

FEDERAL UTILITY PARTNERSHIP WORKING GROUP MEETING
NOVEMBER 1-2, 2006
SAN FRANCISCO, CA

INTRODUCTION

The Federal Utility Partnership Working Group (FUPWG) held its Fall 2006 meeting in San Francisco, CA, on November 1-2. The meeting was hosted by Pacific Gas & Electric's (PG&E). A total of 80 individuals attended the meeting, including 28 new members. Organizations represented included 25 utility officials, 8 Federal Energy Management Program (FEMP) representatives, 22 Federal agency representatives, 6 National Laboratory representatives, and 18 representatives from energy-related organizations (see attached list of participants and corresponding organizations). The working group is a joint effort between FEMP and the utility industry to stimulate the exchange of information among participants and foster energy efficiency projects in Federal facilities nationwide.

The agenda included the following presentations:

- PG&E Welcome
- FEMP Welcome
- Agency Update – U.S. Postal Service Energy Program
- Update on Enabling Documents
- Washington Update
- Facilitated Group Discussions
- PG&E Success Story: Federal Pilot Lighting Program
- Energy Efficiency Funds and Demand Response Programs – National Overview: LBNL
- California Public Utilities Commission
- PANEL: Advanced Metering and Meeting EFACT t 2005 Requirements

All presentations from the FUPWG San Francisco meeting are available on the FEMP web site at http://www1.eere.energy.gov/femp/financing/uescs_sanfrancisco.html.

DAY 1 – NOVEMBER 1, 2006

WELCOMING REMARKS

Ron Shaw, Pacific Gas & Electric

As the host of the San Francisco FUPWG meeting, Mr. Shaw welcomed FUPWG attendees. Pacific Gas & Electric Company (PG&E), is one of the largest combination natural gas and electric utilities in the United States. Based in San Francisco, the company is a subsidiary of [PG&E Corporation](#).

PG&E's primary business is the transmission and delivery of energy. The company provides natural gas and electric service to approximately 15 million customers throughout a 70,000-square-mile service area in northern and central California.

The San Francisco FUPWG meeting was held at The Pacific Energy Center, which offers customers educational programs, design tools, advice, and support to create energy efficient buildings and comfortable indoor environments.

<http://www.pge.com/pec/>

Beverly Alexander, Vice President, Customer Care PG&E

Ms. Alexander provided an overview of PG&E's clean power program and plans for the future for meeting California's aggressive energy efficiency goals. California leads the U.S. in demand response to lower per capita energy use. Codes and standards play a significant role in meeting energy efficiency goals. PG&E works closely with industries that have traditionally represented high energy consumption. A recent success story involves PG&E's work with Sun Microsystems to reduce energy consumption by 80 percent at computer server farms.

PG&E is engaged in strategic planning for total integrated "clean" grid and integrated demand-response options to incorporate stationary and mobile renewable energy sources to shave use off the peak times. This strategy focuses on examining consumers' energy use to develop an integrated approach utilizing both stationary and mobile renewable energy sources. PG&E also has signed on as a supporter of California's carbon trading program, noting that global warming is not only bad for the environment, but also is bad for the economy through droughts, floods, and insurance related claims.

FEMP WELCOME

David McAndrew, Lead of the Federal Utility Partnership Working Group, FEMP, Department of Energy (DOE)

Mr. McAndrew welcomed new and current members to the FUPWG meeting. He serves as the Federal Utilities Partnership Working Group Chair and FEMP's Renewable Power Purchasing Team Lead. He explained that the purpose of FUPWG is to stimulate the exchange of information among participants and foster energy efficiency projects in Federal facilities nationwide. This is a "working group" to encourage discussion through open dialogue and through focused problem solving and brainstorming. Active participation is critical to the success of FUPWG. FUPWG is not solely focused on Utility Energy Services Contracts (UESCs), it is about partnerships working with utilities on projects to achieve energy efficiency.

Mr. McAndrew reviewed the agenda and highlighted the following FUPWG-related activities:

- A new mentoring program was established beginning with this meeting to assist new members in becoming integrated into the working group.
- A utility survey has been developed to obtain information on utility services available to Federal customers and will be distributed to all member utilities. Timely responses to this survey will enable FEMP to update its list of services; this information will be packaged and distributed to Federal agencies government wide.
- The current UESC Enabling Documents are being revised. Feedback on these documents is required to improve the process.
- Active member participation in facilitated FUPWG group discussion networking sessions is vital to contributing to the continual improvement and effectiveness of both the DOE Utility Program and FUPWG.

