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

**Order Instituting Rulemaking to Examine the  
Commission's post-2008 Energy Efficiency  
Policies, Programs, Evaluation, Measurement  
and Verification, and Related Issues**

**Rulemaking 09-11-014  
(Filed November 20, 2009)**

**2011 REPORT OF PACIFIC GAS AND ELECTRIC COMPANY (U 39 M)  
IN ACCORDANCE WITH ADMINISTRATIVE LAW JUDGE'S RULING ADOPTING  
ANNUAL REPORTING REQUIREMENTS FOR ENERGY EFFICIENCY AND  
ADDRESSING RELATED REPORTING ISSUES**

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**May 1, 2012**

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OF THE STATE OF CALIFORNIA**

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Pacific Gas and Electric Company (PG&E) submits the attached 2011 Energy Efficiency Annual Report in accordance with the August 8, 2007 *Administrative Law Judge's Ruling Adopting Annual Reporting Requirements For Energy Efficiency and Addressing Related Reporting Issues*, in R.06-04-010. Ordering Paragraph 2 of that Ruling requires "each utility to file its annual report on May 1 of the year following the end of a given program year." Rulemaking 09-11-014 is the successor proceeding to R.06-04-010. Today's filing is within the scope of Ordering Paragraph 8 of R.09-11-014 related to "transition issues or filings related to pre-2009" programs that were previously addressed in R.06-04-010.

PG&E prepared its report in accordance with the Annual Reporting Requirements Manual, Version 4, that is Attachment C to the August 8, 2007 *Administrative Law Judge's Ruling*. The report describes the programs that make up the 2010-2012 energy efficiency portfolio and summarizes PG&E's energy efficiency accomplishments for 2011. PG&E is also providing its supporting tables to the service list in Excel format.

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Respectfully submitted,

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May 1, 2012

**2011**  
***ENERGY EFFICIENCY***  
***ANNUAL REPORT***

**May 1, 2012**



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# 2011 ENERGY EFFICIENCY PROGRAM PORTFOLIO

## EXECUTIVE SUMMARY

Pacific Gas and Electric Company (PG&E) submits its 2011 Annual Report for Energy Efficiency in accordance with the Annual Reporting Requirements Manual, Version 4 that is Attachment C to the *Administrative Law Judge's Ruling Adopting Annual Reporting Requirements For Energy Efficiency and Addressing Related Reporting Issues* dated August 8, 2007.<sup>1</sup> The report describes the programs that comprise the 2010-2012 Energy Efficiency (EE) portfolio and summarizes PG&E's energy efficiency accomplishments for 2011.

On September 24, 2009, the Commission issued Decision 09-09-047 (EE Decision) that authorized \$1.3 billion in funding for PG&E's 2010-2012 EE Portfolio and ordered PG&E to file various advice letters (AL) to modify programs and detail the program budgets in compliance with the decision.

The EE Decision set energy savings goals for 2010-2012, authorized budgets and cost-effectiveness requirements, placed a cap of 10 percent on utility administrative costs, and set targets for certain programs. The budget for Evaluation, Measurement and Verification (EM&V) for the 2010-2012 program cycle is 4 percent of the total portfolio. In addition, the EE Decision directed that both Database for Energy Efficient Resources (DEER) and non-DEER measure values used in planning the 2010-2012 EE portfolio would be frozen for the purpose of measuring performance against goals.

The EE Decision also authorized the following EE programs for 2010-2012:

- 12 Statewide Programs
  - Residential
  - Commercial
  - Industrial
  - Agricultural
  - New Construction
  - Lighting Market Transformation
  - Heating, Ventilation and Air Conditioning (HVAC)
  - Codes and Standards
  - Emerging Technologies
  - Workforce Education and Training
  - Statewide Marketing Education and Outreach
  - Statewide Demand-Side Management (DSM) Coordination and Integration

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<sup>1</sup> In accordance with the *Administrative Law Judge's Ruling Adopting Annual Reporting Requirements For Energy Efficiency and Addressing Related Reporting Issues* dated August 8, 2007, the Annual Reports are generally due on May 1 of each year following the end of a given program year.

- Local Programs
  - Zero Net Energy Pilot Program (ZNE)
  - On-Bill Financing
  - Local DSM Coordination and Integration
- Third Party Programs
- Government Partnerships
  - Innovator Pilots
  - Green Communities

These programs are described in the “Program Description and Strategies” section below, which in prior Annual Reports have been included in Section 1, as outlined in the 2007 ALJ Ruling. PG&E is presenting all of its 2011 programs in this section to provide a complete overview of the 2010-2012 EE portfolio structure.

On September 17, 2010, PG&E jointly filed with the other investor-owned utilities (IOUs) a Petition for Modification of the EE Decision. Decision (D.) 10-12-054, *Decision Addressing Petition for Modification of D.09-09-047*, issued December 16, 2010, adopted the following modifications to the energy efficiency portfolio for 2010-2012: froze ex ante values based on 2008 DEER version 2.05; clarified co-branding requirements with the Engage 360 brand; reduced the per home annual energy savings goals for homes treated under the Prescriptive Whole House Retrofit Program; clarified eligibility for performance bonuses paid under the California Advanced Home Program; and added language to provide a State Action Doctrine defense for utilities engaging in certain joint energy efficiency activities which are consistent with state policy and supervised by the Commission.

D.11-04-005, the *Second Decision Addressing Petition for Modification of Decision 09-09-047*, was issued on April 14, 2011. This decision adopted a second set of portfolio modifications which allowed benchmarking to be phased in, starting with large facilities first; specified the number of commercial buildings required to be benchmarked; allowed small variations to the 12 adopted statewide programs to fit the needs of different utility territories; and expanded the definition of allowable administrative costs.

D.11-07-030, the *Third Decision Addressing Petition for Modification of Decision 09-09-047*, was issued on July 14, 2011. This decision resolved outstanding issues pertaining to the determination of ex ante energy savings values for the 2010-2012 energy efficiency portfolio. The total portfolio energy savings used in this report include these ex ante updates. In addition, workpapers that are awaiting disposition have been excluded from reported energy savings.

In the Risk/Reward Incentive Mechanism (RRIM) Earnings True-Up for 2006-2008, D.10-12-049, issued on December 27, 2010, at p. 60, PG&E was allowed to claim energy savings for compact fluorescent lamps (CFLs) that were procured and rebated in the 2006-2010 time frame, but were not installed until subsequent years. Total portfolio energy savings used in this report include estimated energy savings from 2006-10 CFLs installed in 2011 per CPUC D.10-12-049. These are estimated savings values awaiting final CFL bulb counts from Energy Division Staff.

In compliance with the EE Decision and D.11-07-030, PG&E filed AL 3235-G/3901-E Request for Authority to Shift Funds and Make Other Program Modifications Pursuant to D.09-09-047 on September 12, 2011. On December 22, 2011, the Commission issued the *Assigned Commissioners Ruling Clarifying Fund Shifting Rules and Reporting Requirements* (ACR) to clarify fund shifting rules for third party and government partnerships, financing and other local programs. In response to the Energy Division's request for additional information and responsive to the ACR, PG&E filed Supplemental AL 3235-G-A/3901-E-A on January 13, 2012 that was approved effective February 10, 2012.

Senate Bill (SB) 87 (Stats. 2011, Ch. 33) authorized the transfer of the gas Public Purpose Programs (PPP) surcharge funds collected from gas ratepayers to the State's General Fund under legislation enacting the fiscal year 2011-2012 budget. D.11-10-014, *Decision Regarding Public Purpose Program Funds* dated October 6, 2011, authorized PG&E and the other IOUs to use unspent authorized gas and electric funds from pre-2010 energy efficiency funds to offset SB 87 related reductions, if any, in gas Public Purpose Program funding. In late 2011, the Alameda Superior Court issued a ruling upholding a lawsuit challenging the legality of this provision of the budget legislation. To date, no PPP surcharge funds have been transferred to the General Fund under SB 87.

The Commission is evaluating shareholder incentives for the 2010 – 2012 program cycle in Rulemaking 12-01-005. Therefore, no shareholder incentive estimates are included in this report for 2011 accomplishments.

In 2011, PG&E achieved 147% of its energy savings (gross annual kWh) goal, 115% of its demand reduction (gross summer peak kW) goal and 205% of its gas savings (gross annual therms) goal.

## **PROGRAM DESCRIPTIONS AND STRATEGIES – STATEWIDE PROGRAMS**

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### ***RESIDENTIAL PROGRAM***

California set an ambitious market goal of reaching all 13 million existing homes with comprehensive energy efficiency improvements by 2020. To achieve significant progress towards this goal, programmatic efforts must be more integrated, coordinated, and scaled significantly over the next seven years. PG&E continues to work more closely with publicly owned utilities (POUs), water agencies, and other organizations across the state. In 2011, PG&E offered comprehensive activities to reach across California's diverse population, climate zones, and socio-economic markets to tap the economic potential available while advancing the initiatives of the Strategic Plan.

## Program Strategy

The 2011 California Statewide Program for Residential Energy Efficiency (SPREE) offered and promoted specific and comprehensive energy solutions within the residential market sector. PG&E's Residential program employed various strategies and tactics to overcome market barriers and to deliver programs and services aligned to support the Strategic Plan by encouraging adoption of economically viable energy efficiency technologies, practices, and services. The ultimate focus of PG&E's Residential program was to:

- Facilitate, sustain, and transform the long-term delivery and adoption of energy-efficient products and services for single and multifamily dwellings;
- Cultivate, promote, and sustain lasting energy-efficient behaviors by residential customers through a collaborative statewide education and outreach mechanism; and
- Meet consumers' energy efficiency adoption preferences through a range of energy-efficient products.

PG&E's Residential program included the following:

- 1. Home Energy Efficiency Survey (HEES) Program:** In accordance with goals of the Strategic Plan, the HEES Program worked towards advancing whole house energy solutions. HEES pursued innovative initiatives to reverse the growth of plug load energy consumption through behavioral solutions and, as warranted, demand side management (DSM) integration opportunities. The HEES program reached out to selected customer groups through three Home Energy Report test waves as part of an increasing effort to create positive behavior change. In addition, work continued on the Progressive Energy Audit Tool Suite to provide increasingly effective tools to help customers save energy. While focusing on new initiatives, the program also maintained current survey offerings to continue to help participants understand how they use energy and how they can improve its use. Additionally, HEES provided information and referrals to other DSM programs, water conservation efforts, and low income programs, as applicable.
- 2. Residential Lighting Incentive Program for Basic CFLs:** The Residential Lighting Incentive Program for Basic CFLs provided customers with incentives in the form of instant rebates that reduced the cost of energy-efficient lighting products. It encouraged the introduction and adoption of energy-efficient lighting products into the market, increased the availability of existing products, and influenced the purchasing behaviors of customers. More than 800 retailers at over 1,800 store locations participated in PG&E's program.
- 3. Advanced Consumer Lighting:** Like the Residential Lighting Incentive Program described above, the Advanced Consumer Lighting Program provided customers with incentives in the form of instant rebates that significantly reduced the cost of energy-efficient lighting products, introduced energy-efficient lighting products to the

market, and influenced the purchasing behaviors of customers. A broad array of product types and models were available for this program's incentives. The 2011 program focused on specialty CFLs. In addition, the IOUs collaborated on a statewide Lighting Market Transformation Program strategy that coordinated IOU efforts to further efficient lighting technology in California.

- 4. Home Energy Efficiency Rebates (HEER):** The statewide HEER Program offered rebates to residential end-use customers to cover some of the incremental costs of purchasing energy-efficient products. Some products were rebated through on-line or mail-in application processes while others provided point-of-sale (POS) rebates. Rebates were offered for a specific list of energy-efficient products; this list of rebated measures varies slightly by utility. The measure list included, but was not limited to, items that could be delivered and installed either by the customer or a contractor, such as Energy Star Qualified<sup>®</sup> room air conditioners, water heaters, clothes washers, insulation, whole house fans and variable speed pool pumps. Finally, the statewide HEER program was supported by various marketing initiatives funded by the program including PG&E's Integrated Marketing Outreach Program, and in-field program support by the field services team.
  
- 5. Appliance Recycling Program (ARP):** The Appliance Recycling Program picked up operable but inefficient appliances, primarily refrigerators, from residential dwellings and businesses to prevent their continued operation by recycling them in an environmentally safe manner.

On April 1, 2011, a trial to test a new retail delivery channel was launched. The trial will run through the fourth quarter of 2012 to allow the program to capture a robust data set. A report on this trial study will then be completed. In the interim, PG&E will utilize the findings of a similar trial study that was recently conducted by SCE, as well as the process evaluation of the ARP program that is being conducted during the 2012 year.

- 6. Business and Consumer Electronics Program (BCEP):** The Business and Consumer Electronics Program (BCEP) is a new addition to the 2010-2012 residential energy efficiency portfolios. PG&E provided midstream incentives to retailers, manufacturers, and distributors to encourage increased stocking, promotion, and sales of high-efficient electronic products including computers, computer monitors, and televisions. The program provided incentives to the market actor best positioned to influence purchasing, stocking, and specification decisions and provided field support services to update marketing materials in retail stores and supported education to the retail sales force. PG&E used online systems to help educate customers and enable identification of the most energy-efficient and environmentally friendly products available in the market for multiple categories, including televisions, and computers.
  
- 7. Multifamily Energy Efficiency Rebates (MFEER) Program:** The MFEER Program offered prescriptive rebates for energy-efficient products to motivate

multifamily property owners and managers to install energy-efficient products in both common and dwelling areas of multifamily complexes in addition to common areas of mobile home parks and condominiums. An additional objective of the program was to heighten the energy efficiency awareness of property owners/managers and tenants.

The MFEER worked to address the ongoing concern with “split incentives,” where the residents are not the owners of the property, so they may lack an incentive to make investment-grade improvements. Similarly, the property owners typically do not live on-site and typically do not pay higher utility expenses associated with inefficient appliances, thus may lack incentive to upgrade. MFEER was designed to drive this customer segment toward participation by offering property owners a variety of energy efficiency measures and services.

In 2011, the IOUs increased visibility by promoting the MFEER Program, as well as other related programs, at various apartment industry trade shows. As a result, customer participation increased with the engagement of energy specialists and large property management firms. PG&E continued towards a more comprehensive set of measures and explored integration opportunities. PG&E promoted energy efficiency and provided equipment rebates to owners and tenants of multifamily properties of two or more dwelling units, including residential apartment buildings, condominium complexes, and mobile home parks. PG&E also reduced the rebate amount for the high impact lighting measures. As a result, the program met its energy savings goals and was more cost-effective overall, and customer satisfaction scores increased by a half percent over the prior year.

- 8. Whole House Performance Program:** In 2011, PG&E launched its full Whole House Performance Program to develop the infrastructure and market for this comprehensive retrofit program. The performance path requires a performance audit of the home, generating a customized energy upgrade set of measures with rebates up to \$4,000 for modeled energy savings of 40% or more. Customer incentives, marketing, contractor field support, and quality assurance processes were implemented to support this program. Using lessons learned from the 2010 pilot, PG&E refined and expanded the offering to yield substantial, comprehensive, and new long-term home energy savings and eliminate lost opportunities in existing homes to the maximum extent possible.
- 9. Prescriptive Whole House Retrofit Program (PWHRP):** In 2011, PG&E launched PWHRP as a full program in conjunction with the Whole House Performance Program. The prescriptive path requires a basic set of envelope measures be installed in a customer's home for a \$1,000 rebate. This whole house approach was promoted through the statewide PWHRP in close coordination with the IOUs' local Whole House Performance Programs (described above) and the American Recovery and Reinvestment Act (ARRA)-funded Energy Upgrade California brand.

PG&E marketed both the Whole House Performance Program and PWHRP offerings to customers and industry participants through a variety of methods ranging from homeowner workshops, contractor participation workshops, contractor marketing collateral and sales training, PG&E's website, and other training activities. PG&E leveraged marketing activities implemented by ARRA awardees, including the Energy Upgrade California web portal and mass media campaigns. Upon project completion, PG&E followed up with program participants through a program survey.

## **COMMERCIAL PROGRAM**

### **Program Description**

The 2010-2012 Statewide Commercial Energy Efficiency Program offers strategic energy planning support, technical support (such as facility audits, calculation and design assistance), and financial support through rebates and incentives aimed at providing integrated energy management solutions for energy efficiency, demand response, and distributed generation, including renewables. Targeted segments include distribution warehouses, office buildings, hotels, motels, restaurants, schools, universities, colleges, hospitals, high-tech facilities, bio-tech facilities, retail facilities, entertainment centers, and smaller commercial customers that have similar buying characteristics.

The five statewide subprograms described below — Nonresidential Audits, Calculated Incentives, Deemed Incentives, Direct Install, and Continuous Energy Improvement — comprise the core product and service offerings for the Commercial program. Each utility also offers local program elements such as Third Party and Local Government Partnership programs that complement and enhance these core offerings in their region.

1. **Calculated Incentives Program:** Offers incentives for customized retrofit and retro-commissioning energy efficiency projects. The program also provides comprehensive technical and design assistance.
2. **Deemed Incentives Program:** Offers rebates to customers in an easy-to-use mechanism to offset the cost of off-the-shelf energy saving equipment.
3. **Continuous Energy Improvement (CEI) Program:** Offers a non-resource pilot program which provides a toolkit of planning and other resources, including analysis, benchmarking, goal setting, project implementation support, performance monitoring, and energy management certification.
4. **Direct Install Program:** Offers rebates to small business customers with a small peak demand and provides the opportunity to have a third-party contractor retrofit existing systems with energy efficient systems at no cost to the customer.
5. **Nonresidential Audits Program:** Provides customers with basic audits, integrated audits, and retro-commissioning audits. These audits provide an inventory of technical project opportunities and financial analysis information.

## **Program Strategy**

Program offerings were packaged with distributed generation and demand response and marketed directly to commercial customers by PG&E staff, trade professionals, third parties, and government entities. Audits, incentives, CEI and direct install components were delivered by PG&E staff and contractors. Rebates were delivered through coordination with manufacturers, distributors, retailers, vendors, contractors and direct to consumer marketing.

PG&E and the IOUs executed a series of strategies to address the needs of commercial customers in 2011. During this period, the economy started a slow recovery, but customers continued to struggle with lower margins and lack of access to capital. These factors impacted the implementation of energy efficiency projects.

Vendors and contractors were key delivery channels for the commercial sector, particularly for direct install projects. These implementers worked with manufacturers, contractors, retailers and customers to maximize energy savings. The IOUs coordinated customer information, provided vendor/retailer/contractor support, and encouraged manufacturer/distributor participation.

An integration team met regularly to develop targeted strategies, including vendor education to ensure integrated delivery of products and services. PG&E launched On-Bill Financing in September 2011 to help address customers' lack of capital for calculated incentive projects. PG&E's Small and Medium Business (SMB) Solutions marketing team developed case studies of successful SMB energy efficiency projects to use as sales tools and rolled out direct mail campaigns including segment rebate booklets to educate customers on their options.

PG&E continued to align its programs to better meet customer needs. The Sales Operations support team provided assistance to account representatives with audits and calculations. In addition, the SMB Energy Solutions & Service team focused on targeted SMB strategies and outreach for SMB customers.

Efforts were also coordinated with the Third Party Programs and Government Partnerships. The Third Party Programs were designed to meet the unique needs of the diverse customer markets in PG&E's service area. The Government Partnerships program has coordinated with cities, counties and other agencies to develop integrated energy management opportunities. Collectively, these programs have complemented PG&E's Energy Solutions & Service offerings and have been part of a comprehensive energy services suite available to customers.

The IOUs also continued to share best practices for these programs to deliver integrated energy opportunities to customers as efficiently and effectively as possible.

## **INDUSTRIAL PROGRAM**

### **Program Description**

The 2011 Statewide Industrial Energy Efficiency Program has partnered with industry stakeholders to promote integrated energy management solutions to industrial end use customers. The program offerings are together designed to not only overcome the traditional market barriers to energy efficiency, but also use energy efficiency to advance distributed generation and demand response opportunities. Customers from the industrial sector include: printing plants, plastic injection molding facilities, component fabrication, lumber and paper mills, cement plants and quarries, metals processing, petroleum refineries, chemical industries, assembly plants, and water and wastewater treatment plants.

The four statewide subprograms described below — Industrial Energy Audits, Calculated Incentives, Deemed Incentives, and Continuous Energy Improvement — comprise the core product and service offerings for the industrial market. Each utility also offers local program elements such as Third Party and Local Government Partnership programs that complement and enhance the core offerings in their region.

1. **Calculated Energy Efficiency Incentives Program:** Offers incentives for customized new construction, retrofit and retro-commissioning energy efficiency projects. The program also provides comprehensive technical and design assistance.
2. **Deemed Energy Efficiency Program:** Offers rebates to customers in an easy-to-use mechanism to offset the cost of off-the-shelf energy saving equipment.
3. **Continuous Energy Improvement (CEI) Program:** Offers a non-resource program which provides a toolkit of planning and other resources, including analysis, benchmarking, goal setting, project implementation support, performance monitoring, and energy management certification.
4. **Nonresidential Audits:** Offers basic audits, integrated audits, and retro-commissioning audits, which provide an inventory of technical project opportunities and financial analysis information.

### **Program Strategy**

PG&E executed a series of strategies to address the needs of its industrial customers in 2011. During this period the economy started a slow recovery but customers continued to struggle with lower production rates, lower margins and lack of access to capital. All these factors impacted the implementation of energy efficiency projects.

These strategies included the introduction or redesign of measures, mainly for system optimization, to align with customers' budget constraints as well as integrated offerings systematically presented to customers in synergy, when possible, with their sustainability plans.

Several customers signed up for the Continuous Energy Improvement subprogram. They started developing their strategic energy management plans and entered their implementation phase in 2011. In addition, PG&E initiated collaboration with the Department of Energy to identify trial facilities for the Superior Energy Performance certification program. PG&E also participated in the US Technical Advisory Group to prepare the ISO 50001 standard that launched in August 2011.

The Industrial Program coordinated with Third Party Programs and Government Partnerships as well as the other utilities. A statewide Industrial Program team met bimonthly to align outreach strategies and offerings across California.

## ***AGRICULTURAL PROGRAM***

### **Program Description**

The 2010-2012 Statewide Agricultural Energy Efficiency Program offers strategic energy planning support, technical support, such as facility audits, calculation and design assistance with financial support through rebates and incentives aimed at providing integrated energy management solutions for energy efficiency, demand response, and distributed generation, including renewables. Targeted segments from the agricultural sector may include agricultural growers (crops, fruits, vegetable and nuts), greenhouses, post-harvest processors (ginners, nut hullers and associated refrigerated warehouses), dairies and water and irrigation districts/agencies. Targeted segments from the food processing sector include: fruit and vegetable processors (canners, dryers and freezers), prepared food manufacturers, wineries and other beverage manufacturers.

The Statewide Agricultural Energy Efficiency Program includes five statewide subprograms: Energy Audits, Calculated Incentives, Deemed Incentives, Continuous Energy Improvement, and Pump Test Services.

Each utility also offers local program elements such as Third Party and Local Government Partnership programs that complement and enhanced these core offerings in their region.

1. **Calculated Energy Efficiency Program:** Offers incentives for customized retrofit and retro-commissioning energy efficiency projects. The program also provides comprehensive technical and design assistance.
2. **Deemed Energy Efficiency Program:** Offers rebates to customers through an easy-to-use mechanism to offset the cost of off-the-shelf energy saving equipment.
3. **Continuous Energy Improvement (CEI):** Provides a toolkit of planning and other resources, including analysis, benchmarking, goal setting, project implementation support, performance monitoring, and energy management certification.
4. **Nonresidential Audits Program:** Includes basic audits, integrated audits, and retro-commissioning audits, which provide an inventory of technical project opportunities and financial analysis information.

5. **Pump Efficiency Services:** Helps customers make informed decisions about improving inefficient pumping systems.

### **Program Strategy**

PG&E executed a series of strategies to address the needs of its agricultural and food processing customers in 2011. During this period, the economy started a slow recovery, but customers continued to struggle with lower production rates, lower margins, and lack of access to capital as well as new federal, state and local regulations. All these factors impacted the implementation of energy efficiency projects.

These strategies included engaging these highly unique business segments around the right measures for their business through the following methods: direct, one-on-one interaction between account managers and third party representatives; print, direct mail and e-mail campaigns; regional- and segment-focused integrated workshops; relationships with industry associations and equipment vendors; and attendance and participation in trade shows and seminars. Each of these interactions afforded the opportunity to present integrated energy solutions to customers and industry-stakeholders.

Successes were directly attributed to targeted e-mail messaging by account managers that offered information about the potential energy savings associated with a particular type of technology or with the particular services of a Third Party program relevant to that customer's business. Segment-focused integrated workshops in 2011 brought customers together with account representatives, third parties, equipment vendors and other industry players and directly generated project leads as a result. Efforts were coordinated with Third Party programs and Government Partnerships as well as the other utilities. The statewide Agricultural Program team continued to meet bimonthly to align outreach strategies and offerings across California.

The consistency of PG&E's presence at key industry trade shows and an improvement in PG&E's booth displays and layout allowed for a greater number of face-to-face interactions with customers at these events. Integrated program offerings included energy efficiency, demand response, and distributed generation marketed directly to agricultural and food processing customers through PG&E's sales and program representatives. Audits, incentives, CEI and pump efficiency components were delivered through a combination of PG&E staff and contractors. Rebates were delivered through coordination with manufacturers, distributors and retailers.

