

**SOUTHERN CALIFORNIA GAS COMPANY
ADVANCED METER
SEMIANNUAL REPORT**

February 28, 2018

Table of Contents

Introduction	3
Since the last Conservation Campaign was completed in 2016-2017 and installation of SoCalGas' Advanced Meter project is substantially complete, the attached Report represents the last to be submitted to the Commission pursuant to D.10-04-027.....	3
Chapter 1 - Project Overview and Summary	3
Chapter 2 - Module Installation and Network Construction Status	5
2.A Module Installation Status.....	5
2.B Communication Network Construction Status	6
Chapter 3 - System Performance	8
3.A Network Performance	9
3.B Billing Data Performance	10
3.C Service Delivery Enhancements resulting from Enhanced Data Analytics	11
3.D Extending the Use of the Advanced Meter Network	12
Chapter 4 - Financial Status	13
Chapter 5 - Meter Reading Work Force Impacts	14
Chapter 6 – Community Education and Outreach	16
Chapter 7 - Customer Awareness and Satisfaction.....	16
Chapter 8 – Elevated Customer Inquiries and Deferral/Opt-Out Program Enrollments.....	17

Southern California Gas Company Advanced Meter Semiannual Report

Introduction

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

“Southern California Gas Company shall establish a system to track and attribute program costs and projected savings from conservation. Based on this tracking system, Southern California Gas Company shall submit a report to the Director of the Commission’s Energy Division semiannually, 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 semiannual 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.”

Since the last Conservation Campaign was completed in 2016-2017 and installation of SoCalGas’ Advanced Meter project is nearly complete, the attached Report represents the last to be submitted to the Commission pursuant to D.10-04-027.

Chapter 1 - Project Overview and Summary

In addition to the specific requirements identified in D.10-04-027, this Report provides overall status of SoCalGas’ Advanced Meter project through December 31, 2017 and builds upon previous Reports by highlighting project changes and activities that have taken place since June 30, 2017. Previous Report filings may be accessed on SoCalGas’ website.¹

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

The Advanced Meter infrastructure consists of two primary components – a meter transmission unit (“MTU” or “module”) attached to SoCalGas meters, and a communications network consisting of data collection units (“DCU”) installed across the SoCalGas service territory. Data from the modules is communicated to the DCUs and then transmitted to SoCalGas’ back-office systems. Operational highlights as of December 31, 2017 include:

- Over 5.9 million meter modules installed representing 99% of the total meters to be upgraded.
- 4,326 data collector units (DCUs) installed and functioning On-Air representing 95 percent of the estimated 4,535 DCUs planned.
- Over 99 percent of the installed modules have been deemed ‘Billing Ready’ and are now used or ready for billing customers.

SoCalGas completed four targeted “Test and Learn” heating season conservation campaigns leveraging Advanced Meter-enabled usage data over the course of the project.

The goals of these consecutive conservation campaigns were to demonstrate how to best meet the one percent energy savings goal² associated with the Advanced Meter rollout and to track the resulting conservation savings. In accordance with Ordering Paragraph 5, each of SoCalGas’ successive heating season conservation campaigns incorporated the lessons learned and key findings from the prior campaigns.

With each successive campaign, residential conservation treatments produced statistically significant gas savings.³ Of note for the final campaign was that one treatment – a “Seasonal Energy Update” energy report based on advanced meter analytics developed by SoCalGas – achieved the highest savings rate for all four years’ campaigns of 3.43 percent⁴.

Continued savings effects were also realized for treatments initially tested during earlier campaigns. The persistence and sustainability of these conservation results demonstrates the durability of conservation actions as outlined in Ordering Paragraph 5 above.

The Advanced Meter project has to date met its schedule, budget and major project milestones; however, continued permitting and construction challenges have impeded completion of the network in accordance with D.10-04-027. As discussed in prior Reports, SoCalGas has implemented a proactive public outreach strategy to educate and inform impacted residents, businesses, and municipalities of network installation to help mitigate potential concerns. Despite extensive engagement, select municipalities continue to require SoCalGas to secure discretionary permits. Because discretionary permitting processes are

² This energy savings goal specifically refers to one percent of total *residential* gas usage.