AGENCY UPDATE – U.S. POSTAL SERVICE ENERGY PROGRAM

***Ray Levinson, United States Postal Service
Implementing Clean Energy Efficiency Projects at the U.S Postal Service – Pacific Area (USPS):***

The USPS Pacific Area Energy Management Team has been a leader in terms of responding to the need for greater energy efficiency. In response to a USPS capital freeze and the requirements outlined by EPACT, the USPS Pacific Area Energy Program Committee was established as a way of developing strategic energy management plans. This committee included management representation from USPS components, including maintenance, finance, operations, and energy management. The committee's goal was to take holistic approach to energy management and obtain management support from the start. It is often difficult to obtain management commitments when cost-saving benefits are realized over the long term. USPS entered into an inter-agency agreement with the Department of Energy's Federal Energy Management Program, in which Lawrence Berkley National Laboratory (LBNL)

provided technical assistance. Partnering with DOE FEMP was one of the keys to the USPS Pacific Area Energy Program Committee's success.

As part of the strategic energy management plans, energy reduction goals and the method to measure progress to ensure tracking and validation was delineated. Tracking programs by region were developed to monitor and report energy use at the plant level. Instead of using DOE's Super ESPC program, USPC resurrected the agency's version of a "shared energy savings" purchasing contract. There has been a concentrated effort to partner with all of California utilities by district groupings. To maximize project benefits, high payback projects such as lighting were wrapped with lower payback projects such as HVAC.

The work performed by the USPS Pacific Area Energy Program Committee is being used as a model to establish similar programs in USPS regions across the country.

An example of a project that resulted from the USPS Pacific Area Energy Program Committee is the installation of one of the nation's larger solar arrays, a nearly 1 megawatt system on top of the processing plant in West Oakland. The solar array, combined with energy efficiency improvements made throughout the mail sorting plant, will save the agency approximately \$1 million a year and cut power purchases from PG&E by nearly one-third. This is just one of the many projects that the USPS Pacific Area is implementing.

Update – UESC Enabling Documents

Karen Thomas, NREL

The Utility Energy Services Contracts (UESCs) Enabling Documents provide a selected set of background information that clarify the authority for Federal agencies to enter into UESCs. The documents are designed to assist Federal agency acquisition teams interested in implementing energy service projects. The use of the Enabling Documents are not limited to Federal agencies; utility partners and other stakeholders have benefited from the documents as well.

Ms. Thomas provided an update from the working session held during the Spring 2006 FUPWG meeting held in Atlanta on May 3-4, 2006. The purpose of the session was to provide feedback for updating and revising the Enabling Documents. Ms. Thomas outlined the additions and revisions that will be made::

- Legislative and Executive Actions
- Legal Opinions
- Agency Guidance
- UESC Contract Sample Documents
- Lessons Learned
- Resource Documents

The goal is to circulate the draft of the revised Enabling Documents to the subcommittee by March 2007, and to share the draft with the FUPWG Steering Committee at the May 1-2, 2007 meeting.

To learn more about the Enabling Documents visit:

http://www1.eere.energy.gov/femp/financing/uescs_resources.html

Washington Update

Rick Khan, FEMP Director, Department of Energy (DOE)

In his opening remarks, Mr. Kahn, stated that utility and Federal agency partnerships are key to successfully meeting the Federal energy efficiency and renewable energy goals established by EPACT. Federal agencies are faced with new guidelines as a result of EPACT that require higher levels of energy efficiency; however, Federal budgets did not increase in direct correlation to the new requirements. A recent FEMP analysis estimated that Federal agencies require \$1 billion per year in investments to meet the EPACT energy efficiency and renewable energy goals. Given the sizeable need for project investments, there is a need to maximize **all** available sources of financing and assistance.

DOE's energy efficiency and renewable energy goals focus on:

- Greater emphasis on deployment
- Expanding the role of project financing
 - Reduce barriers and cycle times to get projects done
 - Drastically increase contract volume
- Coordination of deployment activities
- Use of UESCs, ESPCs, and Enhanced Use Leases as tools for achieving public/private financing projects

FEMP acknowledges the need for shifting perceptions - the perception is that FEMP and DOE EERE have only been concerned with promoting the use of ESPCs. ESPCs were the first alternative financing to be "promoted" as part of an overall strategy that includes all mechanisms for alternative financing. DOE wanted to ensure the ESPC program was healthy and assess the lessons learned. However, the recent ESPC "Blitz" was just the beginning. DOE recognizes that UESCs have been responsible for \$1.5 Billion in Federal energy efficiency projects.