Energy solutions that the agricultural and food processing customers found to be specifically applicable to their operations included pump upgrades, variable speed drives, refrigeration, boiler, steam, insulation, lighting controls, and irrigation measures.

## **NEW CONSTRUCTION PROGRAM**

The 2011 New Construction Program promoted energy efficiency and use of energy-efficient measures by consumers and focused on the maximization of energy efficiency as an energy resource. The Program includes three statewide subprograms:

### **1. Savings By Design (SBD)**

SBD is an energy efficiency program developed for the nonresidential new construction industry. Since 1999, SBD has provided statewide consistency, program stability, and savings to California's IOU customers. SBD seeks to protect and preserve natural resources by advancing the design and construction of sustainable communities and promoting green building practices. The program is designed to overcome customer and market barriers to designing and building high performance facilities.

The six program strategies include:

- Continuing to offer an incentive of \$100/kW for peak reduction.
- Adding incentive kickers for green building certification, end-use monitoring, and commissioning.
- Adding a \$5,000 stipend for design teams to hold workshops to encourage deeper energy reductions.
- Redesigning program icon; in process on website redesign.
- Making ongoing Improvements to the Energy Design Resources website, including publication of monthly newsletters.
- Planning for Integrated Demand Side Management (IDSM) implementation (combining demand response and energy efficiency in New Construction).

### **2. California Advanced Homes Program (CAHP)**

CAHP is part of the statewide Residential New Construction program offering. CAHP encourages single and multifamily builders of all production volumes to construct homes that exceed California's Title 24 energy efficiency standards by a minimum of 15 percent. Through this plan, projects are approached identically for program purposes except where explicitly noted. For instance, PG&E's multifamily new construction program, California Multifamily New Home Program (CMFNH), is a Third Party Program implemented by the Hescong Mahone Group, Inc. As such, CMFNH offers different incentives and program strategies.

The seven program strategies include:

- Moving from a deemed incentive approach to customized incentive approach.

- Adding \$1,000/home New Solar Homes Partnership Tier 2 incentive.
- Capturing and paying on savings from final house orientation.
- Adding incentive kickers for green building certification, Energy Star® certification, smaller house sizes, and peak kW reduction from photovoltaic generation.
- Adding an incentive for peak reduction.
- Adding up to a \$5,000 stipend for design teams to hold workshops to encourage deeper energy reductions.
- Designing new statewide program icon; new web site launched.

### 3. **Energy Star® Manufactured Homes (ESMH) Subprogram**

ESMH is part of the statewide Residential New Construction (RNC) program offering. ESMH addresses new factory-built housing not covered under the state's T-24 energy codes.

Strategies implemented in 2011 included:

- Launching 2011 program.
- Educating customers, retailers and manufacturers about the benefits of the Energy Star® manufactured home.
- Promoting program participation through focused marketing efforts.

## ***LIGHTING MARKET TRANSFORMATION***

### **Program Description**

The Statewide Lighting Market Transformation (LMT) Program established processes through which the IOUs developed and tested market transformation strategies for emerging lighting technologies (products, systems and design strategies), as well as for technologies already incorporated into their energy-efficiency programs. The LMT addressed lighting opportunities across residential, commercial, and industrial market segments for both replacement and new construction activities. These LMT activities augmented and leveraged the existing IOU programs for evaluating and testing the market transformation needs for short- and long-term activities to reach the zero net energy (ZNE) goals in the Strategic Plan. LMT included market research and coordination activities, as well as an educational component aimed toward improving the information available to consumers, contractors, and other market actors regarding new and existing lighting technologies. The program also formalized a process by which the IOUs can rapidly introduce advanced lighting solutions and emerging technologies to the marketplace, continually improve the IOUs' current lighting programs across all market sectors, and develop innovative new program strategies to continually advance the lighting market.

This program included the following subprograms:

1. **Lighting Technology Advancement:** This subprogram explores processes by which the IOUs can rapidly introduce advanced lighting solutions and emerging lighting technologies to the marketplace. This subprogram contained elements to conceptualize and test initiatives that introduced mid-term improvements to current lighting programs in response to product and market developments across all market sectors
2. **Lighting Education and Information:** This subprogram addresses the pressing need for more accessible information on lighting technologies across all market sectors and among IOU staff and installation contractors. The subprogram helped identify and utilize avenues by which advanced lighting education can be applied to pipelines for large scale customer applications.
3. **Lighting Market Transformation:** This subprogram enables the IOUs to identify gaps in LMT strategies for different technologies and create data-driven solutions. These solutions informed and leveraged energy efficiency program efforts to fill the gaps in market transformation strategies for each lighting technology. The subprogram developed and tested innovative program strategies to advance market transformation and helped enfold proven approaches into resource-based production programs. This third subprogram integrated the findings and networks uncovered by the first two subprograms to implement synergistic activities that drive the market forward. It collaborated with other lighting programs to plot paths and monitor progress toward achieving ZNE objectives.

### **Strategies Implemented in 2011**

- The conceptual LMT Program framework in 2010 was revised and formalized in 2011 with input from utility program managers, government and industry stakeholders.
- The LMT Program hosted an LMT Stakeholder Meeting following the Lighting Action Plan meeting. The intent of the meeting was to provide lighting stakeholders an introduction and overview of the LMT Program, to gain insight and input from key lighting stakeholders on the program's efforts, and to learn from one another and increase collaborative opportunities. The meeting was successful with forty-four stakeholders in attendance. Many provided comments, feedback and suggestions for collaboration.
- Work on the LMT Lighting Solution Workbook, formerly known as the "Lighting Technology Roadmap Spreadsheet," was started in 2011. The project gathered input from a broad group of stakeholders including the California Lighting Technology Center, BC Hydro and the Pacific Northwest National Laboratory. As part of the LMT Program Framework, the Workbook is a utility program planning tool. The Workbook contains market data that allows for prioritization of lighting solutions (such as products, systems and design strategies) by market, technology, savings potential, and market barrier. The Lighting Solution Workbook was completed on schedule in 2012 and has been posted to the California

Measurement Advisory Council (calmac.org). The work has also been accepted in the American Council for an Energy-Efficient Economy (ACEEE) and is to be presented at the ACEEE Summer Study on Energy Efficiency in Buildings in 2012. The Lighting Solution Workbook is now currently being used to help develop Lighting Solution Pipeline Plans.

- Design concepts are in development for an LMT Lighting Activity Workbook, which is intended to track various completed, on-going and planned lighting activities. Lighting activity information from this workbook is planned to be used in tandem with the market data from the Lighting Solution Workbook to help develop Lighting Solution Pipeline Plans.
- LMT Lighting Solution Pipeline Plans are under development with input from utility, government and lighting industry stakeholders. The foundation of partnerships gathered in 2010 and 2011 in concert with the lighting market and activity data were leveraged to help develop a more robust, collaborative and coordinated set of activities in an effort to transform the lighting market to help meet California's long-term energy efficiency goals.
- The LMT Program continues to collaborate with IOU programs such as Emerging Technologies, Codes and Standards, and Marketing Education and Outreach programs as well as industry organizations such as the California Lighting Technology Center, Pacific Northwest National Laboratory, lighting designers and manufacturers to increase collaboration and coordination opportunities.

## ***HEATING, VENTILATION, AND AIR CONDITIONING (HVAC)***

The Statewide Residential and Commercial HVAC Program delivers a comprehensive set of downstream, midstream, and upstream strategies that builds on existing program, education, and marketing efforts and leverages relationships within the HVAC industry to transform the market towards a sustainable, quality driven market. Market transformation and direct energy savings and demand reductions are achieved through these six subprograms that make up a comprehensive program approach:

### **1. Upstream HVAC Equipment Incentive**

The Upstream HVAC Incentive Program offers incentives to distributors who sell qualifying high-efficiency HVAC equipment to increase the regional stocking and promotion of such equipment.

Strategies implemented in 2011 included the following:

- Continuing to actively promote the program to distributors and manufacturers, both those currently participating and those who have not yet participated much or at all.

- Continuing to evaluate new technologies or other related equipment categories such as Variable Refrigerant Flow, ductless equipment, and water-cooled packaged chillers introduced into the program, with additions planned for 2012.
- Using metrics to benchmark distributor performance relative to their peers.

## **2. HVAC Technologies and System Diagnostics Advocacy**

The HVAC Technologies and System Diagnostics Advocacy Program is a coordination and advocacy program that addresses the technical elements critical to increasing the market introduction of advanced cooling and fault detection and diagnostic technologies.

Strategies implemented in 2011 included the following:

- The Automated Fault Detection and Diagnostics (AFDD) subcommittee of the IOU-supported Western HVAC Performance Alliance developing a draft “Onboard and In-Field Fault Detection and Diagnostics—Industry Roadmap.”
- Working with leading HVAC Industry association ASHRAE staff and its committees towards the establishment of a national standard for AFDD. ASHRAE has established a standards project committee, SPC 207P, for “Laboratory Method of Test of Fault Detection and Diagnostics Applied to Commercial Air-Cooled Packaged Systems.”
- Collaborating with the other IOUs on conducting a series of AFDD projects for residential/commercial applications in support of the roadmap including impacts of common HVAC cooling faults, commercially available AFDD technologies, developing test procedures for evaluating AFDD technologies, and understanding HVAC maintenance behavior, and leveraging Home Area Networks.
- Collaborating with the other IOUs on several activities in support of “Climate Appropriate HVAC technologies” including Western Cooling Challenge, Roof Top Unit Retrofits, and developing laboratory test protocols for evaporative pre-coolers.
- Continuing executive level discussions with several manufacturers to explore partnership opportunities for testing and deploying emerging and/or “climate appropriate” technologies.
- Together with the statewide IOU team, continuing Codes & Standards enhancement studies, which when completed, will recommend provisions to the California Energy Commission (CEC) for adoption into the Title 24 Energy Efficiency Standards.

## **3. Commercial Quality Installation**

The Commercial Quality Installation Program addresses commercial installation practices to ensure that equipment is installed and commissioned per industry standards.

Strategies implemented in 2011 included the following:

- Continuing to support discussions within a subcommittee of the Western HVAC Performance Alliance to create a roadmap for IOU program staff to use with program development activities to develop an industry-standards-based, comprehensive approach to HVAC Commercial Quality Installation.
- Ramping down contractor participation in initial phase of the program due to the focus in 2011 on a re-design of this program for a planned re-launch of the Commercial Quality Installation program in 2012.

#### **4. ENERGY STAR Residential Quality Installation Program**

The ENERGY STAR<sup>®</sup> Residential Quality Installation addresses residential installation practices to ensure that equipment is installed and commissioned per industry standards.

Strategies implemented in 2011 included the following:

- Ramping down contractor participation in the initial phase of program due to the focus in 2011 on a redesign of this program for a planned re-launch of the program in 2012.
- Conducting multiple training sessions on Manual J, D and S to ensure that systems are designed and specified in accordance with industry norms.
- Conducting multiple training sessions on system commissioning to ensure that participating contractors/technicians have the skills necessary to install systems per industry standards.
- Engaging manufacturers to develop and offer equipment selection calculators and/or expanded capacity tables to provide contractors with the necessary tools needed to properly select equipment at design conditions.
- Supporting contractors with marketing materials and outreach efforts to educate customers on the value of quality installation and utilizing licensed and certified technicians.

#### **5. Residential Quality Maintenance and Commercial Quality Maintenance Development:**

The program addresses residential and commercial maintenance practices to ensure that equipment is serviced per industry standards and that the maintenance effort supports the long-term strategic goal of transforming the trade from commodity-based to quality-based.

Strategies implemented in 2011 included the following:

- In the third quarter of 2011, launching a comprehensive Residential Quality Maintenance Program that provides measures for system assessment, system optimization, one-year preventive maintenance agreements based on ACCA/ANSI Standard 4, system air flow improvements, and brushless fan motor installation.
- In the third quarter of 2011, launching a comprehensive Commercial Quality Maintenance Program based on ANSI/ASHRAE/ACCA Standard 180.
- Conducting multiple training sessions for both residential and commercial contractors on Advanced Diagnostics and other Quality Maintenance practices to ensure that participating contractors/technicians have the skills necessary to assess, maintain, and optimize systems per industry standards.
- Supporting residential and commercial contractors with marketing materials and outreach efforts to educate customers on the value of quality maintenance and utilizing licensed and certified technicians.
- Designing and launching both residential and commercial program websites with information sections for both customers and contractors.
- Continuing to support discussions within a subcommittee of the Western HVAC Performance Alliance to provide input and feedback regarding design of both Residential and Commercial programs.
- Holding multiple contractor forums to solicit direct input into program design of both Residential and Commercial programs.
- Holding multiple customer focus groups to better understand the market barriers to residential and commercial quality maintenance.
- Launching a Maintenance Planning System, software that supports commercial program customers and participating contractors.

## **6. HVAC Workforce Education & Training:**

The program offers education and training opportunities targeted at all levels of the HVAC value chain to close training gaps at all levels of the industry.

Strategies implemented in 2011 included the following:

- Continuing established partnerships with training organizations to expand technician training opportunities in both classroom and lab settings.
- Designing and launching training programs offered through a program implementer for residential and commercial contractors that are participating in the newly re-

designed residential quality maintenance and commercial quality maintenance programs.

- Establishing and supporting two subcommittees of the Western HVAC Performance Alliance to provide input and feedback regarding HVAC workforce education and training efforts related to HVAC in whole building and for quality maintenance and quality installation.

## **CODES AND STANDARDS**

The Codes and Standards (C&S) Program saves energy on behalf of customers by influencing improvements in energy efficiency regulations, improving compliance with existing codes and standards, and working with local governments to develop ordinances that exceed statewide minimum requirements. C&S program activities extend to all buildings and potentially any appliance in California, for both advocacy and compliance improvement. The C&S program aggressively supports the goals of the Strategic Plan, which highlights the role of C&S in meeting Assembly Bill (AB) 32 (Stats 2006, Ch. 488) objectives.

The C&S Program consists of four subprograms: Building Codes Advocacy, Appliance Standards Advocacy, Compliance Enhancement and Reach Codes.

Coordination of internal and external C&S work is conducted as part of ongoing work. For example, development of Codes and Standards Enhancement (CASE) studies and US Department of Energy (USDOE) letters entail research, analysis, and coordination that encompass potentially any internal IOU program or activity, and collaboration with numerous state and national entities. Likewise, compliance improvement and reach code activities are coordinated internally and externally around specific initiatives. Coordination between IOUs is conducted through quarterly meetings and various weekly calls. C&S IOU staff share information to assist with integrated portfolio planning.

### **1. Building Codes Advocacy Subprogram**

The Building Codes Advocacy subprogram primarily targets improvements to Title 24 Building Efficiency Regulations that are periodically updated by the CEC. The subprogram also seeks changes to national building codes that impact CA building codes. Advocacy activities include, but are not limited to, development of code enhancement proposals and participation in public rulemaking processes. The program may coordinate with or intervene in ratings organizations that are referenced in Title 24 (e.g., the National Fenestration Rating Council, and the Cool Roof Rating Council).

In 2011, the statewide IOU team conducted research, analysis, and stakeholder meetings in support of numerous CASE studies for 2013 Title 24 proceedings.

### **2. Appliance Standards Advocacy Subprogram**

The Appliance Standards Advocacy subprogram targets both state and federal standards and test methods: improvements to Title 20 Appliance Efficiency Regulations by the CEC, and improvements to Federal appliance regulations by the USDOE. Advocacy activities include, but are not limited to, development of Title 20 code enhancement proposals and participation in the CEC public rulemaking process, USDOE comment letters based on IOU research and analysis, and participation in direct negotiations with industry. Additionally, the program monitors state and federal legislation and intervenes, as appropriate.

In 2011, the statewide team supported CEC efforts to adopt standards for battery charger systems and conducted research and analysis in support of CASE studies for future CEC rulemakings. Additionally, the statewide team conducted research and analysis on numerous USDOE rulemaking events and submitted comments.

### **3. Compliance Enhancement**

Compliance Enhancement includes Extension of Advocacy (EOA) elements of building and appliance standards subprograms, and the Compliance Enhancement Subprogram (CEP). While EOA targets improvements in compliance with building or appliance efficiency regulations and development of compliance infrastructure, CEP supports local government process improvement. Compliance improvement in buildings is achieved through education, training, and other activities targeting building departments and other building industry actors responsible for compliance. Activities may include development of tools and other elements of infrastructure that serve multiple compliance enhancement objectives. Improvements in compliance with appliance efficiency regulations are achieved through communications, outreach, and other activities targeting manufacturers, retailers, and other California suppliers.

In 2011, the statewide C&S team delivered role-based training sessions, established a compliance improvement advisory group to provide industry guidance to IOUs, supported improvements to certified energy analyst examinations, and commenced a local government best practices survey.

### **4. Reach Codes Subprogram**

The Reach Codes subprogram provides technical support to local governments that wish to adopt ordinances that exceed statewide Title 24 minimum energy efficiency requirements for new buildings, additions, or alterations. Support for local governments includes research and analysis for establishing performance levels relative to T-24 and cost-effectiveness per Climate Zone, drafting of model ordinance templates for regional consistency, and assistance for completing and expediting the application process required for approval by the CEC. The subprogram also supports local governments that seek to establish residential or commercial energy conservation ordinances for existing buildings

In 2011, the statewide IOU team provided technical support to local governments that adopted Reach Codes and completed the required CEC approval process.

## ***EMERGING TECHNOLOGIES***

The statewide Emerging Technologies Program (ETP) is designed to support increased energy efficiency market demand and technology supply (the term supply encompasses the breadth, depth, and efficacy of product offerings) by contributing to the development and deployment of new and underutilized measures—including technologies, practices, and tools—and by facilitating their adoption as measures supporting California’s aggressive energy and demand savings goals.

The ET program includes the following subprograms: Technology Assessments, Demonstration Showcases, Scaled Field Placements, Market and Behavioral Studies, Technology Development Support, and Technology Resource Incubation & Outreach (TRIO)

Strategies implemented in 2011:

- Accelerating the introduction of EE technologies and analysis tools not widely adopted in various California markets.
- Verifying the performance of the technologies in the laboratory under control conditions, as well as in the field.
- Developing computer simulation tools to calculate the energy savings and demand reduction for various energy measures.
- Transferring assessment results to EE programs for use in creating energy measures.
- Transferring acquired knowledge to stakeholders as well as engineering and design communities.
- Conducting workshops for both internal and external customers.
- Coordinating with IOUs and external entities through the Emerging Technology Coordinating Council (ETCC).
- Continuing to use the statewide database for tracking and reporting ET projects.
- Hosting two ET Open Forums to solicit technologies from the technology development community.

### **1. Technology Assessments (TAs) Subprogram**

Through the Technology Assessment element of ETP, energy-efficient measures that are new to the market (or underutilized for a given application) are evaluated for performance claims and overall effectiveness in reducing energy consumption and peak demand.

Strategies implemented in 2011 include collaboration with many IOU and non-IOU partners and scanning a wide variety of sources to identify suitable assessment candidates.

- Using the statewide database to report project activities on a quarterly basis.
- Actively engaging the EE program and other program stakeholders.
  - Transferring acquired knowledge to customers as well as engineering and design communities.
  - Transferring assessment results to EE programs as an energy measure.
  - Working with account managers and account executives to help keep their customers informed.
- Providing information to internal stakeholders from assessments that can help IOU's IDSM resource acquisition programs develop new measures or revise/integrate existing measures.
- Using a screening and scoring system to select the best TA candidates. Producing reports describing TA results, conclusions, and recommendations.

## **2. Scaled Field Placements (SFP) Subprogram**

The Scaled Field Placement (SFP) projects consist of placing a number of measures at customer sites as a key step to gain market traction and possibly gain market feedback. Typically, these measures have already undergone an assessment or similar evaluation to reduce risk of failure.

Strategies implemented in 2011:

- Scanning, screening and prioritizing a wide variety of sources and coordinated closely with EE programs to identify measures suitable for SFPs.
- Developing a strategic communication plan to promote project exposure, stakeholder awareness and public information dissemination.
- Launching SFP efforts.

## **3. Demonstration Showcases (DS) Subprogram**

The Demonstration Showcase element is designed to provide key stakeholders the opportunity to "kick the tires" on proven combinations of measures that advance ZNE goals. DS are awareness-generating projects that may expose EE measures on a systems level to stakeholders, whether the general public or a targeted audience, in real-world settings, thus creating broad public and technical community exposure and increased market knowledge. These potentially large-scale projects expose measures to various stakeholders using real-world applications and installations. Key attributes

of DS are that they are open to the public and/or stakeholders and highlight a systems approach rather than an individual approach.

In 2011, this subprogram performed the following:

- Scanning, screening, and prioritizing a wide variety of sources and coordinated closely with EE Programs for measures suitable for DS.
- Developing a communication plan to promote project exposure, stakeholder awareness, and public information dissemination.
- Demonstrating the technologies in actual field conditions.

#### **4. Market and Behavioral Studies (MBS) Subprogram**

The Market and Behavioral Studies Program is designed to perform targeted research on customer behavior, decision making, and market behavior to gain a qualitative and quantitative understanding of customer perceptions, customer acceptance of new measures, and market readiness and potential for new measures.

In 2011, this subprogram, through the statewide partnership, performed primary and/or secondary research to gain market insights.

- Coordinating with the statewide ETCC stakeholders.

#### **5. Technology Development Support (TDS) Subprogram**

The Technology Development Support program (TDS) is designed to allow the ET program the opportunity to lend assistance to private industry in the development of technologies. Although product development is the domain of private industry, there are opportunities where IOUs are well qualified (or in a strong position) to undertake targeted, cost-effective activities that provide value in support of private industry product development efforts. This support increases market readiness, decreases innovator uncertainties, and allows the ET program to have input. The ET program looks for targeted opportunities to support EE product development.<sup>2</sup> Product development is the process of taking an early-stage technology, or concept, and transforming it into a saleable product.

In 2011, this subprogram performed the following:

- Reviewing TAs and other element projects.
- Staying abreast of statewide lighting and HVAC initiatives.

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<sup>2</sup> Product development is the process of taking an early-stage technology or concept and transforming it into a saleable product.

- Collaborating with industry directly and through partners, such as the Western Cooling Efficiency Center (WCEC) and the California Lighting Technology Center (CLTC), to provide targeted support for technology development.
- Conducting TDS projects.

## **6. Business Incubation Support - Technology Research Incubator Outreach (TRIO) Subprogram**

The Technology Resource Incubator Outreach (TRIO) is a statewide program that provides support and networking for EE and demand response entrepreneurs, investors, and universities with the goal of providing participants the necessary perspective and tools to work with IOUs and ultimately introduce new EE measures to the marketplace. TRIO helps to accelerate the successful development of technologies through an array of engineering support, resources and services, all of which are developed and orchestrated by TRIO and offered both through TRIO and its network of contacts.

2011 TRIO efforts included:

- Recruiting and educating innovators from universities and other research institutions.
- Collaborating with the ETCC and IOUs on various activities, including Small Business Administration (SBA) and the Small Business Innovation Research (SBIR), and Cleantech Open.
- Developing business relationships with investors who were interested in funding cost-effective EE measures.
- Providing symposiums on “how to do business with utilities.” These workshops helped to educate the investor and technology communities on the requirements necessary to do business with utilities.

## ***WORKFORCE EDUCATION AND TRAINING***

The Statewide Workforce Education and Training (WE&T) Program represents a portfolio of education, training and workforce development, planning and implementation funded by or coordinated with the IOUs. Following the adoption of the Strategic Plan, D.09-09-047 subsequently made the statewide WE&T program responsible for the development, planning, and implementation of three subprograms: Centergies, Connections and Strategic Planning and Implementation.

### **1. Centergies Subprogram**

This subprogram is organized around market sectors and crosscutting segments to facilitate workforce education and training. Energy Centers represent the largest

component of this subprogram. Included in this program are educational seminars, tool loans, consultations and events. Such Centergies activities allow potential green workforce candidates to explore energy efficiency, integrated demand-side management technologies and resource management techniques.

In 2011, PG&E enlisted the support of an Adult Learning Theory expert to observe several workshops and recommend additional effective adult learning concepts. PG&E implemented a protocol to more effectively target market actors to better leverage the knowledge base of the workshops to influence a greater percentage of the population. PG&E also offered a few of its classes on demand to better serve people who were not able to attend classes at the times they were offered.

PG&E's Energy Centers began restructuring programs to align with the Needs Assessment described in the Strategic Planning and Implementation Subprogram section below. This realignment includes reaching out to new partners in the energy efficiency, demand response, and distributed generation fields.

Centergies exceeded its program implementation plan (PIP) targets for 2011: Seminars—465 completed towards a target of 386; Consultations—1,518 towards a target of 760; Tool Loan Transactions—1,304 towards a target of 1,235 transactions; Events/Outreach—305 towards a target of 245. Finally, total attendance in 2011 was 20,005.

As part of a statewide effort in 2011, PG&E Centergies Program offered six Building Operator Certification training sessions to commercial building operators, engineers, and facility managers attended by 159 participants.

## **2. Connections Subprogram**

The WE&T K-12 Subprogram is organized around downstream and upstream IOU relationships with the educational sector, entry and intro-level community-based training efforts that support workforce development in energy efficiency, energy management and new emerging green careers. This subprogram focuses on energy efficiency, the nexus of water, demand response, distributed generation, the impacts on the environment related to the production of energy global warming, greenhouse gas emissions and green career awareness/exploration and preparation. All curriculum materials are developed or enhanced to incorporate these concepts.