³ Four out of eleven treatments tested during the 2013-2014 heating season campaign generated average savings of about 1.3 percent. Four out of seven residential treatments tested during the 2014-2015 heating season campaign generated average savings of about one percent. Fourteen out of fourteen residential treatments tested during the 2015-2016 campaign generated average savings of over 1.4 percent. Eleven out of eleven residential treatments tested during the 2016-2017 campaign generated average savings of over 1.7 percent.

⁴ Comprehensive results available in August 2017 Advanced Meter Semiannual Report

contrary to SoCalGas' understanding of the CPUCs overarching authority over utility facilities, and because acquiescing to discretionary permitting processes could result in DCUs being rejected or removed by the jurisdiction at any time, SoCalGas has refrained from completing applications in these jurisdictions.

Although there has been progress in select areas, by continuing to assert their position these municipalities are considerably delaying or preventing the network installation timeline for over 90 DCUs or two percent of the 4,535 planned DCUs. The inability to deploy the necessary infrastructure in these jurisdictions will continue to result in SoCalGas having to maintain separate meter reading, communications, data processing and billing systems functions for longer than was anticipated in D.10-04-027 and may negatively impact expected customer operational and conservation benefits pursuant to Sections 3.C and 3.D of this report.

As previously communicated to the Commission, SoCalGas discovered a small percentage of Advanced Meter modules producing inaccurate digital reads of gas usage. The problem was limited to approximately 0.15 percent of the installed population of MTUs. These devices are issuing multiple false alarms. SoCalGas has implemented a plan to replace all defective MTUs, address any authorized billing corrections, and communicate with regulators, customers and stakeholders. During the course of remediation a subsequent issue was identified with MTUs in curb meter vaults. SoCalGas is working with the manufacturer to resolve the issue; until then, these meters will be manually read to minimize any billing impacts to customers. The total financial impact of the issue is unknown at this time, but SoCalGas is seeking parts and labor cost recovery from the vendor.

In order to continue to address these remaining implementation aspects of the Advanced Meter project, SoCalGas filed Advice Letters (AL) 5134 and 5215 in 2017. AL 5134 extended the Advanced Meter Infrastructure Balancing Account (AMIBA) mechanism for at least one year beyond the seven-year deployment period (2010-2017) through 2018, or until the associated costs and benefits are incorporated in a subsequent General Rate Case (GRC) and established separate subaccounts in the AMIBA to record costs associated with the deployment and post-deployment periods of the AMI project as well as for on-going meter costs in areas where the AMI network is not constructed. AL 5215 revised the AMIBA to reflect that the Deployment Phase Cost Subaccount of the AMIBA will also record costs associated with the installation of Advanced Meter Infrastructure (AMI) communication modules for large commercial and industrial customers and distribution network pressure monitors. These amendments to the AMIBA will ensure that any remaining Advanced Meter project costs are treated in accordance with D.10-04-027.

Chapter 2 - Module Installation and Network Construction Status

2.A Module Installation Status

SoCalGas has installed 5,926,881 modules through the end of December 2017, with its first installation dating back to October 2012. Table 1 displays the installations performed by

Advanced Meter Mass Install personnel and identifies installations completed by other SoCalGas personnel.

Table 1
Module Installations by Personnel Group

	Total
Advanced Meter Installations	5,458,310
Other SoCalGas Personnel	468,571
Total Installations	5,926,881

About 92 percent of the modules are being installed by Advanced Meter personnel, with approximately eight percent being installed by other SoCalGas personnel. Other SoCalGas personnel are involved when the installation requires extensive modifications to the existing meter configuration, such as installing the modules on complex industrial and commercial meters; replacing existing curb meters with new curb meters containing a pre-installed module; and when meters are changed through the normal course of business.

