita hacer mejoras en su medidor de gas natural.

Por favor llame al Centro de Información al Cliente del Advanced Meter de SoCalGas al 1-877-268-6211 para hacer los arreglos pertinentes para el acceso.

De lunes a viernes, de 7 a.m. a 8 p.m.

Si llama después del horario normal de trabajo, por favor deje un mensaje con el número de teléfono de contacto de su preferencia.

Por la seguridad de nuestros empleados, sirvase brindar acceso seguro al medidor de gas manteniendo el área alrededor de este libre de cualquier obstrucción, plantas o arbustos. Si tiene candado en la entrada o un perro que impida el acceso, llame por favor al 1-877-268-6211 para hacer los arreglos pertinentes para el acceso.

¿Y si no quiero un Advanced Meter?

SoCalGas 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 desea diferir la instalación del Advanced Meter y que lo agreguen a nuestra lista de diferimiento, sirvase llamar al 1-877-268-6211.

Si difiere la instalación en este momento, SoCalGas se pondrá en contacto con usted una vez que la Comisión de Servicios Públicos de California (CPUC) se haya pronunciado acerca de nuestro programa para optar por excluirse del Advanced Meter. En ese momento, podrá decidir, 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 incurrir en costos incrementales.

Agradeceremos su respuesta inmediata.

Atentamente,

Southern California Gas Company

Anexo [Resumen del Advanced Meter]

La Regla 25 de la CPUC precisa que los clientes brinden a SoCalGas acceso seguro al medidor de gas dentro de un horario razonable.

*Se aplica únicamente a dientes residenciales.

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PORNA MOTOLOGIE MOSCONA

"Unsuccessful Installation" Collateral Materials

Schedule an Appointment First Attempt Email



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: y



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.

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"Unsuccessful Installation" Collateral Materials

Schedule an Appointment Second Attempt Email



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

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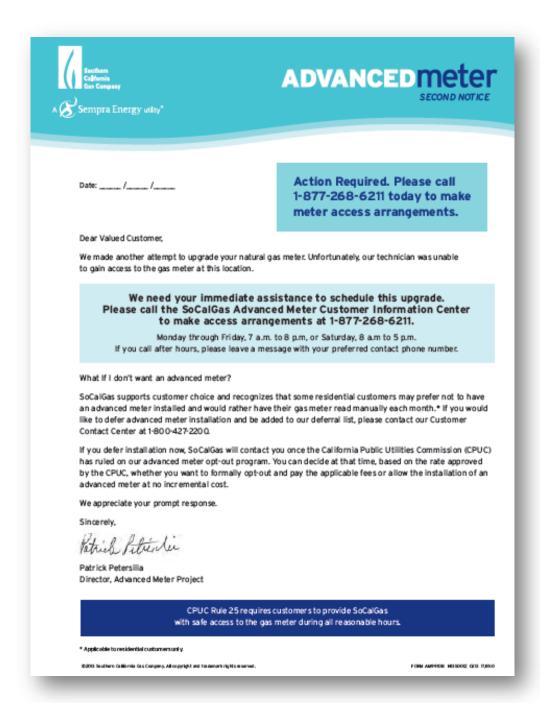
"Unsuccessful Installation" Collateral Materials

Schedule an Appointment First Attempt Letter

Please call 1-877-268	Sempra Energy utility*	ADVANCEDMete
Dear Valued Customer, A technician from Southern California Gas Company (SoCalGas®) was sent to upgrade your natural 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 Ceto 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 numb What if I don't want an advanced meter? SoCalGas supports customer choice and recognizes that some residential customers may prefer not an advanced meter installed and would rather have their gas meter read manually each month.® If like to defer advanced meter installation and be added to our deferral list, please contact our Customated Center at 1-800-427-2200. If you defer installation now, SoCalGas will contact you once the California Public Utilities Commiss has ruled on our advanced meter opt-out program. You can decide at that time, based on the rate by the CPUC, whether you want to formally opt-out and pay the applicable fees or allow the installad vanced meter at no incremental cost. We appreciate your prompt response. Sincerely. Patrick Petersilia	Sempra Energy wity	
A technician from Southern California Gas Company (SoCalGas*) was sent to upgrade your natural 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 Ceto 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 numb What If I don't want an advanced meter? SoCalGas supports customer choice and recognizes that some residential customers may prefer man advanced meter installed and would rather have their gas meter read manually each month.* If like to defer advanced meter installation and be added to our deferral list, please contact our Customate Center at 1-800-427-2200. If you defer installation now, SoCalGas will contact you once the California Public Utilities Commiss has ruled on our advanced meter opt-out program. You can decide at that time, based on the rate by the CPUC, whether you want to formally opt-out and pay the applicable fees or allow the installad advanced meter at no incremental cost. We appreciate your prompt response. Sincerely, Patrick Petersilia	Date:///	Please call 1-877-268-6211 to make meter access arrangements.
Please call the SoCalGas Advanced Meter Customer Information Ceto 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 numb. What If I don't want an advanced meter? SoCalGas supports customer choice and recognizes that some residential customers may prefer in an advanced meter installed and would rather have their gas meter read manually each month.* If like to defer advanced meter installation and be added to our deferral list, please contact our Custo Contact Center at 1-800-427-2200. If you defer installation now, SoCalGas will contact you once the California Public Utilities Commiss has ruled on our advanced meter opt-out program. You can decide at that time, based on the rate by the CPUC, whether you want to formally opt-out and pay the applicable fees or allow the installed advanced meter at no incremental cost. We appreciate your prompt response. Sincerely, Patrick Petersilia	A technician from Southern California Gas Comp	
SoCalGas supports customer choice and recognizes that some residential customers may prefer in an advanced meter installed and would rather have their gas meter read manually each month.* If like to defer advanced meter installation and be added to our deferral list, please contact our Cust Contact Center at 1-800-427-2200. If you defer installation now, SoCalGas will contact you once the California Public Utilities Commiss has ruled on our advanced meter opt-out program. You can decide at that time, based on the rate by the CPUC, whether you want to formally opt-out and pay the applicable fees or allow the install advanced meter at no incremental cost. We appreciate your prompt response. Sincerely. Patrick Petersilia	Please call the SoCalGas Adva to make access arra Monday through Friday, 7 a	nced Meter Customer Information Center angements at 1-877-268-6211. n.m. to 8 p.m., or Saturday, 8 a.m to 5 p.m.
	SoCalGas supports customer choice and recognian advanced meter installed and would rather helike to defer advanced meter installation and be Contact Center at 1-800-427-2200. If you defer installation now, SoCalGas will conta has ruled on our advanced meter opt-out prograby the CPUC, whether you want to formally opt-advanced meter at no incremental cost. We appreciate your prompt response. Sincerely, Patrick Petersilia	ave their gas meter read manually each month.* If you woul added to our deferral list, please contact our Customer act you once the California Public Utilities Commission (CPU am. You can decide at that time, based on the rate approved
CPUC Rule 25 requires customers to provide SoCalGas with safe access to the gas meter during all reasonable hours.		