The subprogram includes the statewide Green Campus program managed by The Alliance to Save Energy and is offered at 16 universities and colleges (seven in PG&E's service area) with nearly 100 participating interns. Green Campus engages students in building pathways into green careers and realized measurable energy savings (saved an annual average of 1,224,527 kWh per campus). It infused energy and energy efficiency concepts into academic curricula, and promoted energy efficiency awareness throughout the campus community with an average of 5,551 people covered per campus per term. Work will continue through 2012.

PEAK is a K-12 student statewide training program providing education curriculum on the science and management of energy use. The curriculum materials were recently revised to include the green career awareness and exploration as well as the impacts of energy generation and demand response on the environment, including greenhouse gas emissions. PEAK is also focused on recruitment efforts in minority or low income, Title 1 school districts. In 2011, in PG&E's service area, of the 104 schools that were enrolled, 55.8% were Title 1 public schools (target was 50%). PEAK participated in 33 collaborations and new partnerships with educational institutions, local governments, and other non-profits.

### **3. Strategic Planning and Implementation Subprogram**

This subprogram involves management and execution of several strategic statewide planning tasks identified in the Strategic Plan: a) forming an IOU/CPUC WE&T Task Force; b) conducting a needs assessment study; c) facilitating Annual WE&T Public Meetings; and d) creating a WE&T-specific web portal.

The completion and release of the IOUs' needs assessment study, which addressed workforce strategies needed to achieve the state's ambitious energy efficiency goals, was a priority for the Statewide WE&T Program in 2011. The final study was posted on March 17, 2011 to the Energy Efficiency Web-portal, [www.engage360.com](http://www.engage360.com). A WE&T public workshop, serving the role of a WE&T Task Force meeting, occurred on April 6, 2011 when results and recommendations from the WE&T Needs Assessment study were presented for public discussion and comment. Public response to WE&T-related recommendations from the study was the primary agenda of the workshop.

In compliance with Commission D.09-09-047, the IOUs submitted a joint advice letter (PG&E Advice 3212-G-B/3852-E-B et al) approved on October 28, 2011, that outlined general plans for implementing a sector strategy approach in IOU WE&T training and curriculum development, with expanded collaboration with industry partners.

In the joint advice letter, the IOUs proposed to use the WE&T Task Force meetings to evaluate existing crosscutting training implementation across industry trade, educational, public agency and community-based sectors. The IOUs also proposed to use regular Task Force meetings as a forum to share progress towards sector strategy implementation and provide an opportunity for input and collaboration with key stakeholders and IOU internal working groups.

The IOUs began exploring expanded ways to develop training curriculum and implement courses for the WE&T Centergies and WE&T Connections subprograms in 2011, to more effectively support increasing workforce interests, and accelerate training capacity in growth areas of the energy efficiency industry sector. IOUs continued collaboration with secondary and post-secondary education to strengthen linkages into energy efficiency careers.

#### **4. Energenius - Local Program**

Energenius is a local PG&E program which provides curriculum to K-8<sup>th</sup> grade students and teachers on energy efficiency, and conservation. Revisions in 2011 to the program curriculum materials included a new 2-3<sup>rd</sup> grade program “Energy and Me,” and 4-5<sup>th</sup> grade program “Trees Energy and the Environment” and “Transportation, Energy and the Environment.” New programs are under development in 2012 to include “Water, Energy and the Environment”, Pre-K program and Smart Energy Technologies. Outreach efforts included attendance at 11 teacher educational conferences where PG&E had a display of the materials and a targeted mailing to 10,000 teachers. More than 82,000 students received these educational materials, which represents 126% of goal (target 65,000 students). Of the 534 public schools that ordered these materials, 64% were Title 1 public schools (target was 50%). The program collaborated with 12 statewide educational organizations; three were with county Offices of Education and nine were with organizations which provide environmental resources and/or conferences to educators.

#### **5. Green Pathway High School Pilot Program – Local Program**

The Green Pathways (GP) pilot is a Green Workforce Development project targeting high school students in five Northern California counties. GP addresses the California Long Term Strategic Plan and the WE&T Needs Assessment goals of integrating career development into K-12 curriculum as well as strengthening and expanding collaboration among career academies, Regional Occupational Programs (ROPs), and community colleges.

The GP goal is to inspire more students to pursue green careers and contribute to green solutions. GP aims to enhance their success by reducing false starts due to unclear goals and inadequate career planning. On their path to success, students develop the skills and understanding they need in order to make informed choices. They identify and create their pathway to a green career, which may include related internships, apprenticeships, and mentorships.

A multi-week GP course offers students in high school, college and community-based organizations (CBOs) opportunities to explore and prepare for green careers. The course brings a green career and workforce context to existing classroom curricula. It integrates career preparation information, experiences, and skill development with environmental sustainability concepts and related green employment opportunities. The course embeds the U.S. Department of Labor (DOL) interest inventory and jobs database, including green job profiles in a student friendly format. Throughout the course, green professionals engage and guide students toward green careers and workforce opportunities. An online community for course graduates enables students to continue to network and learn about green opportunities through conversation and information exchange with green professionals, representatives of green education and training resources, high school teachers, and peers.

The pilot involves schools and organizations from five diverse geographic and socioeconomic counties in the San Francisco Bay Area. School programs include Green Academies, ROPs, and CBOs.

During 2011, the Green Pathways pilot developed the core course content and communications platform for the GP program:

- Engaging small groups of stakeholders in using different elements of the GP course and solicited feedback to inform development.
- Designing content and media for the online course.
- Selecting a Learning Management System as the communication platform for the course and means to integrate social media elements.
- Designing the website plan to integrate the online course and the DOL information.
- Outreaching and marketing targeted educators in seven counties surrounding the Bay Area. PG&E identified classrooms, organizations, and students to test and provide feedback to developers.

## ***INTEGRATED DEMAND SIDE MANAGEMENT***

### **Program Description**

The Strategic Plan recognizes the integration of demand-side management (DSM) options including energy efficiency (EE), demand response (DR), and distributed generation (DG) as fundamental to achieving California's strategic energy goals. To support this initiative, IOUs identified integrated DSM (IDSM) as an important strategic DSM policy priority and proposed a series of activities, pilots and other programs in response to the Strategic Plan DSM Coordination and Integration Strategy.

### **Program Strategy**

An IOU and Energy Division Statewide Integration Task Force (Task Force) was formed in 2010 and is coordinating activities that promote, in a statewide-coordinated fashion, the strategies identified in the Strategic Plan and the eight integration directives described in the EE decision as follows:

1. Development of a proposed method to measure cost-effectiveness for integrated projects and programs including quantification and attribution methods that includes GHG and water reductions benefits and the potential long-term economic and electric/gas hedging benefits.
2. Development of proposed measurement and evaluation protocols for IDSM programs and projects.

3. Review IDSM enabling emerging technologies for potential inclusion in integrated programs.
4. Development of cross-utility standardized integrated audit tools using PG&E's developed audits as a starting point.
5. Track integration pilot programs to estimate energy savings and lessons learned and develop standard integration best practices that can be applied to all IOU programs based on pilot program evaluations and the results of additional integration promoting activities (i.e., EM&V and cost-benefit results).
6. Develop regular reports on progress and recommendations to the Commission.
7. Organize and oversee internal utility IDSM strategies by establishing internal Integration Teams with staff from EE, DR, DG, marketing, and delivery channels.
8. Provide feedback and recommendations for the utilities' integrated marketing campaigns including how the working group will ensure that demand response marketing programs approved as category 9 programs are coordinated with EE integrated marketing efforts.

The following was accomplished in 2011:

- A white paper on IDSM cost-effectiveness was developed at the end of 2010 and the observations and recommendations were presented at a public workshop in March 2011. The final white paper and associated public comments were submitted to the Energy Division on May 18, 2011. Further efforts on developing integrated cost-effectiveness and EM&V methodologies are on hold pending direction from the Energy Division.
- The Task Force tracked multiple integrated emerging technologies and reviewed various programs, projects (including IDSM Pilots) and activities to identify integration efforts and opportunities and to develop best practices.
- The IOUs submitted four joint quarterly reports for 2011, including an Executive Summary section, to provide Energy Division staff with updates on the eight integration directives. All 2010 and 2011 quarterly reports were uploaded and available for viewing on EEGA.
- The statewide IDSM Task Force held regular coordination phone calls and met in person on a quarterly basis to review the status of the various support activities for this IDSM initiative.
- The IOUs delivered over 400 pieces of integrated collateral or campaigns to residential and business customers that promote multiple programs across EE, DR, DG and/or AMI.
- In addition to the meetings described above, the IOUs coordinated on a Statewide basis in several areas:

- The Online Integrated Audits team is coordinating to deliver an online integrated audit tool that works with each IOU interface and educates customers on how they use energy and ways they can save.
- The Onsite Integrated Audits team is collaborating to share approaches and best practices and to discuss ongoing collaboration.
- The Integrated Marketing team meets on a regular basis to discuss integrated efforts, best practices and to identify opportunities for coordination.
- PG&E's IDSM efforts included:
  - Launch in July 2011 of the Interim Tool (Solar Calculator), per the direction in the Program Implementation Plan (PIP) that allows customers to see the impact of energy efficiency measures on the cost of their Solar System.
  - Annual IDSM training for Products, Marketing and Sales staff that have effectively increased understanding of IDSM concepts, approaches and CPUC directives.
  - An Integrated Awards program that is extended to sales staff and supporting team members.
  - External IDSM training through PG&E's Energy Centers and trade professional groups.
  - Continuing coordination with vendors to provide the audit tool to residential and small commercial customers as part of their customer web experience.
  - Integrated marketing campaigns and collateral delivered by PG&E numbered 80 for business customers and 44 for residential / smaller business customers.

## ***MARKETING, EDUCATION AND OUTREACH***

The purpose of the Marketing, Education and Outreach (ME&O) program is to increase utility consumer awareness and participation in cost-effective energy-saving activities offered by the utilities. ME&O promotes behavior changes that result in energy management efforts that save energy and reduce greenhouse gas (GHG) emissions in coordination with demand response and renewable self-generation options. To be successful, ME&O must move consumers through a transitional process from awareness and knowledge of energy efficiency to action.

Following the introduction of the new statewide ME&O brand and website, Engage 360, in late 2010, the brand was launched in 2011 with emphasis on grassroots efforts, including the following activities:

- Influencer Outreach
- Community Outreach

- Events
- Social Media
- Public Relations

Engage 360's success relied on the efforts of dedicated community leaders (Influencers) and volunteers throughout the State to help spread the message and empower Californians to take action--a collaborative effort that relied heavily on social engagement. (Grassroots would serve as the first phase of a two-phase launch that would include mass media to be strategically introduced later in the campaign.)

As discussed below, the IOUs engaged in this statewide effort, as ordered in D.09-09-047 until Commissioner Ferron issued an *Assigned Commissioner's Ruling Regarding Statewide Marketing and Outreach Program* on October 13, 2011, suspending all ME&O activities until Commission Staff could provide recommendations on how to re-strategize the program.

### **Influencer Outreach**

The Influencer Outreach strategy, rolled out in early first quarter 2011, led to the successful recruitment of more than 320 individuals with leadership positions in major companies, universities, nonprofits and other community organizations. These were individuals whom others respected, admired and listened to and had the influence to encourage others to join the effort and to take action.

### **Community Outreach**

By end of second quarter, community outreach activities were initiated through three regional offices in Northern, Central and Southern California that served as hubs for community outreach, door-to-door canvassing and events to general and ethnic audiences.

### **Events**

More than 120,000 conversations were initiated with Californians, through nearly 10,000 homes reached through door-to-door efforts; Engage 360 had a presence at more than 440 community events, and nearly 10,000 commitments were achieved as part of the "Asks" strategy to take action. In-language collateral materials branded with Engage 360 were created to initiate and facilitate dialog with individuals.

### **Social Media**

Social media platforms were introduced on Facebook and Twitter and these platforms along with Engage 360.com served as the online hub for building the movement and curating energy efficiency and conservation content, as well as distribution of original

Engage 360 content. By late third quarter, there were more than 4,100 “Fans” on Facebook and nearly 70 Tweets that resulted in 431,000 impressions.

## **Public Relations**

Public Relations activities were also initiated with multicultural audiences to raise brand/campaign awareness through media mentions, press releases, and inclusions in relevant stories. The focus of media pitches revolved around highlighting the summer actions and education of the community around energy efficiency information. Blogs were also utilized with the intent to raise brand/campaign awareness.

Earned media coverage as of late July resulted in an estimated 600,000 viewers. TV news segments on We are Fresno Live, Good Day Sacramento and blogs, San Marino Patch and Latinavista.com.

A Crisis Communications Plan was also created to protect the image of the brand and ensure prompt and accurate response in the event of an emergency.

While it was still premature to launch a full-scale mass media campaign in 2011, the second phase of the effort, targeted paid media, was recommended in third quarter to drive incremental awareness, interest and fuel groundswell. This tactical element, however, did not receive appropriate approval prior to Commissioner Ferron’s directive to the IOUs on September 26, 2011 to stop all program activities and bring outgoing program costs to zero.

## **Activities September 2011 and Beyond**

*An Assigned Commissioner’s Ruling Regarding Statewide Marketing and Outreach Program* was issued October 13, 2011, which officially suspended all ME&O activities until Commission Staff could provide Commissioner Ferron recommendations on how to re-strategize the program. Parties were asked to provide their recommendations about program design, which each utility did. No additional program activities took place between September and December 2011.

# **PROGRAM DESCRIPTIONS AND STRATEGIES –**

## **LOCAL PROGRAMS**

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### ***ZERO NET ENERGY PILOT PROGRAM***

The Zero Net Energy (ZNE) Pilot Program is a PG&E-specific local non-resource program that supports the Strategic Plan by initiating research, development, and demonstration (RD&D) projects that have aggressive energy efficiency goals and that plan to include on-

site clean distribution generation. Achieving zero net energy will require the implementation of a combination of building energy efficiency design features and on-site clean distributed generation that result in no net purchases from the electricity or gas grid, at the level of a single project seeking development entitlements and building code permits. The ZNE Pilot Program focuses primarily on residential and commercial new construction.

PG&E's ZNE program was detailed in Advice Letter 3078-G-B/3594-E-B and was approved June 11, 2010. The program budget and programmatic targets were revised as detailed in Advice Letter 3235-G-A/3901-E-A and approved February 14, 2012.

## **1. Zero Net Energy Communities Subprogram**

ZNE Communities will offer design assistance and technical support to the owners and design teams of at least three community-scale, commercial and/or residential new construction projects. The subprogram will target mixed-use and multifamily complexes, advanced residential and commercial new construction, and transit-oriented development, generally at the early stages of the entitlement and design process, helping to pursue energy and resource savings that would normally fall outside of the scope of a typical project. The projects will be selected through a competitive process. Starting with current "state of the art" approaches, assistance and support will progressively incorporate the results from the other ZNE subprograms, and cutting edge research from national laboratories, and other states' efficiency programs to continually update design and technical support progress towards true ZNE solutions.

In 2011, the ZNE team reviewed proposals from the teams of firms with expertise in the design and performance analysis of low energy and zero net energy projects. Three "ZNE Consultant" teams were chosen with specific expertise in community-scale, as well as three teams with expertise in commercial new construction, and two teams with expertise in residential new construction. The program put the ZNE Consultant teams under Master Service Agreements. In addition, the Zero Net Energy Pilot Program released a Request for Information (RFI) for the competitive selection of community-scale, commercial, and residential projects with aggressive energy efficiency and zero net energy performance goals. The program chose to move forward with four projects total (including community-scale, commercial, and residential), matched them with the "ZNE Consultant" teams selected in 2010, and began to scope the design and technical assistance to be provided to each project.

## **2. Zero Net Energy Demonstration Showcase Subprogram**

This subprogram has three key elements: 1) at least four residential and at least two commercial new construction consultation projects with design and technical assistance provided by PG&E; 2) case studies and performance monitoring of the completed projects and existing low-energy or zero net energy buildings; and 3)

technical studies on at least four areas underrepresented in zero net energy technical strategy and policy.

As noted under the Zero Net Energy Communities, in 2011 the ZNE team reviewed proposals from the teams of firms with expertise in the design and performance analysis of low energy and zero net energy projects. Three ZNE consultant teams were chosen with specific expertise in commercial new construction, and two ZNE consultant teams were chosen with expertise in residential new construction. The program put the ZNE Consultant teams under Master Service Agreements.

Also as noted above, the ZNE Pilot Program released a RFI for the competitive selection of community-scale, commercial, and residential projects with aggressive energy efficiency and zero net energy performance goals. The program chose to move forward with four projects total (including community-scale, commercial, and residential), matched them with the “ZNE Consultant” teams selected in 2010, and began to scope the design and technical assistance to be provided to each project.

In addition, the ZNE Pilot Program initiated one of the technology studies in an area underrepresented in zero net energy policy and research. The study is scheduled to be completed in the first quarter of 2012. Preliminary scopes were developed for the remaining three studies.

### **3. Zero Net Energy Technology Advancement Subprogram**

This subprogram will conduct at least five technology assessments on technologies that have potential to help projects reduce energy loads and meet zero net energy performance goals. It will coordinate with the existing Emerging Technologies Program to deliver information, insights, analytical tools, and resources. In addition, this subprogram will look beyond 2010-2012 and complete two major reports in coordination with and funded by EM&V. The first report will be a roadmap to zero net energy residential and commercial new construction in California. The second study will be an assessment of the technical potential for achieving zero net energy buildings in the commercial and residential sectors in California.

Per the revised program metrics, this program completed five technology assessments (in 2010) on technologies that have the potential to help projects reduce energy loads and meet zero net energy performance goals but will not complete any additional assessments.

The Zero Net Energy Technology Advancement subprogram worked with staff from the PG&E Technical Product Support group to identify technologies with the potential to help projects achieve zero net energy performance goals and complete five technology assessments. The technologies studied included: 1) heat pump water heaters; 2) evaporative condensers; 3) ground coupled heat pumps; 4) electrochromic windows; and 5) energy-recovery ventilators.

This subprogram also worked with staff from the PG&E EM&V group to compose statements of work and initial timelines for the two major reports to be conducted in coordination with EM&V. In 2011, the Zero Net Energy Technology Advancement subprogram worked with staff from the PG&E EM&V group to draft a Request for Proposals (RFP) for the report on the roadmap to zero net energy residential and commercial new construction in California and another RFP for the study to assess the technical potential for achieving zero net energy buildings in the commercial and residential sectors in California. The studies are being conducted in close coordination with CPUC EM&V staff, and the RFPs were reviewed by CPUC EM&V and ZNE staff before they were released. The project teams for each study were selected in coordination with other IOU EM&V staff, and contracts for each project team were in negotiation at the end of 2011.

#### **4. Zero Net Energy Design Integration Subprogram**

This subprogram will develop and disseminate ZNE Pilot Program information on the best practices for the design of ZNE neighborhoods, communities, buildings, and homes through forums, workshops and classes, two design competitions, and by engaging organizations such as the American Institute for Architects (AIA), the United States Green Building Council (USGBC), the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE ), and other stakeholders, including local and state policy, planning, and code officials.

In 2010, the Zero Net Energy Design Integration program initiated a number of education and outreach activities with stakeholders in the building design and energy efficiency education communities. This subprogram collaborated with staff from PG&E's Pacific Energy Center to develop a nonresidential zero net energy class series to be offered in collaboration with the San Francisco chapter of the AIA. The subprogram collaborated with staff from PG&E's Energy Training Center to develop a residential zero net energy class series. The subprogram began planning the two design competitions to be held as part of future program activities.

In 2011, the Zero Net Energy Design Integration program offered a nonresidential zero net energy class series in coordination with the PG&E Pacific Energy Center and the San Francisco chapter of the American Institute of Architects (AIA SF). The program also offered a residential zero net energy series in coordination with the PG&E Energy Training Center. The program held its first public forum on "Innovative Funding Mechanisms to Drive ZNE Projects in California." The program also held its first zero net energy design competition, Architecture At Zero, managed by AIA SF.

### ***ON-BILL FINANCING – ENERGY EFFICIENCY RETROFIT LOAN PROGRAM***

The On-Bill Financing (OBF) Program offers a financing product designed primarily to facilitate the purchase and installation of qualified energy efficiency retrofit measures by nonresidential customers. The program is offered in conjunction with other PG&E

programs in order to break down the first-cost barriers which often prevent adoption of energy efficiency measures.

The OBF program builds on the success and lessons learned from similar OBF programs in New England and at the other California IOUs, as well as PG&E's Small Business Energy Edge off-bill pilot program of 2006-2007. Approved customers who install energy efficiency retrofit projects are eligible to receive a full rebate or incentive from the participating programs and to finance the balance of the project costs with a 0% loan, with loan terms up to five years for commercial customers and up to 10 years for government agency customers.

An \$18.5 million loan pool was established to fund the energy efficiency retrofit loans during the 2010-2012 Portfolio program cycle. This loan pool will function as a revolving fund, with loan repayments cycled back through the fund and made available for additional loans. The loan pool funds have been authorized as part of PG&E's 2010-2012 energy efficiency portfolio to be recovered from customers through public purpose program rates. OBF loan pool funds will be removed from PG&E's overall portfolio cost-effectiveness calculations and loan defaults will be considered a program expense lowering the available loan pool and will be included in PG&E's portfolio cost-effectiveness calculations going forward.

Customers who install qualifying energy efficiency retrofit projects will be eligible to receive the full rebate or incentive offered through PG&E's energy efficiency programs along with a 0% interest loan to finance the balance of qualifying project costs. The eligible loan amount will be based on the project cost, less incentives or rebates, up to the loan maximums of the OBF product and within the loan term thresholds.

In 2011, PG&E's OBF program continued to expand. The program launched funding for third party calculated measures in the second quarter and launched funding for third party deemed measures and core deemed measures in the third quarter. In addition, Government Partnerships (through the various Energy Watch partnerships) are actively promoting OBF and increasing numbers of Energy Watch projects are being funded with OBF funds.

In 2012, PG&E will continue to evaluate promising financing proposals and concepts and will actively partner with the CPUC in its investigation into creative financing options.

## ***LOCAL IDSM COORDINATION AND INTEGRATION***

PG&E's Local Integration Program focused on internal coordination of teams, marketing approaches and collateral, education and training of sales forces and delivery channels, tools needed to support integrated offerings and support of the Statewide IDSM Task Force. Subprograms include an integration team, and integrated marketing and outreach, education and training (external), sales training (internal), audit, and support tools.

## 2011 Strategies:

- PG&E continued weekly internal integration team meetings with staff from Energy Efficiency, Demand Response, Distributed Generation, Low Income Energy Efficiency, Dynamic Pricing, SmartMeter, green programs, marketing and outreach, Energy Solutions and Service, and delivery channels including trade professionals, third parties, and government partnerships. PG&E developed regular internal tracking reports to monitor activities, worked to establish best practices, and set up meetings to follow up, monitor and report on integrated activities.
- PG&E worked with the larger statewide Marketing, Education, and Outreach effort and the internal marketing teams to ensure integrated messaging and coordination were being offered to customers. PG&E worked to execute marketing campaigns and to provide collateral to the various customer segments to inform customers of demand side resources (including Energy Efficiency, Demand Response, Distributed Generation and SmartMeter). PG&E delivered/launched 80 business and 44 residential campaigns, collateral and/or outreach efforts in 2011.
- External integrated education and training efforts included numerous Trade Professional events and an integration track (classes with a focus on integration of programs and systems) continued at the Energy Training Center and the Pacific Energy Center. Total attendees at these training classes and online was 2,757 in 2011.
- PG&E worked internally with Energy Solutions and Service staff in coordination with the Marketing and Product teams to facilitate knowledge transfer among staff on how to approach customers with integrated offerings. In 2011, PG&E held two two-day sessions with required attendance by all Energy Solutions and Service staff. Total attendees in 2011 were 585.
- PG&E continued to develop the online integrated audit tool as part of additional upgrades to the customer web experience.
- In addition to the online integrated audit tool, PG&E offered onsite integrated audits to large customers. PG&E worked to track large integrated onsite audits for customers over 500 kW.

## **PROGRAM DESCRIPTIONS AND STRATEGIES - GOVERNMENT PARTNERSHIPS**

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### ***INSTITUTIONAL PARTNERSHIPS***

Institutional Partnerships are designed to create working relationships among the four California IOUs, agencies of the State of California and/or state educational institutions.

The objective of the Institutional Partnerships is to reduce energy usage through facility and equipment improvements and share best practices among state institutions. There were four Institutional partnerships in 2011.

PG&E's Institutional Partnership portfolio focused on achieving energy savings and supporting the key Strategic Plan goal of demand-side management (DSM) integration and coordination, which includes improving regulatory coordination, establishing integration procedures, and piloting DSM integration programs. The Institutional Partnerships will also concentrate on innovative delivery channels and funding mechanisms to meet current economic conditions and achieve program integration and savings.

### **California Community Colleges (CCC)**

The CCC/IOU Energy Efficiency Partnership is between the California Community Colleges (CCC) and the IOUs to achieve energy savings in CCC facilities. CCCs are two-year public institutions of higher education composed of 109 colleges statewide and organized into 72 self-governing districts.

### **University of California and California State Universities (UC/CSU)**

The University of California, California State University (UC/CSU), and the IOUs continue this Partnership to share energy efficiency best practices and implement energy efficiency projects for immediate and long-term energy savings and peak demand reduction.