Installation teams generally performed work out of warehouses leased specifically for the Advanced Meter project. As part of the planned project shut down, operations at remaining warehouses have completed as of June 30, 2017.

2.B Communication Network Construction Status

The communications network of the Advanced Meter system is designed to ensure that SoCalGas customers receive their hourly consumption data. It consists of DCUs deployed across the SoCalGas service territory that receive the meter reading data from the modules installed on each meter.

SoCalGas continues to refine the network to improve system performance and based on the latest propagation study provided by Aclara, the technology vendor, the project plans to install 4,535 DCUs. Table 3 displays the status of the SoCalGas network as of December 31, 2017.

Table 3
Status of DCUs through December 31, 2017

DCU Status	Number of DCUs	Percent of DCUs
Installed	4,326	95.4%
<i>On – Air</i>	4,326	95.4%
Negotiating with Local Governments/Other Third Parties ⁵	103	2.3%
Not Started	106	2.3%
Total Planned Installations	4,535	100%

Ninety-five percent of the network has been constructed or is ready to construct. By December 31, 2017, 4,326 DCUs have been installed and commissioned on-air and are receiving reads from installed MTUs. SoCalGas continues to negotiate with local governments and third parties to install the remaining DCUs in the network. Table 4 displays the locations of installed DCUs to date.

Table 4
Location of Installed DCUs

DCU Location	Installed DCUs
SoCalGas Owned Poles in	
SoCalGas Facilities	65
Public Right of Way	2,636
Caltrans Right of Way	83
Private Easement	38
Total	2,822
Attached to Third Party Assets	
Los Angeles Bureau of Street Lighting	655
SCE Street Lights	378
PG&E Street Lights	28
SDG&E Street Lights	43
Other Cities Street Lights	315
Other Public/Private Assets	85
Total	1,504
Total DCUs Installed	4,326

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

To date SoCalGas has installed DCUs on a SoCalGas owned pole in the public right of way under its franchise 65 percent of the time. The second most common method has been to install DCUs on local government-owned street lights.

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

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

Of the 12 counties and 211 cities in the SoCalGas service territory, SoCalGas has finished installing DCUs in seven counties and in 178 cities/communities.⁶ SoCalGas is in active negotiations with several cities and counties to continue installing the remaining DCUs. A limited number of cities and counties have been reopened due to network optimization. To ensure area coverage, the project has reassessed cities and counties that have been completed with the original design and added DCUs where necessary.

With 4,326 DCUs constructed, SoCalGas has received 194 complaints and 94 inquiries, including concerns about the DCUs aesthetics, glare, or location. In each case, SoCalGas contacted the complaining party to resolve the complaint. As a result of customer concerns, SoCalGas has relocated 89 DCUs. Otherwise, the concerns have been resolved without relocating the DCU.

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

When SoCalGas installs a DCU on its own pole, the DCU is solar-powered. When installed on a street light, the DCU is most often powered by electricity from the street light. Given the preponderance of new poles, most of the DCUs are solar powered. Table 5 shows the breakdown between solar and A/C powered DCUs.

Table 5
Power Source for DCUs

Installed DCUs	Solar Powered	AC Powered
4,326	2,921	1,405

Chapter 3 - System Performance

Two key indicators of the overall Advanced Meter system performance are the performance of the network with respect to the delivery of hourly data for billing and online presentation purposes, and the resulting billing data-related performance. Additional improvements to SoCalGas' service delivery are also being realized as a result of meter read automation and

enhanced data analytics capabilities enabled by the Advanced Meter system. Extended uses of the Advanced Meter system through a network sharing capability also have the potential to provide additional operational and conservation benefits to water agencies and their customers within SoCalGas' service territory.

3.A Network Performance

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

Table 6 displays the breakdown of modules that have successfully communicated with SoCalGas' back office systems.