"Unsuccessful Installation" Collateral Materials

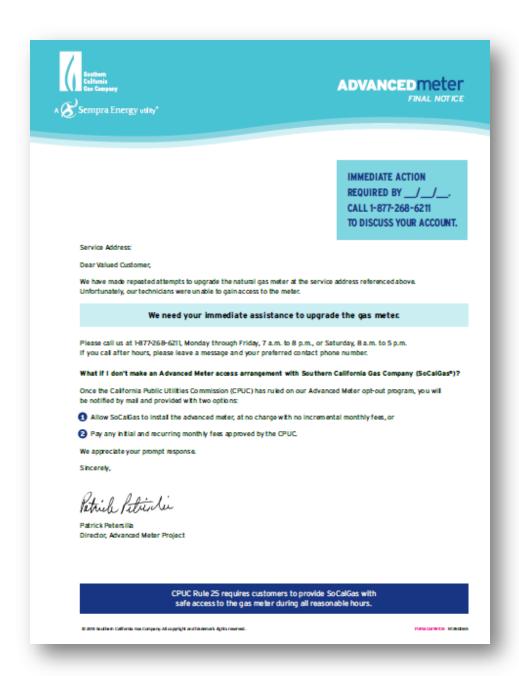
Schedule an Appointment Second Attempt Letter



Appendix J

"Unsuccessful Installation" Collateral Materials

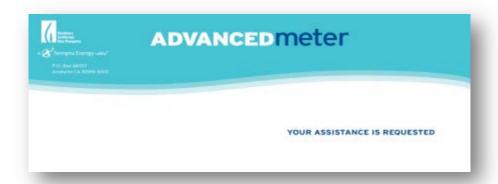
Schedule an Appointment Final Notice Letter



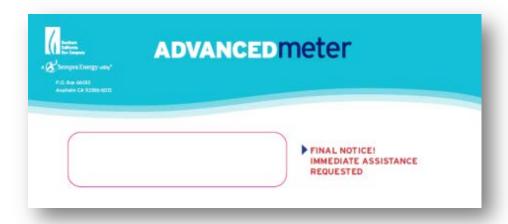
Appendix J

"Unsuccessful Installation" Collateral Materials

First, Second and Final Attempt Appointment Envelopes

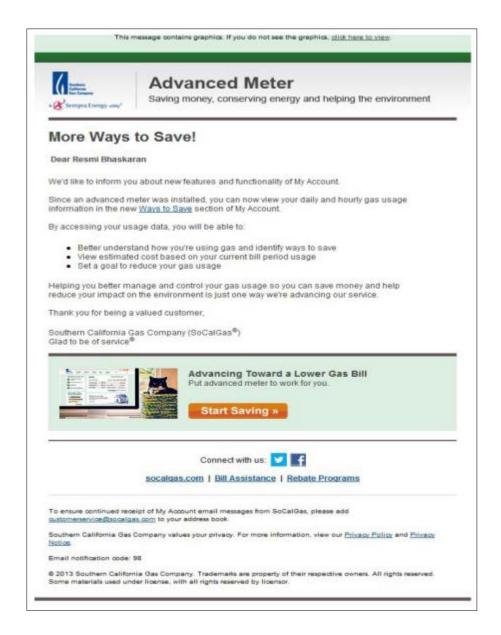






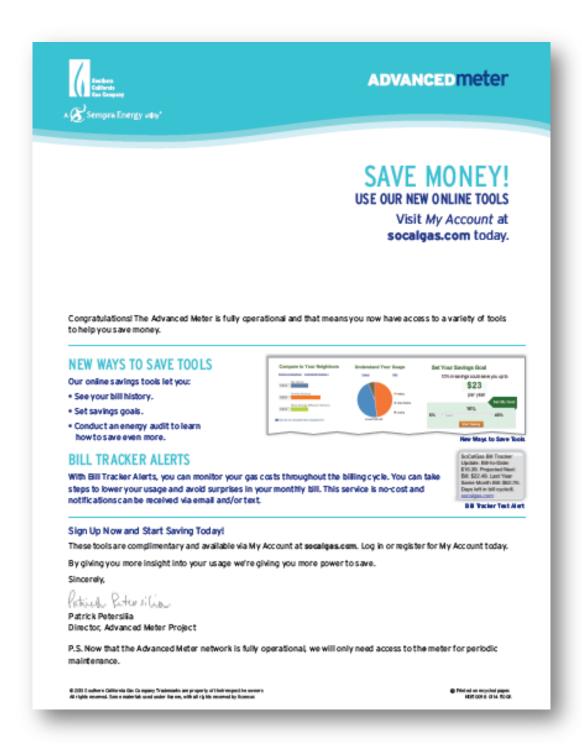
Appendix K AM Billed Notifications

30 Days AM Billed Email



Appendix K AM Billed Notifications

45 Day AM Billed Letter



Appendix K AM Billed Notifications

45 Day AM Billed Letter Envelope



Appendix L Deferral Sticker and Door Hanger

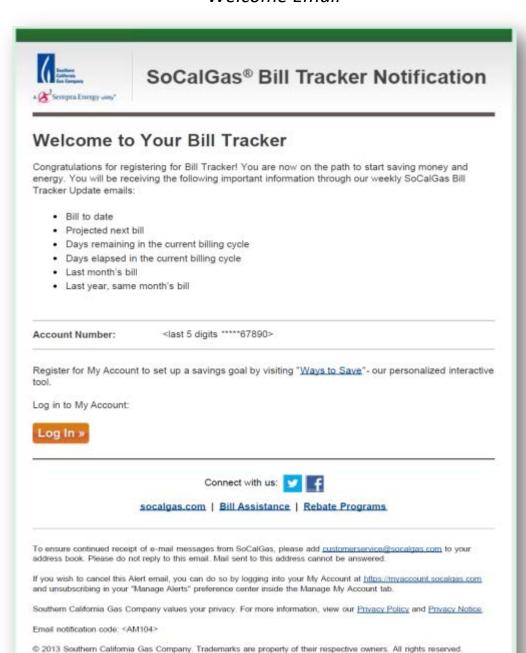


Appendix L Deferral Door Hanger



Appendix M Bill Tracker Alert Emails (My Account)

