**BEFORE THE PUBLIC UTILITIES COMMISSION**
**OF THE STATE OF CALIFORNIA**

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| Application of Pacific Gas and Electric Company for Authority to Increase Revenue Requirements to Recover the Costs to Deploy an Advanced Metering Infrastructure<br><br>U 39 E | A.05-06-028<br>(Filed June 16, 2005) |

# EIGHTH SEMI-ANNUAL ASSESSMENT REPORT ON THE DEPLOYMENT OF PACIFIC GAS AND ELECTRIC COMPANY'S ADVANCED METERING INFRASTRUCTURE PROGRAM AND FIFTH QUARTERLY REPORT ON THE IMPLEMENTATION PROGRESS OF THE SMARTMETER™ PROGRAM UPGRADE


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Dated: September 1, 2010

**BEFORE THE PUBLIC UTILITIES COMMISSION**
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Pacific Gas and Electric Company (PG&E) submits the attached Eighth Semi-Annual Assessment Report on the deployment of its Advanced Metering Infrastructure (AMI) Program and the Fifth Quarterly Report on the implementation progress of its SmartMeter™ Program Upgrade. The Semi-Annual Report is being filed in accordance with the May 4, 2010 "Assigned Commissioner's Ruling Reopening Proceeding, Requiring That Reports Be Filed in This Proceeding, and Ordering Pacific Gas and Electric Company to Release Prior and Future Reports to the Public," Ordering Paragraph (O.P.) 3. Underlying Decision (D.) 06-07-027, O.P. 16, originally required that a semi-annual report assessing AMI deployment only be provided to the Chief Administrative Law Judge, Energy Division, DRA and all other parties in this proceeding. Application 07-12-009 was subsequently filed by PG&E to recover incremental costs associated with the SmartMeter™ Program Upgrade. O.P. 7 of D.09-03-026 in that proceeding requires that: "PG&E shall provide quarterly reports on the implementation progress of the SmartMeter™ Upgrade to the Commission's Energy Division and any interested parties." PG&E has submitted those reports in the past, but today it combines both the semi-annual and quarterly reports in these two proceedings into a single filing as a result of consultations with the Energy Division that were anticipated by O.P. 7. These reports comply with the requirements of D.06-07-027, O.P 16, D.09-03-026, O.P 7, and the May 4, 2010 Commissioner's Ruling.

Respectfully Submitted,

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Dated: September 1, 2010

Pacific Gas and Electric Company
Advanced Metering Infrastructure Semi-Annual Assessment Report
SmartMeter™ Program Quarterly Report
July 2010

(CPUC Decisions 06-07-027 and 09-03-026)

PG&E

July 31, 2010

# Pacific Gas and Electric Company
# Advanced Metering Infrastructure Semi-Annual Assessment Report
# SmartMeter™ Program Quarterly Report
# July 2010

## I. Executive Summary

### A. Introduction

This is Pacific Gas and Electric Company's (PG&E or the Company) eighth semi-annual assessment report (Report) regarding the deployment of PG&E's Advanced Metering Infrastructure (AMI) Program (now the SmartMeter™[1] Program) and serves as the fifth quarterly report for the SmartMeter™ Program Upgrade. In Decision 06-07-027 (the AMI Decision), the California Public Utilities Commission (CPUC or Commission) approved PG&E's SmartMeter™ Program proposed in Application 05-06-028. In Decision 09-03-026 (the Upgrade Decision), the CPUC approved, with certain modifications, PG&E's Application 07-12-009 (Upgrade Application) to recover incremental costs associated with the SmartMeter™ Program Upgrade.

Ordering Paragraph 4 of the AMI Decision requires PG&E to provide regular summary reports to the Commission's Energy Division and Division of Ratepayer Advocates (DRA) to enable the Commission to monitor the progress of PG&E's SmartMeter™ Program. PG&E files these reports on a monthly basis. Ordering Paragraph 16 of the AMI Decision requires the following: "PG&E shall provide the Chief Administrative Law Judge, Energy Division, DRA and all other parties in this proceeding a semi-annual report assessing AMI deployment as set forth herein, beginning six months after the effective date of this decision."

[1] SmartMeter™ is a trademark of SmartSynch, Inc. and is used by permission.

Ordering Paragraph 7 of the Upgrade Decision requires the following: "PG&E shall provide quarterly reports on the implementation progress of the SmartMeter™ Upgrade to the Commission's Energy Division and any interested parties." After consultation with the Commission's Energy Division, PG&E has prepared this Report to comply with the requirements of both Ordering Paragraph 16 of the AMI Decision and Ordering Paragraph 7 of the Upgrade Decision.

The AMI Decision explains that the semi-annual report is intended to update the Commission in the following areas: advances in AMI technology; a self-assessment of AMI system operating performance based on performance criteria established in consultation with the Energy Division and DRA; updated cost-effectiveness review; and the ability to provide real-time usage data and customer interest in such data.[2] PG&E conferred with representatives of the Energy Division and DRA to discuss the scope of topics to be addressed and the metrics by which AMI is to be assessed and incorporated staff comments and suggestions into this Report.

B. Overview of the SmartMeter™ Program

PG&E's SmartMeter™ Program continues to progress through its objectives, including deployment of endpoint devices and associated network equipment, as well as implementing new information technology (IT) functionality. This section of the Report provides an overview of Program developments and PG&E's progress on individual elements of the Program over the past six months.

1. Advances in AMI Technology

PG&E currently has three field network communication technologies available for use in its SmartMeter™ Program:

[2] D.06-07-027 at pp. 57-58.

1. Radio Frequency (RF) Mesh technology, provided by Silver Spring Networks (SSN) – electric metering;
2. RF technology, provided by Aclara RF (Gas RF) - gas and electric metering; and
3. Power line carrier (PLC) technology, provided by Aclara PLC - electric metering.

PG&E will continue to operate all of these networks until the replacement of all electric endpoints utilizing PLC. PG&E is currently deploying advanced solid-state electric meters operating on the SSN network, which include an integrated connect/ disconnect switch and a Home Area Network (HAN) gateway device.

PG&E continues to evaluate metering and network collector technologies as the industry advances. PG&E continues to identify and approve engineering solutions utilizing specific technologies and products that enable PG&E to deploy SmartMeters™ in difficult-to-reach meter locations such as urban areas and remote locations. These solutions may require one of the network communication technologies noted above, or other technologies not yet available, as conditions dictate.

PG&E continues to participate in industry activities related to advanced metering and communication networks, as well as monitoring announcements and activities that are significant in the industry. These activities allow PG&E to be actively involved with and aware of industry developments.

In the SmartMeter™ Upgrade Decision, PG&E was granted $6.0 million in laboratory and product demonstration costs, with the condition that PG&E can only use those ratepayer-provided funds to the extent that it matches them with funds from other sources[3]. PG&E has identified approximately $430,000 in matching funds (within technology assessment areas) and is actively working to secure the remainder of the matching funds.

[3] D.09-03-026, Conclusion of Law 26, p 191.

During the first half of 2010, PG&E continued a lab-based evaluation of HAN-enabled in-home display devices, which includes interoperability, radio frequency, and standards compliance testing. PG&E completed the lab-based evaluation of a selection of In-Home Displays (IHDs) in June, and starting in July, PG&E will be evaluating a selection of IHDs in 20 PG&E employee homes utilizing a lab-based test network. During this phase of testing, PG&E will identify capabilities and limitations of the deployed devices in presenting various message types as well as to better understand the real-world technical challenges of installing and maintaining a HAN (e.g., signal propagation, interference sources and mitigation techniques). PG&E will also gather feedback from the 20 participants on the effectiveness/usefulness of the devices.

PG&E has expanded its evaluation and testing of enhanced network technologies to support its vision for the Smart Grid of the future. PG&E's vision includes integration of meter data, distribution automation, and automated load control to maximize the distribution system reliability using technology as discussed in Section II of this Report.

2. <u>CPUC Independent Assessment of the SmartMeterTM Program</u>

In March of this year, the CPUC selected the Structure Group to conduct an independent assessment of PG&E's SmartMeter™ program. Working under the supervision of the CPUC, their evaluation in intended to address the following areas:

- Whether PG&E's SmartMeter™ system is measuring and billing electric usage accurately, both now and since meter deployment began
- Independent analysis of the high bill customer complaints
- Analysis of PG&E's SmartMeter™ Program's past and current operational and deployment processes, policies, and procedures

The Structure Group began their formal assessment on April 6, 2010 and is expected to deliver their report by September 2010.

3. Progress in PG&E's AMI Deployment

PG&E continues to deploy solid-state electric meters communicating over the SSN RF Mesh network and gas modules communicating over the Aclara RF network throughout the service territory. The deployment of the SSN network was planned to consist of an initial phase to deploy 1,182 Access Points (APs) at defined locations throughout PG&E's service territory, followed by subsequent phase(s) to deploy additional APs to strengthen the network where required. As of June 30, 2010, 1,186 SSN access points (APs) have been installed throughout the PG&E service territory. Of this number 1,061 make up the initial phase of network deployment, and 125 are supplemental installs to increase read performance of certain areas. Installation efforts continue on the Aclara gas RF network, with a total of 4,273 data collection units (DCUs) installed through June 30, 2010. This number represents approximately 85 percent of an estimated total population of 5,000 DCUs at project completion.

As of June 30, 2010, approximately 6,340,830 meters (approximately 3,239,600 electric and approximately 3,101,230 gas) have been converted to, or replaced with, SmartMeter™ technology, representing approximately 62 percent of the total PG&E set meter population. Of this number, approximately 3,020,000 meters were "activated" and the benefits associated with completed meter reading routes were recorded to the gas and electric SmartMeter™ balancing accounts ($1.9543 per meter per month for electric[4] and $1.0366 per meter per month for gas). Further details of the SmartMeter™ Program's deployment status are detailed in Section III of the Report.

PG&E has continued to expand and enhance customer outreach activities to address customers' concerns about SmartMeter™ technology. These activities include increased customer contacts before, during, and after deployment through not only direct mail but also through mass media, online content, and community outreach events. PG&E has also initiated a Customer Experience Survey, surveying thousands of residential and business customers each quarter.

In addition to the outreach activities, meter testing continues with accuracy tests at the manufacturer factories, random sample testing performed by PG&E at its Fremont Meter Shop, random field testing program for SmartMeters™, and field testing at customer premises. PG&E will field-test any SmartMeter™ device upon customer request. In addition to the above customer outreach and testing activities, PG&E has offered side-by-side testing of customers' SmartMeter™ with a conventional meter. As of June 30, 2010, there have been 515 requests for side by side (dual socket) tests, with 170 of these tests currently in progress.

4. Program Costs and Benefits

SmartMeter™ Program expenditures through June 30, 2010 totaled approximately $1,695 million (77 percent) of the $2,206 million authorized project amount. Initially, $2,028 million of the $2,206 million was allocated to workstream budgets covering field deployment, information technology, operations and marketing, and the program management office (PMO). PG&E actively monitors workstream expenditures against budget and determines additional costs and cost savings likely to occur during the

[4] The $1.7722 per electric meter per month applied through March 2009 was raised to $1.9543 in April 2009 with the partial implementation of the IT functionality for remote connect / disconnect consistent with the Upgrade Decision.