**Table 6
Module Communication Status**

Module Communication Status	Modules Installed	Percent Installed With Network
Total Modules Installed	5,926,881	-
Modules installed but not yet communicating with HE systems ⁷	16,539	-
Delivering 100 Percent of Expected Reads	5,619,087	95.1%
Missing 1-12 Reads	188,722	3.2%
Missing More Than 12 Reads	95,151	1.6%
Missing All Reads	7,382	0.1%

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

As illustrated in Table 6, approximately 95 percent of the installed modules are successfully communicating all of a customer's hourly data on a monthly basis. About three percent of the modules are missing 1-12 reads, which means that they have had only one or two unsuccessful communications per month. That is, one or two six-hour periods have not been successfully communicated to the SoCalGas back office systems. SoCalGas does not consider a module performing at this level to be problematic for billing as enough hourly data is being received for these purposes.

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

3.B Billing Data Performance

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

Table 7 displays the progression of modules from installation to actual use for billing.

**Table 7
Advanced Meters Utilized for Billing**

Modules Installed as of December 31, 2017	5,926,881
Modules in 'Billing Ready' Status	5,894,443
Billing Data Provided by Advanced Meter	5,885,012
Billing Data Not Provided by Advanced Meter	5,894
Percent Provided by Advanced Meter – Actual Read	99.84%
Percent Provided by Advanced Meter – Estimated Read	0.06%
Percent Not Provided by Advanced Meter	0.1%

Approximately 99 percent of the installed modules have been deemed 'Billing Ready' and are now used or ready for billing customers. Of the remaining one percent, most are still in the process of completing one of the test elements needed to become 'Billing Ready.' Others are located in areas with incomplete DCU coverage, or are located in areas with insufficient module density to support conversion to Advanced Meter billing.

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

For the Billing Ready modules, the system provides a high percentage of actual reads. The system also provided 0.06 percent of reads which were 'estimated reads' based substantially on reads received earlier in the month, rather than on a particular designated day. Only about 0.1 percent of the reads could not be provided by the Advanced Meter system.

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

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

organization has seen a reduction of over 3.3 million orders since the implementation of the automated reads.

3.C Service Delivery Enhancements resulting from Enhanced Data Analytics

As the Commission articulated in the AMI decision,⁹ the Advanced Meter system “provides [a] system-wide technology platform with the ability to expand operating benefits as new applications emerge.” In areas where the communications network is fully deployed, SoCalGas is leveraging Advanced Meter-enabled data analytics and technology by integrating data to develop algorithms that support the continued safe and reliable delivery of natural gas to its customers. These enhanced data analytics enable identification of unusual gas consumption patterns at customer facilities.

Though in the exploratory phase, this new and more granular awareness of energy data utilization is uncovering new opportunities and benefits potential. Leveraging the Advanced Meter network could result in faster identification of abnormally high gas usage, which enables SoCalGas to identify, investigate, and respond to potential safety situations quicker. By discovering abnormally high gas usage and notifying customers, SoCalGas can reduce methane emissions at customer facilities saving energy and improving air quality while also reducing the financial burden on customers from higher usage.

The Advanced Meter team assesses unusual consumption patterns on closed accounts using a Per Day Average and in some cases will look at the hourly reads to conduct further research. During the exploratory phase of SoCalGas’ enhanced data analytics, the following results have been achieved. Table 8 summarizes the results of the 8,335 exploratory service orders fielded through December 31, 2017.

⁹ D. 10-04-027, page 40.