### **State of California Partnership**

The State of California energy efficiency partnership program shares energy efficiency best practices and implements energy efficiency projects for immediate and long-term energy savings and peak demand reduction at state-owned facilities served by California's four IOUs with partners.

The partnership assists state agencies, under the executive branch of the state government, to comply with Executive Order S-20-04 (Green Building Initiative). The effort will help reduce the amount of energy the state purchases off the electrical grid by 20 percent by the year 2015.

This statewide partnership provides custom incentives and core programs for projects implemented in California's state owned and leased buildings. Additionally, the IOUs provide services for education and training activities. An objective of the partnership is to integrate and coordinate various utility programs to leverage incentives and encourage customers to expand their focus beyond energy efficiency. The activities achieve cost-effective energy savings through energy efficiency retro-commissioning, equipment retrofits, new construction, third party programs, demand response programs, and any applicable self-generation programs. The partnership also seeks opportunities to integrate utility incentives with state financing through the Energy \$mart program (currently on hold) or the American Recovery and Reinvestment Act Revolving Loan Fund to increase program participation in the partnership effort and encourage additional energy projects.

## **California Department of Corrections and Rehabilitation**

The California Department of Corrections and Rehabilitation (CDCR) Partnership is a customized statewide energy efficiency program that accomplishes immediate, long-term peak energy and demand savings, and establishes a permanent framework for a sustainable, long-term, comprehensive energy management program at the CDCR institutions served by California's four IOUs.

This program capitalizes on the vast opportunities for efficiency improvements and utilizes the resources and expertise of CDCR and IOU staff to ensure a successful and cost-effective program that meets all objectives of the CPUC. The program also leverages the existing contractual relationship between CDCR and Energy Service Companies (ESCOs) to develop and implement energy projects in CDCR facilities.

The program is modeled after the UC/CSU partnership program, however assumes greater financial contribution from the CDCR.

## **LOCAL GOVERNMENT PARTNERSHIPS**

PG&E's Local Government Partnership (LGP) program works with local governments and recognizes the roles they play in energy management: as a distinct customer segment with its own unique challenges and needs related to implementing energy efficiency, as a comprehensive delivery channel for energy services to their communities, and as community leaders. These partnerships help meet the goals of the California Long-Term Strategic Plan. PG&E had partnerships with 19 local governments and government associations in 2011.

### **City of San Joaquin Energy Watch**

The City of San Joaquin Energy Watch (CSJEW) is a partnership between the City of San Joaquin and PG&E. CSJEW empowers this rural municipal government to take a leadership role in integrating utility energy efficiency programs and services into its portfolio of city services. In addition, this partnership targets government facilities, and the hardest-to-reach of the moderate-income residential and small business customers. CSJEW retrofits the city's municipal facilities, and provides energy audits, engineering assistance, project completion inspections, and educational programs.

Services provided by CSJEW include the Third Party/Government Partnership (3P/GP) Direct Install Program.

### **East Bay Energy Watch**

East Bay Energy Watch is a collaboration among PG&E, local governments, and community-based energy service providers in the East Bay dedicated to providing innovative energy efficiency solutions for residents and businesses throughout Alameda

and Contra Costa Counties. Quantum Energy Services & Technologies (QuEST) serves as the partnership local administrator.

EBEW fosters a more integrated portfolio through the addition of new elements, increased coordination with PG&E's core and third party energy efficiency offerings, and more aggressive leveraging of municipal resources.

Services provided by the East Bay Energy Watch include the Local Government Partner Commercial Direct Install Program and the Local Government Partner Residential Direct Install.

### **Fresno Energy Watch**

Fresno Energy Watch (FEW) partnership provides comprehensive energy efficiency services to the City of Fresno, County of Fresno, and the cities throughout the County of Fresno. The program is managed by the City of Fresno Department of Sustainability and the Economic Development Corporation serving Fresno County.

FEW delivers cost-effective, comprehensive, and persistent energy savings through the leadership of the local government. The goals of the partnership are to provide comprehensive and integrated energy solutions, address community needs, and capture available energy savings. Locally based energy efficiency seminars are offered to expand the audience for energy efficiency. FEW also focuses on local energy policies that promote energy efficiency practices, codes, and standards.

Services provided by FEW include the Third Party/Government Partnership (3P/GP) Direct Install Program and the Moderate Income Direct Install (MIDI).

### **Kern Energy Watch**

Kern Energy Watch is a unique cooperative effort of PG&E, SCE, SoCalGas, the County of Kern, and the partner cities within Kern County. The Partnership provides assessments and the direct installation of energy saving measures in qualifying residences, businesses, and municipal facilities throughout PG&E's service area of Kern County. The partnership also works to reduce energy consumption by providing energy efficiency information at select community events, public and municipal education and training programs, and audits and financial assistance to municipal customers for the energy efficient retrofit of municipal facilities.

Services provided by the Kern County Energy Watch include the Third Party/Government Partnership (3P/GP) Direct Install Program and the MIDI.

### **Madera Energy Watch**

Madera Energy Watch (MEW) offers a range of energy efficiency options for commercial, small business and residential customers, as well as municipal facilities. MEW works with

local contractors, builders, building departments, and others to install energy efficient equipment to reduce energy use. Locally based training programs are offered to expand the audience for energy efficiency. MEW also focuses on local energy policies that promote energy efficiency practices, codes, and standards. MEW delivers cost-effective, comprehensive and persistent energy savings among local MEW partners.

Services provided by MEW include the Third Party/Government Partnership (3P/GP) Direct Install Program.

### **Marin County Energy Watch**

Marin County Energy Watch (MCEW) is a collaboration between the Marin Community Development Agency and PG&E to deliver cost-effective and comprehensive energy savings and incentives to local governments, businesses, schools, residential (single and multifamily), nonprofits, and special districts in Marin County. Services are delivered through three main program elements. The Marin Energy Management Team provides energy management services and assessments tailored to suit the unique needs of public agencies, municipal facilities, and schools in Marin County. The SmartLights Program provides start-to-finish technical assistance and energy assessments to nonresidential customers for lighting retrofits, air conditioning and refrigeration system tune-ups, and package air conditioner system replacements. MCEW also works with California Youth Energy Services to deliver hardware installation, in-home energy assessments, and education to residential owners and renters while providing green jobs for local youth.

Services provided by MCEW include the Local Government Partner Commercial Direct Install Program and the Local Government Partner Residential Direct Install.

### **Mendocino County Energy Watch**

Mendocino County Energy Watch (MCEW) is a partnership between the Community Development Commission of Mendocino County and PG&E. MCEW offers a comprehensive portfolio of energy efficiency programs that target residential customers, municipalities, small businesses, and nonprofits.

Using a locally-driven approach, MCEW offers innovative energy efficiency programs and outreach services in one of the more sparsely populated counties in the state. Targeted market sectors include, single family and multifamily residential direct install, and small commercial retrofit programs. The commercial program elements include a coordinated direct install program for lighting, education and outreach, energy efficiency workshops, and comprehensive energy audits for public facilities and small businesses.

Services provided by MCEW include the Third Party/Government Partnership (3P/GP) Direct Install Program and the MIDI.

### **Napa County Energy Watch**

Napa County Energy Watch (NCEW) provides comprehensive energy efficiency services to municipalities, nonprofits, special districts, small and medium businesses, and residential customers. Services include audits, retrofits, outreach, and education. NCEW's unique contribution towards energy conservation lies in its ability to integrate conservation strategies with broader sustainability ventures already underway in Napa County.

Services provided by NCEW include the Third Party/Government Partnership (3P/GP) Direct Install Program and the MIDI.

### **Redwood Coast Energy Watch**

Redwood Coast Energy Watch (RCEW) Partnership achieves energy savings through a comprehensive, locally-driven approach in Humboldt County. This partnership augments PG&E's historic efforts to deliver energy savings and achieves a higher level of market penetration in hard-to-reach areas by utilizing local staff expertise and resources to provide marketing, outreach, information, education, and technical assistance. Redwood Coast Energy Authority (RCEA) serves as the partnership local administrator. RCEW builds on its close working ties with local public agencies and uses local delivery channels including contractors, vendors, retailers, chambers of commerce, professional, and service organizations, and environmental groups. RCEW provides comprehensive energy management services and incentives through three main program elements. The Small Business Direct Install Program offers hard-to-reach, small businesses turnkey services, and complete project management by a RCEA energy specialist. The Residential Program offers single family homeowners free energy assessments and installs a range of low-cost and no-cost measures while promoting PG&E's residential rebate program. RCEA also offers larger customers project management assistance for calculated, nonresidential retrofit projects.

Services provided by RCEW include the Local Government Partner Commercial Direct Install Program and the Local Government Partner Residential Direct Install.

### **San Francisco Energy Watch**

San Francisco Energy Watch (SFEW) is a collaborative effort between the City and County of San Francisco and PG&E to deliver a broad spectrum of energy efficiency measures and savings for businesses as well as multifamily facilities in San Francisco. SFEW provides comprehensive energy management services and incentives through three main program elements. The Small Business Direct Install Program offers hard-to-reach, small businesses turnkey services, and complete project management by a program-assigned contractor. The Commercial Plus and Multi-family Plus Programs use a market-based, vendor-driven model to offer property owners and larger businesses technical assistance and energy assessments for installing a wide range of low-cost

measures. SFEW also offers larger customers incentives for calculated, nonresidential retrofit projects.

Services provided by SFEW include the Local Government Partner Commercial Direct Install Program and the Local Government Partner Residential Direct Install.

### **San Joaquin County Energy Watch**

The San Joaquin County Energy Watch program was put on hold in early 2011 after efforts to secure a partnership contract with a local government were not successful. The program served customers while good faith efforts to work with San Joaquin County on a contract took place. The County ultimately declined to enter into contract with PG&E to serve as local program implementer. PG&E is working to identify other possible local governments or government associations to serve as lead local partner.

Services provided by the San Joaquin City Energy Watch include the Third Party/Government Partnership (3P/GP) Direct Install Program.

### **San Luis Obispo County Energy Watch**

San Luis Obispo County Energy Watch is a partnership between PG&E, SoCalGas, the County of San Luis Obispo, and the seven incorporated cities within San Luis Obispo County. The Economic Vitality Corporation of San Luis Obispo serves as the partnership implementer.

The partnership provides assessments, and the direct installation of energy saving measures to qualifying residences, businesses, and municipal facilities throughout the San Luis Obispo County service area. The partnership also works to reduce energy consumption by providing energy efficiency information at select community events, public and municipal education programs, and audits and financial assistance to municipal customers for the energy efficient retrofit of municipal facilities.

Services provided by the San Luis Obispo Energy Watch include the Third Party/Government Partnership (3P/GP) Direct Install Program and the MIDI.

### **San Mateo County Energy Watch**

San Mateo County Energy Watch (SMCEW) is a partnership between the City/County Association of Governments of San Mateo County (C/CAG) and PG&E. SMCEW's goal is to reduce energy usage through energy efficiency in San Mateo County, including its twenty cities and unincorporated areas. C/CAG is a Joint Powers Authority consisting of all twenty cities and the County of San Mateo that enables direct contact to all levels of management at the city and county governments.

SMCEW delivers a comprehensive portfolio of energy efficiency services to public agencies, nonprofits, small businesses, and residential customers including direct install

programs for lighting and refrigeration measures, audits, technical assistance for more complex energy efficiency projects through PG&E's Customized Retrofit program, and energy efficiency training, education workshops, and classes.

Services provided by SMCEW include the Third Party/Government Partnership (3P/GP) Direct Install Program and the MIDI.

### **Santa Barbara County Energy Watch**

Santa Barbara County Energy Watch is a partnership between PG&E, SoCalGas, the County of Santa Barbara, and the cities of Buellton, Guadalupe, Santa Maria, and Solvang. The Santa Maria Valley Chamber of Commerce serves as the partnership implementer within PG&E's service area which covers only the Northern County area.

The partnership provides assessments, and the direct installation of energy saving measures to qualifying residences, businesses, and municipal facilities throughout the Northern Santa Barbara County service area. The partnership also works to reduce energy consumption by providing energy efficiency information at select community events, public and municipal education and training programs, and audits and financial assistance to municipal customers for the energy efficient retrofit of municipal facilities.

Services provided by the Santa Barbara Energy Watch include the Third Party/Government Partnership (3P/GP) Direct Install Program and the MIDI.

### **Sierra Nevada Energy Watch**

Sierra Nevada Energy Watch (SNEW) is comprised of 14 rural Sierra counties, including Lassen, Butte, Sutter, Plumas, Yuba, Sierra, Nevada, Placer, El Dorado, Amador, Calaveras, Alpine, Tuolumne, and Mariposa. SNEW is dedicated to providing innovative energy efficiency solutions for local governments and businesses throughout the Sierras. SNEW coordinates the strengths of PG&E and the counties and cities within the foothill region to overcome energy efficient barriers and better serve the unique needs of small mountain and rural communities.

SNEW provides comprehensive, sustained technical services to municipal, nonprofit, and small business customers. SNEW maintains a presence in the community by attending local events and providing energy efficient measures to municipal, nonprofit facilities as well as small business customers.

Services provided by SNEW include the Local Government Partner Commercial Direct Install Program and the Third Party/Government Partnership (3P/GP) Direct Install Program.

### **Silicon Valley Energy Watch**

Silicon Valley Energy Watch (SVEW) provides targeted energy efficiency education, outreach, energy savings delivery, and overall energy program coordination in Santa Clara County. Implemented locally by the City of San José, SVEW works closely with PG&E, other local stakeholders, and third party providers to augment the success of regional programs through enhanced coordination and outreach, and ensure that targeted customers take advantage of the broad range of audits, rebates, and other programs.

Services provided by SVEW include the Third Party/Government Partnership (3P/GP) Direct Install Program and the MIDI.

### **Sonoma County Energy Watch**

The Sonoma County Energy Watch (SCEW) offers a comprehensive portfolio of energy efficiency programs that primarily target municipalities with elements that also provide outreach to small businesses and nonprofits. The local administrator, County of Sonoma, aims to lead by example and is working in partnership with other cities in the county to promote programs and initiatives in energy conservation and efficiency, clean energy generation, and environmental programs.

Services provided by SCEW include the Third Party/Government Partnership (3P/GP) Direct Install Program.

### **Local Government Energy Action Resources Energy Watch**

The Local Government Energy Action Resources (LGEAR) is designed to optimize the opportunities for jurisdictions and their communities to work toward the common goal of achieving short- and long-term energy savings. Three new Energy Watch partnerships have been established within LGEAR including Lake County Energy Watch, Merced County Energy Watch, and Yolo Energy Watch.

### **Lake County Energy Watch**

Lake County Energy Watch (LCEW) is a partnership between PG&E and the County of Lake and is administered through the Community Development Department. LCEW offers a comprehensive portfolio of energy efficiency programs that target municipalities, special districts, non-government organizations, local businesses, and low income residential individuals. The LCEW program includes the following elements: a direct-install program for lighting measures for public agencies, non-profits and small businesses; a direct-install program for lighting and weatherization measures for low income residents; and energy efficiency training and education workshops and classes for local contractors and residents.

Services provided by LCEW include the Third Party/Government Partnership (3P/GP) Direct Install Program and the MIDI.

## **Merced County Energy Watch**

The Merced County Energy Watch program was put on hold in 2011 after efforts to secure an implementer contract with a local government were not successful. The program served customers while good faith efforts to work with County of Merced on a contract took place. The County ultimately declined to enter into a contract with PG&E to serve as local program implementer. PG&E is working to identify other possible local governments or government associations to serve as lead local partner.

## **Yolo County Energy Watch**

Yolo County Energy Watch (YCEW) promotes energy efficiency and the reduction of greenhouse gas emissions in local government operations. In addition, YCEW promotes the reduction of greenhouse gas emissions throughout the community primarily through programs targeting government facilities, nonprofit organizations, small businesses, residences, farms, schools, and factories in Yolo County. The program supports existing PG&E and other programs that promote or encourage energy efficiency, renewable energy, and greenhouse gas reduction. The partnership engages and coordinates local government officials, technical staff, and experts in demonstrating leadership in pursuit of energy efficiency and fosters a sustained energy efficiency culture among government agencies and their citizenry.

YCEW encourages and facilitates development of Climate Action Plans and other documents that describe local government efforts for increasing energy efficiency, reduction of greenhouse gas emissions, and development of renewable sources of energy. Educational opportunities are provided to all sectors of the community, and YCEW has created an intern program that trains top high school students to perform energy-efficient-based internships during the school year. As a part of the residential program, YCEW provides outreach and coordination with low income programs through the MIDI program.

Services provided by YCEW include the Third Party/Government Partnership (3P/GP) and Direct Install Program.

## ***INNOVATOR PILOTS***

The Innovator Pilots Program provides competitive funding to local, regional and sub-regional governments leading the effort in energy efficiency and greenhouse gas reduction activities through innovative and creative approaches to deliver energy savings. Projects are selected based on the likelihood of being scalable and replicable throughout the service area.

Approved as of June 1, 2010, in accordance with Advice Letter 3081-G-B/3597-E-B, the first solicitation for Innovator Pilot project proposals resulted in seven projects being selected for the program. Contracts were signed for these seven projects in 2010-2011

and are now being implemented. Eight more projects were solicited and selected in 2011 for a total of 15 Innovator Pilot projects. Of these eight projects selected in 2011, three contracts were executed in fourth quarter 2011.

### **Projects Selected During the 2010 Solicitation**

#### **Alameda County Office of Education** (contract executed in 2010)

The Alameda County Office of Education Leadership in Energy Efficiency Program (LEEP) seeks to develop a new, replicable model for improving energy efficiency in an especially hard-to-reach and financially constrained sector. Public school districts provide energy efficiency expertise and management assistance at the office of education level. The LEEP Program leverages internal resources and relationships unique to school districts to actualize results. LEEP energy managers will test their hypothesis in 36 school districts.

#### **City of Chico** (contract executed in 2011)

The pilot plans to help moderate-income households not eligible for low-income programs who cannot typically afford to install energy savings measures on their own. This pilot achieves measurable energy savings by bringing their homes into compliance with Chico's Residential Energy Conservation Ordinance (RECO). This pilot has two primary goals: 1) to identify the most cost-effective path to become RECO compliant and achieve significant energy savings in moderate-income homes; and 2) to test the impacts of access to different types of energy consumption information (e.g., in-person, telephone, on-line) on influencing customer behavior. The pilot not only promotes the local green economy by hiring nearby businesses to provide the audits, but also helps customers achieve significant energy savings in their home.

#### **Sierra Business Council** (contract executed in 2010)

This project includes three components: 1) establishing an Energy and Climate Leadership (ECL) Institute for the purpose of developing grassroots leadership; 2) providing an Energy Efficiency Training Program (EETP); and 3) enhancing energy use information and management for small businesses and municipalities using "sMeasure" software. An overarching goal is to demonstrate that climate change, with its expected environmental impacts, also presents regional economic opportunities. The ECL Institute is designed to develop and support collaborative leadership with key members of Sierra communities for the purpose of fostering projects that reduce greenhouse gas emissions in their communities. The EETP component provides paid training for local contractors to increase the suite of services offered to potential customers which includes: energy audits, solar plumbing, energy retrofits, and other installations in areas where local capacity is lacking. The third component assesses the implementation of a no-cost energy-monitoring software, sMeasure. This software is used by small and medium size businesses to garner energy efficiency savings through the identification of achievable solutions and lower overall energy costs. This tool uses data from My Energy to analyze a customer's energy usage and compares it to similar users in similar weather zones.

**QuEST/Cities of Oakland, Berkeley, and Emeryville** (contract executed in 2010)

Owners of multifamily properties do not reap a direct financial benefit from energy improvements, and tenants have no equity interest in making investments. In the case of master metered buildings, tenants have little direct benefit to conserve. This project proposes to develop policies and programs that the utility and local governments can use to address this split incentive. Several core approaches will be pursued.

**QuEST/Cities of Oakland, Berkeley, and Emeryville** (contract executed in 2010)

It is more cost-effective to provide commercial customers with a single, comprehensive audit than the current model where direct installation contractors audit only the specific technology they sell, leaving customers uninformed about all of their options and creating lost opportunities. This program will ease customer confusion about which energy savings investments are best for their situation, ultimately leading to increased project implementation and deeper energy savings compared to historical utility-funded energy efficiency programs.

**Santa Clara County** (Silicon Valley Energy Watch) (contract executed in 2011)

This pilot expands the ability of municipal housing departments to incorporate Whole House energy efficiency measures into standard rehabilitation work. The City of San Jose Housing Department provides a range of affordable housing programs and services to San Jose residents, including financial and technical assistance. This pilot will provide homeowners with financial assistance in the form of loans and grants to make home repairs and improvements. The program will serve low- and moderate-income, hard-to-reach residential communities. The pilot coordinates outreach education and energy savings projects across Santa Clara County in order to ensure a comprehensive, innovative, and strategic approach to energy savings.

**Santa Clara County** (Silicon Valley Energy Watch) (contract executed in 2011)

This program funds 17 public and nonprofit agencies in Santa Clara County with “mini grants” to conduct 18 innovative energy efficiency outreach and education programs within targeted communities. It supports small, local, and innovative social marketing campaigns designed to achieve significant and lasting behavior changes about energy efficiency. To qualify for funding, projects had to define a specific target population, situate energy efficiency within a broader framework of environmental sustainability, and include tangible incentives for energy efficiency behavior change. Funded projects include energy-focused business outreach, an educational television series, youth classroom education, and the creation of an energy efficiency module for low income home rehabilitation volunteers.

**Projects Selected During the 2011 Solicitation**

**City of San Francisco** (contract negotiations being finalized)

This pilot studies opportunities to transform the market so that newer, more efficient refrigeration equipment can provide a more cost-effective option for small and medium businesses. San Francisco will do this by collecting accurate estimates of the energy

costs associated with the targeted equipment and show how permanent retirement and disposal of inefficient commercial refrigeration from the marketplace may help improve the cost and efficiency of refrigeration at these businesses.

**Mendocino County** (contract executed in first quarter 2012)

The Community Development Commission of Mendocino County is developing a program to assist Public Housing Authorities (PHAs) to facilitate market transformation within their internal operations and in hard-to-reach communities by embedding energy efficiency practices into its policies and procedures. This pilot program will create a new procurement and purchasing policy for PHAs that incorporates long-term energy savings into cost analyses while aligning with local, state, and federal rules and regulations.

**Humboldt County** (contract executed in fourth quarter 2011)

This pilot will test the Redwood Neighborhood Energy Challenge (RNEC) concept, which will engage neighborhoods and individuals to reduce energy consumption on behalf of a local school. To encourage participation and residential energy reductions, the RNEC will utilize concepts from community-based social marketing. Regardless of energy saving outcomes, the RNEC will evaluate social marketing-based outreach strategies, behavioral change strategies, and the assumption that awareness, knowledge and attitudes towards energy efficiency are associated with energy use.

**Santa Clara County** (contract executed in first quarter 2012)

Correctional facilities and campuses are traditionally high consumers of energy and pose special challenges for implementing energy efficiency and conservation. This category of buildings is often not effectively addressed with efficiency retrofits because there are no comparable benchmarks. Successful results require specialized equipment and changes in operational procedures. To address this particular niche need, Santa Clara County will develop a program to create benchmarking standards specifically for various types of correctional facilities.

**Cities of Albany, Benicia, El Cerrito, Moraga, Orinda, Piedmont and San Pablo**  
(contract executed in fourth quarter 2011)

This pilot focuses on increasing energy management activity in small local governments in California. The program will be implemented by Strategic Energy Innovations (SEI) and will pilot a model partnership of small cities backed by a technical support team composed of AmeriCorps volunteers and a retired energy professional serving as an Encore Fellow. This program aims to determine if partner cities can effectively and efficiently identify and implement energy management systems and practices that have been challenging for small cities to set up and maintain.

**San Luis Obispo County** (contract negotiations being finalized)

This pilot seeks to prove the concept that “group purchasing of energy efficiency” for small and medium businesses is cost-effective. It is the collective participation by small- and medium-size businesses to purchase products and services. By pooling the buying power

of more than one buyer, these businesses can save time and resources by obtaining and implementing products that reduce their energy costs and improve their facilities.

**Napa County** (contract executed in fourth quarter 2011)

To realize long-term impacts from physical improvements requires changes in behaviors of the people using those systems. The capacity to make those changes varies from organization to organization. This pilot will develop, test, and evaluate strategies to educate building occupants about benefits related to GHG reduction. Maintenance staff will be taught system optimization procedures to improve energy efficiency, assure comfort, reduce operating costs, and reduce GHG emissions.

**Alameda County** (StopWaste.org) (contract negotiations being finalized)

This program provides energy asset ratings for existing single family, multifamily and commercial buildings. It helps potential buyers and renters make housing and building decisions based on energy efficiency. This program may motivate building owners to improve the energy efficiency of their existing buildings, if they realize that higher property values may result from such improvements.

## **GREEN COMMUNITIES**

The Green Communities (GC) program is designed to provide data, tools, and training to local government customers to enable them to better understand and manage their municipal and community-wide energy usage in order to develop and implement climate action plans. PG&E staff will work with at least seven different non-government organizations and government organizations to provide the GC Program services and products. Major program activities described in Advice Letter 3082-G-A/3598-E-A, approved in March 2010, fall into the three subprograms listed below:

### **1. Statewide Assistance for Local Governments (Statewide Program)**

PG&E, Southern California Edison, SoCalGas, and San Diego Gas & Electric have entered into co-funded contracts with the International Council for Local Environmental Initiatives (ICLEI), the Institute for Local Government (ILG), and the Local Government Commission (LGC) to provide a coordinated statewide program of workshops, technical assistance, a recognition program, and other means to allow local governments to share best practices associated with energy management. This statewide program is called the Statewide Energy Efficiency Collaborative (SEEC). Work performed in this program is coordinated with the statewide local government energy efficiency best practices coordinator whose contract is also co-funded by the four IOUs.