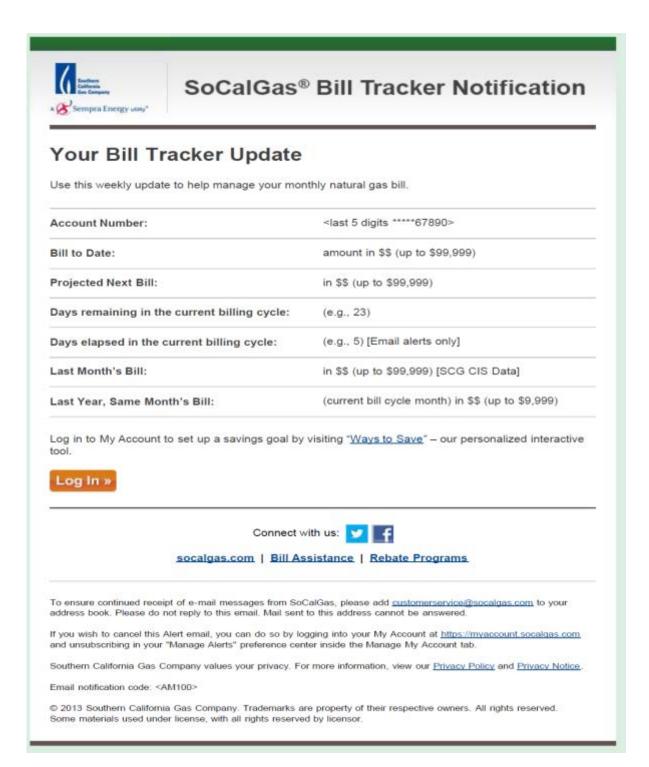
Welcome Email



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Appendix M Bill Tracker Alert Emails (My Account)

Weekly Alert Email



Appendix M

Bill Tracker Alert Emails (My Account & non-My Account)

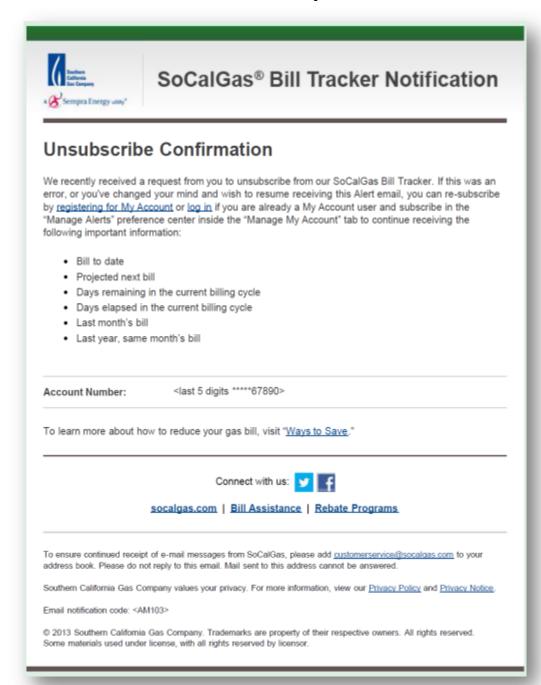
Preference Change Confirmation



Appendix M Bill Tracker Alerts

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

Unsubscribe Confirmation



Appendix M Bill Tracker Alert Emails (Non-My Account)

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

Register for My Account:



Connect with us: y



socalgas.com | Bill Assistance | Rebate Programs

To ensure continued receipt of e-mail messages from SoCalGas, please add <u>customerservice@socalgas.com</u> 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.

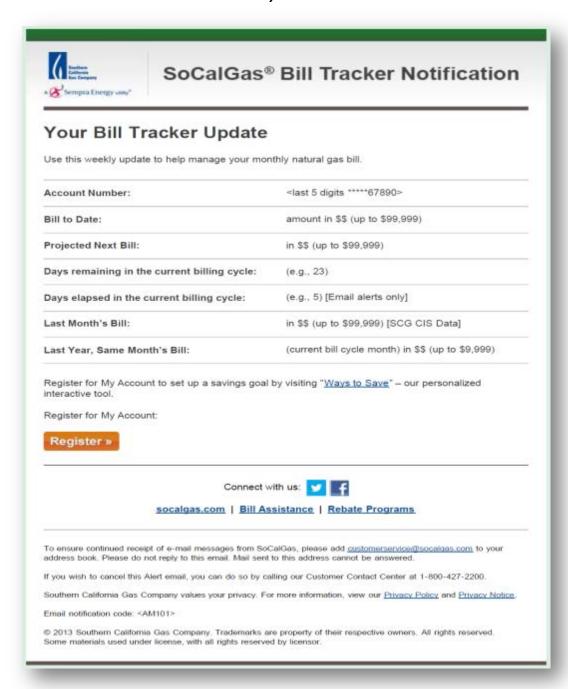
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Email notification code: <AM105>

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Appendix M Bill Tracker Alert Emails (Non-My Account)

Weekly Alert Email



Appendix N Opower Collateral Materials

Opower Email Report



Appendix N Opower Collateral Materials Door Hanger

Front



Appendix N Opower Collateral Materials

Door Hanger *Back*



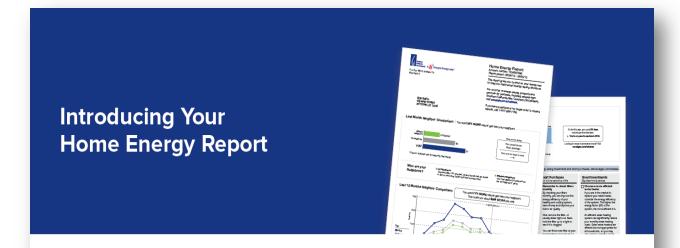
Appendix N Opower Collateral Materials Welcome Insert