Table 8
Gas consumption data analytics results through December 31, 2017

Findings from completed field visits (project to date)	Number of field visits	Percent
Total field visits generated by consumption analytics awareness	8,335	
Gas services closed by SoCalGas field technician due to excessive registration, awaiting resolution. Resolution takes place at the time of the follow-up field visit to reinstate gas service.	3,447	41.36%
Gas leak found by SoCalGas field technician	2,193	26.31%
Gas or hot water leaks corrected by the customer as a result of SoCalGas field visit	1,084	13.01%
Hot water leaks where the hot water heater was in continuous demand	995	11.94%
Abnormal gas usage resulting from an appliance in use for an extended period of time (e.g., appliances unintentionally left on).	616	7.39%

Leveraging Advanced Meter consumption analytics is a component of a more comprehensive set of processes and inspections aimed at ensuring public safety and SoCalGas expects that, as it continues to build out enhanced analytics capabilities enabled by the Advanced Meter system, further customer service and safety benefits will accrue to its customers. More rapid detection and resolution of gas and hot water leaks provides enhanced safety for customers and their communities, as well as provides energy and financial savings, reduced greenhouse gas emissions, and conservation of our scarce water supplies.

3.D Extending the Use of the Advanced Meter Network

As articulated in our AMI Application, SoCalGas recognizes the State’s priority and urgency in encouraging and enabling water conservation and as such included the requirement for an AMI technology capable of reading water meters. This network sharing capability has the potential to provide significant operational and conservation benefits to water agencies and their customers within SoCalGas’ service territory.

In order to operationally evaluate the feasibility of the “Shared Network” concept, SoCalGas established pilots to be conducted by Aclara and SoCalGas with a limited number of water utilities. Additionally, as part of the SoCalGas Water Energy Nexus (WEN) AMI Pilots which were approved by the CPUC on June 9, 2016 with D.16-06-010, SoCalGas partnered with a 3rd party analytics vendor (Valor Water Analytics) and two separate Commission-regulated water utilities (San Gabriel Valley Water Company, California American Water).

In addition to the Advanced Meter network being shared by external water utilities, other groups within SoCalGas are leveraging the network. As part of a pilot project by the Pipeline Safety Enhancement Plan (PSEP) group, data from a sensor device to detect, measure and monitor methane in the area near a transmission pipeline is being transmitted over the Advanced Meter network. These methane sensor devices, installed in 2016, continue to successfully communicate over the Advanced Meter network and provide SoCalGas with remote alarm registration and processing when the methane-in-air concentration, as measured by the sensors, exceeds limits established for our testing period.

Chapter 4 - Financial Status

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

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

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

The CPUC approved budget of \$1,050 million for the SoCalGas Advanced Meter project was augmented by re-directing \$13.5 million of previously approved General Rate Case funding for a Remote Automated Meter Reading (“RAMR”) project. SoCalGas halted the implementation of its RAMR project, a drive-by meter reading system, when its Advanced Metering Infrastructure (“AMI”) application was submitted, and in the AMI application requested that this funding be re-directed to the Advanced Meter project. In D.10-04-027, the CPUC approved this request.¹⁰ Due to the timing of the AMI application and Decision, the project deployment period overlapped with SoCalGas’ TY 2012 and TY 2016 General Rate Case (GRC) schedules. Since AMI deployment costs and benefits are recorded in the AMIBA, AMI impacts could not be integrated into GRC forecasts until TY 2019. As a result, SoCalGas requested authorization in the TY 2016 to establish a 2018 “bridge-year” period – the year between the end of deployment in 2017 and the TY 2019 GRC. Subsequently, on May 5th, 2017, SoCalGas filed Advice Letter 5134 to request the 2018 bridge-year period, referred to in the Advice Letter as the “post-deployment phase cost sub-account.”¹¹ The total budget for the SoCalGas Advanced Meter project is \$1,064 million, which included a contingency fund of \$68.7 million.