In 2010, PG&E issued a contract with ICLEI to conduct a series of workshops and training for local governments about taking key steps to reduce GHG emissions including: conducting a local government operations inventory, conducting a community-scale inventory, developing an emissions reduction target, and developing

and implementing a climate action plan. During 2011, ICLEI began developing and delivering a suite of resources to aid local governments with the implementation of energy efficiency measures, to reduce related greenhouse gas emissions. As of December 31, 2011, ICLEI had conducted 18 in-person workshops and two webinars and has completed the following tools and/or guidance documents: guidance on municipal and community-wide GHG inventories, an online municipal GHG inventory tool, an online community-wide GHG inventory tool, guidance on emission forecasting and target setting, a Climate Action Planning guidebook and template, a sample Climate Action Plan with measures, the Climate & Air Pollution Planning Assistance (CAPPA) tool, and the City Planners' Energy Action Handbook.

## 2. Climate Planning Assistance for Local Governments (Climate Program)

This subprogram provides funding, training, and energy usage data to local governments, regardless of whether they are part of a local government partnership, to help with the completion of GHG inventories and climate action plans (CAPs). Work performed in this subprogram is coordinated closely with the local government partnerships to leverage LGP Strategic Plan Menu work with the Climate Program efforts. The major Climate Program accomplishments for 2011 were:

- **43 GHG Emissions Inventories Completed in 2011:** PG&E's local government partners completed one community-wide GHG Inventory and 42 municipal GHG Inventories in 2011 as part of contracts with PG&E. These completed inventories analyzed GHG emissions for cities and counties throughout the Sierra Nevada region, northern Central Valley, and San Francisco Bay Area. This brings the cumulative total as of the end of 2011 to 20 community-wide and 61 completed municipal inventories.
- **99 Greenhouse Gas Inventories Initiated in 2011:** PG&E issued contracts for 39 community-wide GHG Inventories and 61 municipal GHG Inventories in 2011. These inventories will analyze GHG emissions for cities and counties throughout PG&E's service area.
- **46 Climate Action Plans (CAPs) Initiated in 2011:** PG&E issued contracts for 36 CAPs specific to community-wide and municipal energy usage and 10 CAPs specific to municipal energy usage. These CAPs will include long-term policies and strategies to reduce energy and GHG emission in cities and counties throughout PG&E's service area.
- **Data provided to 236 Jurisdictions through 2011:** PG&E collaborated with ICLEI to develop standardized reports to provide local governments with data on the GHG emissions associated with their electricity and natural gas use at the municipal level and aggregated non-customer specific data at the community-wide scale. PG&E also collaborated with local jurisdictions to develop more detailed residential and non-residential aggregate reports with

data on zip code and NAICS codes. PG&E has provided inventory reports to 199 cities and 39 counties and more advanced reports to 70 cities and 11 counties.

### **Fluorescent Lamp Recycling Program (FLR Program)**

In collaboration with local governments, and as part of its Green Communities program, PG&E launched the Fluorescent Lamp Recycling Outreach and Marketing (FLR) Program in six counties in 2011 for the proper disposal of fluorescent lamps for residential customers. The counties of Humboldt, Sonoma, Napa, Alameda, Santa Clara, and Santa Cruz have established retail partnerships for fluorescent lamp drop-off and collection. At present, over 100 retail collection sites are participating in the programs and in the coming months, we expect this number to reach 128 sites in total. As of the end of 2011, the FLR program had collected 57,747 fluorescent bulbs from residents.

In addition to fluorescent lamp recycling, the Green Communities program collaborated with Alameda County StopWaste.Org to develop engaging and consistent marketing and branding materials to message the importance of proper disposal for fluorescent bulbs. The program developed designs for web badges, posters, newspaper ads, shelf-talkers and counter-cards, bill inserts, school handouts, and a variety of elements that make up a toolkit for any local government interested in launching their own fluorescent lamp recycling program. These free marketing and outreach templates are available to all local governments on the PG&E website at [www.pge.com/sustainablecommunities](http://www.pge.com/sustainablecommunities) and are customizable for any city and county that wants to communicate about collection locations. Several counties are already using these materials in their outreach with the goal of establishing a recognizable and actionable message to residents disposing of fluorescent bulbs.

## **PROGRAM DESCRIPTIONS AND STRATEGIES – THIRD PARTY PROGRAMS**

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Third Party programs support the statewide programs and are described in more detail below.

### **1. Third Party programs supporting the Residential Program**

**Implementer:** Heschong Mahone Group (HMG)

**Program:** California Multifamily New Homes Program (CMFNH)

CMFNH encourages multifamily residence builders to construct homes that exceed California's T-24 energy efficiency standards by at least 15 percent. CMFNH facilitates energy efficient design and construction in multifamily housing through design

assistance and cash incentives. CMFNH benefits include energy efficiency services for developers, architects, engineers, energy consultants, and owners. CMFNH offers resources for owner/developers of qualified multifamily new construction.

**Implementer:** Proctor Engineering Group

**Program:** Cooling Optimizer Program

The Cooling Optimizer Program (previously called the Enhanced Time Delay Relay Switch Program) is a direct install mass market program serving single family and mobile home residential customers in Climate Zones 2, 4, 11, 12, 13 and 16 and multifamily residential customers in Climate Zones 11, 12 and 13. The program improves the sensible efficiency of air conditioners by running the fan at the end of the compressor cycle, evaporatively cooling the air returning to the building. The program also supports the introduction of retrofit high efficiency variable speed brushless permanent magnet (BPM) fan motors with enhanced time delay integrated into the motor that reduces fan power consumption during heating, cooling, ventilation and fan time delay. Proctor Engineering Group recruits and trains the subcontractors who deliver this program to the customer as well as performing QA/QC activities of the installations.

**Implementer:** Systems Building Research Alliance (SBRA)

**Program:** New ENERGY STAR<sup>®</sup> Manufactured Homes

New manufactured homes are typically built under the nationally-preemptive HUD Manufactured Housing Standards, with energy requirements less stringent than the California Energy Code and well below ENERGY STAR<sup>®</sup> levels. The proposed program will move a substantial share of the new manufactured homes built in PG&E's service area from what has been basic energy construction under the HUD standards to high performance ENERGY STAR<sup>®</sup> levels by the strategic application of rebates. It will also reduce system load by right sizing of cooling equipment capacity and by reducing the building thermal load. For homes with electric heat, it will change the heating equipment practice to heat pumps from the current preference for electric resistance furnaces. It also contains an element to educate the key players in the industry—particularly the retail community, and through the retailers, homebuyers—as to the benefits of ENERGY STAR<sup>®</sup> and energy efficient construction, thereby sustaining program gains into the future.

**Implementer:** Synergy Companies

**Program:** Direct Install for Manufactured and Mobile Homes

This Direct Install for Manufactured and Mobile Homes Program is designed to be a direct installation, no-cost-to-the-customer, resource program that serves the hard-to-reach (HTR) moderate-income customers in PG&E's service area and focuses 25 percent of its efforts toward regions outside of the nine-county Bay Area and the Central Valley. It also targets non-English speaking customers, including those who speak Spanish, Russian and a variety of Asian languages. The program targets

manufactured/mobile home customers that would not otherwise receive program benefits from public-purpose funding. It includes evaporative cooler fan depowerment and enhanced pad measures in mobile homes with evaporative cooling. The evaporative cooling elements, duct test and seal and diagnostic measures for central air conditioning are all shown to reduce energy use during afternoon peak loads.

## 2. Third Party programs supporting the Commercial Program

**Implementer:** The Trane Company

**Program:** Cool Cash

Cool Cash is a third party performance contracting program that delivers reliable and persistent electric savings, demand reduction and demand response opportunities by offering comprehensive facility audits and financial incentives for the installation of energy efficiency measures at qualifying commercial facilities served by PG&E throughout its service area. Program efforts will be concentrated in the Central Valley, Climate Zones 11-13. The program design promotes the introduction of a proven energy efficiency measure technology that has traditionally had a low degree of market penetration. Although this measure, an indirect evaporative pre-cooler (IEC) which uses indirect evaporation to pre-cool incoming makeup air streams, is the only one eligible for incentive through the program, program audits and other activities will promote comprehensive energy efficiency upgrades across a broad spectrum of technologies.

**Implementer:** Portland Energy Conservation, Inc. (PECI)

**Program:** AirCare Plus

The AirCare Plus program provides incentives to maintenance service contractors for rooftop HVAC units for refrigerant charge and airflow modifications, economizer retrofits, and thermostat replacements and adjustments. The program targets small- and medium-sized commercial customers with HVAC rooftop units (from 3-60 tons). Customers include high tech and restaurant businesses and others for whom HVAC loads match the specified load above. In particular, the program provides service contractor technicians with on-site energy efficiency training and ongoing technical support, including use of a hand-held software device that uses proprietary AirCare Plus software and accepts data about the HVAC units and provides instructions on how to conduct the retrofit, including proper installation in compliance with Title 24. In addition, pre- and post-retrofit technical data and implemented measures are automatically recorded by the handheld diagnostic tool. After completing the rooftop HVAC unit maintenance, technicians upload their activity information through a wireless connection to the implementer's (PECI) website to identify savings and additional tune-up opportunities. Using energy savings estimates generated by the AirCare Plus software, these technicians are able to show building owners or managers how increased energy efficiency saves them money. Incentives are paid directly to the HVAC contractor.

**Implementer:** Enovity

**Program:** Commercial and Industrial Boiler Efficiency Program (CIBEP)

CIBEP is an incentive program that implements large commercial and industrial fuel-fired boiler system energy efficiency improvements that will result in both natural gas and electrical energy savings. This program combines boiler engineering evaluations and technical implementation assistance with financial incentives that make the projects more economically attractive to PG&E customers. Primary markets for CIBEP include:

- Small and large offices;
- Colleges and universities;
- Large hospitality;
- Hospitals and large medical facilities;
- Gaming and entertainment;
- Industrial and manufacturing;
- Hi-tech and laboratories;
- Laundries; and
- Food processing.

**Implementer:** Quantum Energy Services and Technologies (QuEST)

**Program:** Comprehensive Retail Energy Management Program (CREMP)

CREMP is designed to deliver cost-effective, long-lasting energy and demand savings (electric only) by offering a full suite of engineering services—primarily lighting and HVAC—to existing large retail customers in PG&E's service area. This program provides no-cost engineering services to building owners and operators, while also providing incentives for the installation of measures that improve building operations and save energy.

The CREMP approach is comprehensive and targets building optimization training, and the implementation of measures and services listed above. QuEST CREMP continues to work with one of the largest retailers in PG&E's service area, and is attempting to work with other large retailers.

**Implementer:** Portland Energy Conservation Inc. (PECI)

**Program:** Energy Smart Grocer

Energy Smart Grocer provides grocers with energy audits, rebates and information about energy-efficient technology and operations. The program promotes energy-efficient lighting, HVAC, and refrigeration systems. Specific services include no cost energy audits, energy savings reports, contractor enrollment, technical consultation, and financial rebates and rebate application assistance.

**Implementer:** KEMA

**Program:** Enhanced Automation Initiative (EAI)

The goal of EAI is to promote investments in enhanced automation and control technologies. The EAI targets large commercial customers who want to improve their process controls or building automation systems and the functionality of their existing energy management systems (EMS). The program offers free on-site assessments, technical assistance, and incentives for EMS reprogramming and/or hardware improvements.

**Implementer:** Enovity

**Program:** Monitoring-Based Persistence Commissioning (MBPCx)

The MBPCx program uses a building automation system (BAS) to track the ongoing performance of HVAC systems and facilitate the reporting and correction of deviations from optimal performance. The program initially involves a traditional retro-commissioning approach where site surveys are performed, the HVAC and BAS systems are thoroughly documented, and energy efficiency measures are identified through functional testing. Then, the program uses a Performance and Continuous Recommissioning Analysis Tool (PACRAT) as the main persistence commissioning tool. PACRAT is a comprehensive automated diagnostic tool for HVAC systems performance that automatically collects trend data from the BAS and has built-in diagnostic tools to identify system anomalies from historical data, generating reports of system anomalies and associated energy and operational cost savings at regular user-defined intervals. Customers receive incentives for participating in the program.

This program targets large commercial buildings (office, retail, hotel, hospital, college/university, high tech office/lab/manufacturing).

**Implementer:** Honeywell

**Program:** Cool Control Plus™

The Honeywell Cool Control Plus program shut-down in October 2011. Due to market saturation (lack of customer participation), the implementer elected to shut-down the program.

**Implementer:** Ecology Action

**Program:** Lodging Savers

Lodging Savers delivers multi-measure comprehensive retrofits and retro-commissioning (RCx) to small, medium and large lodging facilities in PG&E's service area. Predominate measures include lighting, HVAC controllers, refrigeration measures, and water saving measures. Ecology Action provides audits and financial incentives to encourage measure adoption.

**Implementer:** Quantum Energy Services and Technologies (QuEST)

**Program:** Medical Building Tune-Up (MBTU)

MBTU is a retro-commissioning program designed to improve the energy efficiency of hospitals operated by Kaiser Permanente, Sutter Health and Catholic Healthcare West in PG&E's service area. Hospital owners are facing the prospect of significant expenditures to meet new seismic requirements. The MBTU program takes advantage of this planned funding by providing a program design that couples in-depth energy engineering analysis, with assistance in meeting regulatory requirements of the Office of Statewide Health Planning and Development (OSHPD). The Program will provide engineering and rebates targeting feasible retro-commissioning measures as well as referrals to PG&E's Demand Response and Self-Generation programs.

**Implementer:** Resource Solutions Group (RSG)

**Program:** School Energy Efficiency Program (SEE)

SEE provides school facility benchmarking, audits, technical assistance (including developing and evaluating a request for proposal to hire a contractor to install recommended measures) and incentives to qualifying preschool (pre-kindergarten) through 12<sup>th</sup> grade schools, both public and private. In addition, this program targets qualifying college campus housing customers with specific and applicable measures in campus housing facilities. Customers can choose to receive incentives, technical assistance in lieu of incentives, or a combination of both. The program serves customers throughout PG&E's service area.

**Implementer:** Richard Heath and Associates (RHA)

**Program:** Energy Fitness Program (EFP)

EFP serves small- and medium-sized nonresidential customers in the area north of Sacramento with a no-cost/low-cost, direct-install program. The EFP performs an audit of each facility and provides direct installation of a tailored package of energy efficiency measures such as lighting, exit signs, vending machine controllers, and occupancy sensors. Energy efficiency measures may also include installation of window film and HVAC condenser coil cleaning. Applicable recommendations for lighting, refrigeration, HVAC, motors, building envelope, and food service are given to each participant in a customized energy audit report. In addition, the EFP provides energy education and personalized technical assistance to each customer as well as referrals to other applicable programs.

**Implementer:** The Energy Alliance Association (TEAA)

**Program:** Energy Savers Program

The Energy Alliance Association (TEAA) provides incentives and comprehensive energy efficiency services to small and medium businesses (up to 200kW). The focus of the program is to reduce peak demand and energy usage through short payback energy efficiency measures.

TEAA serves commercial customers in the counties of Sonoma, Mendocino, Napa, and Solano and offers no-cost energy surveys as well as 100 percent pre- and post-construction inspections by SBEA project managers. Incentives are available for eligible measures (i.e., lighting, occupancy sensors, replacement of inefficient unitary HVAC systems, AC tune-ups).

**Implementer:** Ecology Action

**Program:** RightLights

The RightLights program is a multilingual, direct install program implemented by Ecology Action that delivers comprehensive lighting retrofits to businesses in Monterey, San Benito, Santa Clara, Santa Cruz, and San Mateo Counties with A-1, A-6, or A-10 rate schedules. RightLights' measure list includes lighting, pre-rinse spray valves, refrigeration tune-ups, refrigeration fan motor drop-in replacements, refrigeration heater door controls, strip curtains, interactive refrigeration controls, and vending machine controls.

**Implementer:** KEMA

**Program:** Small Commercial Comprehensive Refrigeration - Cool Biz

Cool Biz is an incentive program designed to provide comprehensive refrigeration energy efficiency upgrades to small- and medium-sized commercial businesses in selected areas. This targeted market encompasses convenience stores, butcher shops/meat markets, fish markets, small independent restaurants/cafes, drugstores, liquor stores, retail bakeries, caterers, cafeterias, assisted living facilities, gas station/convenience stores, and independent grocery stores. The program offers:

- A free facility assessment to identify energy saving equipment opportunities;
- A detailed proposal that includes a list of recommendations and estimates of energy savings, project cost, payback period and the rebate amount to be paid by Cool Biz;
- Installation of the approved energy-saving equipment by a local, approved contractor and well as pre- and post-installation inspections to assure quality and verify energy savings; and
- Prescriptive measures including refrigerator controls, cooler door heater controls, freezer door heater controls, electronically-commutated (EC) motors, novelty cooler controllers, custom refrigeration measures, compact fluorescents, fluorescent fixture upgrades, LED exit signs, custom lighting upgrades, HVAC system tune-ups, HVAC controls, and custom electric measures.

**Implementer:** QuEST

**Program:** Data Center Cooling Controls Program (DCCCP)

DCCCP targets data centers and server farms to improve the centers' energy efficiency by providing facility audits and incentives for temperature-control systems for computer room air conditioning units (CRAC) or computer room air handling units (CRAH) and the variable frequency drives (VFD) for those units. The program focuses on the installation of advanced controls, VFDs and outside air economizers. A self-optimizing control strategy continually adjusts the speed of the CRAC/CRAH fans so that total power consumption (fan power plus cooling power) is minimized. The approach results in significant energy savings and provides data center operators with valuable information about temperature distribution in their data centers.

**Implementer:** EFM Solutions, LLC

**Program:** Energy-Efficient Parking Garage (EEPG)

The Energy Efficient Parking Garage Program is designed to fill a niche within the PG&E program portfolio with simple, proven technologies, quick installation, and a non-abrasive application/participation process, that will provide fast and plentiful energy savings within the program years of 2010 - 2012. EEPG seeks out any above-ground parking garage within the PG&E area and will offer an incentive of \$0.05/kWh (equal to that of the PG&E Customized Program) for either T8 Fluorescent or Induction lamp retrofits along with daylight controls for the perimeter fixtures.

**Implementer:** Matrix Energy Services, Inc.

**Program:** Furniture Store Energy Efficiency

The objective for the Retail Furniture Store Energy Efficiency Program is to improve energy efficiency for retail furniture stores throughout PG&E's service area. The program will replace the existing lamps with high-efficiency lamps and will perform low-cost/no-cost maintenance tune-ups, such as economizer repair, refrigerant charging, filter replacement and coil cleaning. Additionally, Matrix will work with store management to assist them in promoting CFL and other efficient lighting products to their customers.

**Implementer:** Sylvania Lighting Services

**Program:** High Performance Office Lighting

The program delivers lighting solutions to office buildings, warehouses and other large commercial buildings throughout PG&E's service area. The program proposes to use a comprehensive integrated approach and the newest lighting technologies.

**Implementer:** Energy Solutions

**Program:** LED Accelerator

Energy Solutions' LED Accelerator (LEDA) program bridges the gaps between manufacturers of new LED lighting technology and major customers that can install LED technology in large numbers. Current LED products with broad potential application include:

- LED spotlights to replace low voltage halogen spotlights;
- LED reflector lamps to replace incandescent/halogen PAR lamps; and
- LED freezer case lights to replace fluorescent fixtures.

**Implementer:** EnerNOC, Inc.

**Program:** Monitoring-Based Commissioning

The program helps commercial customers gain better information about the energy usage at their facilities, participate in a comprehensive audit, implement cost-effective measures with help from incentive funds, and engage in an ongoing, monitoring-based commissioning process. The Monitoring-Based Commissioning (MBCx) program seeks to bridge the gap between demand response (DR) and energy efficiency. MBCx refers to the combination of retro-commissioning and continuous commissioning activities, coupled with ongoing, technology-based monitoring to ensure persistence of savings. Selected facilities are analyzed to identify and implement cost-effective retro-commissioning activities that typically require little or no capital investment.

**Implementer:** Honeywell International, Inc.

**Program:** GreenVent for Energy-Efficient Kitchens

This Honeywell program GreenVent for Energy Efficient Kitchens Program will accelerate the purchase and installation of demand ventilation controls for commercial food service kitchen hoods.

**Implementer:** Ecology Action

**Program:** CasinoGreen

This program, in partnership with Nexant and California Nations Indian Gaming Association (CNIGA), will deliver comprehensive, hybrid direct install efficiency upgrades to tribal casino customers of PG&E. End uses addressed include lighting, HVAC, refrigeration, food service, motors, controls and others.

**Implementer:** Willdan Energy Solutions DBA Intergy Corporation

**Program:** Healthcare Energy Efficiency Program (HEEP)

Intergy Corporation, in partnership with Putnam Price Group, Mazzetti and Associates, California Hospital Association (CHA), and California Society of Healthcare Engineering (CSHE), created HEEP to address the complex issues of this industry's hesitancy to adopt energy efficiency behaviors, initiate facility upgrades, and achieve cost-effective energy savings. The program targets independent medical facilities, including medical office buildings, acute care facilities, skilled nursing facilities and other associated ancillary building types on medical campuses. HEEP primarily targets projects that are exempt from OSHPD requirements.

**Implementer:** Willdan Energy Solutions DBA Intergy Corporation

**Program:** Ozone Laundry Energy Efficiency

The Ozone Laundry Energy Efficiency Program (OLEEP) is a hardware program that will capture natural gas energy savings for laundry equipment used in hospitality, nursing/rehab home, industrial and other commercial segments within PG&E's service area. A vendor-neutral program, OLEEP will promote ozone laundry systems from a number of different vendors. Nursing/rehab homes and hotels are expected to have the majority of on-site laundry systems and will be the primary target areas. The heavily regulated hospital environment, particularly in regards to laundry water temperatures, has prevented the implementation of ozone technology. Intergy and the various ozone vendors will continue to work diligently with the healthcare regulating agencies to allow exceptions for ozone when safe and appropriate, but the hospital sector does not appear to have the potential that it was originally thought to have.

**Implementer:** The Trane Company

**Program:** Cool Schools

The Cool Schools Program provides incentives for the installation of reliable and comprehensive energy-efficient technologies that achieve both energy savings and permanent peak demand reduction. The Program provides energy-efficient equipment retrofits to improve lighting quality, thermal comfort, acoustics, ventilation, indoor air quality, and occupant control to improve schools. Due to a lack of participation, Trane will close the program in 2012.

**Implementer:** Low Income Investment Fund (LIIF)

**Program:** California Preschool Energy Efficiency Program (CPEEP)

CPEEP provides energy efficiency retrofits to the largest preschool centers. The program brings together the key stakeholders in this segment to leverage additional energy efficiency funds and outreach expertise. CPEEP is a partnership with the California Department of Education and California Head Start Association. LIIF's subcontractor, Willdan Energy Solutions DBA Intergy Corporation, coordinates the implementation of the retrofit projects.

LIIF provides a complete energy efficiency program for the centers by identifying energy and demand reduction opportunities, providing technical assistance to identify and implement projects, completing post-installation quality control procedures, and training key facility staff. The program provides direct installation of a comprehensive list of measures including lighting, HVAC refrigeration and other measures.

**Implementer:** Matrix Energy Services

**Program:** K-12 Private Schools and Colleges Audit Retro

Matrix ESI provides comprehensive energy efficiency services to private preschools and K-12 schools, private colleges and universities and trade/technical schools market

segments. The primary objective of the program is to help these facilities realize both short-term and long-term energy savings in a cost effective manner.

**Implementer:** Matrix Energy Services

**Program:** EE Entertainment Centers

Matrix ESI provides comprehensive energy efficiency services to entertainment centers (movie theaters). The primary objective of the program is to help these facilities realize both short-term and long-term energy savings in a cost effective manner.

### 3. Third Party programs supporting the Industrial Program

**Implementer:** Air Power USA

**Program:** Assessment, Implementation and Monitoring (AIM) of compressed air systems

AIM helps PG&E industrial customers improve their compressed air systems and reduce their electric usage. In addition, AIM provides technical services at no cost to customers, including:

- Air system audits, which identify the costs and savings of specific projects to reduce electric use and improve air quality;
- Design and project implementation support, which helps customers spec and bid improvement projects and oversee their implementation;
- Savings verification, which verifies the actual savings associated with the implemented projects by measuring electric use before and after project installation;
- Incentive processing, which handles the paperwork and documentation for collecting AIM incentives; and
- Post-project technical support for three years, which helps customers sustain energy savings and air system efficiency by providing check-up audits and ongoing technical support for a period of three years after project installation.

**Implementer:** QuEST

**Program:** California Wastewater Process Optimization Program/Anaerobic Digester Optimization Pilot Program (CalPOP/ADOP)

CalPOP targets wastewater treatment plants and provides facility audits, engineering assistance, project management support, and incentives based on potential energy savings. An Anaerobic Digester Optimization Pilot (ADOP) was added to take advantage of available gas savings at wastewater treatment facilities.