Front



Appendix N Opower Collateral Materials

Welcome Insert



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

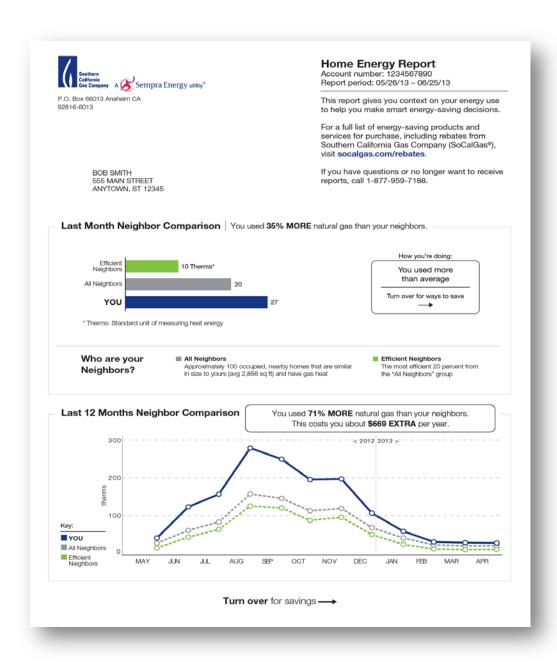
The comparisons and tips in your reports are personalized for you by using publicly available information about your home size, home type and other characteristics. To find more information about your custom analysis and advice, visit **SCG.opower.com**.



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.

Appendix N Opower Collateral Materials Home Energy Report Front



Appendix N Opower Collateral Materials Home Energy Report

Back



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 YI



runs on OP@WER®

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

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

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Appendix O Nextant Conservation Plan





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	Exe	ecutive Summary	2
	1.1	Initial Information Services	2
	1.2	Overview of Testing Process	3
	1.3	Estimating Impacts	4
	1.4	Proposed Schedule and Reporting Process	5
	1.5	Plan Organization	5
2	Pla	n Overview	6
	2.1	Plan Objectives	6
	2.2	Expected Outcomes of the Plan	.12
3	Pla	n Development	.13
	3.1	Information Feedback Options	.13
	3.2	Proposed Experimental Design	.15
	3.3	Sample Size Determination	.16
	3.4	Target Population for Initial Residential Tests	.18
	3.5	Plan for Business Customers	.22
	3.6	Timing	.24
A	pper	ndix A. Research Design Options	.25
Δı	nner	ndix B Simulation Analysis for Research Planning	28



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 rollout" 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. 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

FSC FREEMAN, SULLIVAN & CO.

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.

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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 costeffective 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.

² Residential Electricity Use Feedback: a Research Synthesis and Economic Framework, Electric Power Research Institute, Palo Alto CA, 2009, 1018844



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.

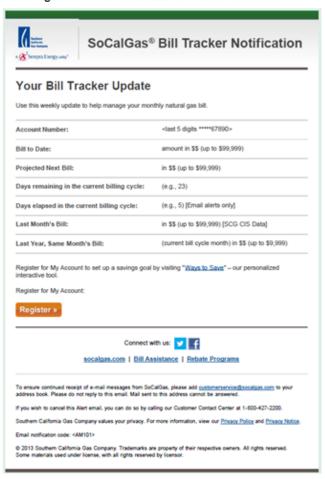
When opt-in BTA customers enroll in the program, they can choose to receive alerts via email, text message or both. Default BTA customers will receive notifications through email. Figure 2-1 displays an example email notification for customers enrolled in or defaulted onto BTA. The email provides the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

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Figure 2-1: Draft SoCalGas BTA Email Notification



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.

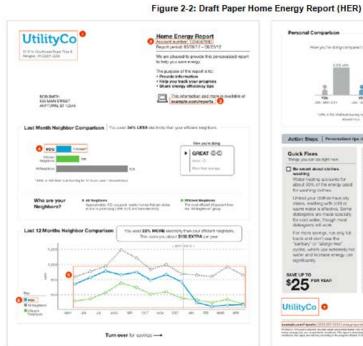
In addition to BTAs, SoCalGas will also offer HERs to a select group of customers. HERs are designed to change energy consumption by providing customers with periodic (monthly during winter) comparisons of the customers' gas usage with that of their neighbors. The HERs will also provide tips on how to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





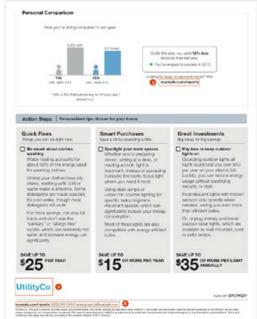






Figure 2-3: Email Home Energy Report (HER)

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.

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



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

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.

Webster's Pocket Dictionary, 1997.

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

- 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. 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

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 optin 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

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- 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.

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 14% 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

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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 detectsmall 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.

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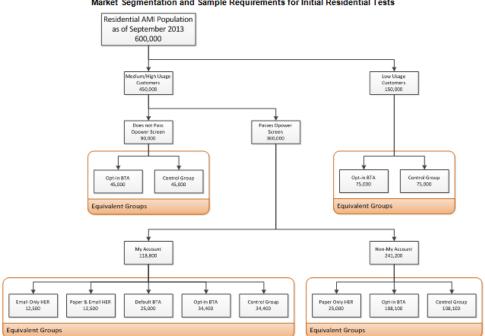


Figure 3-1: Market Segmentation and Sample Requirements for Initial Residential Tests

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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.



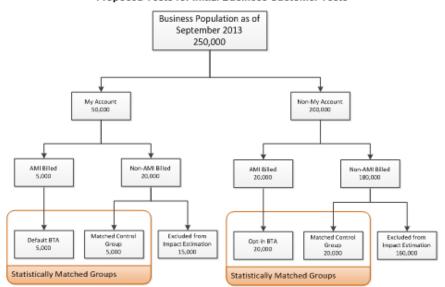


Figure 3-2: Proposed Tests for Initial Business Customer Tests



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.

FSC FREEMAN, SULLIVAN & CO.

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 randomizedencouragement-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. 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 1020855.

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:

- A Monte Carlo simulation (involving 1,000 iterations) was used to select hypothetical treatment and control group customers for the study.
- 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
- 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).
- Energy consumption for the customers who hypothetically received advanced meters was arbitrarily reduced by 1% -- inducing a 1% treatment effect.
- 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.