Program period. The Program has authorized workstreams to incur such additional costs, forecasted over the course of the project period, totaling approximately $178 million.

To date, PG&E's SmartMeter™ Steering Committee has recommended that the $178 million risk-based allowance authorized by the Commission be allocated to workstream budgets based on actual and forecasted costs. At this time, PG&E has allocated all of the $2,206 million to project workstreams, and continues to monitor the actual spending against the forecast.

As previously noted, the total number of activated meters on June 30, 2010 was approximately 3,020,000. The related benefit savings credited to the SmartMeter™ Balancing Accounts (SBA - Gas, and SBA - Electric) through this same date totaled $69.3 million. These amounts are consistent with the method for calculating and recording benefits provided in PG&E testimony and in both the AMI and Upgrade Decisions. Further details of the SmartMeter™ Program's cost and benefit status are detailed in Section IV of this report.

5. System Performance Criteria

PG&E continues to provide system performance metrics as in previous semi-annual reports (see table V-2). In the first half of 2010, PG&E enhanced its metrics and reporting around system performance with the addition of a website dedicated to the communication of SmartMeter™ Program Data which can be accessed by the public at the following link:
(http://www.pge.com/myhome/customerservice/meter/smartmeter/programdata/)

PG&E also is working in conjunction with other Investor Owned Utilities (IOUs) to develop a common set of Smart Metering metrics. These enhancements, along with system performance criteria, are defined and discussed in Section V of this report.

6. <u>Customer Interest in Accessing Real-Time Usage and Pricing Information</u>

PG&E launched its SmartRate Program in May 2008 as reported in the July 2008 Semi-Annual Report. Thus far, this year has been cooler than 2009 and PG&E has called three SmartDay events to date: June 29, July 15, and July 16. As of June 30, the SmartRate Program had 24,308 active residential customers. Details of the SmartRate Program are provided in Section VI of this Report.

Additionally, as directed by the Commission, PG&E continues to monitor developments concerning direct load control, as well as customer interest in accessing real-time energy information and time of use (TOU) rates. An update on the research efforts is detailed in Section VI of this Report.

7. <u>SmartMeter™ Information Technology Progress</u>

During the first half of 2010, PG&E continued the detailed testing and implementation associated with the development of complex IT systems and interfaces required to support the SmartMeter™ Program. Highlights of the continuing IT development over the past six months include:

1. Hardware upgrades to the Meter Data Management System (MDMS) environment;
2. Head-End system software version upgrade (v4.1);
3. Upgraded servers to larger P6 servers;
4. Drafted roadmap for a SmartMeter Operations Center

PG&E's IT development plan for the second half of 2010 includes the following key elements:

1. Additional Outage Management enhancements
2. Migrate backup hosting environment to new locations
3. Increase capability of meter event management
4. Implement HAN functionality in PG&E labs
5. Continue to analyze, test, and validate SmartMeter™ system scalability from 6 million meters through final deployment at 11 million meters

In addition to continued IT system development to support the SmartMeter™ Program, the SmartMeter™ Program IT team is also preparing to be operationalized beginning in 2011 and become part of the regular on-going IT operations function. As a result, ISTS is validating the "architectural roadmap" for IT-enabled functionalities related to the SmartMeter™ Program beyond 2010.

8. SmartMeter™ Transition to O&M

Beginning in, 2011 those SmartMeter™ project activities which are of a recurring nature (i.e. will continue after the project has been completed) will transition from project funded to GRC funded. To support this upcoming transition, PG&E has initiated significant employee outreach and change management activities to address employee education. The SmartMeter™ Change Management team conducts direct outreach for the general PG&E employee population through Ambassador Toolkits mailed to each employee and retirees' home, in person Employee Experience Zones containing increased levels of educational material, and learning material to educate impacted classifications in new processes and procedures (where the introduction of the SmartMeter™ technology has directly changed their work). The directly impacted business departments currently receiving training include: Contact Center Operations, Office Services, Meter to Cash, Service Planning, Gas and Electric Meter Shop, Restoration, Customer Field Services, SmartMeter Field Execution team, Energy Service and Solutions, Telecom, Gas and Electric Maintenance and Construction.

Working in parallel with these activities, Employee Change Management planning continues to work with the Business Delivery Group, Information Technology, Online, Governmental Relations, Internal and External Communication departments to plan for the integration of future capabilities such as Home Area Network, the remote disconnect/ reconnect switch, and the integration of a new rate structure to ensure employees are well prepared ahead of implementation.

## II. Advances in AMI Technology

### A. Introduction

Over the past six months there has been significant growth in industry interest in AMI technology. PG&E has participated internationally in meetings and other industry efforts. PG&E continued its investigation of extending the AMI communications network to support Distribution Automation (DA) applications, including automated distribution reconfiguration and load control. The initial evaluation concluded that these applications are in fact suitable for the AMI network. PG&E will continue the development of more extensive testing and integration plans.

### B. PG&E Distribution Automation Investigations

In the July 2009 Report, PG&E noted its evaluation of both the implementation of Communicating Faulted Circuit Indicators (CFCI) and the S&C Electric Company's Intelli-TEAM auto-reconfiguration system. PG&E continues to work with both the communications manufacturers and traditional CFCI vendors to facilitate joint manufacture. The development of a low-cost CFCI will improve PG&E's ability to respond quickly to outages and the additional fault information will make it possible to deploy the correct equipment and personnel immediately. PG&E's Intelli-TEAM product currently has non-SSN radios. PG&E evaluated SSN radios but has deferred field testing pending evaluation of the full system architecture. Finally, PG&E will continue to work with other fault indicator vendors.

The next steps regarding distribution automation investigation include testing of the radio traffic generated in integrated AMI/DA applications, completing a review of data model options, and creating use cases to be used for system integration.

C. Technology Industry Updates

PG&E continues to lead and participate in industry activities related to advanced metering and communication networks, including membership in professional organizations and attendance at conventions and trade shows.

During the first half of 2010, PG&E presented at the following industry events:

- Metering America Conference in San Diego (February)
- Distributech Conference in Tampa FL (March)
- Utility Planning Network peer group meeting in San Diego (May)
- The Networked Grid 2010 conference in Palm Springs (May)
- Roots of Energy Efficiency conference in San Jose (June)

PG&E actively participates in the following significant activities as part of the Company's commitment to an open and inter-operable Smart Grid:

- UCA Open Smart Grid (Chair) – Providing oversight over UCA's Utili-App, Utili-Ent, Utili-Sec, and Utili-Comm groups. The UCA Open Smart Grid committee (a utility leadership committee) has been integral in setting utility requirements in UCA and providing them to the appropriate standards bodies.
- UCA Open Auto DR (Chair) – Transforming the Lawrence Berkeley National Laboratory Automated Demand Response requirements from a specification to a standard.
- Institute of Electrical and Electronics Engineers (IEEE) 802.15.4 Tg (Chair) – Producing IEEE 802 standards for Smart Utility Networks.
- UCA OpenHAN – Setting technology independent requirements to technology alliances.
- UCA Utili ENT – Setting standards for the AMI Enterprise.
- UCA Utili SEC – Establishing open security standards for the Smart Grid.
- UCA ADE – Defining a common interface for exchange of information between utilities and third parties for customer data.
- SAE J2836 – Setting the communication standards between Vehicle and Grid for purposes of energy transfer.

PG&E continues to believe that making these standards inter-operable through a comprehensive certification process should be one of the industries highest priorities. PG&E will continue to work with major industry stakeholders and the above organizations in assisting with that challenge.

Since PG&E's January 2010 Report, there have been a number of significant industry announcements. They include:

- In January 2010, Itron Inc. announced two major delivery milestones for both its legacy CENTRON® electricity meters, as well as electricity and gas end points for its smart grid platform, OpenWay®. At that time, more than 30 million CENTRON meters had been shipped to utilities throughout the world. Coinciding with that milestone, Itron also announced the shipment of 1 million OpenWay units. The shipments support several industry-leading utilities' smart grid deployments including CenterPoint Energy (Texas), DTE Energy (Mich.), San Diego Gas & Electric (Calif.), Southern California Edison (Calif.), and Glendale Water and Power (Calif.). (http://www.itron.com/pages/news_press.asp?year=2010)
- In February 2010, Itron Inc. announced that it has signed an agreement with the Town of Arlington, Mass., (Arlington) to install Itron's advanced metering system, Water SaveSource. Located six miles northwest of Boston, Arlington provides water service to approximately 43,000 residents. (http://www.itron.com/pages/news_press.asp?year=2010)
- In March 2010, Itron Inc. announced that it has signed an agreement with Tropos Networks to jointly develop products for the utility market including an integrated network solution. The joint solution will allow utilities to extend their smart grid foundation into a comprehensive, privately owned broadband network for utility applications. (http://www.itron.com/pages/news_press.asp?year=2010)
- In May 2010, Itron Inc. announced that it has released the North American market's first gas meter with an integrated remote disconnect valve. The METRIS® Remote Disconnect (RD) residential meter also incorporates Itron's leading 100G Datalogging Gas ERT® module—all in a complete, compact and

easy-to-install package. (http://www.itron.com/pages/news_press.asp?year=2010)

- In Jan 2010, Aclara Inc. announced that the City of Toronto, Canada, has selected the STAR® Network system from Aclara RF Systems Inc as its advanced metering infrastructure (AMI) for water. (http://www.aclara.com/pages/pressreleases.aspx)
- In March 2010, Aclara Inc. announced the industry's first home-area network (HAN) based on proven, widely adopted Wi-Fi technology. The solution is being demonstrated at DistribuTECH 2010 in Tampa, Fla., and was developed in conjunction with Intwine Connect, a technology company specializing in internet-based connectivity solutions. (http://www.aclara.com/pages/pressreleases.aspx)
- In March of 2010 Landis+Gyr announced it had been selected by the UK's largest energy supplier, British Gas to support the UK's first commercial-scale smart meter deployment in an energy efficiency effort that could save consumers more than £200 million in energy bills. http://www.landisgyr.com/en/pub/media/press_releases.cfm?news_ID=4845
- On June 21, 2010 Landis+Gyr announced it has been selected by CPS Energy to deploy Landis+Gyr's Gridstream™ smart grid solution for its more than one million electric and natural gas customers in San Antonio, Texas. http://www.landisgyr.com/en/pub/media/press_releases.cfm?news_ID=5029
- The Silicon Valley Leadership Group, City of San Jose and Pacific Gas and Electric Company (PG&E) announced on June 25, 2010 that they have partnered to create the Silicon Valley Smart Grid Task Force. The group brings leaders

from industry, the public sector, non-profits and academia together to make recommendations on California's energy efficiency efforts and the rollout of Smart Grid technology. Silver Spring Network has also decided to join this task force. http://www.silverspringnet.com/newsevents/pr_062510.html

- On June 9, 2010 Silver Spring Networks announced an expanded commitment to the Brazilian market. Silver Spring is collaborating with Nansen, a leader in the Brazilian energy industry, as its first Brazilian meter partner. http://www.silverspringnet.com/newsevents/pr_060910.html
- Two of the industry's leading smart grid solutions providers, Comverge, Inc. and Sensus, announced a strategic alliance to support current and future utility energy management and conservation programs. The alliance will focus on integrating Comverge's Apollo® Demand Response Management System (DRMS) across the Sensus FlexNet™ multi-application advanced metering infrastructure (AMI) communications network to provide comprehensive and integrated energy management solutions.