**Implementer:** Global Energy Partners (now EnerNOC)

**Program:** Energy Efficiency Services for Oil Production

The Energy Efficiency Services for Oil Production Program provides a turnkey custom measure incentive program targeting PG&E hard-to-reach oil and gas customers located in PG&E's service area. It implements a variety of energy efficiency measures including: conversion of outdated pumping systems, pump-off controllers, motor controllers, proper sizing of motors, pumps, and premium efficient motors, variable frequency drives, water reduction technologies, and splitting water injection systems into high and low pressure. Global Energy Partners provide on-site surveys to identify energy efficiency opportunities and post-installation surveys to determine impacts and certify installations.

The program assists all producers by identifying qualifying projects, calculating energy savings, completing applications, verifying energy savings and submitting all necessary documentation to the utility.

**Implementer:** Lockheed Martin Services

**Program:** Heavy Industry Energy Efficiency Program (HIEEP)

HIEEP identifies and facilitates the implementation of major process-oriented and other energy efficiency upgrades for PG&E's heavy industry customers. Customers that install energy efficient systems and equipment receive incentives based on the annual kWh or therm savings achieved.

Services provided by the program include, but are not limited to:

- Identifying all opportunities (energy efficiency, demand response, and renewable energy systems) and assessing their economies;
- Performing studies and assessments to: (1) identify efficiency improvements; (2) quantify these savings and other benefits to be produced by these improvements; and (3) explain/quantify the investments needed to achieve the benefits;
- Marketing collateral design and production;
- Assisting the participant to apply for program incentives;
- Assisting the participant in vendor and contractor selection;
- Monitoring installation for quality, conformance, and participation in commissioning; and
- Processing and tracking of incentive applications.

**Implementer:** Ecova, Inc.

**Program:** Ecova Air

Ecova (formerly Ecos) Air conducts audits and installations of compressed air systems. Participating customers receive complete compressed air system audits and incentives to install equipment that result in energy savings and demand reduction. Ecova Air

also provides training designed to generate persistent energy savings while helping the customer keep its compressed air system running at optimal performance. The Ecova Air Program is open to PG&E mid- to large-sized industrial facilities that use compressed air systems.

**Implementer:** Nexant, Inc.

**Program:** Refinery Energy Efficiency Program (REEP)

The REEP offers Nexant's refining expertise from its Petroleum and Chemical division and demand-side management program implementation experience from its Energy Management division. The REEP also fully uses the current three-year funding cycle to specifically address the long lead-time for refinery projects. REEP provides the following services:

- Identifying cost-effective projects and providing and applying industry-specific experience for selection and design of energy efficiency projects;
- Using incentives to offset capital investments; and
- Project management/coordination.

**Implementer:** Onsite Energy Corporation

**Program:** Cement Production and Distribution Energy Efficiency

The objective of the Cement Production and Distribution Energy Efficiency (CDP) Program is to provide energy efficiency and demand reduction energy efficiency services to cement production, cement distribution and Ready-Mix plants throughout PG&E's service area. Onsite will be implementing a variety of measures including: chemical and process improvements, mechanical process improvements, VFD's on fans, other mechanical measures, compressed air system improvements, Monitoring and Targeting/continuous improvement programs, lighting, HVAC, renewable fuels replacement and waste heat recovery. This market segment has shown a deep decline and this is reflected in a lack of participation by eligible customers.

**Implementer:** Nexant

**Program:** Industrial Retrocommissioning

The program targets all industrial end uses in PG&E's service area. It is designed to tap into the large savings potential associated with optimizing and maintaining the performance of energy systems. The objective of this program is to reduce the substantial energy losses that routinely occur in industrial facilities due to poorly controlled or malfunctioning equipment

#### **4. Third Party programs supporting the Agricultural Program**

**Implementer:** EnSave Inc.

**Program:** Dairy Energy Efficiency Program (DEEP)

DEEP offers rebates to smaller dairy producers and dairy food processors throughout PG&E's service area. Measures include milking vacuum pump variable speed drives, plate coolers, compressor heat recovery units, milk transfer pump variable speed drives, scroll compressors, premium efficiency motors, box fans, high-volume, low-speed fans, and lighting. EnSave works with the manufacturers of the technologies, dairy equipment dealers, and agricultural organizations to promote the program and enroll customers.

**Implementer:** VaCom Technologies

**Program:** Industrial Refrigeration Performance Plus Program (IRPP)

IRPP targets refrigerated warehouses, food processors and related cooling operations that operate year-round or seasonally in the food and beverage sector, including processing, storage and distribution operations with industrial refrigeration systems. Under IRPP, existing facilities are retrofitted, emphasizing refrigeration system improvements as well as lighting, envelope, pumping, air handling and related process equipment. Whole-facility simulation is used to quantify savings and economics. Two years of Web-based automated performance monitoring and associated operator education is included to provide transparency and long-term permanence of savings. IRPP provides more complex, comprehensive integrated solutions, higher savings levels and institutes a continuous improvement paradigm delivered through real-time performance monitoring and training.

**Implementer:** Richard Heath and Associates (RHA)

**Program:** Mercury Vapor Yard Light Exchange Program (LCP)

RHA replaces mercury vapor fixtures in the agricultural communities in the rural areas of Climate Zone 11 through a direct install or exchange process. RHA coordinates and facilitates the LCP with local schools and community organizations. The program encourages the voluntary, no-cost trade of existing, older mercury vapor lights for high pressure sodium lighting. RHA offers schools and organizations an exchange incentive for each operating mercury vapor fixture brought in and exchanged for a high pressure sodium yard light. By making the LCP a community event, RHA expands a normal fundraiser into an activity that combines marketing, outreach, public energy awareness, and financial benefit to local organizations and schools in rural communities.

**Implementer:** Resource Solutions Group (RSG)

**Program:** Wine Industry Efficiency Solutions (WIES)

WIES addresses energy efficiency and resource management in smaller wineries and implements a process that ensures demand and energy savings. WIES identifies efficiency improvement opportunities and provides incentives through either installation support services or rebates for customers who agree to implement the recommendations. RSG developed the Resource Management Advisor model for

businesses that require more than rebates to encourage program participation. This model assists customers with the confusing and often tedious tasks involved in implementing efficiency projects such as equipment specification, bid package development, contractor selection, project financing and project management.

**Implementer:** Global Energy Partners (now EnerNOC)

**Program:** Comprehensive Food Process Audit & Resource Efficiency Program

This program delivers electric and natural gas savings and demand reduction for the food processing industry throughout PG&E's service area. Measures include energy-efficient natural gas equipment, such as condensing economizers, condensate return optimization, heat recovery, process boilers, steam traps, and pipe and tank insulation; and electric equipment—such as custom refrigeration, processing and pumping, condensers and controls for refrigeration systems, premium efficiency motors and variable speed drives, and lighting. The measures address every major gas and electric end use in food processing facilities.

**Implementer:** Resource Solutions Group (RSG)

**Program:** Dairy Industry Resource Advantage Program (DIRA)

The Program provides energy efficiency services and incentives to larger dairies that will:

1. Identify comprehensive efficiency solutions through dairy facility energy audits, covering facilities as well as pumping and irrigation systems
2. Provide detailed and prioritized recommendations for efficiency upgrades
3. Offer three types of incentives to dairy customers in PG&E area to encourage comprehensive and swift installation of measures: base incentives, Installation Support Services, and bonus rebates
4. Coordinate with complementary programs in PG&E's range of offerings, including:
  - Third-party programs, such as those in process wastewater, refrigerated warehouses, and food processing
  - Demand Response
  - Water efficiency and energy/water synergies
  - Agricultural Pump Efficiency Program
  - Renewable energy

**Implementer:** BASE Energy, Inc.

**Program:** Process Wastewater Treatment EM Program for Ag Food Processing

The objective of the program is to assist the existing and new/expanding food processing facilities to reduce their energy and demand on their wastewater treatment facilities in PG&E's service area.

- Dairies
- Fruit beverage manufacturers
- Dry fruit producers
- Poultry farms
- Ice cream production plants
- Tomato plants
- Yeast production plants
- Wineries

## 5. Third Party programs supporting the Workforce, Education & Training program

**Implementer:** ConSol

**Program:** Builder Energy Code Training (BECT)

BECT provides training by the building industry to the building industry to improve compliance with Title 24 energy codes for residential new construction.

BECT provides the fundamentals of energy-efficient construction and an understanding of materials, assemblies, building systems and subsystems in the context of energy codes. In addition, in response to the major changes in Title 24 requirements, the focus of BECT has been to improve compliance with the new mandatory lighting standards and to provide information and training to encourage use of energy efficiency measures that reduce peak consumption and load, especially the quality-construction code elements that require third-party inspections and tests. These inspections and tests are not widely used by builders but provide cost-effective and verified savings.

**Implementer:** Build It Green

**Program:** Green Building Technical Support Services (GBTSS)

GBTSS promotes a green building strategy to achieve greater energy efficiency in new and existing homes. The focus of the program is to promote healthy, durable, energy and resource-efficient buildings in California. In order to accomplish this objective, Build It Green uses education and outreach to connect consumers and building professionals with the tools and technical expertise they need to build quality green buildings. Build It Green strives to foster collaboration with key stakeholder groups to accelerate the adoption of green building standards, policies, and programs.

## ISSUES FOR PARTNERSHIPS OR COMPETITIVE BID PROGRAMS IN 2011

### Government Partnerships

Statewide and local partnerships achieved their 2011 electric savings goals; however, some local partnerships did not achieve the 2011 natural gas savings goals. The main factor that impacted therm savings was significant accumulation of negative interactive effects from direct install lighting installations. Programs hit with significant negative therms are focusing on strategies moving forward to bring in positive therms that counterbalance negative interactive effects.

Energy Efficiency and Conservation Block Grant (EECBG): several local partnerships experienced project implementation delays in response to requirements associated with EECBG funding. Delays in fund disbursement, lack of local program coordination, incorrect project baselines, equipment specifications, and prevailing wage requirements were some of the issues local partnerships had to resolve prior to project installation.

### Third Party Programs

The following were examples of some issues that specific Third Party Programs encountered in 2011:

- PECE Air Care Plus and Ecology Action RightLights are two of 13 programs so successful in 2011 that additional funding was provided.
- The Honeywell Cool Control Plus program shut down in October 2011. Due to market saturation (lack of customer participation), the implementer elected to shut down the program.
- The Cool Schools program has had difficulty attracting customers and will close the program in 2012.
- The Cement Production and Distribution program continued to struggle in 2011, reflecting the deep decline in demand for cement.

# SECTION 1 ENERGY SAVINGS

Table 1

| <b>Table 1.</b>   |                          |   |                          |                                      |                    |       |
|---|--------------------------|---|--------------------------|--------------------------------------|--------------------|-------|
| <i>Electricity and Natural Gas Savings and Demand Reduction</i> |                          |   |                          |                                      |                    |       |
| <b>Annual Results</b>   | <b>Installed Savings</b> | <b>CPUC Adopted in D. 09-09-047 Goal (Year)</b> | <b>% of Goals (Year)</b> | <b>% of 3-year Goals (Portfolio)</b> | <b>Balance (4)</b> |       |
| <b>2010 Energy Savings (GWh) – Annual</b>                       | PG&E                     | 1,735   | 964                      | 180%                                 | 56%                | 1,375 |
| <b>2011 Energy Savings (GWh) – Annual</b>                       | PG&E                     | 1,519   | 1,032                    | 147%                                 | 49%                | (144) |
| <b>2012 Energy Savings (GWh) – Annual</b>                       | PG&E                     |   | 1,114                    |                                      |                    |       |
| <b>TOTAL Energy Savings (GWh) - Annual</b>                      |                          | <b>3,254</b>                                    | <b>3,110</b>             | <b>105%</b>                          | <b>105%</b>        |       |
| <b>2010 Energy Savings (GWh) – Lifecycle</b>                    | PG&E                     | 17,112  |                          |                                      |                    |       |
| <b>2011 Energy Savings (GWh) – Lifecycle</b>                    | PG&E                     | 16,014  |                          |                                      |                    |       |
| <b>2012 Energy Savings (GWh) – Lifecycle</b>                    | PG&E                     |   |                          |                                      |                    |       |
| <b>TOTAL Energy Savings (GWh) – Lifecycle</b>                   |                          | <b>33,126</b>                                   |                          |                                      |                    |       |
| <b>2010 Natural Gas Savings (MMth) – Annual</b>                 | PG&E                     | 18  | 16                       | 115%                                 | 37%                | 31    |
| <b>2011 Natural Gas Savings (MMth) – Annual</b>                 | PG&E                     | 33  | 16                       | 205%                                 | 68%                | (2)   |
| <b>2012 Natural Gas Savings (MMth) – Annual</b>                 | PG&E                     |   | 17                       |                                      |                    |       |
| <b>TOTAL Natural Gas Savings (MMth) – Annual</b>                |                          | <b>51</b>                                       | <b>49</b>                | <b>105%</b>                          | <b>105%</b>        |       |
| <b>2010 Natural Gas Savings (MMth) – Lifecycle</b>              | PG&E                     | 340   |                          |                                      |                    |       |
| <b>2011 Natural Gas Savings (MMth) – Lifecycle</b>              | PG&E                     | 497   |                          |                                      |                    |       |
| <b>2012 Natural Gas Savings (MMth) – Lifecycle</b>              | PG&E                     |   |                          |                                      |                    |       |
| <b>TOTAL Natural Gas Savings (MMth) – Lifecycle</b>             |                          | <b>836</b>                                      |                          |                                      |                    |       |
| <b>2010 Peak Demand savings (MW)</b>                            | PG&E                     | 303   | 218                      | 139%                                 | 43%                | 400   |
| <b>2011 Peak Demand savings (MW)</b>                            | PG&E                     | 270   | 234                      | 115%                                 | 38%                | 130   |
| <b>2012 Peak Demand savings (MW)</b>                            | PG&E                     |   | 251                      |                                      |                    |       |
| <b>TOTAL Peak Demand savings (MW)</b>                           |                          | <b>573</b>                                      | <b>703</b>               | <b>81%</b>                           | <b>81%</b>         |       |

PG&E Notes:

- (1) All energy savings numbers are gross.
- (2) Does not include Energy Savings Assistance (ESA) Program savings. The ESA Program was formerly entitled Low Income Energy Efficiency (LIEE).
- (3) Total portfolio energy savings include ex ante updates consistent with Decision 11-07-030 and estimated energy savings from 2006-10 CFLs installed in 2011 per CPUC D-10-12-049, pending final CFL bulb counts from Energy Division Staff. In addition, workpapers that are awaiting disposition have been excluded from reported energy savings.
- (4) The "Balance" values reflect the difference between the installed savings and the 3-yr goals. The negative values are a result of installed savings exceeding the 3-yr goals.

## SECTION 2 EMISSION REDUCTIONS

Table 2

| <b>Table 2</b>             |                            |                               |                            |                               |                            |                               |                             |                                |
|----------------------------|----------------------------|-------------------------------|----------------------------|-------------------------------|----------------------------|-------------------------------|-----------------------------|--------------------------------|
| <i>Emission Reductions</i> |                            |                               |                            |                               |                            |                               |                             |                                |
| Annual Results             | Annual tons of CO2 avoided | Lifecycle tons of CO2 avoided | Annual tons of NOx avoided | Lifecycle tons of NOx avoided | Annual tons of SOx avoided | Lifecycle tons of SOx avoided | Annual tons of PM10 avoided | Lifecycle tons of PM10 avoided |
| PG&E                       | 925,496                    | 10,572,101                    | 245                        | 3,181                         | -                          | -                             | 47                          | 496                            |
| <b>2011 Total</b>          | <b>925,496</b>             | <b>10,572,101</b>             | <b>245</b>                 | <b>3,181</b>                  | <b>-</b>                   | <b>-</b>                      | <b>47</b>                   | <b>496</b>                     |

PG&E Notes:

- (1) All environmental impact values are derived from gross energy savings.
- (2) Does not include Energy Savings Assistance (ESA) Program savings. The ESA Program was formerly entitled Low Income Energy Efficiency (LIEE).
- (3) Total portfolio energy savings include ex ante updates consistent with Decision 11-07-030 and estimated energy savings from 2006-10 CFLs installed in 2011 per CPUC D-10-12-049, pending final CFL bulb counts from Energy Division Staff. In addition, workpapers that are awaiting disposition have been excluded from reported energy savings.

Table 2 reports incremental environmental impacts of PG&E’s Energy Efficiency portfolio for 2011. The E3 calculator (PGE E3 version 4g5) has been updated by the Energy Division consultant for the calculation of Carbon Dioxide (CO2), Nitrogen Oxide (NOx) and Particulate Matter under 10 microns (PM10) per D.10-04-029, O.P. 5. The E3 calculator includes a Green House Gas adder of \$30 per tonne in 2011, using generation avoided cost inputs from the most recent Commission adopted Market Price Referent, and natural gas avoided costs for energy efficiency resources using natural gas price data as of the adopted date of D.10-04-029.

All of PG&E’s resource programs that provide energy savings contribute to emissions reductions reported in the table above. The emissions reductions are directly related to the amount of kWh and therms saved, so the programs and strategies that were most successful in reducing emissions are the same ones that were most successful in reducing kWh and therms.

PG&E uses the E3 calculator for all emissions calculations except for Sulfur Oxide (SOx). The SOx reductions are not calculated in the E3 calculator and are expected to be zero since none of the California IOUs use coal fueled power.

## SECTION 3 EXPENDITURES

Table 3

**Table 3**

*Expenditures*

| Summary of Portfolio Expenditures  | Adopted Program<br>Budget | Cumulative<br>Annual<br>Expenditures | Percent of<br>Portfolio<br>Budget | Percent of Total<br>Annual<br>Expenditures |
|--|---------------------------|--------------------------------------|-----------------------------------|--|
| <b>Total Portfolio Expenditures</b>  |                           |                                      |                                   |  |
| Administrative Costs   | 144,242,356               | 30,728,488                           | 2.4%                              | 8.1%                                       |
| Marketing/ Advertising/ Outreach Costs   | 105,551,639               | 16,425,171                           | 1.3%                              | 4.3%                                       |
| Rebates/Incentives/Direct Install  | 541,353,550               | 164,600,650                          | 12.8%                             | 43.3%                                      |
| Direct Implementation Costs  | 493,332,455               | 168,522,531                          | 13.1%                             | 44.3%                                      |
| <b>Total Portfolio Expenditures</b>  | <b>1,284,480,000</b>      | <b>380,276,840</b>                   | <b>29.6%</b>                      | <b>100.0%</b>                              |
| <i>Total Investor-owned Utility (Core) Expenditures (sub-component of portfolio)</i> |                           |                                      |                                   |  |
| Administrative Costs   | 87,177,575                | 14,258,317                           | 1.1%                              | 3.7%                                       |
| Marketing/ Advertising/ Outreach Costs   | 80,831,327                | 10,241,460                           | 0.8%                              | 2.7%                                       |
| Rebates/Incentives/Direct Install  | 332,030,266               | 98,402,675                           | 7.7%                              | 25.9%                                      |
| Direct Implementation Costs  | 322,234,089               | 97,080,235                           | 7.6%                              | 25.5%                                      |
| <b>Total Investor-owned Utility (Core) Expenditures</b>                              | <b>822,273,257</b>        | <b>219,982,686</b>                   | <b>17.1%</b>                      | <b>57.8%</b>                               |
| <i>Total Competitive Bid Program Expenditures (sub-component of portfolio)</i>       |                           |                                      |                                   |  |
| Administrative Costs   | 35,538,004                | 11,390,943                           | 0.9%                              | 3.0%                                       |
| Marketing/ Advertising/ Outreach Costs   | 15,299,866                | 4,698,168                            | 0.4%                              | 1.2%                                       |
| Rebates/Incentives/Direct Install  | 140,993,501               | 41,383,731                           | 3.2%                              | 10.9%                                      |
| Direct Implementation Costs  | 98,147,821                | 45,034,650                           | 3.5%                              | 11.8%                                      |
| <b>Total Competitive Bid Program Expenditures</b>                                    | <b>289,979,192</b>        | <b>102,507,491</b>                   | <b>8.0%</b>                       | <b>27.0%</b>                               |
| <i>Total Partnership Program Expenditures (sub-component of portfolio)</i>           |                           |                                      |                                   |  |
| Administrative Costs   | 21,526,777                | 5,079,227                            | 0.4%                              | 1.3%                                       |
| Marketing/ Advertising/ Outreach Costs   | 9,420,446                 | 1,485,544                            | 0.1%                              | 0.4%                                       |
| Rebates/Incentives/Direct Install  | 68,329,783                | 24,814,245                           | 1.9%                              | 6.5%                                       |
| Direct Implementation Costs  | 72,950,545                | 26,407,647                           | 2.1%                              | 6.9%                                       |
| <b>Total Partnership Program Expenditures</b>  | <b>172,227,551</b>        | <b>57,786,663</b>                    | <b>4.5%</b>                       | <b>15.2%</b>                               |
| <b>Total EM&amp;V Expenditures (separate from portfolio)</b>                         |                           |                                      |                                   |  |
| EMV IOU  | 14,718,000                | 1,847,759                            | 3.5%                              | 32.9%                                      |
| EMV JOINT STAFF  | 38,802,000                | 3,767,396                            | 7.0%                              | 67.1%                                      |
| <b>Total EM&amp;V Expenditures</b>   | <b>53,520,000</b>         | <b>5,615,155</b>                     | <b>10.5%</b>                      | <b>100.0%</b>                              |

Table 3 reports PG&E’s cumulative annual expenditures for 2011, the second year of the 2010-2012 Energy Efficiency Portfolio cycle.

## SECTION 4

### COST-EFFECTIVENESS

Table 4

Table 4

Cost Effectiveness

| Annual Results             | Total Cost to Billpayers (TRC) | Total Savings to Billpayers (TRC) | Net Benefits to Billpayers (TRC) | TRC Ratio   | Total PAC Cost        | PAC Ratio   | PAC Cost per kW Saved (\$/kW) | PAC Cost per kWh Saved (\$/kWh) | PAC Cost per therm Saved (\$/therm) |
|----------------------------|--------------------------------|-----------------------------------|----------------------------------|-------------|-----------------------|-------------|-------------------------------|---------------------------------|-------------------------------------|
| <b>2010 - 2012 TARGETS</b> |                                |                                   |                                  |             |                       |             |                               |                                 |                                     |
| Average per year           |                                |                                   |                                  |             |                       |             |                               |                                 |                                     |
| PG&E                       | \$ 628,637,343                 | \$ 813,083,892                    | \$ 184,446,548                   | 1.29        | \$ 363,413,653        | 2.24        | \$                            | 0.054                           | \$ 0.482                            |
| <b>PG&amp;E TOTAL</b>      | <b>\$ 628,637,343</b>          | <b>\$ 813,083,892</b>             | <b>\$ 184,446,548</b>            | <b>1.29</b> | <b>\$ 363,413,653</b> | <b>2.24</b> | <b>\$</b>                     | <b>0.054</b>                    | <b>\$ 0.482</b>                     |

PG&amp;E Notes:

- (1) Does not include Energy Savings Assistance (ESA) Program savings. The ESA Program was formerly entitled Low Income Energy Efficiency (LIEE).
- (2) PAC cost per kWh or per therm is levelized PAC cost per kWh or therm respectively.
- (3) The adopted avoided cost methodology does not provide information to provide a meaningful value for PAC Cost per kW. The adopted avoided cost methodology created kWh cost values that vary for each hour of the year that includes kW generation capacity costs. The current PAC Cost per kWh includes all ratepayer financial costs incurred in producing electric savings. The same costs would have to be reallocated if a PAC Cost per kW were presented. Additionally, the current approved calculator does not have the capability to calculate discounted kW.
- (4) Total portfolio energy savings include ex ante updates consistent with Decision 11-07-030 and estimated energy savings from 2006-10 CFLs installed in 2011 per CPUC D-10-12-049, pending final CFL bulb counts from Energy Division Staff. In addition, workpapers that are awaiting disposition have been excluded from reported energy savings.
- (5) TRC and PAC costs exclude projected shareholder incentives since no shareholder incentive mechanism was in place in 2011.
- (6) PG&E used reported project costs to calculate the cost effectiveness of non-residential retrofit customized projects.
- (7) The cost-effectiveness calculations are based on the actual accomplishments recorded in 2011.

Table 4 shows the various cost-effectiveness values used in the Total Resource Cost (TRC) test and the Program Administrator Cost (PAC) test. The cost-effectiveness calculations have been performed using the E3 calculator (PGE E3 version 4g5) with avoided costs updated by the Energy Division consultant in compliance with D.10-04-029. The E3 calculator provides the PAC cost per kWh saved and the PAC cost per therm saved but not the PAC cost per kW. The PAC costs per kWh or per therm provided in the E3 calculator are levelized PAC costs divided by the respective discounted energy savings over the life of the energy saved. It is not particularly useful, or practical, to separate the electric PAC cost into cost per kW and cost per kWh since they are different measures of the same energy; therefore, the E3 calculator does not separate these costs.

The TRC ratio of 1.29 is greater than 1.0 and the TRC net benefits are positive, as required for the portfolio, indicating that the avoided costs of energy exceed the energy efficiency program costs and provide a net resource benefit from a broad societal perspective. The PAC ratio of 2.24 is greater than 1.0, as required for the portfolio, indicating that the avoided costs of energy exceed the energy efficiency program costs and have a net resource benefit from a program administrator perspective.

The energy savings and incremental costs are from the Database for Energy Efficiency Resources (DEER) database where applicable and are otherwise documented in workpapers submitted to the CPUC. The effective useful lives (EUL) and net-to-gross values are taken from the Energy Efficiency Policy Manual and DEER where applicable and are otherwise documented in workpapers.