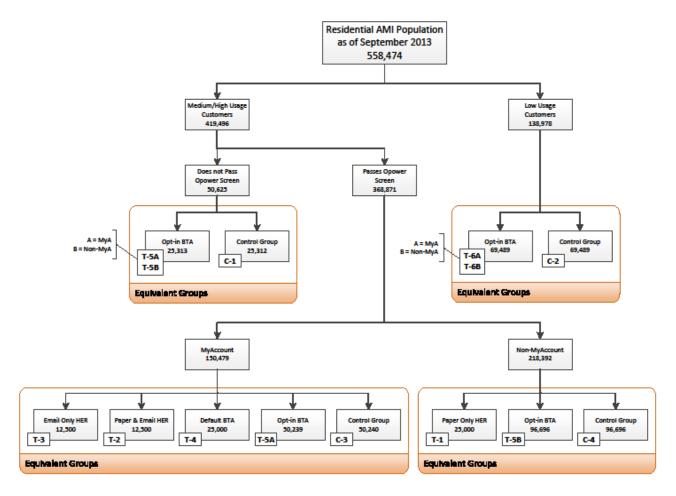


^{*1} FSC determined that the deployment of advanced meters would take place in Pico Rivera and that SoCalGas' implementation plan called for installing advanced meters "working outward" from this initial deployment area. We also learned that SoCalGas intended to deploy approximately 921,000 meters in 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.

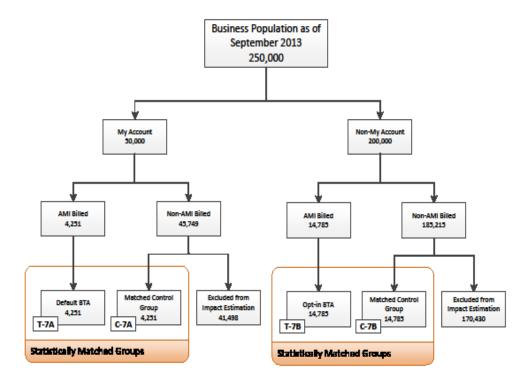
From these results we concluded that given the small effect size under investigation, matching on pretreatment usage does not adequately control for differences in the usage patterns over time between the treatment and control groups. We therefore recommended abandoning matching as a strategy for formulating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



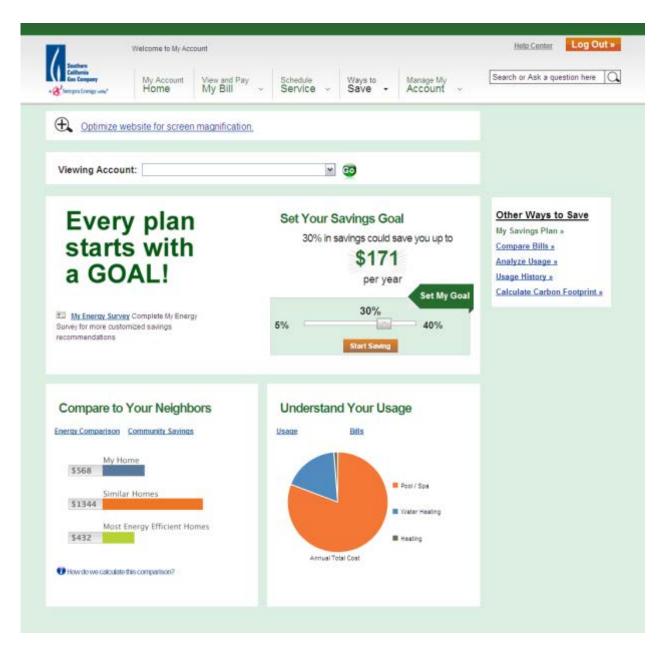
Appendix O Nextant Conservation Plan Final Test Cell Design



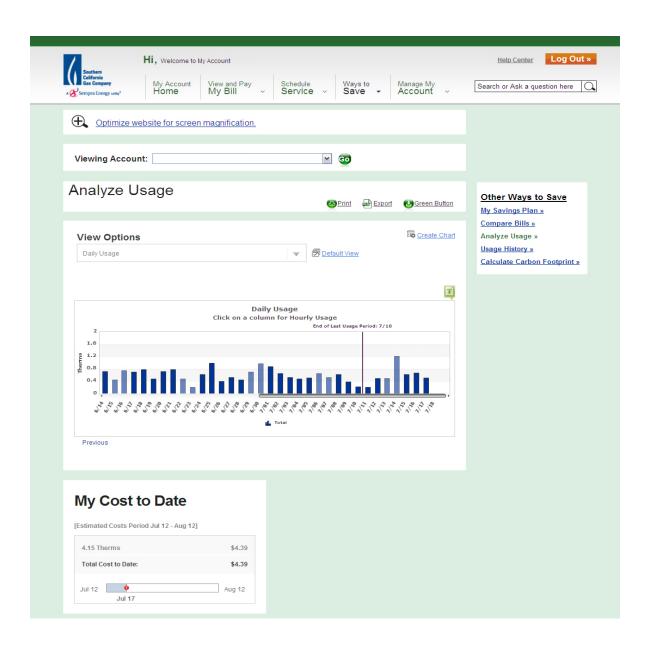
Appendix O Nextant Conservation Plan Final Test Cell Design



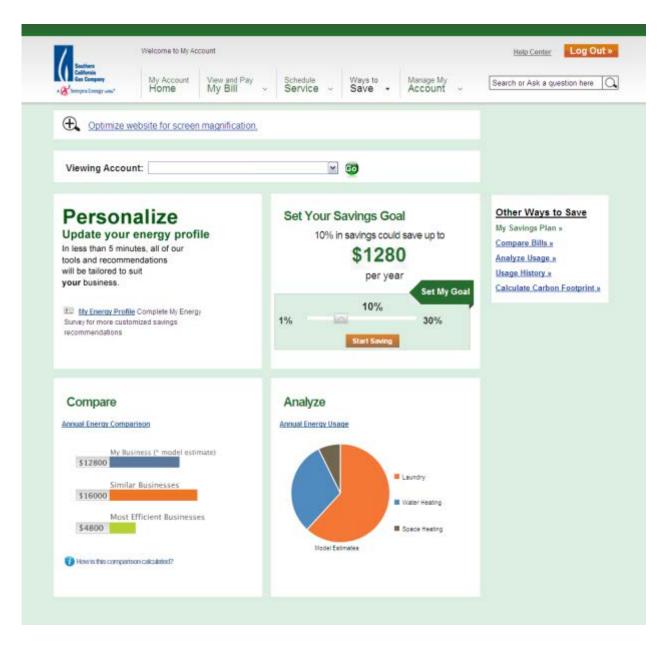
Appendix P Socalgas.com Ways-to-Save Residential Screen Shot