## III. Progress in PG&E's AMI Deployment

### A. Overview

PG&E continues to manage its meter and network deployment activities in parallel with the development and implementation of the IT systems and interfaces necessary to support SmartMeter™ functionality. The deployment schedule is dependent upon the availability of a trained workforce, an effective supply chain to maintain an efficient installation process, and customer premise access to make the necessary changes at each service location. Deployment planning adjustments may be required due to any number of factors, including adverse customer impacts, supply chain considerations, labor availability, and technology considerations, which could affect the scheduling of meter endpoint installations.

As of June 30, 2010, PG&E had converted or installed approximately 6.3 million meters (including retrofits) with SmartMeter™ technology. As noted above, the Upgrade Decision approved PG&E's plan to replace all electric meters without Upgrade technology, and PG&E has deployed 236,718 SSN retrofit endpoints to replace PLC endpoints. PG&E's progress as of June 30, 2010 is summarized in Table III-1.

**Table III - 1**

**AMI Project Status as of June 30, 2010**

| Progress Toward Completion | Total Budgeted Plan | Actual | % of Total Project Plan Installed |
|---|---|---|---|
| Electric Network - RF Network | 1,182 | 1,186 | 100% |
| Gas Network Collectors | 5,000 | 4,273 | 85% |
| Electric Network Enabled Locations | 5,275,099 | 4,721,988 | 90% |
| Electric Meter-module installations* | 5,646,000 | 3,239,600 | 57% |
| Electric Meter-module Activated | 5,275,099 | 1,336,213 | 25% |
| Gas Network Enabled Locations | 4,458,024 | 3,809,827 | 85% |
| Gas Meter-module installations | 4,458,024 | 3,101,230 | 70% |
| Gas Meter-module Activated | 4,458,024 | 1,683,937 | 38% |

*Includes installation of retrofitted SmartMeters™.

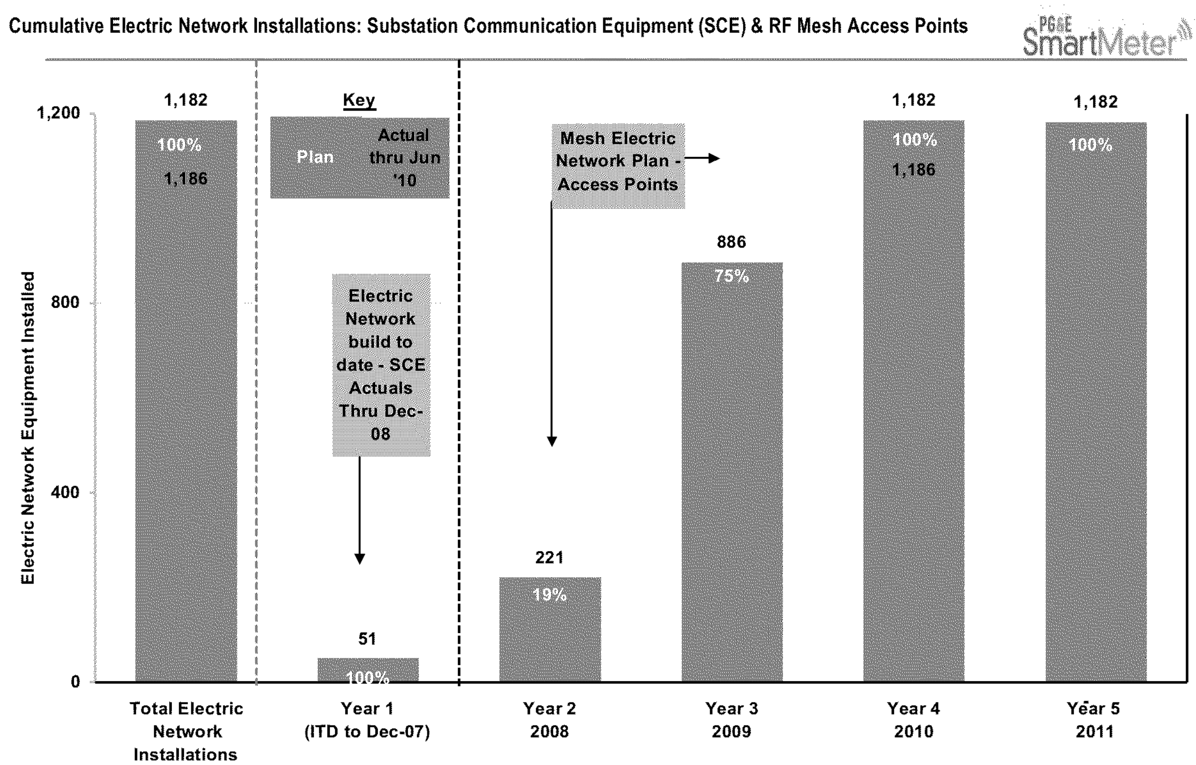
Note: Meter growth occuring in 2011 and 2012 is funded in the 2010 GRC and not included in the above table or the following graphs.

B. Actual Infrastructure Installations

In the six months since the January 31, 2010 Report, PG&E has continued to make progress in the deployment of gas and electric network infrastructure, the installation of gas and electric meters and communication modules, and the activation of gas and electric meters. As previously indicated, technology decisions may result in deployment planning adjustments that could affect the timing of meter endpoint installations.

The following figures summarize the progress of PG&E's SmartMeter™ Program implementation in each respective area through June 30, 2010. The percent-of-plan refers to the total (five-year) Program completion and provides perspective on PG&E's installation progress. PG&E reports actual and projected deployments and installations on a calendar year (CY) basis.

**Table III – 2**

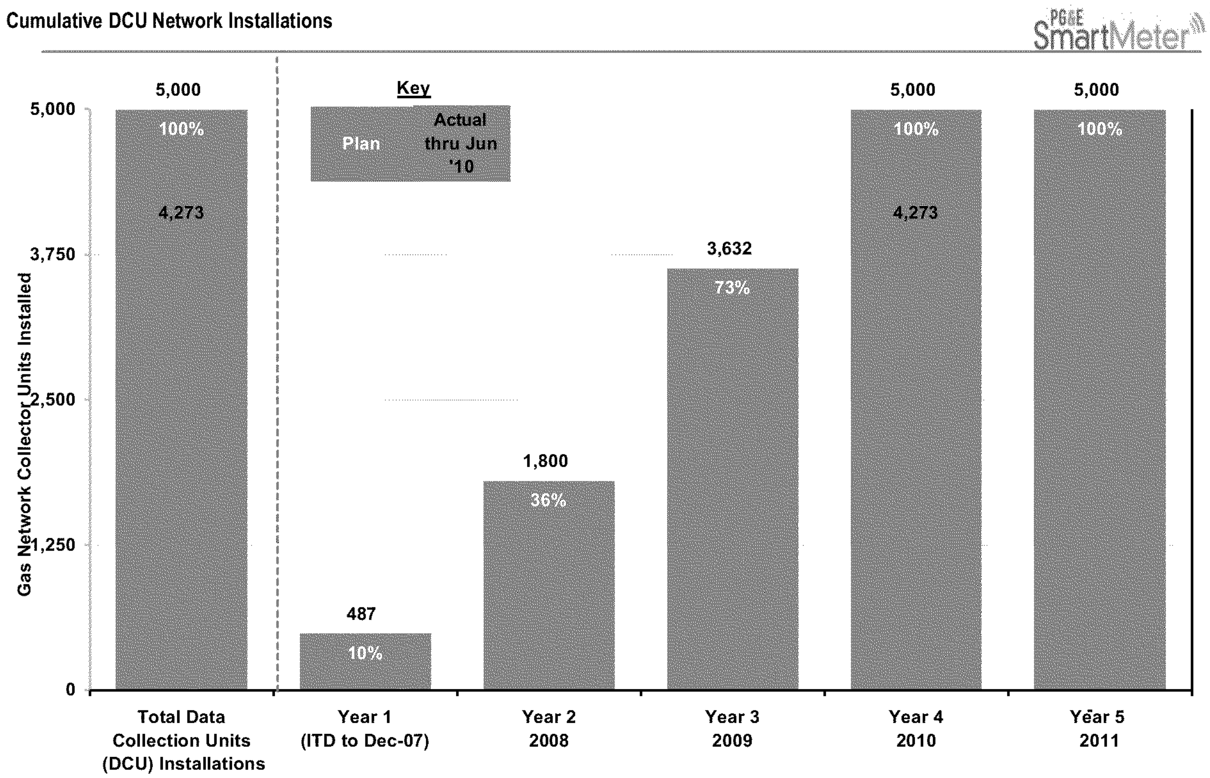



| Electric Network - Substation SCE | Total | Yr 1 (to Dec-07) |
|---|---|---|
| Cumulative Installed thru 06/10 | 51 | 51 |
| Plan | 51 | 51 |

| Electric Network - RF Mesh Access Points | Total | Yr 1 (to Dec-07) | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|
| Cumulative Installed thru 06/10 | 1,186 | - | 221 | 886 | 1,186 | - |
| Plan | 1,182 | - | 221 | 886 | 1,182 | 1,182 |

90% of the originally planned network has been installed. Additional access points will be installed to increase read rates in certain areas where required.