## SECTION 5 BILL PAYER IMPACTS

Table 5

**Table 5**

*Ratepayer Impacts*

| 2011   | Electric Average<br>Rate (Res and Non-<br>Res) \$/kwh | Gas Average Rate<br>(Res and Non-Res)<br>\$/therm | Average First Year Bill<br>Savings (\$) | Average Lifecycle Bill<br>Savings (\$) |
|--|---|---|---|--|
| PG&E   | \$0.15252   | \$0.93076   | \$262,676,809                           | \$2,904,758,972                        |
| <b>PG&amp;E Average</b>  |   |   |   |  |
| <b>PG&amp;E Notes:</b> <ol style="list-style-type: none"> <li>1) 2011 weighted average bundled electric rate - \$0.15252/kWh</li> <li>2) 2011 weighted average bundled gas rate - \$0.93076/therm</li> <li>3) First year and lifecycle energy savings exclude Energy Savings Assistance (ESA) Program, formerly entitled Low Income Energy Efficiency (LIEE).</li> </ol> |   |   |   |  |

PG&E’s electric and gas average rates are weighted to reflect as filed 2011 rates and adopted electric and gas forecast volumes. The average gas rate for gas transport customers has been calculated using PG&E’s filed monthly core procurement rate as a proxy.

As agreed in the IOUs’ conference call with Energy Division staff on August 17, 2007, average electric (residential and nonresidential) and gas (residential and nonresidential) rates will be included in the annual report to calculate the average first year and lifecycle bill savings. Also, it was agreed to use an average rate to calculate the average first year and average lifecycle bill savings from the participant perspective as follows:

- The average first year electric bill savings is calculated by multiplying an average (residential and nonresidential) electric rate with the first year kWh energy savings.
- The average first year gas bill savings is calculated by multiplying an average (residential and nonresidential) gas rate with the first year therm energy savings.
- The average lifecycle electric bill savings is calculated by multiplying an average (residential and nonresidential) electric rate with the lifecycle kWh energy savings.
- The average lifecycle gas bill savings is calculated by multiplying an average (residential and nonresidential) gas rate with the lifecycle therm energy savings.

## Section 6 Green Building Initiative

**Table 6**

**Table 6**  
*Green Building Initiative (1, 2)*

| 2011            | Expenditures (3)     | GWH  |        |           | MW   |        |           | MMth |        |           |
|-----------------|----------------------|------|--------|-----------|------|--------|-----------|------|--------|-----------|
|                 |                      | Goal | Annual | % of Goal | Goal | Annual | % of Goal | Goal | Annual | % of Goal |
| PG&E            | \$ 53,466,996        | N/A  | 316    | N/A       | N/A  | 56     | N/A       | N/A  | 6      | N/A       |
| <b>PG&amp;E</b> | <b>\$ 53,466,996</b> |      | 316    |           |      | 56     |           |      | 6      |           |

PG&E Notes:

- (1) All energy savings numbers are gross.
- (2) Does not include Energy Savings Assistance Program (formerly Low Income Energy Efficiency), Codes & Standards, and Nonresidential Audits.
- (3) The expenditures are incentive dollars to participants only.
- (4) Total portfolio energy savings include ex ante updates consistent with Decision 11-07-030 and estimated energy savings from 2006-10 CFLs installed in 2011 per CPUC D-10-12-049, pending final CFL bulb counts from Energy Division Staff. In addition, workpapers that are awaiting disposition have been excluded from reported energy savings.

Governor Arnold Schwarzenegger signed Executive Order S-20-04 (Green Building Initiative) regarding Green Buildings on December 14, 2004. It established the State of California's priority for energy and resource-efficient high performance buildings.

The Executive Order sets a goal of reducing energy use in state-owned buildings by 20 percent by 2015 (from a 2003 baseline) and encourages the private commercial sector to set the same goal. The order also directs compliance with the Green Building Action Plan (PDF file, 166 kb), which details the measures the state will take to meet these goals.

More details about the project can be found on the CEC's webpage at <http://www.energy.ca.gov/greenbuilding/>

Table 6 shows the expenditures and energy savings in 2011 for the Governor's Green Building Initiative (GBI). The following programs with their respective EEGA program code and description contributed to the GBI. Additional PG&E programs that supported the GBI with integrated and coordinated energy savings include Local Government Energy Watch Partnerships and PG&E core program offerings including Self Generation.

| EEGA_CODE | EEGA_DESCRIPTION  |
|-----------|---|
| PGE21261  | California Community Colleges (CCC)                           |
| PGE21262  | University of California/California State University (UC/CSU) |
| PGE21263  | State of California   |
| PGE21264  | Department of Corrections and Rehabilitation (CDCR)           |

Since 2004, The California Department of Corrections and Rehabilitation, University of California, California State University, and California Community College systems have

engaged with PG&E through formal energy efficiency contracts to achieve energy savings reductions and receive funding from California's IOUs.

In 2006, PG&E entered into a Memorandum of Understanding with the State of California and formed the State of California / IOU Energy Efficiency Partnership. The purpose of this MOU was to provide a foundation for the IOUs to collaborate with the Green Action Team and facilitate the mutual implementation of energy efficiency projects that will assist the State of California agencies in complying with Executive Order S-20-04 (EO), to achieve cost-effective energy savings through energy efficiency retro-commissioning (RCx) and retrofits of state-owned facilities in accordance with the California Public Utilities Commission (CPUC) D.05-09-043 and the IOUs' CPUC-approved energy efficiency and demand response programs.

The non-resource programs in PG&E's Energy Efficiency portfolio also contribute significantly to achieving the goals of the GBI by introducing customers to the general benefits of energy efficiency as well as to specific measures that could increase the energy efficiency of their homes and businesses.

Education, training, and online components are offered to State of California employees through the Energy Training Centers in San Francisco and Stockton.

Efforts continue with all statewide partnerships and the investor owned utilities. Commitments have been made through the 2011-2012 program cycle to support reducing energy use in state-owned buildings.

## **SECTION 7**

# **SHAREHOLDER PERFORMANCE INCENTIVES**

### **Summary**

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The Commission is evaluating shareholder incentives for the 2010 – 2012 portfolio cycle in Rulemaking 12-01-005. Therefore, no shareholder incentive estimates are included in this report for 2011 accomplishments.

## SECTION 8 SAVINGS BY END-USE

Table 8

**Table 8:**  
*Annual Savings By End-Use*

|  | GWH             | % of Total    | MW            | % of Total    | MMTh =<br>1,000,000<br>therms | % of Total    |
|--|-----------------|---------------|---------------|---------------|-------------------------------|---------------|
| <b>Residential</b>                         | <b>387.97</b>   | <b>24.76%</b> | <b>71.01</b>  | <b>25.01%</b> | <b>(1.81)</b>                 | <b>-5.06%</b> |
| Appliances                                 | 9.49            | 0.61%         | 3.83          | 1.35%         | 1.10                          | 3.08%         |
| Consumer Electronics                       | 48.77           | 3.11%         | 5.08          | 1.79%         | (0.77)                        | -2.16%        |
| Cooking Appliances                         | -               | 0.00%         | -             | 0.00%         | -                             | 0.00%         |
| HVAC                                       | 29.94           | 1.91%         | 13.23         | 4.66%         | 2.22                          | 6.20%         |
| Lighting                                   | 271.13          | 17.30%        | 42.40         | 14.94%        | (5.48)                        | -15.33%       |
| Pool Pump                                  | 2.92            | 0.19%         | 0.42          | 0.15%         | -                             | 0.00%         |
| Refrigeration                              | 23.86           | 1.52%         | 3.91          | 1.38%         | (0.16)                        | -0.44%        |
| Water Heating                              | 0.23            | 0.01%         | 0.33          | 0.12%         | 1.02                          | 2.85%         |
| Other                                      | 1.63            | 0.10%         | 1.83          | 0.64%         | 0.27                          | 0.75%         |
| <b>Nonresidential</b>                      | <b>646.59</b>   | <b>41.26%</b> | <b>121.01</b> | <b>42.62%</b> | <b>35.15</b>                  | <b>98.27%</b> |
| HVAC                                       | 109.20          | 6.97%         | 21.57         | 7.60%         | 3.08                          | 8.61%         |
| Lighting                                   | 244.93          | 15.63%        | 45.80         | 16.13%        | (1.14)                        | -3.19%        |
| Office                                     | 26.65           | 1.70%         | 3.74          | 1.32%         | (0.04)                        | -0.11%        |
| Process                                    | 155.88          | 9.95%         | 30.45         | 10.72%        | 28.18                         | 78.77%        |
| Refrigeration                              | 78.02           | 4.98%         | 12.08         | 4.25%         | 0.01                          | 0.04%         |
| Other                                      | 31.91           | 2.04%         | 7.38          | 2.60%         | 5.06                          | 14.15%        |
| <b>Energy Savings Assistance Program</b>   | <b>47.83</b>    | <b>3.05%</b>  | <b>13.75</b>  | <b>4.84%</b>  | <b>2.52</b>                   | <b>7.06%</b>  |
| <b>Codes &amp; Standard Energy Savings</b> | <b>484.82</b>   | <b>30.94%</b> | <b>78.13</b>  | <b>27.52%</b> | <b>(0.10)</b>                 | <b>-0.27%</b> |
| <b>PG&amp;E ANNUAL PORTFOLIO SAVINGS</b>   | <b>1,567.19</b> | <b>100%</b>   | <b>283.90</b> | <b>100%</b>   | <b>35.77</b>                  | <b>100%</b>   |

PG&E Notes:

- (1) All energy savings numbers are gross.
- (2) Total portfolio energy savings include ex ante updates consistent with Decision 11-07-030 and estimated energy savings from 2006-10 CFLs installed in 2011 per CPUC D-10-12-049, pending final CFL bulb counts from Energy Division Staff. In addition, workpapers that are awaiting disposition have been excluded from reported energy savings.
- (3) Energy Savings Assistance (ESA) Program, formerly entitled Low Income Energy Efficiency (LIEE).

Table 8 shows the 2011 annual savings of all programs by end use. The energy savings recorded by PG&E's energy efficiency portfolio comply with the Commission's policy rules in the Energy Efficiency Policy Manual, Version 4.0, as well as with subsequent Commission decisions and rulings.

The Energy Savings Assistance (ESA) Program energy savings reported above are from the ESA Program 2011 Annual Report provided to the Commission in May 2012. ESA measure savings are defined in D.08-11-031.

## SECTION 9 COMMITMENTS

Table 9

**Table 9**  
*Commitments*

| Commitments Made in the Past Year with Expected Implementation by December 2012           |                       |                         |           |           |
|---|-----------------------|-------------------------|-----------|-----------|
| 2010-11   | Committed Funds<br>\$ | Expected Energy Savings |           |           |
|   |                       | GWH                     | MW        | MMth      |
| PG&E  | 75,957,389            | 446                     | 66        | 33        |
| <b>PG&amp;E Total</b>   | <b>\$ 75,957,389</b>  | <b>446</b>              | <b>66</b> | <b>33</b> |
| Commitments Made in the Past Year with Expected Implementation <i>after</i> December 2012 |                       |                         |           |           |
| 2010-11   | Committed Funds<br>\$ | Expected Energy Savings |           |           |
|   |                       | GWH                     | MW        | MMth      |
| PG&E  | \$ 13,323,406         | 25                      | 20        | 6         |
| <b>PG&amp;E Total</b>   | <b>\$ 13,323,406</b>  | <b>25</b>               | <b>20</b> | <b>6</b>  |

PG&E Notes:

- (1) All energy savings numbers are gross.
- (2) The expenditures are incentive dollars to participants only.
- (3) Does not include Energy Savings Assistance (ESA) Program, formerly entitled Low Income Energy Efficiency (LIEE)

Table 9 shows the incentive commitments existed at the end of 2011 for energy efficiency projects that are expected to be completed after December 2011. All projects use Nonresidential Retrofit and Nonresidential New Construction calculated applications and procedures to make long-term commitments on projects that require lead times or long construction schedules. Many of these are large commercial projects, complex industrial projects, or projects with complex administrative requirements such as schools or government buildings. The Residential New Construction subprogram also receives long-term projects such as subdivisions that will be built out over several years.

In addition, a number of third party and government partnerships serve larger customers and have program commitments for projects to be completed after 2011.

## APPENDIX A PG&E PROGRAM NUMBERS

| Program ID | Program Name   | Date Added<br>(new<br>programs) | Date Removed |
|------------|--|---------------------------------|--------------|
| PGE2100    | Residential Energy Efficiency Program  |                                 |              |
| PGE21001   | Home Energy Efficiency Surveys Program   |                                 |              |
| PGE21002   | Residential Lighting Incentive Program for Basic CFLs                          |                                 |              |
| PGE21003   | Advanced Consumer Lighting Program   |                                 |              |
| PGE21004   | Home Energy Efficiency Rebates   |                                 |              |
| PGE21005   | Appliance Recycling Program  |                                 |              |
| PGE21006   | Business and Consumer Electronics Program                                      |                                 |              |
| PGE21007   | Multifamily Energy Efficiency Rebates Program                                  |                                 |              |
| PGE21008   | Whole House Performance Program  |                                 |              |
| PGE2101    | Commercial Program   |                                 |              |
| PGE21011   | Commercial Calculated Incentives   |                                 |              |
| PGE21012   | Commercial Deemed Incentives   |                                 |              |
| PGE21013   | Commercial Continuous Energy Improvement                                       |                                 |              |
| PGE21014   | Commercial Nonresidential Audits Program                                       |                                 |              |
| PGE2102    | Industrial Program   |                                 |              |
| PGE21021   | Industrial Calculated Incentives   |                                 |              |
| PGE21022   | Industrial Deemed Incentives   |                                 |              |
| PGE21023   | Industrial Continuous Energy Improvement                                       |                                 |              |
| PGE21024   | Industrial Nonresidential Audits Program                                       |                                 |              |
| PGE2103    | Agricultural Program   |                                 |              |
| PGE21031   | Agricultural Calculated Incentives   |                                 |              |
| PGE21032   | Agricultural Deemed Incentives   |                                 |              |
| PGE21033   | Agricultural Continuous Energy Improvement                                     |                                 |              |
| PGE21034   | Agricultural Nonresidential Audits Program                                     |                                 |              |
| PGE21035   | Agricultural Pump Efficiency Services Program                                  |                                 |              |
| PGE2104    | New Construction Programs  |                                 |              |
| PGE21041   | Residential New Construction   |                                 |              |
| PGE21042   | Savings By Design  |                                 |              |
| PGE2105    | Lighting Market Transformation   |                                 |              |
| PGE2106    | Residential and Commercial HVAC  |                                 |              |
| PGE21061   | Upstream HVAC Equipment Incentive  |                                 |              |
| PGE21062   | HVAC Technologies and System Diagnostics Advocacy                              |                                 |              |
| PGE21063   | Commercial Quality Installation  |                                 |              |
| PGE21064   | ENERGY STAR® Residential Quality Installation Program                          |                                 |              |
| PGE21065   | Residential Quality Maintenance and Commercial Quality Maintenance Development |                                 |              |
| PGE21066   | Workforce Education & Training   |                                 |              |
| PGE2107    | Codes & Standards (C&S)Program   |                                 |              |
| PGE21071   | C&S Advocacy & CASE Studies: Building Codes                                    |                                 |              |

| Program ID | Program Name  | Date Added<br>(new<br>programs) | Date Removed  |
|------------|---|---------------------------------|---------------|
| PGE21072   | C&S Advocacy & CASE Studies: Appliance Standards                  |                                 |               |
| PGE21073   | C&S Compliance Enhancements Training                              |                                 |               |
| PGE21074   | C&S Coordination (Statewide, EE Programs, External Entities)      |                                 |               |
| PGE21075   | C&S REACH Codes   |                                 |               |
| PGE21076   | C&S Other   |                                 |               |
| PGE2108    | Emerging Technologies Program                                     |                                 |               |
| PGE21081   | Assessments   |                                 |               |
| PGE21082   | Scaled Field Placement  |                                 |               |
| PGE21083   | Demonstration / Showcasing  |                                 |               |
| PGE21084   | Market and Behavioral Studies                                     |                                 |               |
| PGE21085   | Technology Supply Side Efforts                                    |                                 |               |
| PGE21086   | Incubation  |                                 |               |
| PGE2109    | Workforce Education & Training (WE&T)                             |                                 |               |
| PGE21091   | WE&T Centergies   |                                 |               |
| PGE21092   | WE&T Connections  |                                 |               |
| PGE21093   | WE&T Strategic Plan Implementation                                |                                 |               |
| PGE2110    | Marketing, Education & Outreach (ME&O)                            |                                 |               |
| PGE21101   | Statewide Marketing & Outreach                                    |                                 |               |
| PGE21102   | ME&O Strategic Plan Support                                       |                                 |               |
| PGE2111    | Statewide DSM Coordination & Integration                          |                                 |               |
| PGE2112    | Zero Net Pilots   |                                 |               |
| PGE2113    | Local DSM Coordination & Integration                              |                                 |               |
| PGE21131   | Integrated Marketing  |                                 |               |
| PGE21132   | Integrated Education & Training                                   |                                 |               |
| PGE21133   | Integrated Sales Training   |                                 |               |
| PGE21134   | Integration Support   |                                 |               |
| PGE2114    | On-Bill Financing   |                                 |               |
| PGE2125    | Local Government Energy Action Resource (LGEAR)                   |                                 |               |
|            | Lake County Energy Watch  |                                 |               |
|            | Merced County Energy Watch  |                                 | December 2011 |
|            | Yolo County Energy Watch  |                                 |               |
| PGE21251   | Innovator Pilots Program  |                                 |               |
| PGE21252   | Green Communities   |                                 |               |
| PGE21261   | California Community Colleges                                     |                                 |               |
| PGE21262   | University of California/California State University              |                                 |               |
| PGE21263   | State of California   |                                 |               |
| PGE21264   | Department of Corrections and Rehabilitation                      |                                 |               |
| PGE2130    | Association of Monterey Bay Area Governments (AMBAG) Energy Watch |                                 |               |
| PGE2131    | City of San Joaquin Energy Watch                                  |                                 |               |
| PGE2132    | East Bay Energy Watch   |                                 |               |
| PGE2133    | Fresno County Energy Watch  |                                 |               |
| PGE2134    | Kern County Energy Watch  |                                 |               |
| PGE2135    | Madera County Energy Watch  |                                 |               |
| PGE2136    | Marin County Energy Watch   |                                 |               |

| Program ID | Program Name   | Date Added<br>(new<br>programs) | Date Removed |
|------------|--|---------------------------------|--------------|
| PGE2137    | Mendocino County Energy Watch  |                                 |              |
| PGE2138    | Napa County Energy Watch   |                                 |              |
| PGE2139    | Redwood Energy Watch   |                                 |              |
| PGE2140    | San Joaquin County Energy Watch  |                                 | April 2011   |
| PGE2141    | San Luis Obispo County Energy Watch  |                                 |              |
| PGE2142    | San Mateo County Energy Watch  |                                 |              |
| PGE2143    | Santa Barbara County Energy Watch  |                                 |              |
| PGE2144    | Sierra Nevada Energy Watch   |                                 |              |
| PGE2145    | Sonoma County Energy Watch   |                                 |              |
| PGE2146    | Silicon Valley Energy Watch  |                                 |              |
| PGE2147    | San Francisco Energy Watch   |                                 |              |
| PGE2176    | California New Homes Multifamily   |                                 |              |
| PGE2177    | Enhance Time Delay Relay   |                                 |              |
| PGE2178    | ENERGY STAR <sup>®</sup> Manufactured Homes                                  |                                 |              |
| PGE2179    | Direct Install for Manufactured and Mobile Homes                             |                                 |              |
| PGE2181    | Air Care Plus  |                                 |              |
| PGE2182    | Boiler Energy Efficiency Program   |                                 |              |
| PGE2183    | Comprehensive Retail Energy Management                                       |                                 |              |
| PGE2185    | EnergySmart Grocer   |                                 |              |
| PGE2186    | Enhanced Automation Initiative   |                                 |              |
| PGE2187    | Monitoring-Based Persistence Commissioning                                   |                                 |              |
| PGE2189    | Cool Controls Plus   |                                 | October 2011 |
| PGE2190    | LodgingSavers  |                                 |              |
| PGE2191    | Medical Building Tune-Up   |                                 |              |
| PGE2193    | School Energy Efficiency   |                                 |              |
| PGE2194    | Energy Fitness Program   |                                 |              |
| PGE2195    | Energy Savers  |                                 |              |
| PGE2196    | RightLights  |                                 |              |
| PGE2197    | Small Business Commercial Comprehensive                                      |                                 |              |
| PGE2198    | Data Center Cooling Controls Program (DCCCP)                                 |                                 |              |
| PGE2199    | Energy-Efficient Parking Garage  |                                 |              |
| PGE2200    | Furniture Store Energy Efficiency  |                                 |              |
| PGE2201    | High Performance Office Lighting   |                                 |              |
| PGE2202    | Light Emitting Diode (LED) Accelerator                                       |                                 |              |
| PGE2203    | Monitoring-Based Commissioning   |                                 |              |
| PGE2204    | SmartVent for Energy-Efficient Kitchens                                      |                                 |              |
| PGE2205    | Casino Green   |                                 |              |
| PGE2206    | Healthcare Energy Efficiency Program   |                                 |              |
| PGE2209    | Ozone Laundry Energy Efficiency  |                                 |              |
| PGE2210    | Cool Schools   |                                 |              |
| PGE2212    | California Preschool Energy Efficiency Program                               |                                 |              |
| PGE2213    | K-12 Private Schools and Colleges Audit Retro                                |                                 |              |
| PGE2214    | Energy Efficiency Entertainment Centers                                      |                                 |              |
| PGE2220    | Assessment, Implementation and Monitoring (AIM)<br>Compressed Air Efficiency |                                 |              |
| PGE2221    | California Wastewater Process Optimization                                   |                                 |              |

| <b>Program ID</b> | <b>Program Name</b>  | <b>Date Added<br/>(new<br/>programs)</b> | <b>Date Removed</b> |
|-------------------|--|--|---------------------|
| PGE2222           | Energy Efficiency Services for Oil Production                                      |  |                     |
| PGE2223           | Heavy Industry Energy Efficiency Program   |  |                     |
| PGE2224           | Industrial Compressed Air  |  |                     |
| PGE2225           | Refinery Energy Efficiency Program   |  |                     |
| PGE2227           | Cement Production and Distribution Energy Efficiency                               |  |                     |
| PGE2228           | Industrial Recommissioning Program   |  |                     |
| PGE2230           | Dairy Energy Efficiency Program  |  |                     |
| PGE2231           | Industrial Refrigeration Performance Plus  |  |                     |
| PGE2232           | Light Exchange Program   |  |                     |
| PGE2233           | Wine Industry Efficiency Solutions   |  |                     |
| PGE2234           | Comprehensive Food Process Audit and Resource Efficiency Program                   |  |                     |
| PGE2235           | Dairy Industry Resource Advantage Program  |  |                     |
| PGE2236           | Process Wastewater Treatment Energy Management (EM) Program for Ag Food Processing |  |                     |
| PGE2240           | Builder Energy Code Training   |  |                     |
| PGE2241           | Green Building Technical Support Services  |  |                     |
| PGE2242           | Cool Cash  |  |                     |

| <b>Table 1.</b><br><i>Electricity and Natural Gas Savings and Demand Reduction</i> |                             |   |                          |                                      |                    |       |
|--|-----------------------------|---|--------------------------|--------------------------------------|--------------------|-------|
| <b>Annual Results</b>  | <b>Installed Savings</b>    | <b>CPUC Adopted in D. 09-09-047 Goal (Year)</b> | <b>% of Goals (Year)</b> | <b>% of 3-year Goals (Portfolio)</b> | <b>Balance (4)</b> |       |
| <b>2010 Energy Savings (GWh) – Annual</b>  | PG&E<br>SCE<br>SDG&E<br>SCG | 1,735   | 964                      | 180%                                 | 56%                | 1,375 |
| <b>2011 Energy Savings (GWh) – Annual</b>  | PG&E<br>SCE<br>SDG&E<br>SCG | 1,519   | 1,032                    | 147%                                 | 49%                | (144) |
| <b>2012 Energy Savings (GWh) – Annual</b>  | PG&E<br>SCE<br>SDG&E<br>SCG |   | 1,114                    |                                      |                    |       |
| <b>TOTAL Energy Savings (GWh) – Annual</b>   |                             | <b>3,254</b>                                    | <b>3,110</b>             | <b>105%</b>                          | <b>105%</b>        |       |
| <b>2010 Energy Savings (GWh) – Lifecycle</b>                                       | PG&E<br>SCE<br>SDG&E<br>SCG | 17,112  |                          |                                      |                    |       |
| <b>2011 Energy Savings (GWh) – Lifecycle</b>                                       | PG&E<br>SCE<br>SDG&E<br>SCG | 16,014  |                          |                                      |                    |       |
| <b>2012 Energy Savings (GWh) – Lifecycle</b>                                       | PG&E<br>SCE<br>SDG&E<br>SCG |   |                          |                                      |                    |       |
| <b>TOTAL Energy Savings (GWh) – Lifecycle</b>                                      |                             | <b>33,126</b>                                   |                          |                                      |                    |       |
| <b>2010 Natural Gas Savings (MMth) – Annual</b>                                    | PG&E<br>SCE<br>SDG&E<br>SCG | 18  | 16                       | 115%                                 | 37%                | 31    |
| <b>2011 Natural Gas Savings (MMth) – Annual</b>                                    | PG&E<br>SCE<br>SDG&E<br>SCG | 33  | 16                       | 205%                                 | 68%                | (2)   |
| <b>2012 Natural Gas Savings (MMth) – Annual</b>                                    | PG&E<br>SCE<br>SDG&E<br>SCG |   | 17                       |                                      |                    |       |
| <b>TOTAL Natural Gas Savings (MMth) – Annual</b>                                   |                             | <b>51</b>                                       | <b>49</b>                | <b>105%</b>                          | <b>105%</b>        |       |
| <b>2010 Natural Gas Savings (MMth) – Lifecycle</b>                                 | PG&E<br>SCE<br>SDG&E<br>SCG | 340   |                          |                                      |                    |       |
| <b>2011 Natural Gas Savings (MMth) – Lifecycle</b>                                 | PG&E<br>SCE<br>SDG&E<br>SCG | 497   |                          |                                      |                    |       |
| <b>2012 Natural Gas Savings (MMth) – Lifecycle</b>                                 | PG&E<br>SCE<br>SDG&E<br>SCG |   |                          |                                      |                    |       |
| <b>TOTAL Natural Gas Savings (MMth) – Lifecycle</b>                                |                             | <b>836</b>                                      |                          |                                      |                    |       |
| <b>2010 Peak Demand savings (MW)</b>   | PG&E<br>SCE<br>SDG&E<br>SCG | 303   | 218                      | 139%                                 | 43%                | 400   |
|  |                             |   |                          | #DIV/0!                              | #DIV/0!            | -     |
|  |                             |   |                          | #DIV/0!                              | #DIV/0!            | -     |
| <b>2011 Peak Demand savings (MW)</b>   | PG&E<br>SCE<br>SDG&E<br>SCG | 270   | 234                      | 115%                                 | 38%                | 130   |
|  |                             |   |                          | #DIV/0!                              | #DIV/0!            | -     |
|  |                             |   |                          | #DIV/0!                              | #DIV/0!            | -     |
| <b>2012 Peak Demand savings (MW)</b>   | PG&E<br>SCE<br>SDG&E<br>SCG |   | 251                      |                                      |                    | -     |
|  |                             |   |                          | #DIV/0!                              | #DIV/0!            | -     |
|  |                             |   |                          | #DIV/0!                              | #DIV/0!            | -     |
| <b>TOTAL Peak Demand savings (MW)</b>  |                             | <b>573</b>                                      | <b>703</b>               | <b>81%</b>                           | <b>81%</b>         |       |