Mr. Khan stated that FEMP and DOE EERE will pledge to promote both UESCs and ESPCs as valued tools in the FEMP tool box, noting that FEMP's mission is a significant factor in achieving the overall EERE strategy. He said that FEMP will continue to provide agencies and utilities with several tools, including:

- Technical Assistance
- Outreach

- Recognition
- Alternative Financing
- Policy Analysis

FEMP is interested in expanding Federal/Utility partnerships in these areas in order to better leverage utility resources and expertise. To accomplish this, Federal agencies and utilities need to work together to strengthen the UESC contracting vehicle, revise model agreements and the enabling documents, and develop standardized performance verification procedures. FEMP believes utilities can help agencies secure more public benefits funding and also help EERE with the deployment of advanced technologies in Federal facilities.

FEMP posed a challenge to FUPWG members to:

- Accelerate project planning and implementation
- Increase project funding to double from current investment levels
- Enhance the partnerships between utilities and agencies
- Increase the number of utility and Federal agency participants
- Maximize the use, by agencies, of additional services offered by utilities toward meeting the government's goals for energy efficiency and renewable energy

Facilitated Group Discussion: FUPWG Networking

The purpose of the facilitated group sessions is to provide a forum for individual discussion as well as explore issues and ideas for improving the effectiveness of FUPWG. Participants were divided into seven working groups of 10-12 people to discuss the questions listed below. Each working group was led by a FUPWG Steering Committee member, who moderated and facilitated the session. The working groups provided valuable input into how to meet the challenge posed by FEMP.

As part of developing the EERE UESC strategy, Mr. Khan listed number issues to be addressed during the facilitated group discussion:

- How can we double the level of project investment from its current level?
- How can we double the number of utilities offering UESCs to their customers?
- What are the perceived barriers to meeting these goals?
- What role can FUPWG play in achieving this goal?
- What key activities should FEMP engage in to help members meet this challenge?
- How can the FEMP Director and other EERE Senior management officials help meet this challenge?

Provided below is a summary of the group discussions; input was concentrated and encapsulated into the three primary issues.

Double the Level of Project Investment:

- Awareness
 - Encourage EERE Assistant Secretary, FEMP Director, and other EERE management officials to promote UESCs to Federal agencies. EERE Management must lead by example.
 - Share project success stories at the Energy 2007 Workshop and Exposition
 - Balance ESPC promotion with UESC promotion
 - Promote FUPWG meetings and engage the entire working group membership
 - Establish a FUPWG marketing subcommittee
 - Develop and implement a Marketing and Communications Plan, including letters to agencies and utilities
 - Establish an investment baseline and emphasize energy savings along with dollar investment
 - Review individual agency project lists and meet with agencies to discuss opportunities
 - Establish a UESC clearinghouse to obtain projects captures more effectively.
 - Update the FEMP web site, by making the UESC information easier to find

- Conduct Training
 - Utilities
 - Agencies – including Contracting Officers (NCMA)
 - Financing community
 - Lawyers
 - Webinars

- Produce Guidance Documents
 - Savings and retention guidance to help agencies
 - UESC/ESPC Comparison
 - Guidance for Contracting Officers
 - Map of utilities with UESC program to be used as marketing tool

- Encourage Partnerships
 - Between utilities and ESCOs
 - Between FEMP organizations such as EEI, NARUC, APPA, other utility organizations
 - More communications with utilities – (e.g., telecons)

- Provide Technical Assistance

- Consider additional project facilitation and other technical assistance to agencies
- Augment field staff
- Regulate Participation
- Offer Financing Assistance
 - Establish a revolving-loan fund
 - Improve financing via competition
 - Encourage the financing community to become more involved
 - Conduct workshops

Double the Number of Utilities Involved in Federal Projects

- Awareness
 - Begin by understanding utility needs and motivations
 - FEMP Director /other senior management should meet with EEI
 - Highlight potential Federal sector market potential
 - Approach mid-size utilities
 - Approach RECs and munis
- Training
 - Target utilities with significant Federal loads that don't currently offer UESCs
 - Conduct webinars
 - Provide a package of information together for potential utilities
- Partnerships
 - Engage with leaders and organizations referenced in the *National Action Plan for Energy Efficiency* – including, NARUC, EPA, utilities and utility organizations
 - Secured additional GSA support for UESCs
 - Work with State PUCs