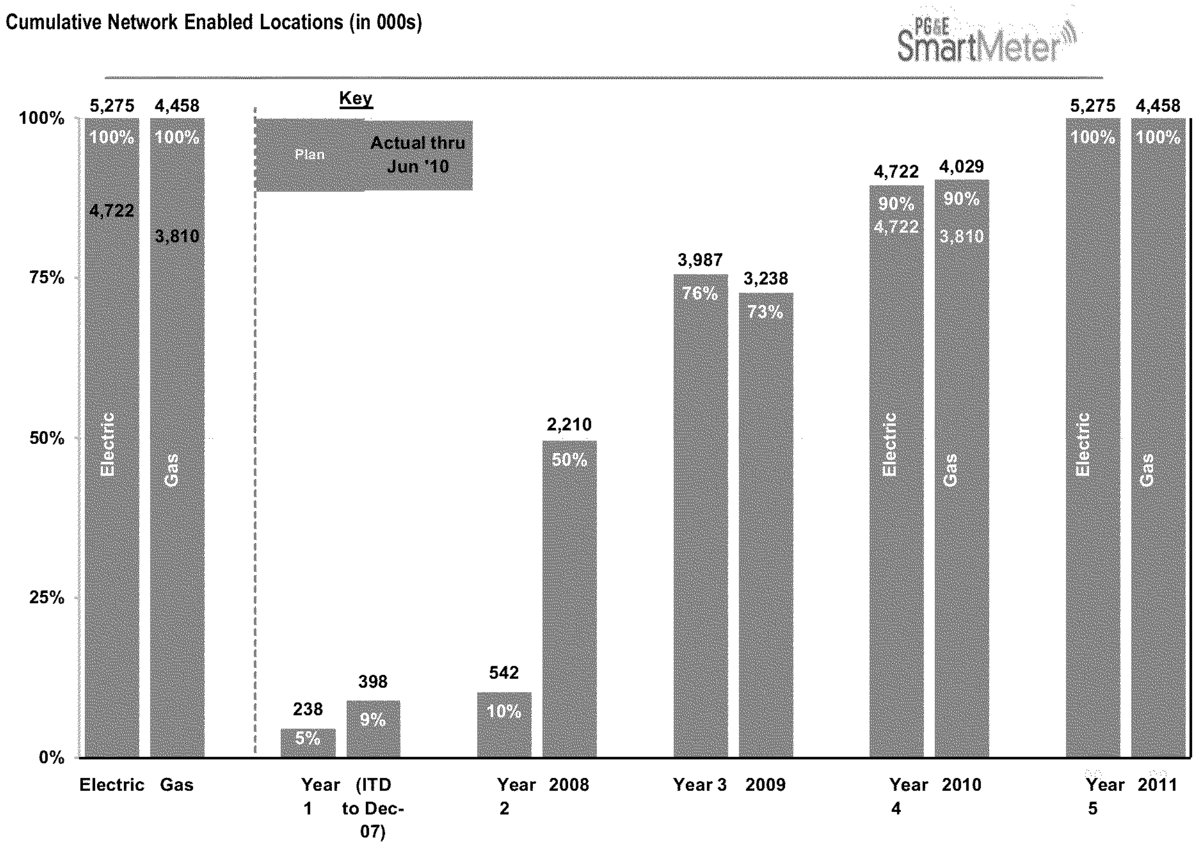
## Table III - 3




| Cumulative Data Collection Unit (DCU)Installations | Total | Yr 1 (to Dec-07) | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|
| Installed thru 06/10 | 4,273 | 487 | 1,800 | 3,632 | 4,273 | - |
| Plan | 5,000 | 487 | 1,800 | 3,632 | 5,000 | 5,000 |

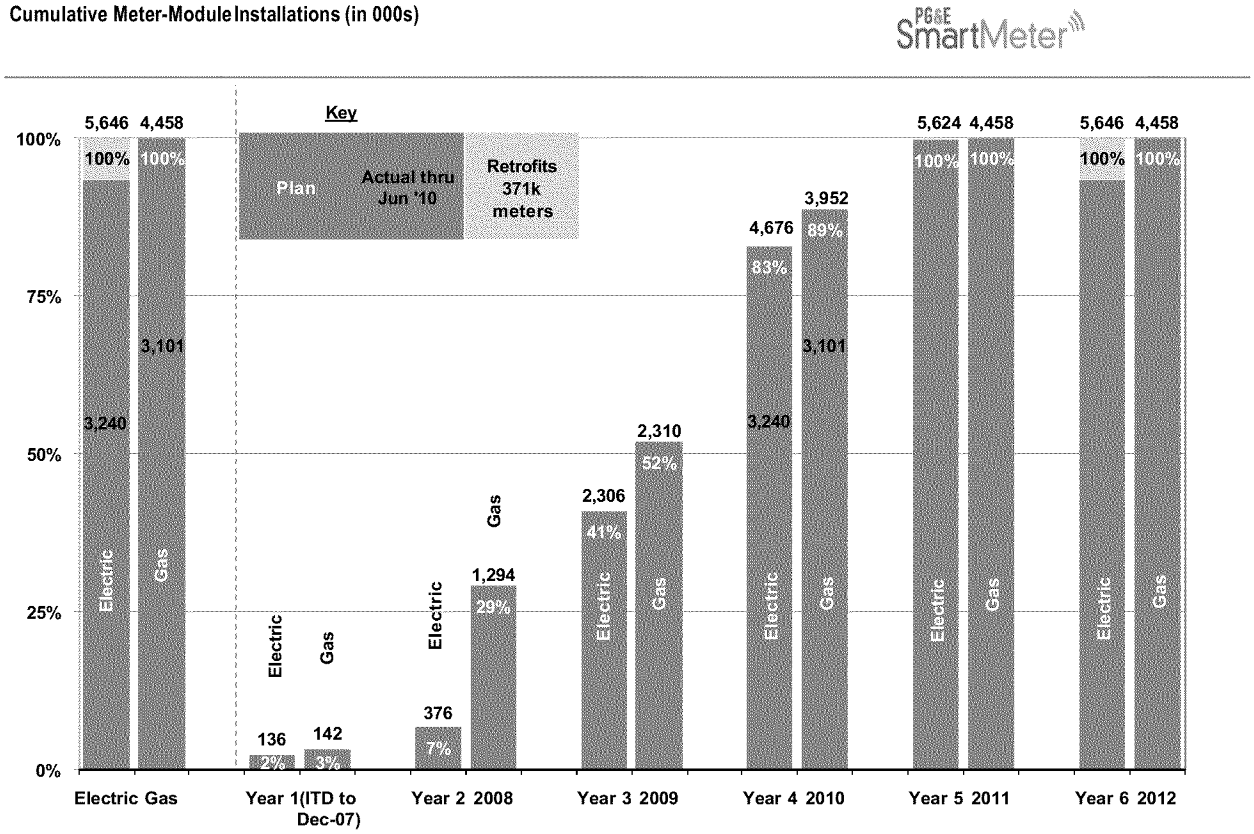
85% of the originally planned DCUs have been installed. Additional DCUs w ill be installed to increase reat rates in certain areas where required.

# Table III - 4




| Cumulative Network Enabled Locations | Total | 2007 | | 2008 | | 2009 | | 2010 | | 2011 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *(000)* | | Electric | Gas | Electric | Gas | Electric | Gas | Electric | Gas | Electric | Gas |
| Enabled thru 06/10 | 8,532K | 238K | 398K | 542K | 2,210K | 3,987K | 3,238K | 4,722K | 3,810K | - | - |
| Plan | 9,733K | 238K | 398K | 542K | 2,210K | 3,987K | 3,238K | 4,722K | 4,029K | 5,275K | 4,458K |

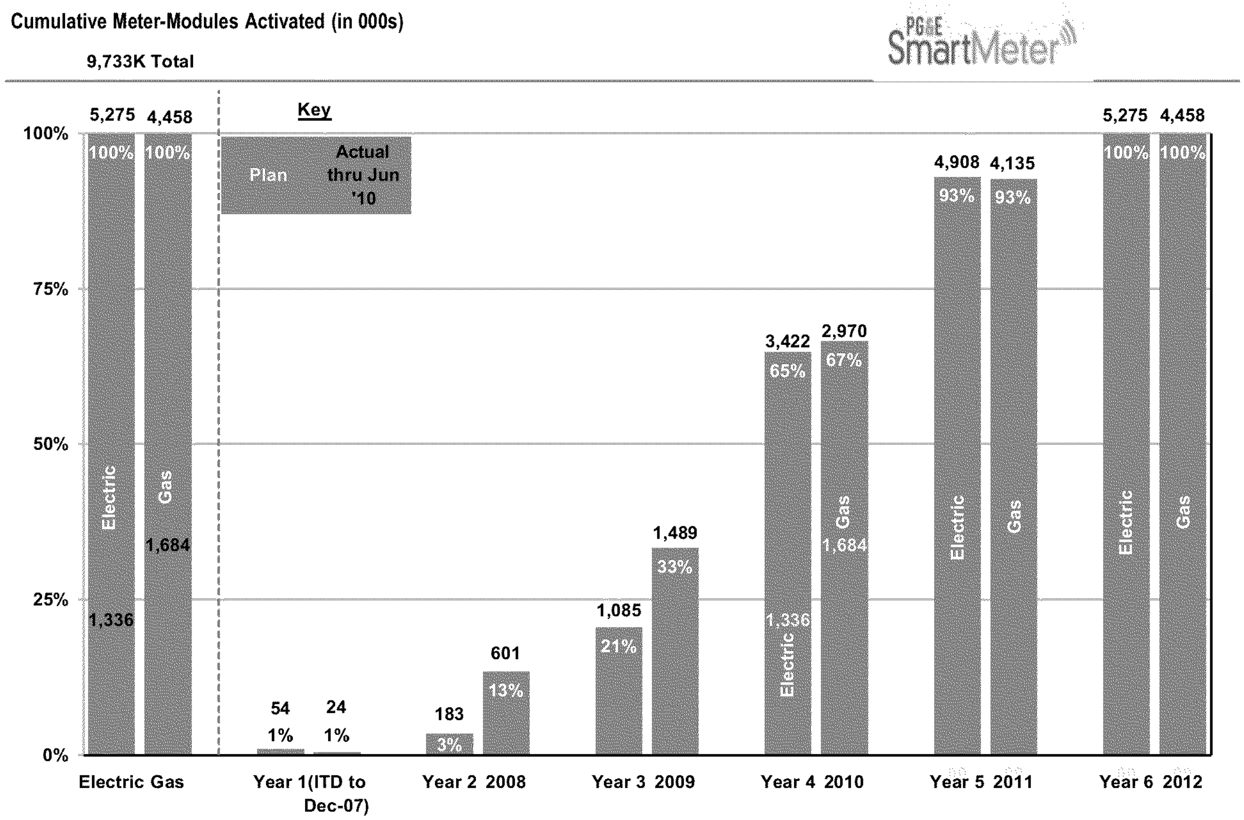
# Table III - 5




| Cumulative Meter-Module Installations | Total | Year 1 | | Year 2 | | Year 3 | | Year 4 | | Year 5 | | Year 6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *(000)* | | Electric | Gas | Electric | Gas | Electric | Gas | Electric | Gas | Electric | Gas | Electric | Gas |
| Installed thru 06/10 | 6,341K | 136K | 142K | 376K | 1,294K | 2,306K | 2,310K | 3,240K | 3,101K | - | - | - | - |
| Plan* | 10,104K | 136K | 142K | 376K | 1,294K | 2,306K | 2,310K | 4,676K | 3,952K | 5,624K | 4,458K | 5,646K | 4,458K |

*Planned total includes installation of retrofitted SmartMeters™ and updated meter growth forecast through 12/31/10.

# Table III - 6




| Cumulative Meters Activated | Total | 2007 | | 2008 | | 2009 | | 2010 | | 2011 | | 2012 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Electric | Gas | Electric | Gas | Electric | Gas | Electric | Gas | Electric | Gas | Electric | Gas |
| Activated thru 06/10 | 3,020K | 54K | 24K | 183K | 601K | 1,085K | 1,489K | 1,336K | 1,684K | - | - | - | - |
| Plan* | 9,733K | 54K | 24K | 183K | 601K | 1,085K | 1,489K | 3,422K | 2,970K | 4,908K | 4,135K | 5,275K | 4,458K |

* Includes updated meter growth forecast through 12/31/10.