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

¹¹ AL 5134 with sub-account details is available at the following site:
<https://www.socalgas.com/regulatory/tariffs/tm2/pdf/5134.pdf>

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

Table 9
Financial Results (in \$Thousands)
Recorded 2010 through December 2017

	2010	2011	2012	2013	2014	2015	2016	2017	Project to Date
Project Management Office	2,719	6,477	6,634	4,945	4,027	3,415	3,006	2,854	34,077
Meters, Modules & Installation	120	3,718	28,410	115,516	183,117	170,078	58,829	7,833	567,620
Network	877	3,743	14,429	23,805	18,796	15,306	14,572	13,461	104,989
Information Technology	6,011	16,873	21,931	16,015	10,469	11,109	6,248	5,775	94,430
Customer Outreach	324	1,026	2,088	5,502	5,190	4,786	3,999	2,143	25,057
Employee Awareness	65	3,078	3,732	2,088	1,046	1,087	752	383	12,231
Support Organizations¹²	-	-	707	3,500	4,517	4,684	11,512	2,145	27,065
Overheads & AFUDC¹³	2,222	9,471	21,291	32,577	38,311	32,268	29,433	14,257	179,830
Total	12,338	44,386	99,223	203,947	265,472	242,732	128,350	48,851	1,045,300

Table 9 displays the Advanced Meter spending through December 31, 2017, by the major project activities. The purchase and installation of meters and modules continue to be the primary source of spending at approximately \$570 million project to date. The next large areas of spend are in the construction of the communication network and information systems with approximately \$104 and \$94 million in spend, respectively. Although the project has fully allocated the authorized contingency SoCalGas believes the project will be delivered within the approved budget.

Chapter 5 - Meter Reading Work Force Impacts

The Meter Reading work force is the most significantly impacted by the Advanced Meter project as Meter Reading positions will all but be eliminated by the project.¹⁴ Both SoCalGas and the CPUC are concerned about these impacts. The Commission specifically addressed this concern. Ordering Paragraph 1 of the D.10-04-027 states:

¹² Support organizations are comprised of SoCalGas departments outside of Advanced Meter that are funded by the project for project related work or for work identified in business case. This includes field work related to advancing our larger meters (primarily commercial and industrial).

¹³ Updated to exclude the Pension & Benefits refundable portion that is balanced separately from the AMI project.

¹⁴ Some personnel may continue to manually read meters in support of the CPUC authorized Opt-Out program.

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

In response to this direction, SoCalGas set aside funding in its Enhanced Educational Assistance Fund specifically to support the Meter Reading personnel in place in April 2010. Through the project deployment period, meter readers have been reimbursed over \$100,000 through this fund.

While meter readers have been active in seeking employment opportunities within SoCalGas the fund had not been heavily utilized, so as part of continuing efforts to support our employees’ transition to potential job opportunities, SoCalGas expanded the retention and retraining efforts to include skills orientation workshops. These workshops were designed to familiarize employees with the mechanical and technical skills associated with piping, tools usage, natural gas appliance and distribution system construction work. The orientation workshops offered transitional skills that could be applied toward job opportunities within and outside of SoCalGas. The target employee group was expanded to include all current meter reading employees as well as AMI Field Representatives. All of these employees will be affected when Advanced Meter implementation is completed in 2017. SoCalGas allocated \$42,400 from the authorized funding from 4th Quarter 2014 through 2017 to provide these workshops for employees.

Table 10 displays the current status of those Meter Reading personnel who were employed in April 2010, when the project was approved by the CPUC.

Table 10
Status of Meter Reading Personnel Employed in April 2010

Meter Reading Personnel	Work Force in April 2010	Remain in Meter Reading June 30, 2017	Left Company	Transition Within Company
Full-time	166	2	24	749
Part-time	818	17	192	
Management	46	7	14	25
Total	1,030	26	230	774
Percent of Work Force	100%	2.52%	22.33%	75.15%

As Table 10 shows, 774 employees (over 75 percent of the Meter Reading personnel from April 2010) have transitioned to another position within SoCalGas. Twenty-two percent of those

employed in 2010 have left SoCalGas and 26 employees (less than 3 percent) remain in the Meter Reading organization.