Perceived Barriers:

- Regulated utilities don't see these services as a core business activity
- Risk perception of all stakeholders
- Lack of incentive for utilities to participate
- Lack of priority for energy conservation
- Lack of savings retention
- Lack of understanding of UESC benefits

- General lack of awareness
- Red Tape
- Upper management lack of support
- 10-year limit

David McAndrew stated that these comments will be incorporated into Strategic Action Plan for FUPWG for meeting the FEMP Challenge. The Plan will be presented and reviewed for comment at the Spring 2007 FUPWG meeting on May 1-2, 2007, in Cape Canaveral, Florida.

PG&E Success Story: Federal Pilot Lighting Program

Brad Gustafson, FEMP; Brian Liebel, AfterImage + Space, Peter Schwartz; and Peter Schwartz and Associates

The purpose of FEMP’s technology transfer program is to identify promising emerging technologies and accelerate deployment of these technologies in the Federal sector. The program also focuses on meeting Federal energy management goals, leading by example, and enhancing FEMP’s support for other agencies. Brad Gustafson, the FEMP Team Leader, provided an overview of current ongoing Emerging Technology Program projects.

- Spectrally Enhanced Lighting (SEL)
- Wireless Sensor HVAC control
- Intelligent Lighting
- Advanced (Electrochromic) Windows
- Hybrid Solar Lighting
- Advanced Lighting Efficiency/Demand Response Demonstration
- Variable Speed HVAC

The presentation focused on lighting, which is a major factor in energy use within the Federal sector. FEMP is currently investigating the following lighting technologies:

Technologies
1. Scotopic Lighting
2. Super T-8 Lighting
3. Task Lighting
4. Intelligent lighting controls
5. High-performance rooftop air

9. Solid State Lighting
10. Switchable Glazings
11. Building Automation / Demand Response
12. Fuel Cells

Two recent success stories were cited as lighting technology examples: PG&E's Advanced Lighting Technology Program for Federal Buildings, presented by Peter Schwartz and the Spectrally Enhanced Lighting Project presented by Brian Liebel.

PG&E's Advanced Lighting Technology Program goal is to save three MW of electricity by applying tailored energy efficiency and demand response technologies to shed load and cut power use while reducing pollution. The underlying thought is that each building is a power plant waiting to consume less energy. Rather than promoting just one technology, the program examines a building and its purpose to select the best set of technologies. Projects will be performance based and measurable. The guiding principles of a project translate to deploying cost effective, advanced lighting control technologies integrated with building control systems without compromising performance. The program team:

- Identifies facilities
- Enrolls participants-partners
- Deploys technology solutions tailored to each site
- Measures and verifies energy savings
- Documents occupant and customer satisfaction
- Reports results
- Transfers technology

The Advanced Lighting Technology Program for Federal Buildings will be operational between 2006 to 2008. To learn more about the PG&E Advanced Lighting Technology Program or to become a participant visit: <http://www.pge.com/biz/rebates/fedlighting/>.

Previous DOE sponsored lighting research has shown that the traditional way to measure light does not accurately reflect the way people see. Spectrally Enhanced Lighting adds more blue wavelengths to the light that result in an increased ability to see (acuity) with less light, thus less energy use. The Spectrally Enhanced Lighting Program (SELP) is focused on implementation for energy savings. The guiding principles of SELP are:

- Validate what is known
- Test what is conjectured
- Address market barriers
- Motivate industry

- Educate the public
- Develop new tools for success

PG&E tested the energy savings and occupant satisfaction of Spectrally Enhanced Lighting in real buildings as a result of the 2001 California brownouts. PG&E retrofitted seven of their own office buildings totaling approximately 300,000 square feet and found energy savings ranging from 30 to 65 percent, depending on the pre-retrofit lamp/ballast technologies. In addition, the building occupants raised no objections to the change in lighting.

The informal findings from the PG&E buildings led to a DOE/PG&E jointly sponsored field study that compared two floors of an office building, one retrofit with 3,500 K and 82 CRI lamps and the other retrofit with 5,000 K and 82 CRI lamps with reduced lighting levels set to result in equal visual acuity. The results provided energy savings with no difference in occupant acceptance between the two floors. While this study provided evidence for occupant acceptance and energy savings in a lighting retrofit application, the study was limited to two single floors within a building, making it too constrained to determine the economics of retrofitting an entire building with standard ballasts.