## IV. Program Costs and Benefits

A. SmartMeter™ Program Costs

The SmartMeter™ PMO maintains governance over the allocation of both the annual budget and budget-to-completion for each of the respective workstreams. The workstreams are summarized into four major categories in this Report: Field Delivery, Information Technology, Customer & SM (SmartMeter™) Operations, and PMO.

The Program budget also includes a risk-based allowance, which was authorized to provide for unanticipated costs necessary to complete for the defined Program work scope. For the SmartMeter™ Program, only the officer-led Steering Committee can approve a workstream expenditure that requires a draw against the risk-based allowance funding category. If a draw against the risk-based allowance is approved, the workstream budget is shown with an increase in approved funds, and the risk-based allowance category with an equal offsetting amount. In addition, the PMO recommends other reallocations, both increases and decreases, within and among workstream budgets, as circumstances require. Table IV-1 indicates the approved adjustments to the workstream budgets since the January 31, 2009 Report.

Through June 30, 2010, the SmartMeter™ Program has incurred costs of approximately $1,695 million ($1,398 million in capital and $297 million in expense). Of this total dollar amount, Field Delivery activities have cost approximately $1,089 million (64 percent) and IT-related activities have cost approximately $421 million (25 percent). The remaining 11 percent is attributed to the Customer & SM Operations and PMO categories. The Program's authorized cost is based on the combined project cost authorization of the AMI and Upgrade Decisions.

**Table IV - 1**

| ($ Millions) | TOTAL | Field Delivery | Information Technology | Customer & SM Operations | PMO | Risk-Based Allowance* |
|---|---|---|---|---|---|---|
| **December '09 Total Plan** | **2,206** | **1,438** | **483** | **156** | **112** | **17** |
| June 2010 Forecast | | | | | | |
| Cost Adjustments | - | - | 8 | - | (8) | - |
| **Subtotal** | 2,206 | 1,438 | 491 | 156 | 104 | 17 |
| Potential Use of Risk-Based Allowance | - | - | - | - | - | - |
| **June '10 Total Plan** | **2,206** | **1,438** | **491** | **156** | **104** | **17** |
| **Actuals** | **1,695** | **1,089** | **421** | **100** | **84** | **N/A** |
| **% of Plan** | 77% | 76% | 87% | 64% | 75% | |

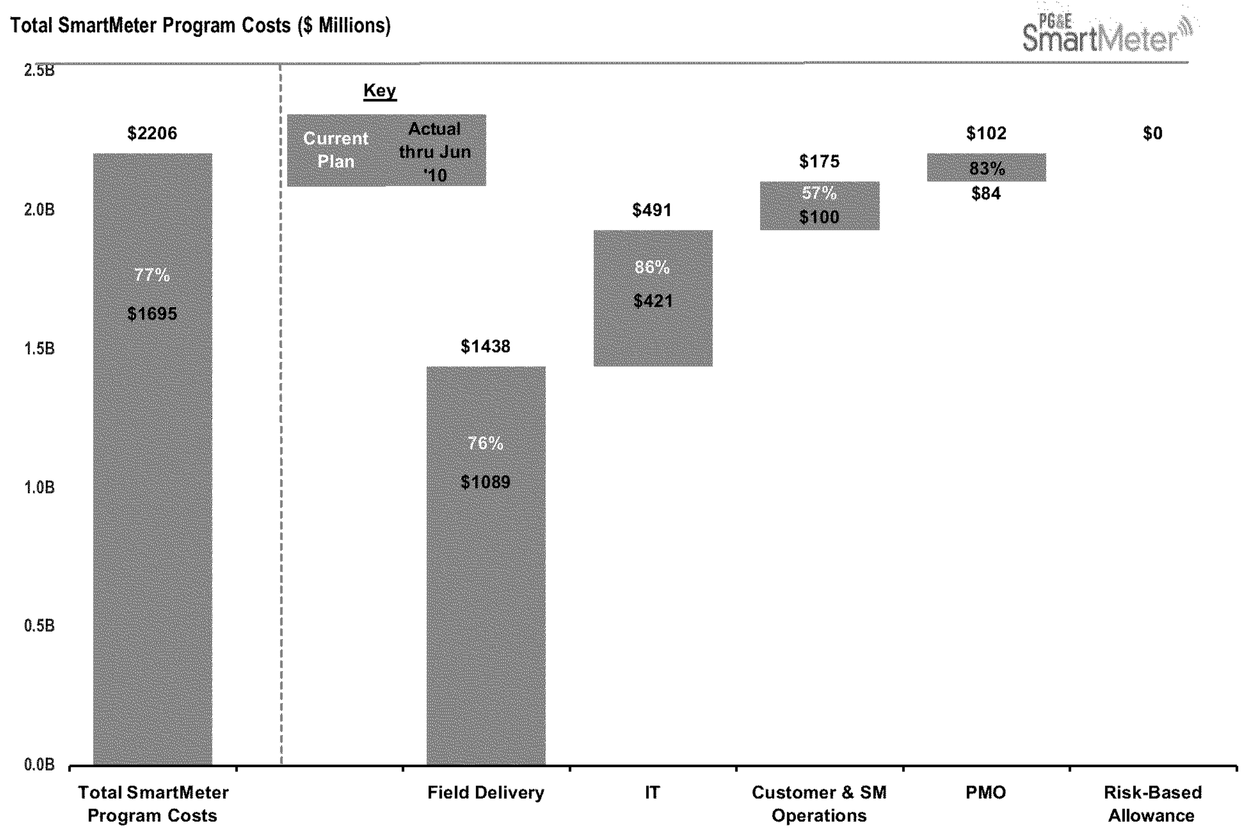
Note: Totals subject to rounding

The Customer & SM Operations category includes $54.8 million specifically authorized in the AMI Decision for the purpose of marketing Critical Peak Pricing programs. As of June 30, 2010, approximately $15.4 million of the $54.8 million has been spent in support of SmartRate marketing efforts from inception to date.

| (Thousands of Dollars) | 2005 Actual | 2006 Actual | 2007 Actual | 2008 Actual | 2009 Actual | 2010 YTD | Total |
|---|---|---|---|---|---|---|---|
| SmartRate Marketing & Education and Customer Web Presentment | $ 0 | $ 349 | $1,166 | $6,811 | $6,454 | $633 | $15,413 |

Tables IV-2 through IV-7 shows PG&E's incurred costs since inception through June 30, 2010, for the SmartMeter™ Program, as well as each respective budget category. The percent-of-expenditures refers to the total incurred expenditure as of June 30, 2010 as a percentage of the adjusted workstream budgets.

## Table IV - 2




| $ Millions | Total SmartMeter Program Costs | Field Delivery | IT | Customer & SM Operations | PMO | Risk-Based Allowance |
|---|---|---|---|---|---|---|
| Actual thru 06/10 | $ 1,695 | 1,089 | 421 | 100 | 84 | N/A |
| Plan as of 12/09* | $ 2,206 | 1,438 | 483 | 156 | 111 | 19 |
| Cost Changes/Reallocation | $ (0) | (0) | 8 | 19 | (8) | (19) |
| Plan as of June 30, 2010 | $ 2,206 | 1,438 | 491 | 175 | 102 | 0 |
| % of Plan completed | 77% | 76% | 86% | 57% | 83% | |

Note: Totals subject to rounding



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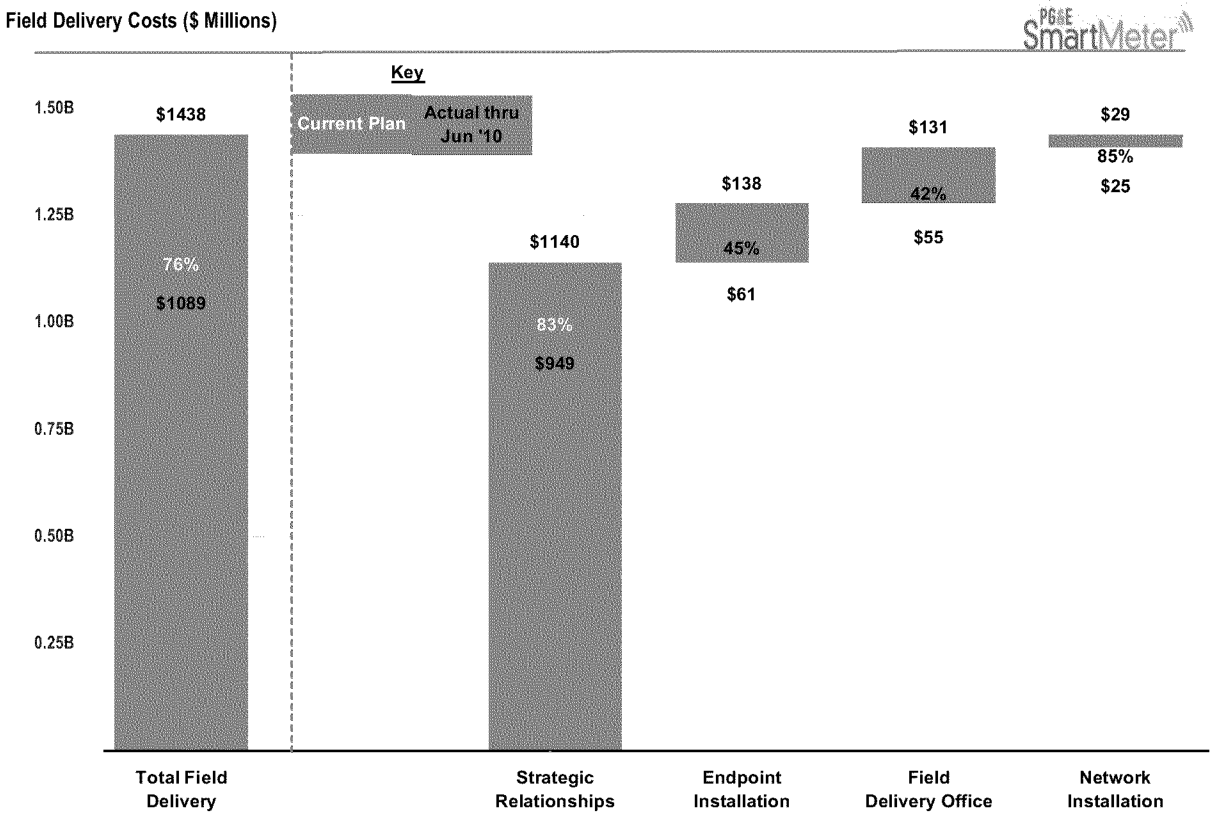
## Table IV - 3