Appendix P Socalgas.com Ways-to-Save "Analyze Usage" Screen Shot



Appendix P Socalgas.com Ways-to-Save Business Screen Shot



Appendix Q PRM Community Events

Events Attended in 2013

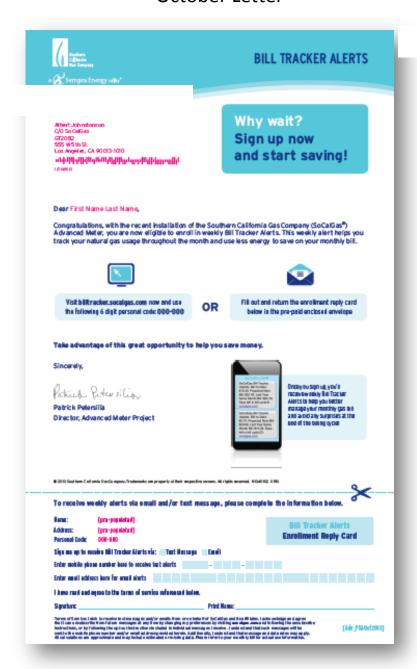
Date	Event	Location
10/24/2013	Indio Chamber Event	Indio
11/2/2013	IID Lamp Exchange	Indio
11/9/2013	Cattle Call Parade	Brawley
11/16/2013	IID Lamp Exchange	El Centro
11/16/2013	Honey Festival	Westmoreland
12/7/2013	Tamale Festival	Indio
12/8/2013	Tamale Festival	Indio
12/13/2013	Xmas in a Small Town	Imperial
1/9/2013	IV Joint Chambers	Imperial

2014 Events

Date	Event	Location
1/11/2014	La Quinta Health Fair	La Quinta
1/24/2014 - 1/26/2014	Southwest Arts Festival	Indio
2/8/2014	Carrot Festival	Holtville
2/14/2014 - 2/15/2014	County Fair	Indio
2/15/2014	Mardi Gras Event	El Centro
2/16/2014 - 2/23/2014	County Fair	Indio
2/28/2014 - 3/9/2014	Mid Winter Fair	Imperial

2013/14 Conservation Outreach Campaign Collateral Materials

October Letter



Appendix R 2013/14 Conservation Outreach Campaign Collateral Materials October Envelope



2013/14 Conservation Outreach Campaign Collateral Materials

October Email



2013/14 Conservation Outreach Campaign Collateral Materials

October Auto Enrolled Postcard (Inside)



2013/14 Conservation Outreach Campaign Collateral Materials

October Auto Enrolled Postcard (Outside)





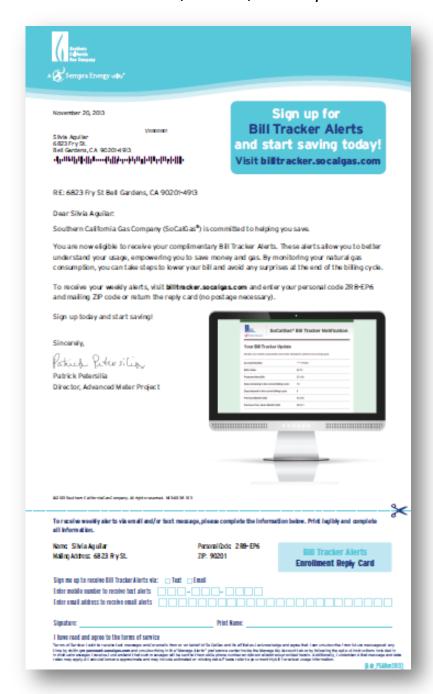
2013/14 Conservation Outreach Campaign Collateral Materials

October Auto Enrolled Email



2013/14 Conservation Outreach Campaign Collateral Materials

November letters, inserts, envelopes & emails



2013/14 Conservation Outreach Campaign Collateral Materials

November letters, inserts, envelopes & emails





SAVE ENERGY THIS WINTER

3 easy "Ways to Save"

BUILDING

- Caulk cracks around windows, doors and other openings.
- · Identify and repair leaky or disconnected ducts.

2 EQUIPMENT

- Perform routine maintenance recommended by the manufacturer, according to the owner's manual. This includes replacing dirty filters and cleaning intake screens, condenser coils, supply registers and return grills.
- Have a qualified licensed technician test, clean and adjust equipment.
- If you're considering new natural gas equipment, Southern California Gas Company (SoCalGas*) has rebates and other financial incentives available to help with your purchase.

WINTERIZE YOUR BUSINESS

- Keep programmable thermostats set to turn heating on 30 minutes before people arrive and off 30 to 60 minutes before they leave. Set them no higher than 68 degrees Fahrenheit during occupied periods in the winter.
- Close curtains, shades and blinds at night and during unoccupied periods to help your building retain heat. Keep them open on sunny days.

(Continued on back)

USE OUR NEW ONLINE TOOLS TO SAVE EVEN MORE!

Visit My Account "Ways to Save", your online savings tool.

- · Set savings goals and get tips on how to achieve them.
- · Create a personalized energy profile for your facility
- · View your daily and hourly gas usage
- · View your bill history.



New "Ways to Save" Tools

Please visit socalgas.com.



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November 20, 2013

1/0 000 001

Javier Loyola Duran 6015 Gallant St. Bell Gardens, CA 90201-5507

-Արբլի լի հետ ին համանական համական հիմ

Saving More is Within Reach Visit My Account now

RE: 6015 Gallant St Bell Gardens, CA 90201-5507

Dear Javier Loyola Durant

Southern California Gas Company (SoCalGas*) is committed to helping you save.

Continue to monitor your gas usage with Bill Tracker Alerts and you're on your way to tracking down savings. To understand your usage even better, visit My Account Ways to Save, your online savings tool.

- · Set savings goals and get tips on how to achieve them.
- · Create a personalized energy profile.
- View your daily and hourly gas usage.
- · Analyze your monthly bill history to understand how different factors affect your natural gas usage.

Visit socalgas.com, log in to My Account and click on Ways to Save.

Start saving more today!

Sincerely.

Patrick Petersilia

Patrick Petersilia

Director, Advanced Meter Project

P.S. Bill Tracker Alerts are also available via text message. Log in to myaccount.socalgas.com and go to the "Manage My Account" tab to change or add your preferences.

Every day of the first state of

If you no longer want to receive Bill Tracker Alerts, simply log into your So CalGas My Account or call 1-800-427-2200.

8009 Sauthern California Gas Company, All rights reserved, NS4096-193

Adv_\$4Nov2013





Bill Tracker Alerts



Save more this winter

For account number: *****09991

We're committed to helping you save.