## PG&amp;E Notes:

- (1) All energy savings numbers are gross.
- (2) Does not include Energy Savings Assistance (ESA) Program savings. The ESA Program was formerly entitled Low Income Energy Efficiency (LIEE).
- (3) Total portfolio energy savings include ex ante updates consistent with Decision 11-07-030 and estimated energy savings from 2006-10 CFLs installed in 2011 per CPUC D-10-12-049, pending final CFL bulb counts from Energy Division Staff. In addition, workpapers that are awaiting disposition have been excluded from reported energy savings.
- (4) The "Balance" values reflect the difference between the installed savings and the 3-yr goals. The negative values are a result of installed savings exceeding the 3-yr goals.

| <b>Table 2</b>                |                            |                               |                            |                               |                            |                               |                             |                                |                                |
|-------------------------------|----------------------------|-------------------------------|----------------------------|-------------------------------|----------------------------|-------------------------------|-----------------------------|--------------------------------|--------------------------------|
| <i>Emission Reductions</i>    |                            |                               |                            |                               |                            |                               |                             |                                |                                |
| Annual Results                | Annual tons of CO2 avoided | Lifecycle tons of CO2 avoided | Annual tons of NOx avoided | Lifecycle tons of NOx avoided | Annual tons of SOx avoided | Lifecycle tons of SOx avoided | Annual tons of PM10 avoided | Lifecycle tons of PM10 avoided | Lifecycle tons of PM10 avoided |
| <b>2010 Portfolio Targets</b> | N/A                        | N/A                           | N/A                        | N/A                           |                            |                               | N/A                         | N/A                            | N/A                            |
| PG&E                          | 925,496                    | 10,572,101                    | 245                        | 3,181                         | -                          | -                             | 47                          | 496                            |                                |
| SCE                           |                            |                               |                            |                               |                            |                               |                             |                                |                                |
| SDGE                          |                            |                               |                            |                               |                            |                               |                             |                                |                                |
| SCG                           |                            |                               |                            |                               |                            |                               |                             |                                |                                |
| <b>2011 Portfolio Targets</b> |                            |                               |                            |                               |                            |                               |                             |                                |                                |
| PGE                           |                            |                               |                            |                               |                            |                               |                             |                                |                                |
| SCE                           |                            |                               |                            |                               |                            |                               |                             |                                |                                |
| SDGE                          |                            |                               |                            |                               |                            |                               |                             |                                |                                |
| SCG                           |                            |                               |                            |                               |                            |                               |                             |                                |                                |
| <b>2012 Portfolio Targets</b> |                            |                               |                            |                               |                            |                               |                             |                                |                                |
| PGE                           |                            |                               |                            |                               |                            |                               |                             |                                |                                |
| SCE                           |                            |                               |                            |                               |                            |                               |                             |                                |                                |
| SDGE                          |                            |                               |                            |                               |                            |                               |                             |                                |                                |
| SCG                           |                            |                               |                            |                               |                            |                               |                             |                                |                                |
| <b>2011 Total</b>             | <b>925,496</b>             | <b>10,572,101</b>             | <b>245</b>                 | <b>3,181</b>                  | <b>-</b>                   | <b>-</b>                      | <b>47</b>                   | <b>496</b>                     |                                |
| PG&E                          | 1,125,015                  | 11,745,023                    | 207                        | 2,790                         |                            |                               | 66                          | 625                            |                                |
| SCE                           |                            |                               |                            |                               |                            |                               |                             |                                |                                |
| SDGE                          |                            |                               |                            |                               |                            |                               |                             |                                |                                |
| SCG                           |                            |                               |                            |                               |                            |                               |                             |                                |                                |
| <b>2011 Total</b>             | <b>-</b>                   | <b>-</b>                      | <b>-</b>                   | <b>-</b>                      | <b>-</b>                   | <b>-</b>                      | <b>-</b>                    | <b>-</b>                       | <b>-</b>                       |
| PGE                           |                            |                               |                            |                               |                            |                               |                             |                                |                                |
| SCE                           |                            |                               |                            |                               |                            |                               |                             |                                |                                |
| SDGE                          |                            |                               |                            |                               |                            |                               |                             |                                |                                |
| SCG                           |                            |                               |                            |                               |                            |                               |                             |                                |                                |
| <b>2012 Total</b>             | <b>-</b>                   | <b>-</b>                      | <b>-</b>                   | <b>-</b>                      | <b>-</b>                   | <b>-</b>                      | <b>-</b>                    | <b>-</b>                       | <b>-</b>                       |

| <b>Table 2</b>                    |                            |                               |                            |                               |                            |                               |                             |                                |
|-----------------------------------|----------------------------|-------------------------------|----------------------------|-------------------------------|----------------------------|-------------------------------|-----------------------------|--------------------------------|
| <i>Emission Reductions</i>        |                            |                               |                            |                               |                            |                               |                             |                                |
| Annual Results                    | Annual tons of CO2 avoided | Lifecycle tons of CO2 avoided | Annual tons of NOx avoided | Lifecycle tons of NOx avoided | Annual tons of SOx avoided | Lifecycle tons of SOx avoided | Annual tons of PM10 avoided | Lifecycle tons of PM10 avoided |
| PGE                               |                            |                               |                            |                               |                            |                               |                             |                                |
| SCE                               |                            |                               |                            |                               |                            |                               |                             |                                |
| SDGE                              |                            |                               |                            |                               |                            |                               |                             |                                |
| SCG                               |                            |                               |                            |                               |                            |                               |                             |                                |
| <b>Total for 3-year Portfolio</b> | <b>1,125,015</b>           | <b>11,745,023</b>             | <b>207</b>                 | <b>2,790</b>                  | <b>-</b>                   | <b>-</b>                      | <b>66</b>                   | <b>625</b>                     |

PG&E Notes:

- (1) All environmental impact values are derived from gross energy savings.
- (2) Does not include Energy Savings Assistance (ESA) Program savings. The ESA Program was formerly entitled Low Income Energy Efficiency (LIEE).
- (3) Total portfolio energy savings include ex ante updates consistent with Decision 11-07-030 and estimated energy savings from 2006-10 CFLs installed in 2011 per CPUC D-10-12-049, pending final CFL bulb counts from Energy Division Staff. In addition, workpapers that are awaiting disposition have been excluded from reported energy savings.

**Table 3**  
*Expenditures*

| <b>Summary of Portfolio Expenditures</b>   | <b>Adopted Program Budget</b> | <b>Cumulative Annual Expenditures</b> | <b>Percent of Portfolio Budget</b> | <b>Percent of Total Annual Expenditures</b> |
|--|-------------------------------|---------------------------------------|------------------------------------|---|
| <b>Total Portfolio Expenditures</b>  |                               |                                       |                                    |   |
| Administrative Costs   | 144,242,356                   | 30,728,488                            | 2.4%                               | 8.1%  |
| Marketing/ Advertising/ Outreach Costs   | 105,551,639                   | 16,425,171                            | 1.3%                               | 4.3%  |
| Rebates/Incentives/Direct Install  | 541,353,550                   | 164,600,650                           | 12.8%                              | 43.3%                                       |
| Direct Implementation Costs  | 493,332,455                   | 168,522,531                           | 13.1%                              | 44.3%                                       |
| <b>Total Portfolio Expenditures</b>  | <b>1,284,480,000</b>          | <b>380,276,840</b>                    | <b>29.6%</b>                       | <b>100.0%</b>                               |
| <i>Total Investor-owned Utility (Core) Expenditures (sub-component of portfolio)</i> |                               |                                       |                                    |   |
| Administrative Costs   | 87,177,575                    | 14,258,317                            | 1.1%                               | 3.7%  |
| Marketing/ Advertising/ Outreach Costs   | 80,831,327                    | 10,241,460                            | 0.8%                               | 2.7%  |
| Rebates/Incentives/Direct Install  | 332,030,266                   | 98,402,675                            | 7.7%                               | 25.9%                                       |
| Direct Implementation Costs  | 322,234,089                   | 97,080,235                            | 7.6%                               | 25.5%                                       |
| <b>Total Investor-owned Utility (Core) Expenditures</b>                              | <b>822,273,257</b>            | <b>219,982,686</b>                    | <b>17.1%</b>                       | <b>57.8%</b>                                |
| <i>Total Competitive Bid Program Expenditures (sub-component of portfolio)</i>       |                               |                                       |                                    |   |
| Administrative Costs   | 35,538,004                    | 11,390,943                            | 0.9%                               | 3.0%  |
| Marketing/ Advertising/ Outreach Costs   | 15,299,866                    | 4,698,168                             | 0.4%                               | 1.2%  |
| Rebates/Incentives/Direct Install  | 140,993,501                   | 41,383,731                            | 3.2%                               | 10.9%                                       |
| Direct Implementation Costs  | 98,147,821                    | 45,034,650                            | 3.5%                               | 11.8%                                       |
| <b>Total Competitive Bid Program Expenditures</b>                                    | <b>289,979,192</b>            | <b>102,507,491</b>                    | <b>8.0%</b>                        | <b>27.0%</b>                                |
| <i>Total Partnership Program Expenditures (sub-component of portfolio)</i>           |                               |                                       |                                    |   |
| Administrative Costs   | 21,526,777                    | 5,079,227                             | 0.4%                               | 1.3%  |
| Marketing/ Advertising/ Outreach Costs   | 9,420,446                     | 1,485,544                             | 0.1%                               | 0.4%  |
| Rebates/Incentives/Direct Install  | 68,329,783                    | 24,814,245                            | 1.9%                               | 6.5%  |
| Direct Implementation Costs  | 72,950,545                    | 26,407,647                            | 2.1%                               | 6.9%  |
| <b>Total Partnership Program Expenditures</b>  | <b>172,227,551</b>            | <b>57,786,663</b>                     | <b>4.5%</b>                        | <b>15.2%</b>                                |
| <b>Total EM&amp;V Expenditures (separate from portfolio)</b>                         |                               |                                       |                                    |   |
| EMV IOU  | 14,718,000                    | 1,847,759                             | 3.5%                               | 32.9%                                       |
| EMV JOINT STAFF  | 38,802,000                    | 3,767,396                             | 7.0%                               | 67.1%                                       |
| <b>Total EM&amp;V Expenditures</b>   | <b>53,520,000</b>             | <b>5,615,155</b>                      | <b>10.5%</b>                       | <b>100.0%</b>                               |

| A                          | B                              | C                                 | D                                | E              | F                     | G              | H                             | I                               | J                                   |
|----------------------------|--------------------------------|-----------------------------------|----------------------------------|----------------|-----------------------|----------------|-------------------------------|---------------------------------|-------------------------------------|
| <b>Table 4</b>             |                                |                                   |                                  |                |                       |                |                               |                                 |                                     |
| <i>Cost Effectiveness</i>  |                                |                                   |                                  |                |                       |                |                               |                                 |                                     |
| Annual Results             | Total Cost to Billpayers (TRC) | Total Savings to Billpayers (TRC) | Net Benefits to Billpayers (TRC) | TRC Ratio      | Total PAC Cost        | PAC Ratio      | PAC Cost per kW Saved (\$/kW) | PAC Cost per kWh Saved (\$/kWh) | PAC Cost per therm Saved (\$/therm) |
| PG&E                       | N/A                            | N/A                               | N/A                              | N/A            | N/A                   | N/A            | N/A                           | N/A                             | N/A                                 |
| SCE                        |                                |                                   |                                  |                |                       |                |                               |                                 |                                     |
| SCG                        |                                |                                   |                                  |                |                       |                |                               |                                 |                                     |
| SDGE                       |                                |                                   |                                  |                |                       |                |                               |                                 |                                     |
| <b>2010 - 2012 TARGETS</b> |                                |                                   |                                  |                |                       |                |                               |                                 |                                     |
| Average per year           |                                |                                   |                                  |                |                       |                |                               |                                 |                                     |
| PG&E                       | \$ 628,637,343                 | \$ 813,083,892                    | \$ 184,446,548                   | 1.29           | \$ 363,413,653        | 2.24           |                               | \$ 0.054                        | \$ 0.482                            |
| <b>PG&amp;E TOTAL</b>      | <b>\$ 628,637,343</b>          | <b>\$ 813,083,892</b>             | <b>\$ 184,446,548</b>            | <b>1.29</b>    | <b>\$ 363,413,653</b> | <b>2.24</b>    |                               | <b>\$ 0.054</b>                 | <b>\$ 0.482</b>                     |
| PG&E                       |                                |                                   |                                  | #DIV/0!        | \$ -                  | #DIV/0!        |                               |                                 |                                     |
| SCE                        |                                |                                   |                                  | #DIV/0!        | \$ -                  | #DIV/0!        |                               |                                 |                                     |
| SCG                        |                                |                                   |                                  | #DIV/0!        | \$ -                  | #DIV/0!        |                               |                                 |                                     |
| SDGE                       |                                |                                   |                                  | #DIV/0!        | \$ -                  | #DIV/0!        |                               |                                 |                                     |
| <b>2007 TOTAL</b>          | <b>\$ -</b>                    | <b>\$ -</b>                       | <b>\$ -</b>                      | <b>#DIV/0!</b> | <b>\$ -</b>           | <b>#DIV/0!</b> |                               |                                 |                                     |
| PG&E                       |                                |                                   |                                  | #DIV/0!        | \$ -                  | #DIV/0!        |                               |                                 |                                     |
| SCE                        |                                |                                   |                                  | #DIV/0!        | \$ -                  | #DIV/0!        |                               |                                 |                                     |
| SCG                        |                                |                                   |                                  | #DIV/0!        | \$ -                  | #DIV/0!        |                               |                                 |                                     |
| SDGE                       |                                |                                   |                                  | #DIV/0!        | \$ -                  | #DIV/0!        |                               |                                 |                                     |
| <b>2008 TOTAL</b>          | <b>\$ -</b>                    | <b>\$ -</b>                       | <b>\$ -</b>                      | <b>#DIV/0!</b> | <b>\$ -</b>           | <b>#DIV/0!</b> |                               |                                 |                                     |

PG&E Notes:

- (1) Does not include Energy Savings Assistance (ESA) Program savings. The ESA Program was formerly entitled Low Income Energy Efficiency (LIEE).
- (2) PAC cost per kWh or per therm is levelized PAC cost per kWh or therm respectively.
- (3) The adopted avoided cost methodology does not provide information to provide a meaningful value for PAC Cost per kW. The adopted avoided cost methodology created kWh cost values that vary for each hour of the year that includes kW generation capacity costs. The current PAC Cost per kWh includes all ratepayer financial costs incurred in producing electric savings. The same costs would have to be reallocated if a PAC Cost per kW were presented. Additionally, the current approved calculator does not have the capability to calculate discounted kW.
- (4) Total portfolio energy savings include ex ante updates consistent with Decision 11-07-030 and estimated energy savings from 2006-10 CFLs installed in 2011 per CPUC D-10-12-049, pending final CFL bulb counts from Energy Division Staff. In addition, workpapers that are awaiting disposition have been excluded from reported energy savings.
- (5) TRC and PAC costs exclude projected shareholder incentives since no shareholder incentive mechanism was in place in 2011.
- (6) PG&E used reported project costs to calculate the cost effectiveness of non-residential retrofit customized projects.
- (7) The cost-effectiveness calculations are based on the actual accomplishments recorded in 2011.

**Table 5**  
Ratepayer Impacts

| <b>2011</b>             | <b>Electric Average Rate<br/>(Res and Non-Res)<br/>\$/kwh</b>  | <b>Gas Average Rate<br/>(Res and Non-Res)<br/>\$/therm</b> | <b>Average First Year Bill Savings<br/>(\$)</b> | <b>Average Lifecycle Bill<br/>Savings (\$)</b> |
|-------------------------|--|--|---|--|
| PG&E                    | \$0.15252  | \$0.93076  | \$262,676,809                                   | \$2,904,758,972                                |
| SCE                     |  |  |   |  |
| SDGE                    |  |  |   |  |
| SCG                     |  |  |   |  |
| <b>PG&amp;E Average</b> |  |  |   |  |
| <b>PG&amp;E Notes:</b>  | <b>1) 2011 weighted average bundled electric rate - \$0.15252/kWh</b><br><b>2) 2011 weighted average bundled gas rate - \$0.93076/therm</b><br><b>3) First year and lifecycle energy savings exclude Energy Savings Assistance (ESA) Program, formerly entitled Low Income Energy Efficiency (LIEE).</b> |  |   |  |

**Table 6**

*Green Building Initiative (1, 2)*

| 2011            | <b>Expenditures (3)</b> | <b>GWH</b> |        |           | <b>MW</b> |        |           | <b>MMth</b> |        |           |
|-----------------|-------------------------|------------|--------|-----------|-----------|--------|-----------|-------------|--------|-----------|
|                 |                         | Goal       | Annual | % of Goal | Goal      | Annual | % of Goal | Goal        | Annual | % of Goal |
| PG&E            | \$ 53,466,996           | N/A        | 316    | N/A       | N/A       | 56     | N/A       | N/A         | 6      | N/A       |
| SCE             |                         |            |        | #DIV/0!   |           |        | #DIV/0!   |             |        | #DIV/0!   |
| SCG             |                         |            |        | #DIV/0!   |           |        | #DIV/0!   |             |        | #DIV/0!   |
| SDGE            |                         |            |        | #DIV/0!   |           |        | #DIV/0!   |             |        | #DIV/0!   |
| <b>PG&amp;E</b> | <b>\$ 53,466,996</b>    |            | 316    |           |           | 56     |           |             | 6      |           |

PG&E Notes:

(1) All energy savings numbers are gross.

(2) Does not include Energy Savings Assistance Program (formerly Low Income Energy Efficiency), Codes & Standards, and Nonresidential Audits.

(3) The expenditures are incentive dollars to participants only.

**Table 8:**  
*Annual Savings By End-Use*

|  | <b>GWH</b>      | <b>% of Total</b> | <b>MW</b>     | <b>% of Total</b> | <b>MMTh =<br/>1,000,000<br/>therms</b> | <b>% of Total</b> |
|--|-----------------|-------------------|---------------|-------------------|--|-------------------|
| <b>Residential</b>                         | <b>387.97</b>   | <b>24.76%</b>     | <b>71.01</b>  | <b>25.01%</b>     | <b>(1.81)</b>                          | <b>-5.06%</b>     |
| Appliances                                 | 9.49            | 0.61%             | 3.83          | 1.35%             | 1.10                                   | 3.08%             |
| Consumer Electronics                       | 48.77           | 3.11%             | 5.08          | 1.79%             | (0.77)                                 | -2.16%            |
| Cooking Appliances                         | -               | 0.00%             | -             | 0.00%             | -                                      | 0.00%             |
| HVAC                                       | 29.94           | 1.91%             | 13.23         | 4.66%             | 2.22                                   | 6.20%             |
| Lighting                                   | 271.13          | 17.30%            | 42.40         | 14.94%            | (5.48)                                 | -15.33%           |
| Pool Pump                                  | 2.92            | 0.19%             | 0.42          | 0.15%             | -                                      | 0.00%             |
| Refrigeration                              | 23.86           | 1.52%             | 3.91          | 1.38%             | (0.16)                                 | -0.44%            |
| Water Heating                              | 0.23            | 0.01%             | 0.33          | 0.12%             | 1.02                                   | 2.85%             |
| Other                                      | 1.63            | 0.10%             | 1.83          | 0.64%             | 0.27                                   | 0.75%             |
| <b>Nonresidential</b>                      | <b>646.59</b>   | <b>41.26%</b>     | <b>121.01</b> | <b>42.62%</b>     | <b>35.15</b>                           | <b>98.27%</b>     |
| HVAC                                       | 109.20          | 6.97%             | 21.57         | 7.60%             | 3.08                                   | 8.61%             |
| Lighting                                   | 244.93          | 15.63%            | 45.80         | 16.13%            | (1.14)                                 | -3.19%            |
| Office                                     | 26.65           | 1.70%             | 3.74          | 1.32%             | (0.04)                                 | -0.11%            |
| Process                                    | 155.88          | 9.95%             | 30.45         | 10.72%            | 28.18                                  | 78.77%            |
| Refrigeration                              | 78.02           | 4.98%             | 12.08         | 4.25%             | 0.01                                   | 0.04%             |
| Other                                      | 31.91           | 2.04%             | 7.38          | 2.60%             | 5.06                                   | 14.15%            |
| <b>Energy Savings Assistance Program</b>   | <b>47.83</b>    | <b>3.05%</b>      | <b>13.75</b>  | <b>4.84%</b>      | <b>2.52</b>                            | <b>7.06%</b>      |
| <b>Codes &amp; Standard Energy Savings</b> | <b>484.82</b>   | <b>30.94%</b>     | <b>78.13</b>  | <b>27.52%</b>     | <b>(0.10)</b>                          | <b>-0.27%</b>     |
| <b>PG&amp;E ANNUAL PORTFOLIO SAVINGS</b>   | <b>1,567.19</b> | <b>100%</b>       | <b>283.90</b> | <b>100%</b>       | <b>35.77</b>                           | <b>100%</b>       |

PG&E Notes:

- (1) All energy savings numbers are gross.
- (2) Total portfolio energy savings include ex ante updates consistent with Decision 11-07-030 and estimated energy savings from 2006-10 CFLs installed in 2011 per CPUC D-10-12-049, pending final CFL bulb counts from Energy Division Staff. In addition, workpapers that are awaiting disposition have been excluded from reported energy savings.
- (3) Energy Savings Assistance (ESA) Program, formerly entitled Low Income Energy Efficiency (LIEE).

**Table 9**  
*Commitments*

| Commitments Made in the Past Year with Expected Implementation by December 2012           |                       |                         |           |           |
|---|-----------------------|-------------------------|-----------|-----------|
| 2010-11   | Committed Funds<br>\$ | Expected Energy Savings |           |           |
|   |                       | GWH                     | MW        | MMth      |
| PG&E  | 75,957,389            | 446                     | 66        | 33        |
| SCE   |                       |                         |           |           |
| SDGE  |                       |                         |           |           |
| SCG   |                       |                         |           |           |
| <b>PG&amp;E Total</b>   | <b>\$ 75,957,389</b>  | <b>446</b>              | <b>66</b> | <b>33</b> |
| Commitments Made in the Past Year with Expected Implementation <i>after</i> December 2012 |                       |                         |           |           |
| 2010-11   | Committed Funds<br>\$ | Expected Energy Savings |           |           |
|   |                       | GWH                     | MW        | MMth      |
| PG&E  | \$ 13,323,406         | 25                      | 20        | 6         |
| SCE   |                       |                         |           |           |
| SDGE  |                       |                         |           |           |
| SCG   |                       |                         |           |           |
| <b>PG&amp;E Total</b>   | <b>\$ 13,323,406</b>  | <b>25</b>               | <b>20</b> | <b>6</b>  |

PG&E Notes:

- (1) All energy savings numbers are gross.
- (2) The expenditures are incentive dollars to participants only.
- (3) Does not include Energy Savings Assistance (ESA) Program, formerly entitled Low Income Energy Efficiency (LIEE)