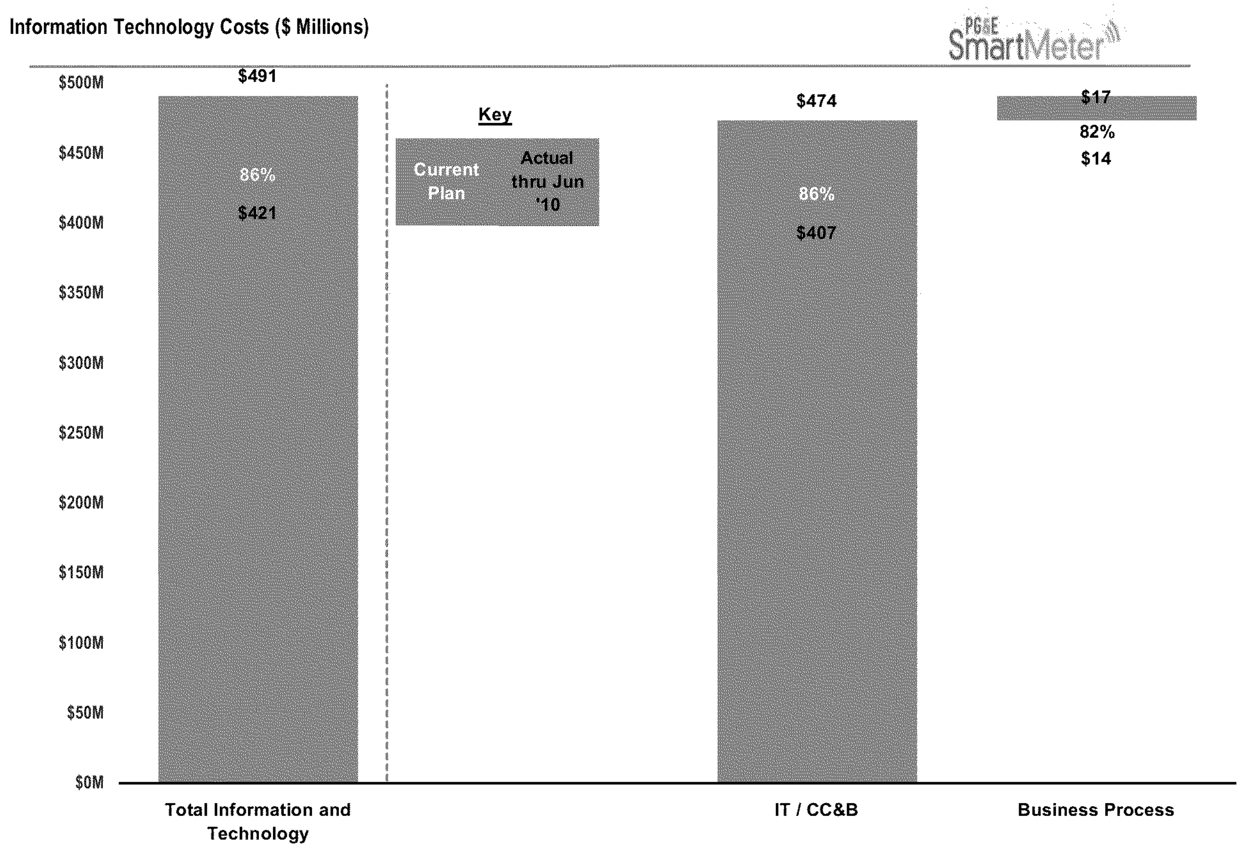



| $ Millions | Total Field Delivery | | Strategic Relationships | Endpoint Installation | Field Delivery Office | Network Installation |
|---|---|---|---|---|---|---|
| Actual thru 06/10 | $ | 1,089 | 949 | 61 | 55 | 25 |
| Plan as of 12/09* | $ | 1,438 | 1,297 | 61 | 51 | 29 |
| Cost Changes/Reallocation | $ | (0) | (157) | 76 | 80 | 0 |
| Plan as of June 30, 2010 | $ | 1,438 | 1,140 | 138 | 131 | 29 |
| % of Plan Expended | 76% | | 83% | 45% | 42% | 85% |

| $ Millions | Network Installation | | Electric Network | Gas Network |
|---|---|---|---|---|
| Actual thru 06/10 | $ | 25 | 14 | 10 |
| Plan as of 12/09 | $ | 25 | 17 | 8 |
| Cost Changes/Reallocation | $ | 4 | 1 | 3 |
| Plan as of June 30, 2010 | $ | 29 | 17 | 12 |
| % of Plan Expended | 85% | | 83% | 88% |

Note: Totals subject to rounding

## Table IV - 4




| $ Millions | Total Information and Technology | IT / CC&B | Business Process |
|---|---|---|---|
| Actual thru 06/10 | $ 421 | 407 | 14 |
| Plan as of 12/09* | $ 483 | 466 | 17 |
| Cost Changes/Reallocation | $ 8 | 8 | - |
| Plan as of June 30, 2010 | $ 491 | 474 | 17 |
| % of Plan Expended | 86% | 86% | 82% |

Note: Totals subject to rounding



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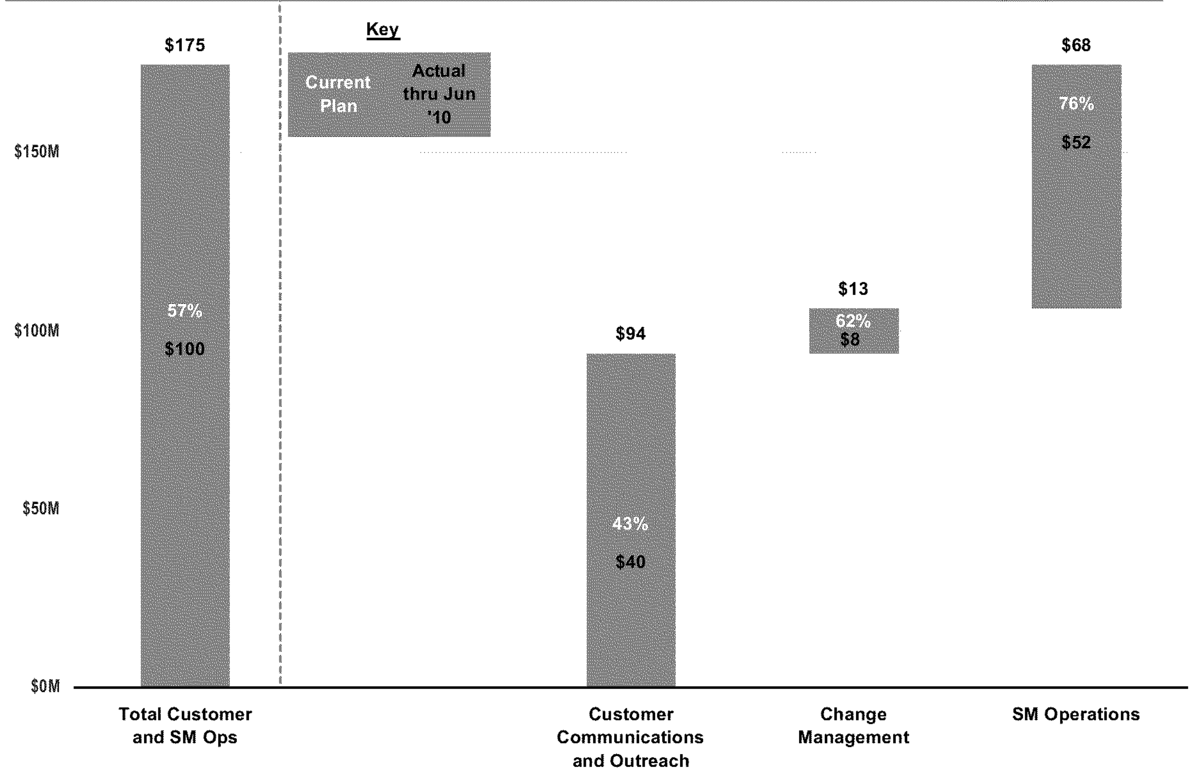
## Table IV - 5

Customer and SM Operations Costs ($ Millions)

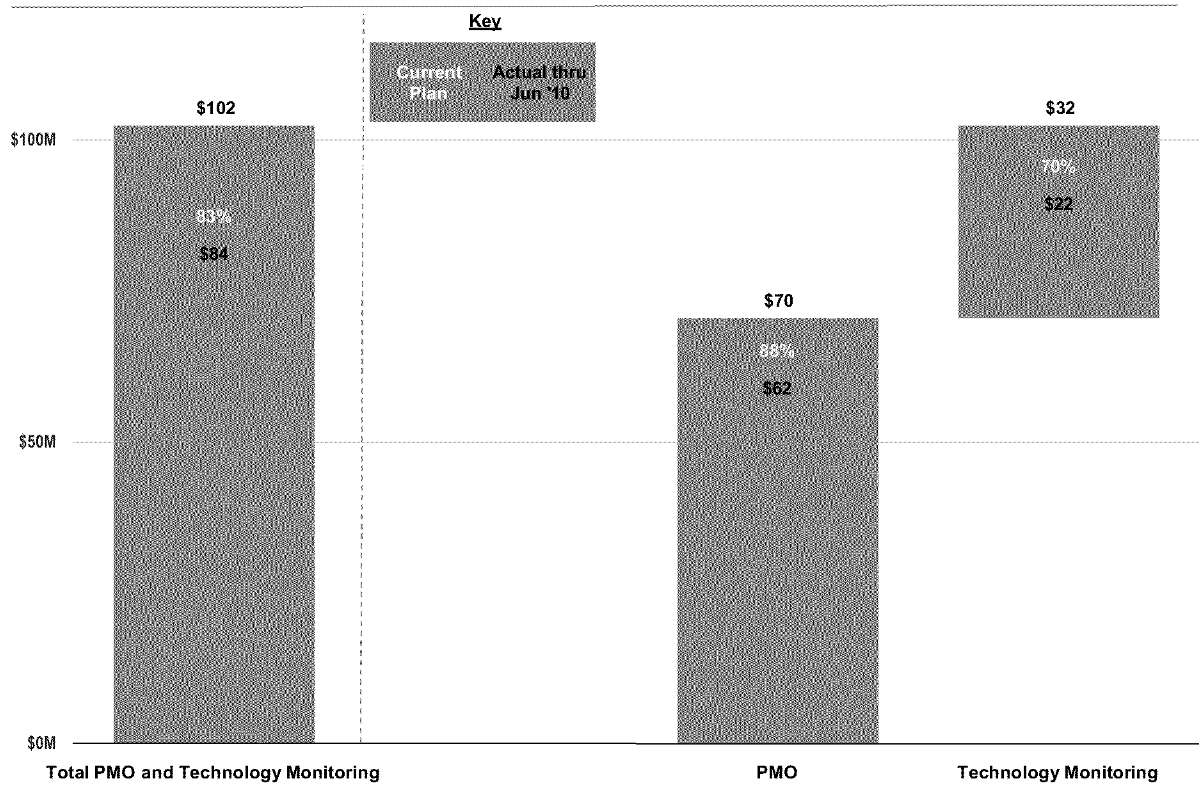



| $ Millions | Total Customer and SM Ops | Customer Communications and Outreach | Change Management | SM Operations |
|---|---|---|---|---|
| Actual thru 06/10 | $ 100 | 40 | 8 | 52 |
| Plan as of 12/09* | $ 156 | 94 | 4 | 58 |
| Cost Changes/Reallocation | $ 19 | - | 9 | 10 |
| Plan as of June 30, 2010 | $ 175 | 94 | 13 | 68 |
| % of Plan Expended | 57% | 43% | 62% | 76% |