Based on field study results, DOE performed comprehensive field tests using three independent buildings that were entirely retrofitted with 5,000 K and 82 CRI lamps. This study determined that energy savings of approximately 20 percent are obtainable for T8 to T8 retrofits and 50 percent for T12 to T8 retrofits. Again, there was no difference in occupant satisfaction between the old and new lighting, nor was there any increase in the use of task lighting as a result of a decrease in illumination levels.

While continued research and field studies are underway, the cumulative and progressive results of the studies performed thus far demonstrate that Spectrally Enhanced Lighting can provide significant energy savings in a cost-efficient manner without risk of occupant rejection or dissatisfaction.

Energy Efficiency Funds and Demand-Response Programs – National Overview

Chuck Goldman, LBNL

Energy management programs are categorized according to the following definitions:

- **Energy Efficiency Programs:** Can be either 1) *public purpose* programs, which are administered either by utilities, state agencies, or other third parties, and are paid for by utility ratepayers, typically through a non-bypassable System Benefits Charge, which is instituted as part of restructuring legislation or rules, or 2) *utility programs* administered by the local utility and paid for by utility ratepayers through their bundled rates.

- **Demand Response Programs/Load Management:** Programs which provide incentives to curtail demand and reduce load during peak periods in response to system reliability or market conditions.

The trend for Demand-Response Programs/Load Management (DSM) and funding is increasing. Spending in 2006 Utility DSM and Public Benefit programs is approximately \$2.5 billion. In California, utilities account for 25 percent of total DSM spending. At least 30 state Public Utilities Commissions have directed utilities and/or public benefit administrators to invest in energy efficiency.

Currently, there is an under utilization of available public benefits funds by Federal customers. While alternative financing is good, free financing is better! The national trends to watch regarding public benefits funds include:

- Renewed Interest in IRP among many state PUCs
- DOE/EPA *National Action Plan for Energy Efficiency*
- ISO-NE Forward Capacity Market
 - Demand-side resources can participate in auctions
- Regional Greenhouse Gas Initiative(s) (RGGI)
- Utility Industry Initiatives
 - EPRI EE Technology Initiative: “Prices to Devices”

There has been a shift in approach and thinking regarding demand response. Previously, the focus was on load management. The practice was to provide interruptible/curtailable rates for commercial/industrial customers. Rate discounts were available for curtailments to pre-set Firm Service Level. In addition, there were significant penalties for non-compliance. This practice of direct-load control allowed utility control of customer end use loads. Now there is a shift toward demand response. This includes emergency demand response in which customers provide load reductions in response to generation shortfalls or transmission constraints. There is also an element of economic demand response known as demand bidding, which is becoming very popular in California. Customers submit load reduction bids or simply respond to real-time prices. This practice is resulting in the ability to take advantage of dynamic pricing (e.g., real-time pricing).

To learn more about Energy Management Programs and Demand Response Programs/Load Management visit:

http://www1.eere.energy.gov/femp/program/utility/utilityman_energymanage.html.

California Public Utilities Commission – California’s Energy Efficiency and Demand Response Programs

Dian Grueneich, Commissioner

Energy efficiency is California's highest priority resource to meet the state's needs in a low-cost manner and aggressively reduce green house gas emissions. *California's Energy Action Plan II (EAP II), Implementation Roadmap for Energy Policy* was adopted in October 2005, by the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC). The California EAP II is a living document, which will change with time, experience, and need. The CPUC and the CEC have jointly prepared the plan to identify additional actions to meet California's future energy needs. The development of EAP II has benefited from the active participation of the Business, Transportation, and Housing Agency; the Resources Agency; the State and Consumer Services Agency; the California Independent System Operator (CAISO); the California Environmental Protection Agency (Cal EPA); and other agencies with energy-related responsibilities. EAP II describes a coordinated implementation plan for state energy policies that have been articulated through the Governor's Executive Orders, instructions to agencies, public positions, and appointees' statements; the CEC's Integrated Energy Policy Report (IEPR); CPUC and CEC processes; and the agencies' policy forums.

California's approach to energy efficiency policy is both economic and environmentally sensitive. The EAPII includes clear priorities and a clear plan. California's load growth will be managed through energy efficiency practices and technologies, including renewable energy. There is a commitment to "Pursue all cost-effective energy efficiency, first." In addition, the plan includes strong demand response and advanced metering infrastructure programs. The revisions to the EAPII add RD&D, climate change, and transportation elements.