You are now eligible to receive complimentary Bill Tracker Alerts. These alerts allow you to better understand your natural gas usage, empowering you to save money and gas. By monitoring your gas costs, you can take steps to lower your bill and avoid any surprises at the end of the billing cycle.

The BIII Tracker Alerts message Includes:

- · BIII-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

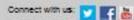
To receive your weekly email alerts, sign up at Bill Tracker Alerts.

Start saving today!

≯ Sign Up!

Bill Tracker Alerts are also available via text message. Log in to My Account and go to the Wanage My Account tab to change your preferences.

ICon_P6ANov2013



socalgas.com | Ways to Save | Pay Bill Online | Rebate Programs





Bill Tracker Alerts



Save more this winter

For account number: *****09991

We're committed to helping you save.

Conserve more with Bill Tracker Alerts

With Bill Tracker Alerts, you're on your way to tracking down savings! Your weekly alerts keep you up to date on your natural gas usage and help prevent any surprises on your monthly bill. To discover even more ways to conserve, visit our online <u>Buvers Guide</u>.

My Account Ways to Save

To find additional online savings tools, visit My Account, where you can:

- . Set savings goals and get tips on how to achieve them
- · Create a personalized energy profile
- . View your daily or hourly gas usage
- . Analyze differences between monthly bills to understand your gas usage

Start saving more today! Log In to My Account and click on Ways to Save.

> Log In

Bill Tracker Alerts are also available via text message. Log in to <u>My Account</u> and go to the "Manage My Account" tab to change your preferences. If you no longer want to receive Bill Tracker Alerts, simply log into your SoCal/Gas My Account or call 1-800-427-2200.

ICon_S6ANov2013





Bill Tracker Alerts



Save more this winter

For account number: *****09991

We're committed to helping your business save.

Conserve more with Bill Tracker Alerts

With Bill Tracker Alerts, your business is on its way to tracking down savings! Your weekly alerts keep you up to date on your natural gas usage and help prevent any surprises on your monthly bill. To discover even more ways to conserve, visit our online <u>Buvers Guide</u>.

My Account Ways to Save

find additional online savings tools, visit Wy Account, where you can:

- at savings goals and get tips on how to achieve them
- Create a personalized energy profile
- . View your daily or hourly gas usage
- Analyze differences between monthly bills to understand your business' gas usage

Start saving more today! Log in to My Account and click on Ways to Save.

) Log in

Bill Tracker Alerts are also available via text message. Log in to <u>the Account</u> and go to the "Manage My Account" tab to change your preferences. If you no longer want to receive Bill Tracker Alerts, simply log into your SoCalGas My Account or call 1-800-427-2200.

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Appendix R

2013/14 Conservation Outreach Campaign Collateral Materials

December letters, inserts, envelopes & emails





WINTER SAVINGS CHECKLIST

Start saving on your gas bill today!

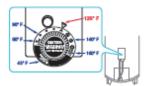
Here are some simple, no-cost and low-cost steps you can take to lower your natural gas usage and reduce your bill without sacrificing your comfort:

- Take the guesswork out of your monthly bill by signing up for weekly Bill Tracker Alerts at bill tracker.socalgas.com. You will need your Southern California Gas Company (SoCalGas*) account number.
- Set your thermostat to 68°F when you're home and lower it to 58°F when you're away. Consider adding an extra blanket to the bed to keep comfortable while sleeping at the lower temperature.

SoCalGas Bill Tracker Update, Bill-to-Date: \$25. Projected Next Bill: \$49. Last Year Same Month Bill: \$60. Days left in bill cycle: 17. socalcas.com

Text Alert Sample

- Check your heating and cooling system filters every month. Clean filters can significantly improve the energy efficiency of your system.
- Keep heating vents clear. Vents blocked by rugs and furniture prevent heated air from circulating efficiently.
- Set your water heater's temperature to 120°F.
 You'll want to check the owner's manual for safety instructions before changing any settings.



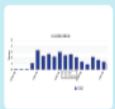
SoCalGas Customer Service

1-800-427-2200 socalgas.com



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My Account Ways to Save tools available on socalgas.com



Now you can monitor and manage your business' natural gas consumption by the day or hour, which will help you see how much energy you are using and when you're using it. Plus, you'll be able to access this information online 24/7.

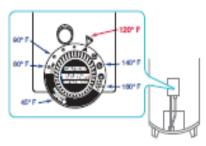


See what equipment in your business makes up the majority of your natural gas usage. Complete the "Energy Profile" and receive even more detailed information about your usage.



See how your business' usage companies to other businesses in your industry of similar size and location and the most energy-efficient businesses in your are a.

- Test, clean and adjust your equipment by a qualified, licensed technician.
- Perform routine maintenance recommended by the manufacturer, according to the owner's manual. This includes replacing dirty air filters and cleaning intake screens, condenser coils, supply registers and return grills.
- Keep heating vents clear. Vents blocked by rugs and furniture preventheated air from circulating of ficiently.
- Identify and repair leaky or disconnected ducts.
- Caulk cracks around windows, doors and other openings.
- Adjust programmable thermostats to turn heating on 30 minutes before employees/ customers arrive and off 30 to 60 minutes before they leave. Set thermostats no higher than 689F during occupied periods in winter.
- Close curtains, shades and blinds at night and during unoccupied periods to help your building retain heat. Keep them open on sunny days.
- Set your water heater's temperature to 120°F.
 You'll want to check the owner's manual for safety instructions before changing any settings.



• Wrap water heater and pipes. Unless you have a newer water heater that aiready has built in insulation, covering your water heater tank with an insulated "jacket" (\$17-\$20) will keep costs down, especially if your water heater is in an unheated space, like a warehouse or shop.





Manage your gas bill with Bill Tracker Alerts

Account number: """%% ACCOUNT_NUMBER%%

Take charge

Stay on top of your bill with Bill Tracker Alerts from Southern California Gas Company. Weekly alerts give you insight into your:

- BIII-to-Date
- · Projected next bill
- . Last month's bill
- . Last year, same month's bill
- . Number of days remaining in the current billing cycle
- And more!

You choose

Bill Tracker Alerts are available as text messages or emails. Choose what works for you.

Start today

To sign up for Bill Tracker Alerts, log in to My Account and click on 'Manage My Account.'