Note: Totals subject to rounding

## Table IV - 6

**PMO & Technology Monitoring Costs ($ Millions)**

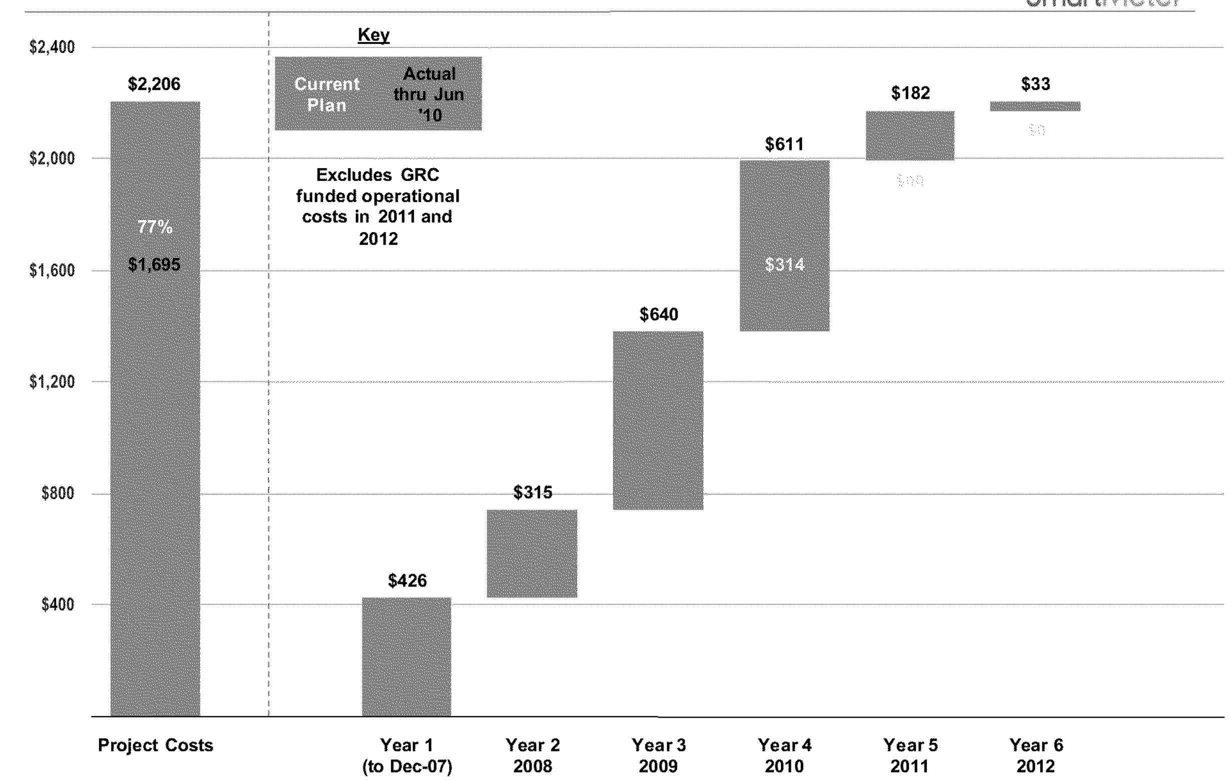



| $ Millions | Total PMO and Technology Monitoring | PMO | Technology Monitoring |
|---|---|---|---|
| Actual thru 06/10 | $ 84 | 62 | 22 |
| Plan as of 12/09 | $ 111 | 70 | 40 |
| Cost Changes/Reallocation | $ (8) | - | (8) |
| Plan as of June 30, 2010 | $ 102 | 70 | 32 |
| % of Plan Expended | 83% | 88% | 70% |

Note: Totals subject to rounding

## Table IV - 7

**Total Project Costs By Year ($ Millions)**




| $ Millions | Project Costs | Year 1 (to Dec-07) | Year 2 (CY 2008) | Year 3 (CY 2009) | Year 4 (CY 2010) | Year 5 (CY 2011) | Year 6 (CY 2012) |
|---|---|---|---|---|---|---|---|
| Actual thru 06/10 | $ 1,695 | 426 | 315 | 640 | 314 | - | - |
| Plan from 1/1/10* | $ 2,206 | 426 | 315 | 596 | 611 | 182 | 33 |
| % of Plan Expended | 77% | 100% | 100% | 100% | 51% | 0% | 0% |

Note: Totals subject to rounding

Project costs have been adjusted to reflect the inclusion of cost of removal amounts previously considered recoverable outside of the SmartMeter balancing accounts

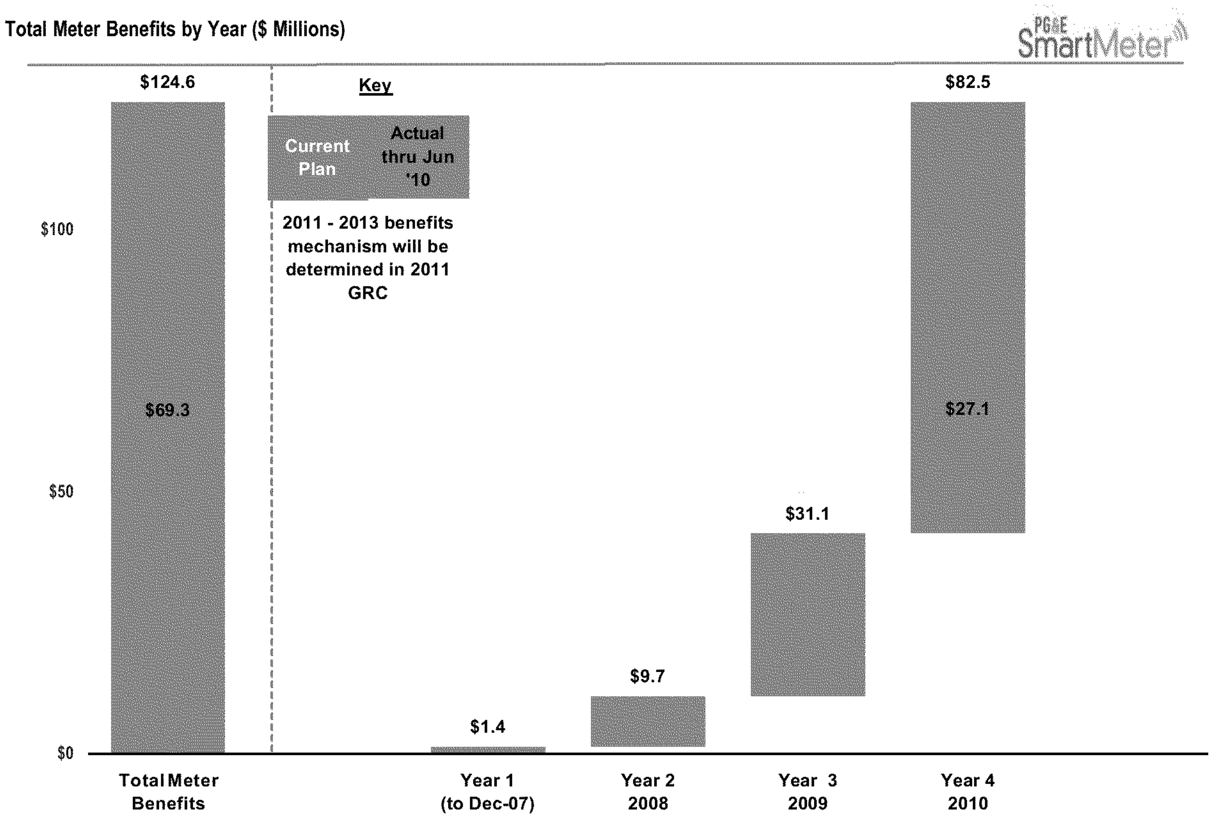
B. Operational Benefits Realization

Program realizes benefits primarily when meters fitted with SmartMeter™ technology are installed, transitioned, and become activated. After installation, gas and electric meters transition when: (1) the communications network infrastructure is in place to remotely read them; (2) the meters are installed, remotely read, and utilize SmartMeter™ data for billing; (3) and the remote meter reads become stable and reliable for billing purposes. Once enough customers on a particular “route string” transition to SmartMeter™ billing, manual reading of the meters on that “route string” ceases, and those meters are considered activated.

As reported in the January 2008 Report, the first meter activations occurred in December 2007. Since then, approximately 4,699,000 meters have been transitioned, and approximately 3,020,000 meters have been activated (as of June 30, 2010). Total cumulative benefits recorded as credits to the balancing accounts as of June 30, 2010 are $69.3 million, which represent both activated meter benefits and mainframe software licensing benefits. Such amounts are consistent with the calculation methodologies and savings rates adopted in the final CPUC Decisions.

Table IV-9 shows the currently forecasted plan for activated meters and the corresponding benefits based on the average savings rates adopted in the AMI and Upgrade Decisions. These benefits include $1.9543 per meter per month for electric and $1.0366 per meter per month for gas.

## Table IV – 8




**Activated Meter Benefit - Current Forecast (As of June 30, 2010)**

| | | Year 1* | Year 2* | Year 3* | Year 4 |
|---|---|---|---|---|---|
| (in thousands) | | (To Dec-07) | (CY2008) | (CY2009) | (CY2010) |
| **Meters** | | | | | |
| Activated Electric meter months | | 50 | 1,436 | 6,669 | 21,927 |
| Activated Gas meter months | | 21 | 2,086 | 12,666 | 23,994 |
| Total Activated meter months | | 71 | 3,521 | 19,335 | 45,921 |
| | | | | | |
| **SmartMeter Balancing Account** | | | | | |
| Electric at $1.77 per meter month | $1.77 | $89 | $2,544 | | |
| Electric at $1.95 per meter month | $1.95 | | | $12,925 | $42,849 |
| Gas at $1.04 per meter month | $1.04 | $22 | $2,162 | $13,129 | $24,872 |
| Reduced Software Licensing | | $1,251 | $5,000 | $5,000 | $5,000 |
| Automate Interval Billing | | - | - | - | |
| | | $1,362 | $9,706 | $31,054 | $72,721 |
| | | ** Actuals* | | | |

Note: Totals subject to rounding



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## V. System Performance Criteria Metrics

System performance criteria and metrics are measured and reported on an on-going basis as meter installations progress. As stated in previous reports, PG&E may modify these criteria and metrics after it has collected and analyzed actual system performance parameters in order to better characterize system performance. In the first half of 2010, PG&E enhanced SmartMeter™ program metrics and reporting with the addition of a website dedicated to the communication of SmartMeter™ Program Data which can be accessed by the public at the following link: (http://www.pge.com/myhome/customerservice/meter/smartmeter/programdata/). At this website, PG&E SmartMeter™ Program provides metrics on deployment, billing performance, system performance, meter accuracy testing, and customer data usage.