California adopted new legislation in the *Global Warming Solutions Act of 2006*, which defines the state's emission reduction targets; the targets call for 1990 levels by 2020. Energy efficiency is obviously a major tool for achieving this goal. The state law requires that 20 percent of electricity be delivered from renewable sources. California is looking into ways to add incentives in for utilities to make greater investments in energy efficiency. Water conservation is a major element in the energy efficiency equation.

Demand response is critical to success. The actual number of hours that need to be curtailed is not large, but manageable. The key is to inform customers and have technology and pricing/financial benefits not only available but also effectively communicated to customers. CPUC wants to continue the trend of successful accomplishments in area of Demand Response Programs, which include:

- Installation of interval meters for large customers (>200 kW) and placing customers on time-of-use tariffs (2001)
- CPUC approval of the utilities' 2006-2008 Demand Response budget proposals (\$262 million)
- Adoption of an aggressive, long-term dynamic pricing MW goal for utilities: 5 percent of system peak demand by 2007 (2003)

- Completing a 2-year pilot program - the Statewide Pricing Pilot, to examine the demand response capability of residential and small commercial customers (2003)
- Authorization of a total of \$70 million in AMI pre-deployment activities for utilities (2005)
- Directed utilities to propose default Critical Peak Pricing tariffs for large customers in their General Rate Cases (2006)
- Completed Automated Demand Response System (ADRS) pilot that investigated Demand Response capability of residential customers with automated Demand Response technology and their willingness to pay for the technology (2006)
- Directed the utilities to propose Demand Response measures for Summer 2007

To review the entire EAPII visit:

<http://www.cpuc.ca.gov/PUBLISHED/REPORT/51604.htm>

Advanced Metering and Meeting EPACT 2005 Requirements

Bill Eisele, South Carolina Electric & Gas; Ab Ream, FEMP; and Tim Vahlstrom, PG&E

There have been significant improvements in the area of utility metering in terms of obtaining and using data. Previously, monthly meter reads were recorded by the consumer on paper cards and mailed to the utility; today, through automation and advances in technology where meters are always on, wireless internet based technology using satellites to transfer unlimited amounts of real-time data are used

The *Energy Policy Act of 2005* (EPACT 2005), Sec.103,(a) requires the installation of meters and advanced electric meters on all Federal buildings by the year 2012, according to guidelines set forth by the Department of Energy (DOE) in consultation with other Federal agencies and stakeholder groups. EPACT required Federal agencies to submit an implementation plan by August 4, 2006. Agencies are required to install standard or advanced meters at all Federal buildings to the maximum extent practicable, by October 1, 2012.

Advanced meters have the capability to measure and record interval data (at least hourly for electricity) and to communicate data to a remote location in a format that can be easily integrated into an advanced metering system. EPACT Section 103 requires at least daily data collection capability. Advanced metering systems collect time-differentiated energy usage data from advanced meters via a network system on either an on-request or defined schedule basis, are capable of providing usage information on at least a daily basis, and support desired features and functionality related to energy use management, procurement, and operations.

Meter data is used for the following:

- Revenue Billing

- Time-of-Use Metering
- Real-Time Pricing
- Load Aggregation
- Submetering
- Energy Use Diagnostics
- Measurement and Verification of ESPC Savings
- Emergency Response
- Planning and Reporting

PG&E has undertaken an advanced metering initiative known as PG&E's SmartMeter, which provides customers with an automated gas and electric metering system that improves access to meter readings both for PG&E and for the customer. SmartMeters allow PG&E to collect meter data without setting foot on the customer's property. The SmartMeter collects energy usage data much more frequently, including hourly for electric and daily for gas. Customers will be able to access this detailed usage data online, and take advantage of new rate options to better manage energy consumption and control energy bills.

The main function of the PG&E SmartMeter program is to improve overall customer service; however, the SmartMeter program also gives customers increased control over their energy usage and bills. The goal is to increase the ability to monitor energy usage, provide an incentive for customers to conserve energy or shift energy usage, and decrease pressure on the power grid and the number of power plants.

Starting in the fall of 2006, Wellington Energy, an authorized independent contractor for PG&E, started upgrading gas and electric meters in the Bakersfield area. By 2011, the SmartMeter program will be available to all of the millions of PG&E gas and electric customers.