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

Chapter 6 – Community Education and Outreach

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

Chapter 7 - Customer Awareness and Satisfaction

From 2010 through 2016, SoCalGas monitored the impact of its outreach activities in the areas of customer awareness and customer satisfaction. SoCalGas utilized 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 purposes of monitoring overall customer awareness and perceptions, SoCalGas used the Customer Insight Study (“CIS”)¹⁵ which is administered by Davis Research. CIS is SoCalGas' public opinion tracking study. Starting in the fourth quarter of 2010, SoCalGas added three Advanced Meter related questions to this tracking survey. The questions were then updated slightly in the fourth quarter of 2012, commensurate with the initial deployment of Advanced Meters. These questions were fielded through the fourth quarter of 2016, and then discontinued going forward given that 96 percent of the installations were completed by the end of 2016.

A consistent finding of the quarterly CIS results was that awareness levels amongst residential and business customers increased gradually over the course of the project rollout. The general upward trend seems to reflect the increased volume of customer communications about the project as well as an increase in installations.¹⁶

¹⁵ Formerly called iTracker Customer Perception Study.

¹⁶ Please refer to prior years' Reports for further details regarding Customer Awareness and Satisfaction research conducted over the course of the Advanced Meter project.

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

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

Some customer inquiries were not routinely resolved and were escalated to Advanced Meter Customer Experience staff. There have been about 9,000 inquiries since the project’s inception. The number of escalated customer inquiries is very low, considering the volume of Advanced Meter communications that have been distributed to SoCalGas customers. The most common cause of the escalated inquiries is requests to defer/opt-out of the installation of the Advanced Meter communications module.

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

Table 11 displays a breakdown of enrollment status for the Advanced Meter Opt-Out Program as of December 31, 2017.

Table 11
Advanced Meter Opt-Out Program Enrollment

Inquiry Type	Number Received	Explanation
Active customer-requested Opt-Out Program enrollments ¹⁷	7,574	The number of customers actively enrolled and being billed for Opt-Out Program fees and charges. ¹⁸
Active customers defaulted in to the Opt-Out Program	17,570	The number of customers that have been default enrolled ¹⁹ and are being billed for Opt-Out Program fees and charges.
Total Active Opt-Out Program enrollments	25,144 (0.42%)	
Customer Opt-Out Program requests to “opt back in” to Advanced Meter installation	56,677	The number of customers that requested to be removed from the Opt-Out Program (includes customers in both an “Active” and “Pending Enrollment” Opt-Out Program status).

In March 2014, SoCalGas’ Opt-Out Program became effective and the project team initiated efforts to inform employees of the Opt-Out Program and revised any impacted company communication materials. The interim opt-out fees approved by the Commission were consistent with those previously adopted for the other California Investor-Owned Utilities (“IOUs”).²⁰ SoCalGas’ Advanced Meter Opt-Out Program interim fees for residential customers were as follows:

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

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

¹⁷ “Active” includes only those customers who are enrolled in the Opt-Out Program and are currently being billed associated Opt-Out Program fees. Many customers in a “Pending” status, once presented with final communications regarding Opt-Out Program fees, elect to terminate their prior request for enrollment in the Opt-Out Program. Similarly, customers about to be default-enrolled due to repeated installation/access attempts sometimes contact SoCalGas to schedule an installation prior to being actively enrolled.

¹⁸ SoCalGas implemented its Advanced Meter Opt-Out Program effective March 19, 2014, pursuant to D.14-02-019. These customers either requested to defer from an Advanced Meter module installation prior to March 19, 2014, or subsequent to March 19, 2014, requested to enroll in the Advanced Meter Opt-Out Program.

¹⁹ These customers were defaulted (automatically enrolled) into the Opt-Out Program due to several unsuccessful attempts by SoCalGas to contact the customers to provide access for the installation of the Advanced Meter.

²⁰ D.12-02-014 (PG&E), D.12-04-018 (SCE), and D.12-04-019 (SDG&E).

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

SoCalGas still expects the total percentage of customers who will eventually opt-out to be within the planning assumption of 0.5 percent.