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socalgas.com | Ways to Save | Pay Bill Online | Rebate Programs



Bill Tracker Alerts





Manage your gas bill with Bill Tracker Alerts

Account number: ****** %% ACCOUNT_NUMBER%%

Take charge

Stay on top of your bill with Bill Tracker Alerts from Southern California Gas Company. Weekly alerts give you insight into your:

- + Bill-to-Date
- · Projected next bill
- Last month's bill
- . Last year, same month's bill
- . Number of days remaining in the current billing cycle
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You choose

Bill Tracker Alerts are available as text messages or emails. Choose what works for you.

Start today

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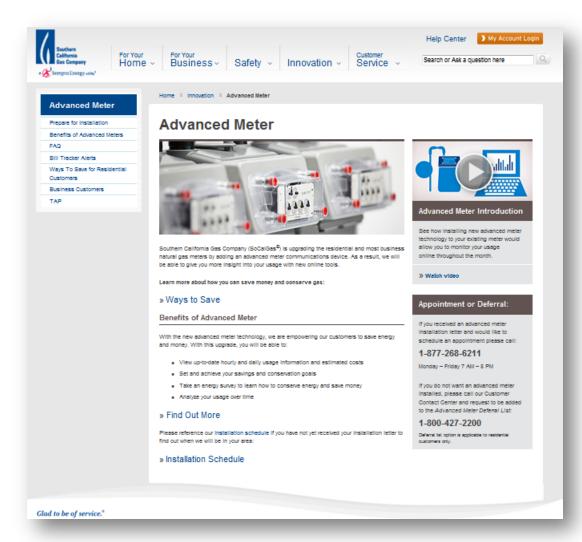
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socializationm | Ways to Save | Pay Bill Online | Rebate Programs

Appendix S socalgas.com Advanced Meter Online Information Pages





Appendix T

billtracker.socalgas.com Enrollment Microsite

Bill Tracker Alerts Enrollment Center



Bill Tracker Alerts

Welcome! Southern California Gas Company (SoCalGas®) Bill Tracker Alerts help you monitor your natural gas usage throughout the month. You can receive weekly Bill Tracker Alerts via email and/or text message.

Step 1 Step 2 **Provide Information Requested** To get started, please enter the Personal Code you received, or your SoCalGas bill account number and your ZIP Code. *Required Personal Code: XXX-XXX How do I find this? OR XXX-XXX-XXXX-X SoCalGas Account #: How do I find this? Mailing Address ZIP Code*: XXXXX Next » Southern California Gas Company is a subsidiary of Sempra Energy®. © 1998-2013 Southern California Gas Company. SoCalGas® is a registered trademark of Southern California Gas Company. The trademarks used herein are the property of their respective owners. All rights reserved.

If you're having difficulties enrolling in Bill Tracker Alerts, please email us at advancedmeter@socalgas.com.





Bill Tracker Alerts Notification Settings

Welcome, ! Click "Enroll" to finish the process and you will be on your way to saving money.

Step 1 Step 2

SoCalGas Account #: XXX-XXX-1111-1

Not you? Click here.

Notifications

You can receive weekly Bill Tracker Alerts by using your SoCalGas My Account email address, and/or by providing an additional email address and/or mobile phone number below.

Email Notifications

☑ Use my existing My Account email address t***@info.com



And/Or

Text Message Notifications

Enter your mobile phone number below to receive weekly Bill Tracker Alerts text messages.

Send alerts to this mobile number (numeric input only)

Mobile number

Re-enter mobile number

How did you hear about Bill Tracker Alerts?



Terms and Conditions

I wish to receive text messages from or on behalf of SoCalGas and its affiliates for the purpose(s) checked above. I acknowledge and agree that I can opt out of future text messages at any time by changing my preferences in this preference center or

By clicking the checkbox, you acknowledge that you have fully reviewed and agree to the terms of service for text alerts and the My Account terms and conditions. The My Account terms and conditions apply generally to your use of the My Account features (including the Ways to Save tools), and not only to Bill Tracker Alerts.

Enroll »





Bill Tracker Alerts Notification Settings

Welcome, ! Click "Enroll" to finish the process and you will be on your way to saving money.

Step 1 Step 2 SoCalGas Account #: XXX-XXX-1113-3 Not you? Click here. **Notifications** You can receive weekly Bill Tracker Alerts by using your SoCalGas My Account email address, and/or by providing an additional email address and/or mobile phone number below. **Email Notifications** Send alerts to this email address Enter email address Re-enter email address Re-enter email address And/Or Text Message Notifications Enter your mobile phone number below to receive weekly Bill Tracker Alerts text messages. Send alerts to this mobile number (numeric input only) Mobile number Re-enter mobile number Re-enter mobile number How did you hear about Bill Tracker Alerts? Terms and Conditions I wish to receive text messages from or on behalf of SoCalGas and its affiliates for the purpose(s) checked above. I acknowledge and agree that I can opt out of future text messages at any time by changing my preferences in this preference center or By clicking the checkbox, you acknowledge that you have fully reviewed and agree to the terms of service for text alerts and the My Account terms and conditions. The My Account terms and conditions apply generally to your use of the My Account features (including the Ways to Save tools), and not only to Bill Tracker Alerts. Enroll »





Congratulations!

You have successfully enrolled in Bill Tracker Alerts and are on your way to saving money and tracking your natural gas usage.

To get started, log in to My Account to see your personalized daily and hourly usage reports under the Ways to Save tab, plus tips on how to reduce your monthly bill.

Log In »





Congratulations!

You have successfully enrolled in Bill Tracker Alerts and are on your way to saving money and tracking your natural gas usage.

You will begin receiving your weekly Bill Tracker Alerts a short time after your Advanced Meter is installed. <u>Learn More</u> about the installation schedule in your area.

Not registered for My Account yet?

Register for My Account to update your alert notification settings, see your personalized daily and hourly usage reports under the Ways to Save tab, plus tips on how to reduce your monthly bill.

Register »

Appendix U IKahan Media



MARKET: Los Angeles, CA

VENUE NETWORK: Convenience Store MEDIA-TYPE: One-Sheet- English CAMPAIGN TIMING: 11/18/13 – 02/10/14





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Powered by Aspenic Indoor Media



MARKET: Los Angeles, CA VENUE NETWORK: Supermarket MEDIA-TYPE: POP Panel - English CAMPAIGN TIMING: 11/18/13 – 02/10/14







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Powered by Asperic Indoor Media



MARKET: Los Angeles, CA VENUE NETWORK: Supermarket MEDIA-TYPE: Cart Corral - English CAMPAIGN TIMING: 11/18/13 – 02/10/14







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