In table V-1, PG&E has summarized SmartMeter™ Program Data metrics for timely and estimated bills. The performance criteria presented in Table V-2 are based on the amount of actual reads retrieved by the system versus the expected number of reads provided by the head-end system. Deployment in areas with poor cellular coverage degrades performance, while firmware upgrades and supplemental network designs for existing and new installations improve performance. PG&E considers that the system performs as designed within the specified system requirements. Additionally, PG&E's monitoring of SmartMeter™ billing continues to indicate performance that meets and/or exceeds established criteria.

**Table V - 1**

| Timely Bills[1] | | |
|---|---|---|
| Month | Overall | SmartMeter |
| April | 99.66% | 99.74% |
| May | 99.78% | 99.88% |
| June | 99.72% | 99.86% |

[1] Total % of SA's Billed ≤ 35 Days as compared to all active SA's

| Estimated Bills[1] | | |
|---|---|---|
| Month | Overall | SmartMeter |
| April | 0.74% | 0.12% |
| May | 0.60% | 0.08% |
| June | 0.60% | 0.09% |

[1] Number of bill segment calculations based on estimated usage as a % of all completed bill segments

**Table V - 2**

| Performance Criteria | Performance from Jan.'10 thru Jun. '10 | Performance from Jul. '09 thru Dec. '09 | Performance from Jan. '09 thru Jun. '09 |
|---|---|---|---|
| 1. Electric module failure rate | 0.09% | 0.34% | 0.12 % |
| 2. Gas module failure rate | 0.14% | 0.36% | 0.45 % |
| 3. Electric network failure rate | 0.23% | 0.63% | 0.29 % |
| 4. Gas network failure rate | 0.14% | 0.34% | 0.24 % |
| 5. Electric billing data collection failure rate | 0.39% | 1.14% | 0.81 % |
| 6. Gas billing data collection failure rate | 0.16% | 0.24% | 0.20 % |

**Definitions of System Performance Criteria Terms:**

*Electric module failure rate:* Counts incidence of meters being removed specifically for suspected meter hardware failure. Examples would be blank display, meter/module hardware errors, and non-communicating meters. Does not count external causes like broken cover, customer damaged meter, or tampering/theft. These modules are then submitted through the Return Material Authorization (RMA) process for further investigation.

*Gas module failure rate:* Counts incidence of module being removed specifically for suspected hardware failure. Examples would be bad battery/poor charging pattern, bad module circuit, and non-communicating module. Does not count external causes like damaged meter, SMC, dog damage, customer damage, etc. These modules are then submitted through the RMA process for further investigation.

*Electric network failure rate:* Counts incidence of network component removals and submission for RMA, such as AP and relays failing to communicate and failure to maintain charging capacity. Also includes component failure on the DCSI Substation Communication Equipment.

*Gas network failure rate*: Counts incidence of gas network component removals and submission for RMA, including failure to maintain charging capacity, drifts off frequency, cellular failure, and failed electronic boxes.

*Electric billing data collection failure rate:* The number of electric SmartMeters™ from which complete data (complete backhaul data, daily anchor, and complete set of intervals) was not retrieved, divided by the total number of electric SmartMeters™. The measure for electric consists of the percentage of complete daily data sets, one good anchor and complete good intervals, averaged over the period defined. Any service point with an estimated anchor and/or estimated interval(s) fails the measure and is excluded. Failure of this read metric does not lead to an estimated bill -- an accurate bill can be generated in most cases.

*Gas billing data collection failure rate*: The number of gas SmartMeters™ from which a daily cumulative read was not retrieved, divided by the total number of gas SmartMeters™. Failure of this read metric does not lead to an estimated bill -- an accurate bill can be generated in most cases

## VI. Customer Interest in Accessing Real-Time Usage and Pricing Information

Over the past six months, PG&E has learned that customers need more and better information about the SmartMeter™ Program, and as a result has significantly expanded and improved customer communication and outreach based on this customer feedback. PG&E now delivers multiple communications to each customer before, during and after meter installation to more clearly communicate the characteristics and benefits of the technology.

PG&E has several venues for customer feedback: Contact Centers, e-mails, participation in our Customer Advisory Groups, and even outreach to other stakeholders like elected officials or regulators. In addition, PG&E recently began a SmartMeter™ customer experience survey, surveying thousands of residential and business customers each quarter.

Since the January 2010 Report PG&E made significant improvements in the content of its messages and the channels used to deliver the messages, including direct mail, e-mail, mass media, online content, social media, web tools and community outreach. From the end of 2009 and through 2010, the following improvements have been made to education and outreach activities:

Direct Mail and E-mail

- Improved pre-installation letter with insert regarding program benefits - more than 940,000 mailed YTD in 2010
- Developed "welcome booklet" explaining how to read the meter, program benefits, rate education - 2.1 million mailed YTD in 2010
- Developed rate education materials and proposed approaches for managing summer energy bills – 900,000 mailed YTD in 2010
- Announced new Energy Alerts program, which notifies customers by their choice of e-mail, text message or automated phone call as they move through the tiers of electric use – more than 900,000 postcards and 300,000 e-mails sent YTD in 2010

Mass Media

- Launched "Information is Power" campaign focusing on third parties validating SmartMeter™ technology and speaking about the necessity of laying the foundation for the future smart grid – TV (broadcast and cable) and digital ads launched in the Bay Area in Q2 2010

Online Content, Social Media and Web Tools

- Implemented three phases of improved online content on www.pge.com in Q4 2009 and 2010 related to the SmartMeter™ program to
  - focus on customer perspective
  - more clearly communicate benefits
  - prepare customers for installation experience
  - demonstrate real PG&E customers using SmartMeter™ technology to manage energy use and lower bills
  - provide education on rates and cost of energy use
  - highlight third parties discussing the benefits of SmartMeter™ technology
  - provide detailed information and weekly data reports on the performance of the SmartMeter™ program
- An average of nearly 46,000 visitors a month have viewed online content on the SmartMeter™ program in 2010
- Created outreach channels on Twitter, Facebook and blogs (including PG&E's See Your Power Blog) to address customer questions, concerns and service requests
- Launched improved web tools in Q2 2010 to show customers use to date, approximate cost to date, average daily use of electricity on the "Energy

Highlights" dashboard page and cost per hourly interval of electric use on the detailed usage charts

- Added sign up for the new "Energy Alerts" program to My Account in Q2 2010, and 10,625 customers have enrolled in the program to date (customers can also enroll over the phone – by automated phone menu or by talking to a live agent)

Community Outreach

- Participated in 71 grassroots style community outreach events YTD (civic groups, home owners associations, churches, city council organizations)
- Created and engaged Customer Advisory Groups (panels of residential customers engaged in SmartMeter™ or rates issues) in Bakersfield, Fresno, San Jose and Santa Rosa to gather customer insight to further improve processes, programs, and outreach activities
- Opened Answer Centers in Bakersfield, Fresno and Oakland and served thousands of customers to address questions and concerns about the SmartMeter™ program or other customer service issues

Though much as been accomplished in 2010 to improve our customer education and outreach related to the SmartMeter™ program, PG&E is committed to continuous improvement. The insights gained by research and direct customer engagement are fed back into outreach activities so that PG&E can continue to enhance our educational materials and activities and better address our customers' questions about the SmartMeter™ program.

PG&E's SmartRate Program

PG&E's SmartRate™ Program, a critical peak pricing tariff option that requires interval data to administer, was launched in May 2008. The program provides customers the opportunity to manage their energy usage during hot summer days by triggering SmartDay "events" when temperatures surpass a predetermined threshold. This summer has been cooler than previous years, and as a result PG&E has called only three SmartDay events to date: June 29, July 15, and July 16. As of June 30, the SmartRate™ Program had 24,308 active residential customers.

As of May 1st, 172 small to medium business SmartRate™ customers transitioned to Peak Day Pricing (PDP). The residential population will transition (Decision 10-02-032) to PDP on February 1, 2011. With the imminent migration, PG&E conducted an analysis of how SmartRate™ customers would benefit under PDP.

In April, PG&E published its report "2009 Load Impact Evaluation for Pacific Gas and Electric Company's Residential SmartRate™ – Peak Day Pricing and TOU Tariffs and SmartAC Program" which included details on the 2009 season performance of the SmartRate™ population. The findings highlighted the following from a load reduction perspective:

- There were 15 SmartDays throughout the season (May 1 through October 31)[5].
- On average, participants reduced peak electricity use by 15% across the 15 event days[6].
- September offered the season's highest average reduction of an average of 17.2%[7].

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[5] See January 31, 2010 SmartMeter™ Semi-Annual Assessment Report
[6] 2009 Load Impact Evaluation for Pacific Gas and Electric Company's Residential SmartRate™ - Peak Day Pricing and TOU Tariffs and SmartAC Program, pg. 31
[7] Ibid, pg. 31

- Notification places a very vital role in a customers' ability to effectively reduce their demand.[8]
- Customers that provide two or more active points of contact, on average, reduced peak electricity use by 25.5%.[9]
- In general, participants with central air conditioning reduced peak electricity use more than those without it. The hotter the temperature, the more peak electricity use they curtailed. This is in part because they used more peak electricity to start with. [10]
- Across all geographic planning regions, low income customer peak electricity consumption was similar to that of standard tariff customers during non-event days.

Additionally, the following are highlights from a customer satisfaction perspective:

- 79% of 2009 customers report being very satisfied with SmartRate™ [11]
- A higher share of low income respondents, 95% reported being very satisfied with SmartRate™ [12]
- 80% of respondents perceived they were saving energy during their SmartRate™ participation, and more than 90% of those who received a bill actually experienced lower costs[13]
- 95% planned to continue on SmartRate™ in 2010[14]
- 89% of would recommend SmartRate™ to a friend[15]

The SmartRate™ Program provides bill protection during the first full summer of the customer's participation. Under bill protection, if a customer pays more under the SmartRate™ Program than the customer would have paid on the otherwise applicable

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[8] Ibid, pg. 34
[9] SmartRate™ Fact Sheet, pg. 2
[10] 2009 Load Impact Evaluation for Pacific Gas and Electric Company's Residential SmartRate™ - Peak Day Pricing and TOU Tariffs and SmartAC Program, pg. 37
[11] SmartRate™ Summer Pricing Plan Customer Experience Tracking Research, Summer 2009, pg. 13
[12] Ibid, pg. 13
[13] Ibid, pg. 13
[14] Ibid, pg. 13
[15] Ibid, pg. 13

rate schedule, the difference is reimbursed to the customer on the November bill following the first full summer of participation in the program. Beginning in February of this year 7,552 of the residential SmartRate™ customers received notices they would lose bill protection. These customers had completed at least one full summer season on SmartRate™, had the opportunity to test the program, and were no longer eligible to receive bill protection. Of these customers, 130 de-enrolled from the program (122 of these were from Bakersfield).